

More Mixes: Other mixes that are common to SA aircraft are a throttle curve and aileron differential. I don't use either of them with my airplane but I thought it prudent to touch on them here.

A throttle curve is used to make the engine power feel more linear through the entire range of stick motion. Since carburetor butterfly position does not usually translate to engine rpm, most of the change in power comes at the lower end of the stick movement. You can set a curve to give you a more even feel. Some people use this for torque rolling if the throttle is too touchy at the hovering rpm range. I had throttle curves in all of my models when I flew at sea level, but since moving to the high altitude in Colorado I've taken the curves back out.

Aileron differential is a means to even out the drag on each wing of the aircraft while rolling. If one aileron has more drag than the other it can cause the airplane to yaw off line as it rolls, giving you a wobble. Normally the down aileron creates more drag than the up side, giving us what is commonly known as adverse yaw. Most differential programs work well at adjusting the down aileron for either roll direction. Actually seeing this happen can be very tricky, so often it just comes down to some extensive experimentation until you get a roll that looks good.

Before computer radios, pilots and designers used to adjust differential by changing the location of the aileron hinge line! Can you imagine the work involved in doing that for each adjustment? You can also see the importance of starting with properly set aileron deflection. The key to making intelligent adjustments is knowing what you have to start with. Our Extra has an axial roll, so I have no differential programmed into the airplane.

Ready to Fly! If all is going well and you've followed Project Extra through the building process, you're probably just putting the last drops of Loctite on your bolts and checking throw directions one final time before you head out to the field for the first flights with your new airplane.

Who would have ever imagined five years ago when I started to dream about the type of Scale aerobatic model I wanted for myself that it would turn into a major project I would be able to share with the whole modeling community? It has been my hope that you come away from reading this series with some new knowledge or ideas about your own modeling experiences. And if you came away from it with a new airplane, that's so much the better!

It's been incredibly gratifying to read so many letters and E-mails from AMA members who have followed and enjoyed the series, and it's been equally gratifying to be able to forge ahead essentially with a blank sheet and help the *MA* staff create a model for future Web-based construction articles and start the ball rolling for an information database that will spread to all aspects of the hobby.

The entire process of bringing this airplane to you and documenting it as the construction progressed would not have been possible without Erik Richard's tireless effort and perfectionism. When we started this project for *Model Aviation*, Erik's wife Angela was newly expecting their first child. Erik's daughter Julia is a year old now! Throughout it all, Erik's commitment to the project has been unwavering.

Oh, don't think for a minute that he's going to have time to spend at home with his family now. We have plenty more ideas and projects ready to get started on, and we can stay busy for a long, long time ...

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