

# Spacewalker Building Notes

By Walter Umland

**Thank you** for purchasing this kit, the best balsa wood available was used to make Jack Sheeks Spacewalker. Bob Kruger and I worked together to verify accuracy of these plans with Jack Sheeks. The laser cut parts are the state of the art. We hope that you enjoy building this kit as much as we had doing the prototype. This kit is engineered for any skill level; from the beginner to expert builder and flyer, so if you have some basic model building experience you will do just fine.

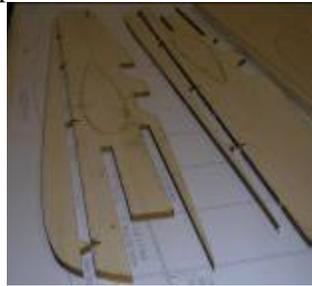
## Pre construction notes.

The prototype actually took only 3½ days to assemble, so use the following building notes to act as guidelines for construction of the kit. During these guidelines, we will jump back and forth from component to component a few times because some items will need longer drying times than others and we have done this to speed things up, so read these notes at least once before starting the airplane and they should help you understand why we have done things this way and also to familiarize you with some of the terminology in building Control Line Stunt models, especially if you are new to this type of construction. One nice feature about this model is you will virtually build the entire wing before putting in the bellcrank.

Before starting construction, lay out all the sheets/parts in the kit and check them against the checklist. If you have found any problems at all and have internet access please visit our website for kit specific contact info.

## Fuselage:

Start with the fuselage; first remove the parts from their sheets and clean off any charring from around all the parts.  
\*This is to be repeated with all the laser cut parts.\*



Remove the balsa from the wing cut out sections and glue both of these pieces together, \* this will aid in the alignment of the fuselage halves.



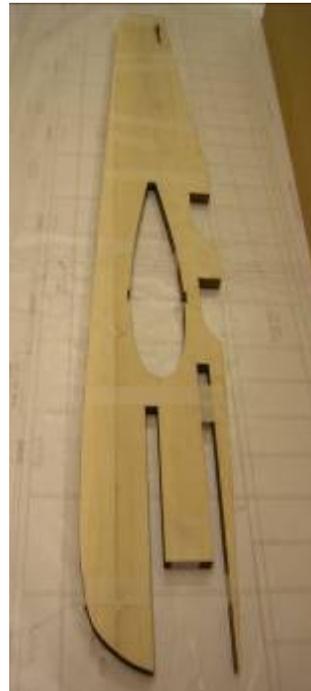
Next start assembly by carefully gluing the top and bottom body parts together and also assemble the balsa triplers



Once done, mark on the fuselage which sides are to receive the glue, this will prevent you from gluing the wrong side.



With the top and bottom parts of the two body halves assembled and the fuselage sides marked, continue the assembly by carefully gluing the two body halves together with 24 hr epoxy. This will give you time to check the alignment of the fuselage halves as the epoxy cures. I suggest that you put a very thin layer on both sides and allow about five minutes or so for the glue to soak in and then with a scrap piece of wood, scrape off any excess glue, *\*You can also apply a little heat with a heat gun to thin out the epoxy as you are removing the excess glue. .\** **Align** the fuselage halves together then separate once, (See photos below)



Temporarily re-install the center wing cut out piece and a piece of scrap into the stab slot the carefully place the other fuselage half back together. Once done, apply pressure and clean off any excess glue that may squeeze out, and tape together. Once you have finished taping all around the fuselage, double check the alignment and remove the center wing cut out piece and check for any excess glue, clean off any excess glue and leave out the center wing cut out piece, as this is no longer needed. Put a clean piece of wax paper under the body and lay on a flat surface with lots of weight on top. Bricks or large heavy books will suffice.

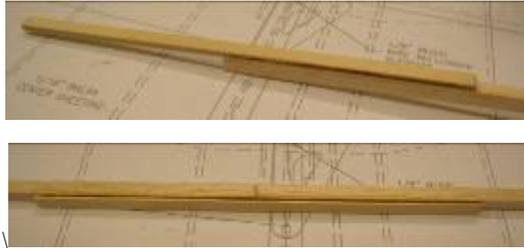


While the fuselage cures, I recommend moving onto assembling the wing.

