

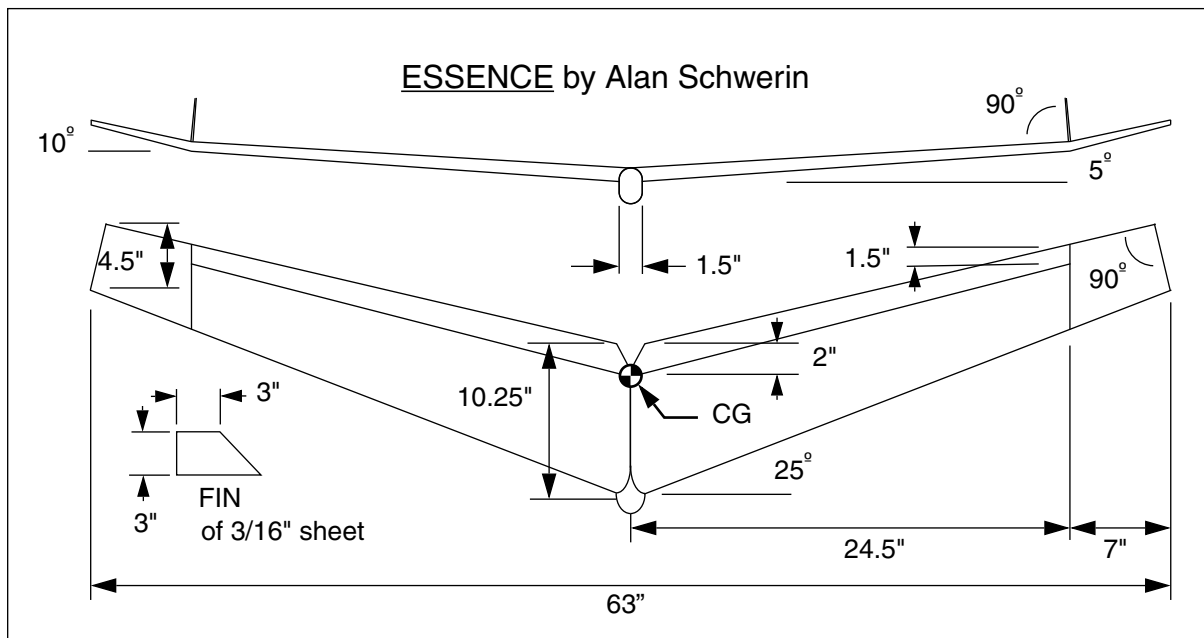
Alan Schwerin's "Essence"

Dr. Alan Schwerin, of Lake Charles Louisiana, wrote to tell of his latest project, a swept 'wing which he calls "Essence." This 'ship, his second 'wing, has several characteristics which will be of interest to tailless enthusiasts.

Alan used the SD 7037 as the root section and the SD 8020 for the tip. The transition from one airfoil to another is linear across the semi-span. Neither of these airfoils is generally considered to be appropriate to tailless applications, but the combination seems to work very well for this planform. Lateral stability is achieved through use of enlarged fences. These fins are three inches high and are outboard, at about 80% of the semi-span.

Alan put five degrees of dihedral into the wing's center panels, and ten degrees of dihedral into the outer panels. Dihedral usually makes winch and high start launching difficult, but this has not been the case with "Essence" — it high starts very easily.

"Essence" is constructed of blue foam which has been sheeted with obechi. An Airtronics micro receiver, two micro servos, and a 100 mah battery make up the flight pack. Elevons serve as the only control surfaces. These extend



out from the root to the fins, and the roll rate is excellent. A minimal fiberglass keel provides a hand hold and houses and protects all of the radio gear. Total weight is 17 ounces, but with an area of 450 in², the loading is down to 5.44 oz./ft².

“Essence” started out as an RC-HLG, but it was soon discovered that, despite its relatively low wing loading, its ability to circle was not nearly adequate for HLG contests. “Essence” does, however, have a rather broad speed range, and is capable of flying nearly as slowly as an Eppler 387 equipped RC-HLG of conventional tailed configuration. This makes for a lot of leisure flying fun.

Alan concluded his letter with the following observation; “There are so many negative comments in the literature about ‘wings and their inefficiencies, I had to find out for myself. I am not entirely sold on ‘wings, but the fun of trying out one’s own ideas, over very high grass, appeals to me.”

