



Gene Smith  
and  
The Backyard Flyer

Comments on his ultra-lite - with references

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August 14, 2019

The picture of Gene Smith on the title page is from a YouTube video (I just happened to see) and have been almost mesmerized by listening to him and watching him discuss his ultra-lite called The Backyard Flyer.

This picture is a 'print screen' shot from the video at <https://www.youtube.com/watch?v=uaUe8uT-CtM>  
(published 2015 – 19:30)

It was not until a few more URLs on him, his planes, and is his family -and just about the time I figured I needed to have one of these 'aeroplanes' in my hangar, I found out he had died in 2016.

So, this is just to tout the profound simplicity in his design, gander in amazement at the beauty of aluminum tubing welded to hold/carry/support a simple wing, and to list some more places to look at the later models/series, and show a note or two on his family who helped him build it.



Engine, windscreen, seat, wing, fuselage, and tail.

This shot is showing the full span Fokker type ailerons. He has the stick to left with the left aileron up and the right one down. The stick is also forward showing the 'elevon' in the down position.

It just cannot be any simpler.

For those of us who use to fly and build model airplanes this is just splendid inspiration.

(I have flown with guys like him and some have built light aeroplanes. He has received some awards but deserves a metal for just being a good guy, a good pilot, and a great father and grandfather.)

\* Look and listen for:

PSRU – Prop Speed Reduction Units; 72x39 maple and mahogany; Four-Cycle, two-cylinder, 990cc, V-Twin developing 40 hp at 3600 rpm; 254 pounds empty weight; 27 foot wing span; auto carburetor-heat; five gallon max fuel tanks; electric starter; "Big Twin" Four Stroke; take off distance (really?); flying speed; and how long it takes to 'swing the wing.'



Listen to his explanation on the curved bow tube for the 'shock absorbing' effect – it is just amazing. The prop is 72 inches.



Close up view of the tail wheel on the two place aircraft...looks like some more work is needed.



How simple can you get and be able to look up into the high cantilever, high lift wing, to see the 'spars' and the five gallon gas tank?



This is why it is called a swing wing. Needs a 30 foot trailer and away you go. Watch the video to see how they attach the wing to fuselage – and then watch how they hook up the ailerons. Is it failsafe and simple?



Alaina Lewis, granddaughter w/Abigale

<http://www.culverprops.com/ValleyEngineering.html> Valley Engineering...Two Place (10:57 – 2017)

(Not in the process of building anymore since Gene died in 2016. See notes on family, props, and reduction units.)



This is what I was/am looking for...no, she is married! See above for a two-place! Look at the double tube 'shock absorber' replacing just the one. Would you put the throttle in the middle or leave it on the left side?



25, 25, 50, 100

Twenty-five feet for take off roll,

25 mph flying speed,

50 mph straight and level,

100 feet traffic pattern altitude...

Watch him begin his roll, push (cram) stick full forward - just to get the tail up - and then rotate it to fly.

I/we need to find one of these and go over all the parts to the engine as 3600 or 4200 on these small engines may be a bit loud. Bet you can't get 2000 hours on the engine before overhaul (but I really don't know).

**Email me if you see one of these for sale...- especially the two-place.**

1. Aircraft - Culver Props Shop Interview Alaina Lewis! (36:56 – 2018)

A one woman show....well, her grandmother comes over every day to help.

<https://www.youtube.com/watch?v=HHXlhJIPqKg>

2. Unveiled at Oshkosh in 2008.

(Hard to understand – unpacking the ultra-lite - shows a bunch of takeoff and landings.

[https://www.youtube.com/watch?v=r\\_Byh3SdVvo](https://www.youtube.com/watch?v=r_Byh3SdVvo)

3. BRS Ballistic Recovery System for ultralight – these first models do not look a BRS is installed.

<https://www.youtube.com/watch?v=b65jMXiL6A>

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