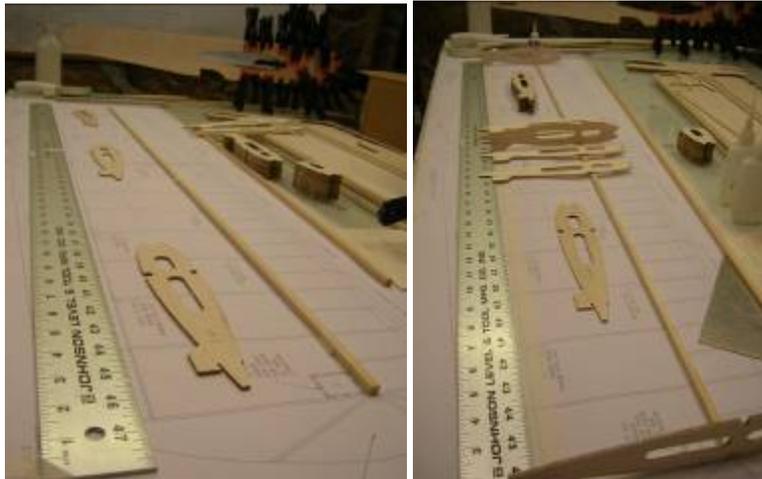
## Wing Construction

**\* Wing Notes\*** The Spacewalker wing features building tabs on each rib making it a really simple, straight forward and easy wing to build and you will see that we show the wing constructed on a flat surface without the use of a jig, but should you elect to use a jig we recommend not removing tab pieces from the ribs as they will assist you when installing the bottom T.E. sheeting. In-fact... they will act as a shelf under the ribs and hold the T.E. sheeting in place, either way you decide to build the wing you first should tape the plans to your building surface.

*Okay... Let's move on to building your wing.* First permanently join the spars and spar doublers together. Do both the top and bottom now to save to a few minutes later on during construction.



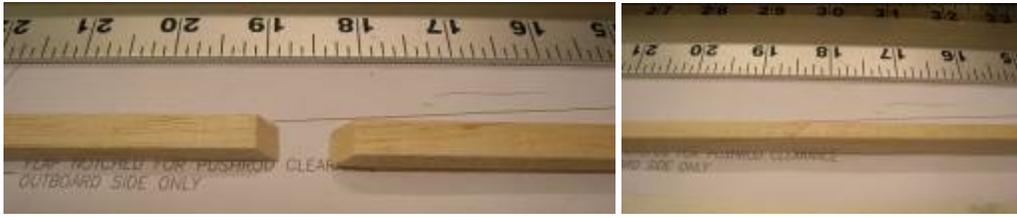
With the plans secured to your work surface, temporarily tape the spar in place. Then, making sure the ribs are lined up tape a straight edge on the plans for a straight wing & T.E..



**\*Note\*** Weighing the ribs and placing the heavier ribs to the outboard side is one way to save extra weight during construction of any model, so once you have weighed the ribs place them lighter on the inboard side to heavier on the outboard side. Insert all the ribs onto the spar now. Be sure to adjust all the ribs to their correct spacing. This can be achieved by using a small square to position directly over the plans. Once done add the top spar, the LE, half ribs and then the T.E. sheeting as shown.



Once done, carefully scarf cut and join the two T.E. sticks together. Always use a long straight edge when joining sticks and sheeting together. Once done, glue the trailing edge on.

