

Back to Homebuilder Basics

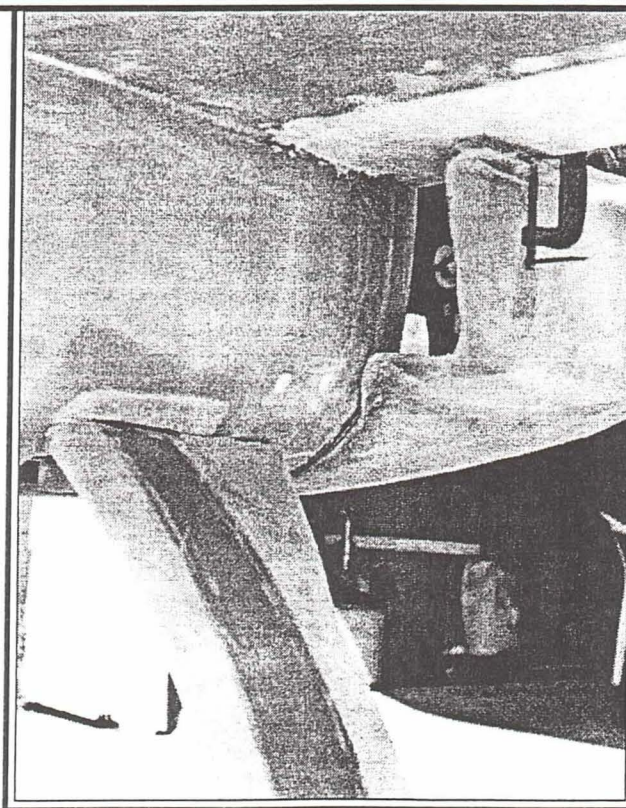
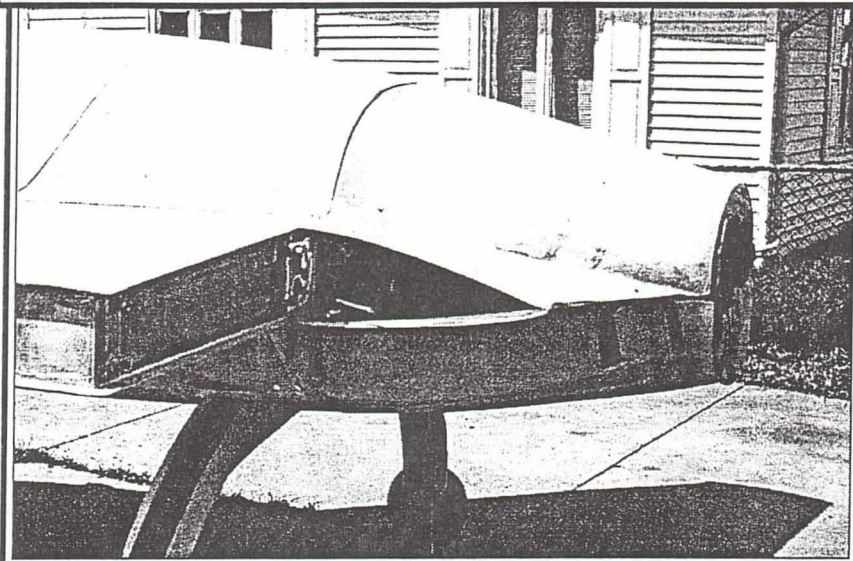
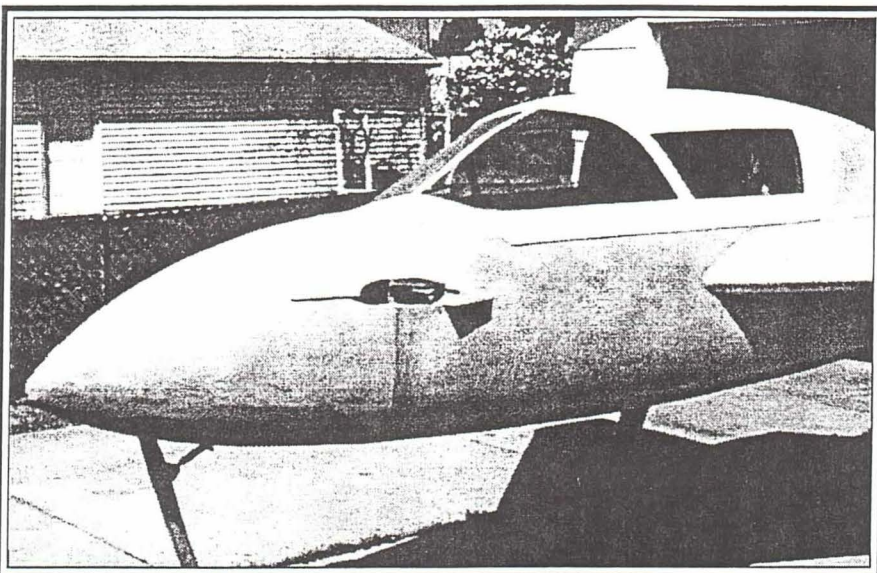
In the 70's, when Burt first brought the Vari-Eze to OSH, a revolution was started. The airplane's performance, appearance, relative ease of construction and affordability combined to cause a sensation.

The homebuilder could, indeed, have it all. Foam and glass were cheap and Rutan plans showed how to build nearly everything. As years passed more prefabricated parts and kits became available and prices increased dramatically! If you have mucho bucks there is little problem, but the average man's airplane has begun to look like a Peitenpol again.

I recently visited a fellow who demonstrates one can still build a modern airplane without knocking over a Brinks truck. George Graham is well along on what he calls a highly modified E-Racer. E-Racer purists may be repulsed because George's main gear is not retractable, however, this "mod" was an acceptable change to George due to the complexity, weight and cost reduction. All airplane designs are compromises. We all have different constraints and must adjust accordingly. George also made his own main gear strut to further save money and because no prefab strut was available for a fixed gear. He made a mold of the strut then wetted out the multitude of individual strands of glass and laid them into the mold. It was "just another 2 hour job" that took almost 24 hours of continuous lay up effort.

In the "good old days" one could get a prefab canopy for about \$200. Now, they are around \$800. George decided to make a different canopy, more fitting with his constraints. Flat Plexiglas sheets were heated, formed and placed in a sandwich composite frame to create a unique canopy that fairs well into the rest of the aircraft.

Another area of major expenditure is the powerplant. See page 12 for George's solution to propeller and PRSU (prop speed reduction unit). You may remember the January 98 issue having a view of his Mazda automotive conversion and ingenious way of mounting it for testing. How many other homebuilt engine/prop combinations do you know of that have over 15 hours logged before installation in the airframe? The cowl is of sandwich construction, also. My hat is off to anyone who demonstrates good old Yankee ingenuity and dedication to produce a modern composite design like George has done. It seems building from scratch is still alive and one can still build on a budget.



2/2/16