

RV-11 UPDATE

VAN



Project status: Active again, after many periods of inactivity.

Reasons for Delay: Too many to mention, but I'll try.

R&D Priorities. The RV-11 has always been a spare time personal project, not a Van's Aircraft project.

- *Personal Priorities.* My late spring, summer, and early fall months seem to be devoted to gardening, yardwork, and soaring priorities. Then, about three years ago I got the bright idea that I needed an RV-10 of my own. Thus, an RV-10 QB kit occupied my shop at the same time as a group from EAA Chapt. 105 were working to restore the "Little GeeBee" for the NAS Museum. That set the RV-11 back about two years.
- *Uncertain Market.* There has never been a demonstrated market for motor gliders or self-launch sailplane kits. Back in the 60s and 70s sailplane kits were quite popular, but eventually the influx of high performance fiberglass sailplanes from Europe (affordable at the time) created a continuing supply of affordable used sailplanes of comparable or greater performance than the best kit sailplanes. A number of motorized sailplane designs appeared over the years, but they were either too difficult to build, gave unsatisfactory performance, or were too expensive. Several kit sailplanes (European origin) remain available, but are high priced compared with used sailplanes.
- *Market Survey Results.* I have long felt that the primary market for a motor glider kit would be power pilots. I have more recently come to the realization (conclusion, assumption) that a very small percentage of power pilots would be interested. I now feel that the vast majority of power pilots, perhaps 90% or more, are primarily "point A to point B" pilots; more interested in navigational gadgets and glass panels than in flying simply for the fun and challenge. This, if true, greatly limits the potential market for a motor glider kit.

When I wrote a series of features in the *RVator* about eight years ago, my purpose was to educate as much as it was to run a market survey. I knew that most RV builders were power pilots with little involvement in or knowledge of sailplanes and soaring. To get a meaningful response, I felt that I needed to give them a basic idea of what soaring

is, and the basic design requirements for a glider capable of reasonable sport soaring. I believe that I did a good job of this, enough so that these articles were later reprinted in the Sailplane Homebuilders Association newsletter.

I have received a number of responses to my articles over the years. About a third of the respondents indicated that they accepted my premise, and were genuinely interested in an RV-11 if it could meet the performance parameters outlined. Others simply said that they were interested.

However, nearly half expressed an interest and then went on to describe what they thought the design parameters should be -- construction materials, number of seats, etc. Most of these people ignored my reasoning and made suggestions that made it obvious that they'd never built an airplane -- or even really thought about the basics of what makes airplanes perform.

I was probably very naïve for even thinking that a survey would be of value, but it is a bit annoying when respondents completely ignore the premise, and the knowledge and experience it represents. They probably had a negative impact on the project.

I have put a ridiculous number of hours in the building of the RV-11. This is partially because it is a totally new airplane with features that I have not had to contend with in prior designs. Another reason is that I undertook the construction after a rather basic design process. I told myself that I'd figure out the details as I progressed. Unfortunately I rediscovered the old adage about "designing yourself into a corner". When details are not properly addressed in advance, they can become very difficult to accommodate when they rear their ugly heads.

This is particularly apparent in the cockpit, where there just isn't enough space. The basic length and width dimensions are OK, but I cut cockpit depth to a minimum to minimize drag. By the time I fitted all of the controls, space for a semi-retracted wheel, wheel retract mechanism, etc., it is a bit cozy. Each of these features had to be designed, and re-designed to function adequately and not interfere with something else. I've experienced this before, but I have never needed to fit so many things in such a small space.

OK, enough of my excuses and complaining. I am again working on the RV-11 POC with the intent of finishing it this winter. To those of you who were, or are seriously interested in this concept, I apologize for stringing you along for so many years. While I would still like to offer a kit for a soaring quality motor glider someday, don't hold your breath. Remember, the POC aircraft is just that, and any possible kit would require *much* more design effort and a new kit prototype. For those of you intrigued by the concept of soaring flight, I suggest that you visit SSA.org and locate a soaring school or club in your area. Take some lessons or maybe get an add-on rating. Try to get some time in an advanced trainer with an L/D of 30 or better so that you can appreciate what true soaring is all about. Training in a Schweizer 2-33 is not too much better than flying a T-Craft with the engine off. I exaggerate, but the higher performance is where the real fun is.

Meanwhile, stay tuned. I still feel that the concept I am pursuing is valid. Maybe something will eventually filter into the marketplace.