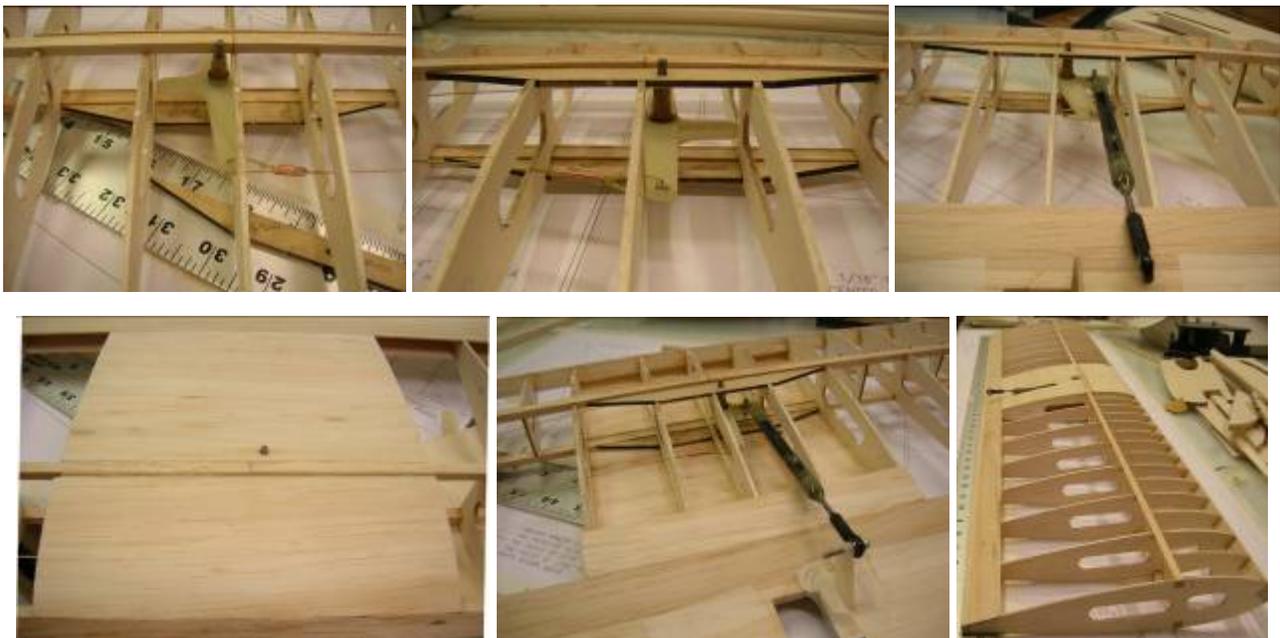


Following the T.E. sheeting, carve and sand T.E. flush with the sheeting as shown on the plans. This is best achieved by adding masking tape to the sheeting for protection. When done, remove tape and continue to final sand until glue joint is smooth and virtually unseen.

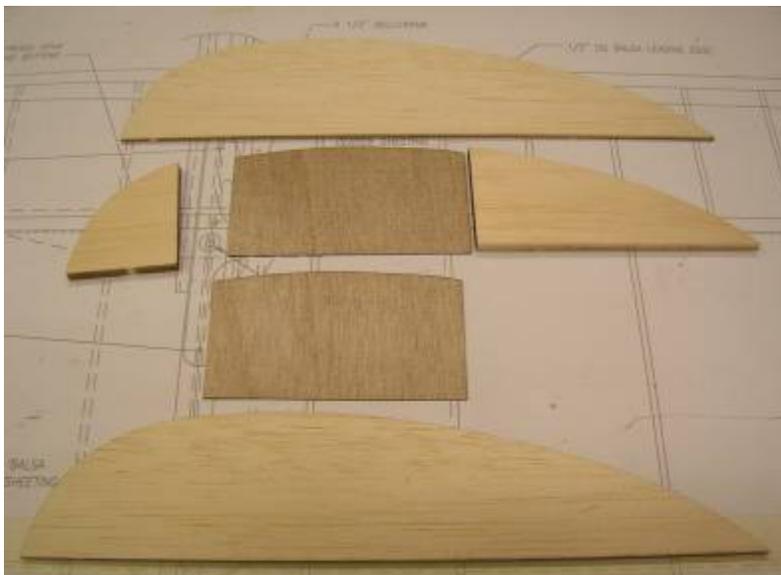


Once done, permanently install the top bellcrank mount (*top one only*) to the rib and spar. Next, carefully remove the wing from your work surface, and then remove the wing rib building tabs from each rib and repeat the process of sanding the T.E. flush with the sheeting.

Okay now... with the wing free from your work surface and the top B.C. mount permanently installed, measure and cut the B.C. pivot shaft so it will extend at least a 1/4" past both of the spars. Once done, temporarily tape your flaps to the wing and then permanently install the B.C., L.O's, pushrod and bottom B.C. mount (follow all bellcrank mounting instructions provided by the bellcrank mfg.) then sheet the bottom of the wing, flip over and sheet the top.



