

TAIL WEIGHT SAVING

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The building instructions for a typical slab sided rubber powered model suggest that the fuselage longerons are selected from firm or hard balsa. This makes sense. The longerons support the torsion and compression loads imposed by the rubber motor.

But the section of fuselage aft of the rear motor peg does not carry these loads. The longerons are over strength and more importantly, over weight! So why not eliminate some of the excess weight? Why not cut away the inside corners of the longerons as shown in the sketch. Each longeron would now have a triangular section. The uprights could also be lightened. Is it worth the trouble? Simple calculations for a Peanut size model show that the weight savings would be .05 grams. Wow! But wait. If our Peanut model follows the norm and is tail heavy and assuming a three to one tail to nose moment arm ratio, then lightening the tail by .05 grams will save .15 grams in the nose for a grand total of .2 grams! As an example of wad of modeling clay .2 inches in diameter weight about .2 grams. Maybe its worth the trouble.

