

# Ultra Duper Zilch!

By Michael Garmon

The author's 40-year infatuation with Jim Saftig's venerable C/L design inspired a flapped version that proved to be an ideal intermediate Stunt trainer.

The *Ultra Duper Zilch* is the result of a forty-year infatuation with *Zilches*. It all began in 1950, when I witnessed my first model airplane flight. The plane was a *Super Duper Zilch*, powered by a Madewell .49, finished in shiny white dope and trimmed with Cub Yellow; that *Zilch* was the most beautiful plane I had ever seen. I watched in awe as it took off, performed loops, inverted flight and figure eights. Watching the flight, I thought the *Super Duper Zilch* was, just as the Berkeley ads proclaimed, "The king of Stunt planes".

The *Zilch* series of stunt planes was designed by Jim Saftig and kited by Berkeley Models. They were available in many sizes, ranging from the 1/2A powered *mini Zilch* to the .60 powered *Super Duper Zilch*.

For many years, I dreamed of building a *Super Duper Zilch*, but the \$5.95 price tag was too steep and I had to settle for the less expensive PDQ *Super Clowns* and *Circus Kings*. By the time I could afford one, Berkeley had gone out of business and my dream of flying a *Zilch* seemed at a dead end.

In 1990, I found a set of plans for the *Super Duper Zilch* and my dream of forty years was finally realized. The old *Zilch* was

very easy to build and just as beautiful as I remembered. However, its flight performance was another story. Due to the thin airfoil and lack of flaps, it would not perform the Stunt pattern as well as the *Super Clowns* I flew years ago. So, I hung it on the workshop wall and forgot it for a time.

For many years prior to this I had been competing in Combat, Racing and Navy Carrier events, and it wasn't until the mid 90s that I entered my first Stunt contest. Although my flying was on a par with most of the other intermediate class pilots, I failed to place in any of them, because of problems inherent to the design I was flying. These problems included tapered wings that warped, inverted engines that would not start, wing mounted landing gears that tore on landing, built-in fuel tanks that required major surgery for maintenance. So, in December 1992, I decided to design a new ship for the 1993 season that would incorporate the following features and eliminate the problems experienced with my 1992 airplane.

1. First, constant chord wing for ease of construction and warp resistance.
2. Built-up fuselage with uncowed upright engine mounting for ease of starting

and maintenance.

3. Removable hatch to facilitate the quick removal of the fuel tank for maintenance or adjustment.

4. Fuselage mounted landing gear to avoid wing damage when landing on rough grass fields.

5. External elevator horn for ease in adjusting flap to elevator ratio.

6. Elimination of compound curves in the design to speed construction.

While contemplating all this as I sat in the workshop, I happened to look at the old *Zilch* hanging on the wall and realized that it possessed all the features I planned to incorporate in my new design. Within a few hours spent at the drawing board, the result was an airframe combining modern airfoils, moments, and construction, but with the clean straight simple lines of the old Saftig designed *Zilches*.

From the first flight, *Ultra Duper Zilch's* performance has exceeded all my expectations. It is extremely stable in level flight, yet has an outstanding turn in the square corners. The *Zilch* feels a lot like the *Sig Magnum* in flight. Even though the *Ultra Duper Zilch* is not going to win the Nats, I feel for the intermediate level flyer, it is an excellent choice because of its simplicity. Some of the experts might even want to build one as an engine test ship.

## Getting started

I start construction with the wing, by splicing together the wing spars, leading edges, and trailing edges. Mark the rib locations on both spars, the leading and the trailing edges. Pin the bottom wing spar to the building board and glue the ribs to the spar. Add the top wing spar, leading and trailing edges and remove them from the board. Add 3/32-inch shear webbing to the spars. Glue in 1/4-inch balsa bellcrank mount reinforcements to the inside of the two center ribs. Add 1/16 x 1 x 1/2-inch trailing edge sheeting and install a 1/8-inch ply bellcrank mount, bellcrank leadouts and pushrod.

Sheet the leading edges and center section with 1/16-inch balsa. Add wing tips and capstrips. Cut the flaps from 1/4-inch firm balsa and install a Sig 4-inch flap horn, hinge the flaps to the wing, and connect the pushrod to the upper hole in the horn.

Cut stabilizer, elevators, fin and rudder from firm 1/4-inch sheet balsa, install a 3/32-inch diameter music wire joiner in both elevators and hinge them to the stab.

## Moving on to ...

Cut two fuselage sides from firm 1/8-inch sheet balsa and install the 1/8-inch light ply



For the author, the *Ultra Duper Zilch* killed two birds with one stone. His design provided him with a pattern-capable stunter and satisfied a long dream of owning and flying a real *Zilch*.