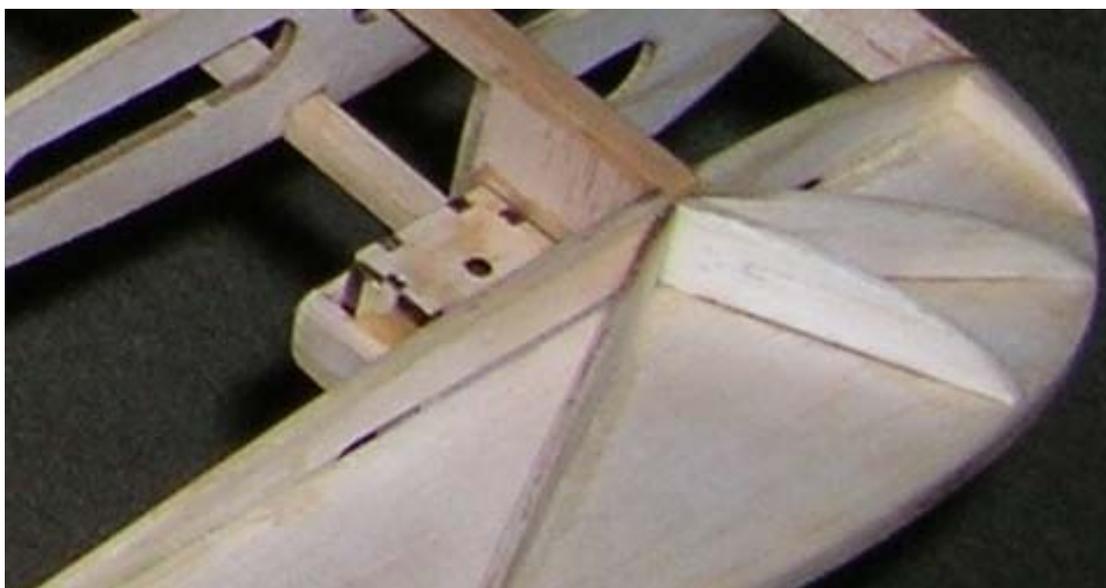
With the B.C. & L.O's now in place; you can move on to assembling the wingtips. Lay out the wing tip parts; they are different thicknesses, so mark them inboard and outboard according to the plans. Also mark the inboard wing's outer tip pieces for the center plywood doubler. Once marked, assemble as shown.



Masking sure you have proper clearance for the leadouts, install the assembled inboard wingtip, tip ribs and scrap balsa L.E. filler on to the wing.



Once done, repeat the process for the outboard wingtip. The adjustable weight box is mounted to the back side of the spars, Install a piece of scrap sheeting between or on the back of the spars so the adjustable weight box has something to hold onto other than the rib. See plans for A.W.B. location.

