

**The "Goose" Pinkham Field Stick Model**  
**Woodsom Farm, 9/11/2022**  
By Steve Evans



It was suggested recently that we have a Pinkham Stick event during upcoming contests. Never having flown in this event I read through the rules and got busy with the drafting board, (yes, I still use one of those).

I had never designed or built a canard but have always liked the profile of the Rutan VariEze so I used that as the basis for the wing. The generous center section and swept back wings yields 62.85 square inches of area, all within the required 20" maximum span. I referred to Don Ross' "Rubber Powered Model Airplanes" book to understand the recommended proportions for a canard design and laid out the front canard and the rest of the design based on those recommendations and what I felt "looked right". Lastly, as advised by my excellent fellow modelers, I set the incidence of the primary wing to '0' and the canard at 7 degrees. I made the canard very adjustable both in fore-aft position as well as angle by attaching it with dental bands. Without the rubber but with nose weight, the model came in at 13 grams resulting in a wing load of .207 gr/in<sup>2</sup>!

I arrived at our beautiful Amesbury field just as the dew was evaporating and the day was warming up. I loaded a short loop of 3/32 rubber into the plane just to turn the 8" pusher prop during the initial test flights. Very quickly it was apparent I needed considerable amounts of clay on the nose to balance her out but once that had been remedied the test glides looked promising. More winds and more rubber kept improving the performance but she would never get above 6 or 7 feet high and would just putter around.

Meanwhile Richard Zapf was putting in Pinkham Stick flights with his Pipit which was soaring high and setting the mark for the day at 60 seconds.

Slight twinges of frustration were starting to creep into my efforts then Tom Nallen suggested I switch to a smaller prop which I did. Lordy what a difference it made! After installing a 6" prop and rebalancing she fairly shot upwards, circling tight. Successive flights with more rubber yielded times of 50 seconds, 52, 48 and even 57. I was knocking on the door but was unable to surpass Richard's time and he laughed evilly with the results of each flight.

Then I caught a slight thermal, 110 seconds! Now I was laughing but I knew he would just need to get the Pipit out for one flight to retake the lead so while conditions were near ideal, I wound her up as much as I dared and let her go.

The climb out was steep and circling tight, at one point it seemed to rotate on its wingtip, but it continued to climb. Now I was worried it would go OOS but fortunately at the peak of altitude the rubber motor fell off the rear hook and she glided down, landing on the field and at the 120 second mark. That was enough to seal the win. Not bad for the first day out with a new design. Clearly the design has the potential to exceed 2 minutes and I plan to blow past that during our upcoming October contest. Watch out Richard!

If you would like to build one, I have converted my crude drafting board design into a CAD version which should be available for download on our Stealth Squadron website, [stealthsquadron-fac49.com](http://stealthsquadron-fac49.com).

Happy flying!

Steve Evans