

**SUPPLEMENTAL GENIE LT/S FILE BY Harley Michaelis (Sept. 5, '09)**

The LT/S is rugged, zooms like crazy, has great legs, is thermal sensitive & really agile. With overall CF cloth in the skin & a Kevlar thread wrapped spar system that includes top/bottom CF spars, the center section is like a board. The wing will handle full pedal, deep dip & hard zoom launches. It's perfect for sport & thermal competition.

The 10' span wing area is 978 sq. in. (6.79 sq. ft.) Though light, this is not a flimsy airframe & is "full house" with 6 servos. The glassed-over wood fuse version is rugged like the Smooth Genie Pro/Big Smoothie fuse. There's no skimping for the sake of making it light. Materials were just well selected & construction carefully engineered. You can use a "gorilla" grip on the fuse without fear of crushing it.

Although the first one weighed less than 62 ounces, my personal preference is in the 70-72 ounce range. To me, they move, groove, launch & handle better & give up nothing in the ability to thermal in light lift. The liberal flaps slow them down well for landings.



The composite fuse, shown here, is longer behind the wing. Handling is smoother in the pitch axis. The August, '09 plans show a 2-pc. SS pattern this length for the glassed-over fuselage. Cut from a 48" ply sheet, it requires a splice up front like the SGP fuse.

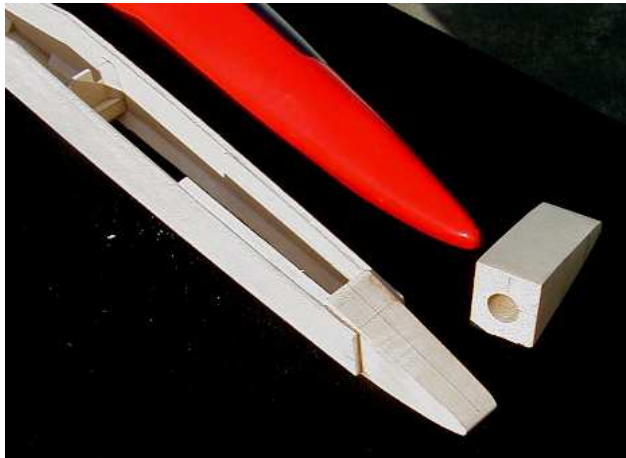


The LT/S can be built with one-pc. SS's cut from a 48" ply sheet & looks like this. Just shorten the pattern at the tail end as indicated for the Easy LT/S.

Compared to the composite fuse, the glassed-over fuse is much cheaper, tougher, more easily repaired & needing no tray, greatly simplifies servo installation. The August, '09 plans show the outline of the vertical tail for the glassed-over fuse, pictured below.

**CF SPARS:** These are discussed in the Costs, Materials and Tools document. Center the spar back 2-3/8" from the LE of the Section 1 core pieces at their outer ends. Fuselage requires servos sized like the JR micros, Hitec 225 BB's, Airt. 761Z etc. so the pushrod & rudder cables will conveniently pass under the main bolt holddown assembly.

**STAB:** If using the 48" SS's, shorten the large plan stab one bay at the root. If going for the 2-1/2" longer one or the composite fuse, use smaller stab on the plans. Rather small deflections are needed for pitch control. Plans outline a smaller vertical tail for the LT/S or Easy LT/S.



This pic shows a 4" long drilled out basswood nose block sandwiched between 1" of the 1/16" ply slab sides to which 1/8" balsa doublers have been added.

After the thicker woods are added top & bottom, this is shaped, glassed & painted.

The closed compartment behind the nose block is made 4-1/2" long.

See Const. File 4 about dealing with the nose block & slotting it for the single tooth nose skid. With band saw & sanding tools, taper the sides of the 4" block so it is 1-1/8" wide at its rear end & 7/8" wide at its front end. As shown, this fits nicely between the tapering sides & accommodates a standard square pack of AA cells or squat sub-C cells upright side by side. The block is rectangular in cross section at this stage.

When called for, glue the nose block vertically centered between the front 1" of the SS's. Run the closed portion on top 4-1/2" behind it & ending 1/2" high. When the fuse is ready to shape, taper the block toward the nose so the end is about 3/8" wide. Taper the 1/8" balsa doublers on the sides & that first 1" of the ply sides down to near the nose block.

In general, when shaping, keep the bottom balsa & the turtle deck no thicker than needed to impart nice curves, say 5/16" at the thickest areas.

**FLAP & AILERON CHORDS:** I had tapered flaps on the first 3 built. On the 4<sup>th</sup> one, I went constant chord to easily cut a straight line on the bandsaw using a fence. The trimmed flap chord was a constant 1-13/16" as is the aileron at its root. I extended the aileron hinge line out so that at the 5.7" point where the Section 4 begins tapering forward, the chord was 1-1/4". The aileron end, 1" in from the extreme tip, is about 1/2" less in chord.

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