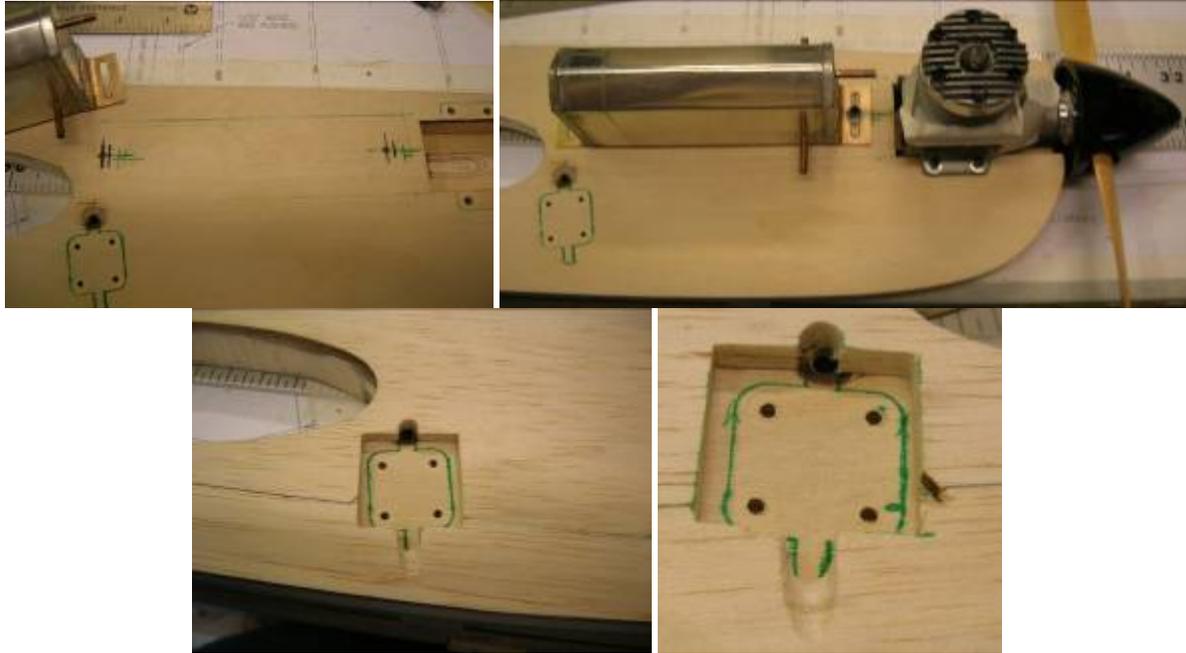


### Preparing the fuselage

Preparing the fuselage consists of mounting the landing gear, engine, tank, tail wheel block and triplers; it is recommended for best long term results you insert a 3/8 dowel thru the fuselage as shown in the photo below for the brass tubing to be inserted into. Drill for the dowel, brass tubing and mount the landing gear and gear straps now.



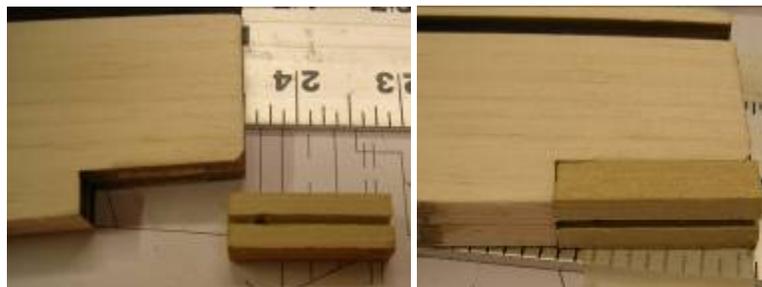
Mount the gear, tank and engine, once mounted mark both sides of the fuselage doublers by tracing around where these objects are mounted. Once done, duplicate these markings to the balsa triplers and relieve balsa triplers as required. See photos.



Once done, permanently glue the triplers on and sand to shape, see plans.

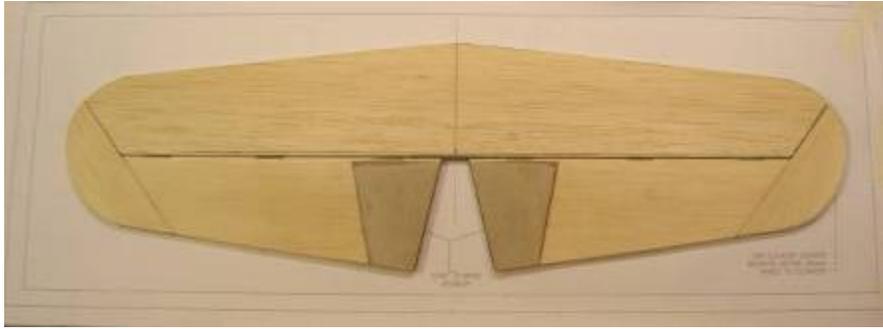


Drill hole for tail wheel wire then epoxy tail wheel block into fuselage, once cured test fit and secure wire.

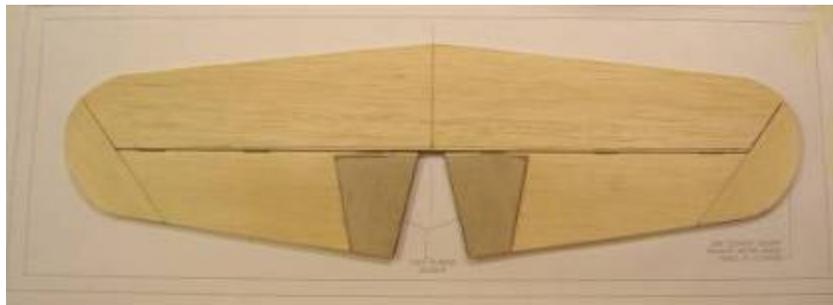
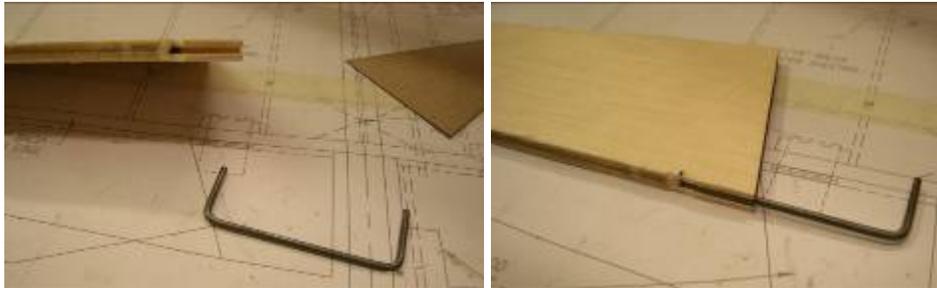


