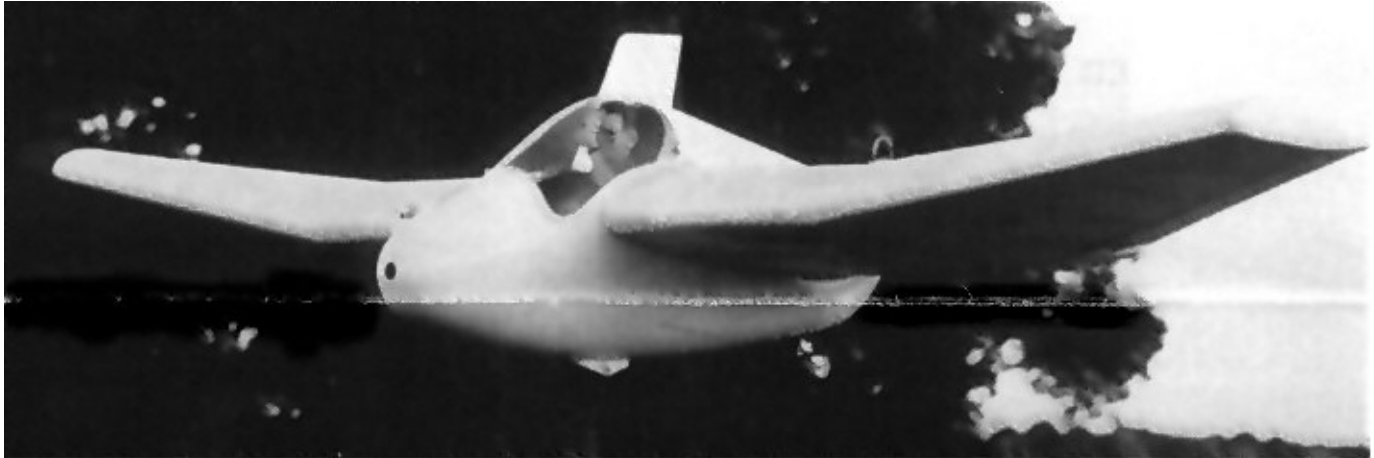


T.W.I.T.T. NEWSLETTER

In the October 1998 TWITT Newsletter we showed a 3-view of the Pelican on page 7. Phillippe Vigneron had indicated photos were on the way, and the above is proof that this is a real flying wing. (Please excuse the distortion one through the fuselage that resulted from the photo being folded.) This aircraft was designed by Jean Claude Debreyer and is manufactured/marketed in kit form by AIR EST SERVICES, Marly, France. It is built of composite materials with wings of foam and Dacron. Span; 7.2m, length 3.1m, Area 12m², Main Chord 2m, thickness 17%, Empty Weight 80/85kg, Max Weight 175kg, Engine on Solo 210cc (15hp) with pusher propeller and a Cruise Speed of 75km/h.

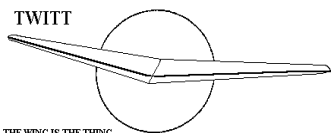
T.W.I.T.T.

The Wing Is The Thing
P.O. Box 20430
El Cajon, CA 92021



The number after your name indicates the ending year and month of your current subscription, i.e., 9901 means this is your last issue unless renewed.

Next TWITT meeting: Saturday, January 16, 1999, beginning at 1:30 pm at hanger A-4, Gillespie Field, El Cajon, CA (first hanger row on Joe Crosson Drive - Southeast side of Gillespie).



THE WING IS THE THING (T.W.I.T.T.)

T.W.I.T.T. is a non-profit organization whose membership seeks to promote the research and development of flying wings and other tailless aircraft by providing a forum for the exchange of ideas and experiences on an international basis. T.W.I.T.T. is affiliated with The Hunsaker Foundation which is dedicated to furthering education and research in a variety of disciplines.

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Meetings are held on the third Saturday of every other month (beginning with January), at 1:30 PM, at Hanger A-4, Gillespie Field, El Cajon, California (first row of hangers on the south end of Joe Crosson Drive, east side of Gillespie).

