

Dinner Plate Bulkheads

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As much as a traditionalist I am when it comes to stick and tissue, I love all the new stuff that is out for construction. CYA glue, to me, saved model aircraft building as the speed it gives you really overwhelms the negatives. Besides, you learn how to work around the negatives---use it where it helps and don't where it hurts. Seems simple enough to me. The finishing techniques are really wild now. It used to be colored dope was it. Like it or lump it---it was all you had. Now there are acrylic paints that wash up with water, enamels that you can mix with dope and airbrush on in a vast array of "official" aircraft colors, colored chalk rubbed on tissue, Krylon taking the place of dope on tissue, and all sorts of variations of water based glues. Remember when Ambroid was it and nothing else? The miracles of modern chemistry really have made life sweet for us. Then there is stuff like the iron on coverings that are a real boon to the ducted fan and Jet-X/Rapier crowd as every landing is fast and tissue has a short, violent life on the belly of a jet.

Of course, if you get to looking at power sources it just about knocks your socks off. Electric motors that are so superior for scale compared to those screaming .049s of our youth. While the smell of burned nitro still brings tears to my eyes of nostalgia, I also remember the quick and exciting final flights of my gas powered scale models as well. You were not a real man unless you had your finger smacked bloody by prop kickbacks and then got the fuel into that throbbing raw flesh for a real treat. Mix it all with a chilly day and cold hands and you understand what true masochism is. Now electric motors that can be tamed to any speed you want, batteries are so light you can carry them along, gears are there to swing big props and even tiny ducted fans make jets possible. The CO2 motors are now like small fine watches and do the same thing as the electrics and sound like miniature engines to boot. Ah, we truly live in the Golden Age of Free Flight Scale.

Getting into this renaissance of scale free flight I have been experimenting in my shop with some interesting techniques that I found very workable. One was sheet foam such as what dinner plates are made from. I was totally out of good 5-6# balsa sheet for a new project and I did not want to build another lead sled as I have enough of those hanging around my shop as it is. In taking a foam dinner plate and cutting off the raised lip, I did some measurements and weights and found out it is an excellent substitute for 5-6#1/16th sheet balsa. While it is actually a little denser, the thickness is slightly under 1/16th such that they are totally interchangeable. An advantage the foam has is that it has no grain to shatter and when used as a interior bulkhead, it takes exploding rubber motors far differently than balsa. While balsa shatters under such stress, foam tends to bend and fold but stay together. While the balsa disintegrates into pieces you shake out the nose opening, the foam stays where it is. To repair, you just open the fold and glue a 1/16th sq stringer across the bend and the bulkhead is back in business. All right, I will admit foam will tear and rip apart under a really big explosion but nothing survives those.

In cutting out bulkheads, you can express your creative side and do it with scissors (don't laugh, it works) or be traditional and do it with an Exacto. The foam can be drawn on with a ballpoint pen for the bulkhead outline or you can glue paper patterns on with white glue and then cut away. Amazingly enough, white glue does NOT glue foam, nor does it glue the paper patterns on to the foam. It does keep the paper patterns stuck until it dries out completely and then the pattern just peels off. As far as gluing the sheet foam, the 2 things I found worked were foam-friendly CYA (it is labeled as such) and a glue sold by Hobby Shack called "SuperPhatic". The SuperPhatic is a very thin watery liquid that dries flexible and really has a lot of uses around your workbench outside of being foam stick um. When putting on stringers, I used 1/32nd by 3/32nd stringers and used a small cosmetic scissors to make little cuts in the edge of the bulkheads along the stringer line. I then gently pushed the stringer into the slots and lined it all up nicely with a little tugging with a tweezers here and there and hit each joint with the SuperPhatic. Things went fine all around the fuselage and when it was all done I took a moto tool with a tapered grinding stone in it and scalloped between each stringer. A little going over with a sanding block and I was amazed---it worked! The sheet foam was as easy to work as balsa, light as balsa, and for bulkheads, as strong as needed in all directions. Wing ribs were the same way. The sheet foam was user friendly, consistent in strength and weight, cheap, and as close as the local grocery store. I will admit nothing will take the almost sensual pleasure of cutting beautiful, marbled, pale white, 5# C-Grain balsa sheet but when the cupboard is bare, sheet foam is the best thing I have found.