Assemble rudder and fin, sand and set aside. See plans

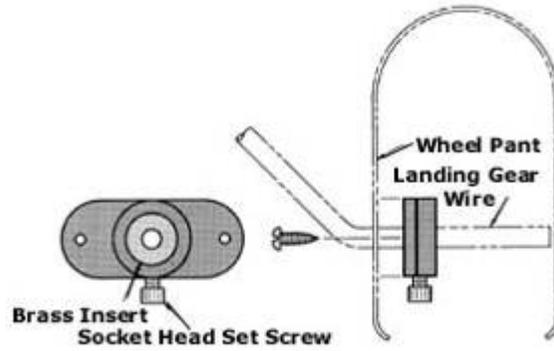
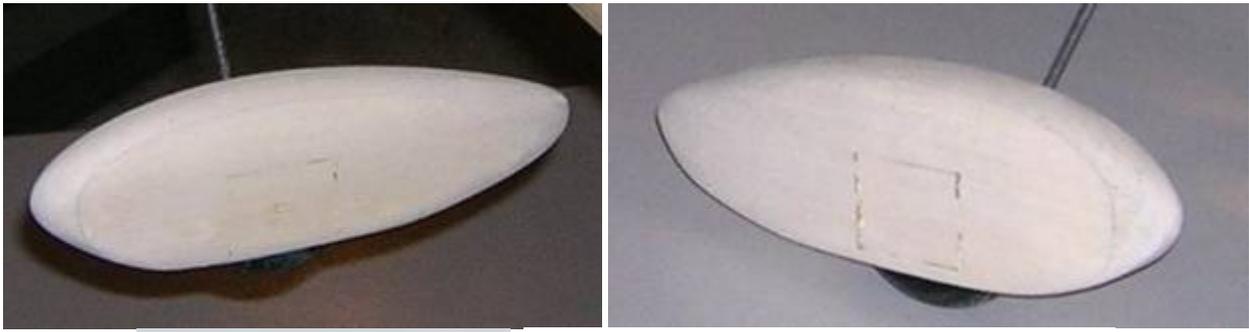
Okay now let's jump over to the stab & elevator, here is the finished stab and elevator should look like.



First mark a center line on the stab and then line up the elevators with the ends of the stab, do not glue on the counter balances on the elevators at this time because they will make it difficult to install nylon hinges. Install nylon hinges now. If you're not using nylon hinges then tape together and continue on and install the counter balances now. Mark the location for the elev. joiner wire. \*If you're not using our lucky boxes (lucky boxes sold separately) then drill the holes in the elev. for the joiner wire now. If you're using lucky boxes then cut elev. as needed. Either way you go, after the joiner wire installation is completed; install the plywood doublers.



Here is the finished wheel pant and its parts.



**\*\* Note\*\*** One change from the photos shown immediately below is there will be four outer pieces with the square hole not two



Wheel pant assembly will vary from wheel to wheel, so use these photos as a guide to assembling the wheel pants with the wheels you have chosen for your Spacewalker, once assembled, sand to shape.



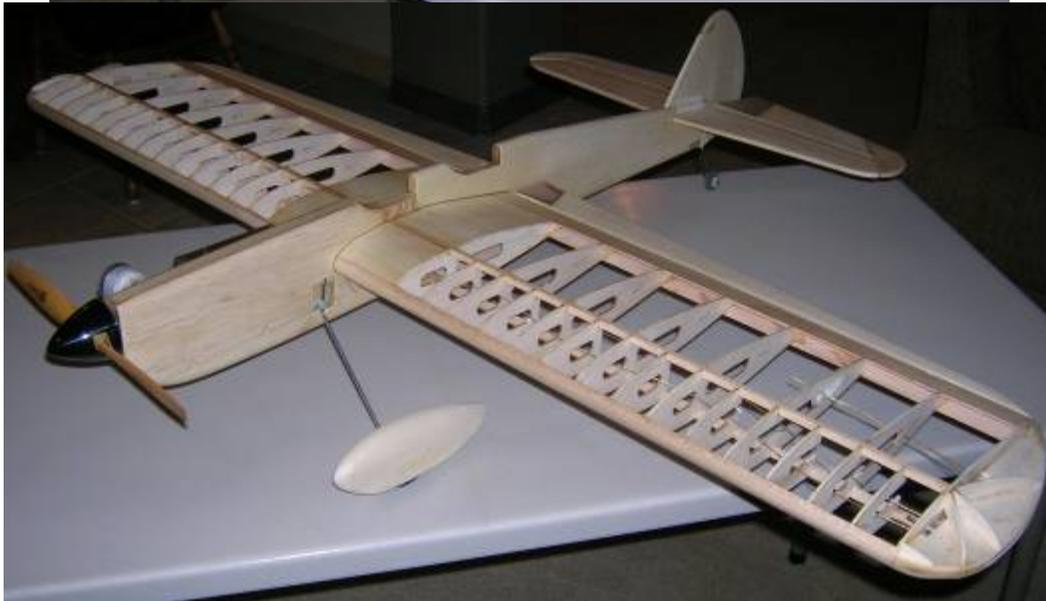
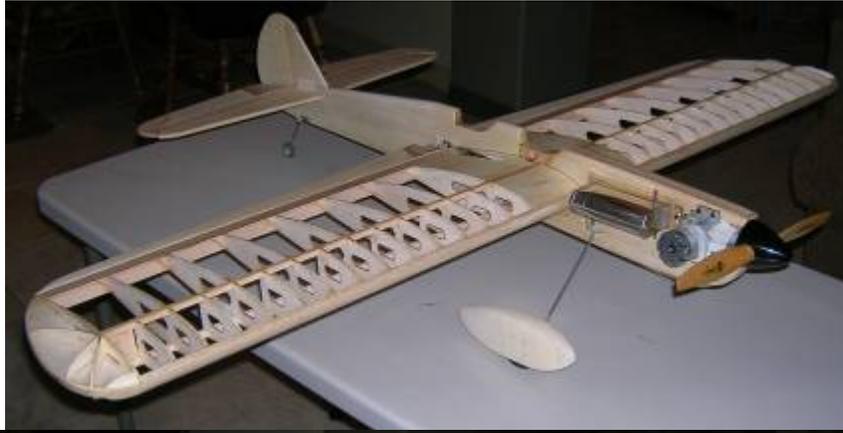
### Okay... You're pretty much done from here.

**\*\*Optional\*\* Glassing the center section for added strength.** Temporarily install the wing into the fuselage and mark the center section where the fuselage will mount, then remove. Once the wing removed, glass the center section using a lightweight fiberglass cloth and slow curing epoxy. Set aside and let cure. Once cured lightly sand being careful not to over sand, all that is needed here is a light scuffing to allow paint and or covering to adhere. In other words; only scuff off the shiny spots in the epoxy.



Once done, Final sand the entire model, completely assemble your "Spacewalker" and Cover to your desired finish, and the rest is up to you.

Let's jump ahead and show you a sneak preview of the assembled kit prototype...



**\*NOTICE\*** Some minor changes were made to the plans to prevent any possible issues in construction therefore; the photos and notes above should be used simply as a reference based off the building of the prototype. The builder shall use his or her own building techniques as they see fit or deem necessary.

**WALTER UMLAND'S LIMIT OF LIABILITY**

The only obligation to this kit shall be to replace such quantity of product proven to be defective. It shall be the user's responsibility to determine the suitability of the product for his/her use, and the user shall assume all risk and liability and responsibility in connection therewith. To contact Walter by phone call: 386-447-4247 Or email me at: [builtrightflyright@builtrightflyright.com](mailto:builtrightflyright@builtrightflyright.com)