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PRESIDENT'S CORNER

One of the last things I mentioned in my column at the end of the year was that the yearly membership fees would be going up after the first of the year. We didn't make this decision lightly, but in this case the cost of printing has gone up in the past several months and the US postage rate is going up this month. The foreign rate has gone up a little more than the US rate, since we have been somewhat subsidizing it for some time now and it can no longer be done. The new rates are \$20.00 for US/Canada subscribers and \$25.00 for all other foreign subscriptions.

We regret having to make the increase, but will be doing our best to also improve the quality of the newsletter as the months go by to help make for the difference in pricing. Some larger donations have made it possible to purchase a flatbed scanner and digital camera which will enhance our capability to include more pictures, graphs and other types of illustrations each month. They will also help improve the quality of the information being provided on the web site.

Speaking of the web site. It is doing real well as far as the number of visitors each day and has now grown to about 3.7 megabytes of pictures, stories, links and advertising. I have been trying to do updates about once a week or when new information becomes available. I am experimenting with different presentation formats to ensure the average user can download the information quickly and this will improve with time and my learning curve.

If any of you know of a web site you would like others to know about, please drop me an e-mail with the site name and a brief description of what it contains. If it is appropriate for the group, I will be glad to add it to the links section so others can easily find it.

I would like to thank those of you who have been sending in material and your letters. I have gotten a little behind on printing them due to the backlog in meeting minutes, but I will try to get some of the older ones in this issue.

In this issue is also the **1999 Membership Roster** broken down by state or country. I hope this help you find members who live in your general area and perhaps get together from time to time and discuss your mutual interest in flying wings.

I hope everyone had a HAPPY NEW YEAR.



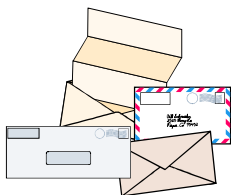
**JANUARY 16, 1999
PROGRAM**

We will be kicking off the new year with a program on Low-Speed Aerodynamic Drag presented by **Rik Keller**. He has been a constant contributor to EAA Chapter 14's newsletter through his Computer Corner articles covering how to do things more easily with simple computer programs. One of these is a Stall Speed and Efficiency Factor spreadsheet using Microsoft Excel to perform complex calculations after inputting the basic information. I anticipate we will have a handout containing some of Rik's articles that will also show you where to find several of the Excel spreadsheets he has developed along the way.

Rik originally comes from Sioux City, Iowa, where he learned to fly in a J-3 Cub when he was about 11 or 12 years old. After missing out on Navy flight training due to the premature end of WW II, he continued flying all types of tail draggers as his financial situation would allow.

He earned a degree in Electrical Engineering and went on to work in the area of electronically identifying aircraft. He patented a device that was used to home in on an ELT's signal and, designed a gadget used to track the whereabouts of sonobouys dropped from Navy aircraft. He built and taught himself to fly a Bensen Gyrocopter in the 1960's, and in the '70 collaborated with a friend to build a Thorp T-18.

Rik has taught both math and electronics courses at a local San Diego Community College and, in the process taught himself about aerodynamics. He felt there must be some easy way for the average person to use complicated aerodynamic formulas and that is what got his Computer Corner started.



**LETTERS TO THE
EDITOR**

11/1/98

TWITT:

Thank you for your excellent newsletter. I accidentally realized I need to renew my subscription (read the code on the address label, folks), so please find enclosed my check for \$86 for two more years subscription and \$50 of back issues. I would like to start the back issues at the beginning, if possible, my intention being to get all of them. Could you tell me how many are available?

I have included several photos that might be of interest. The four photos of flying wing N121LW I took at Oshkosh in 1997. It is part of the Air Museum's display aircraft, but I couldn't find anyone that could give me any information on

it (due to the huge airshow going on). It is all composite with very good workmanship, but I couldn't determine the engine type.

The other two photos are of the Shapel SA-882 (I think). It is hanging on a hanger wall at the Chino Planes of Fame Museum. I was there on a Sunday, so there was no one with any knowledge of it working that day. I suspect that the TWITT back issues will shed light on this aircraft.

Thanks again for all the hard work. If I get to San Diego, I will time it with a TWITT meeting.

Paul Spatrisano

(ed. - Thanks for the renewal and the reminder to the members to check the information on their mailing labels. I assume by this time you have received your back issues and are working your way through them.

The aircraft at Oshkosh was identified by Serge Krauss in our May 1993 newsletter as the Whitaker Center Wing. As of 1990 it had a sign with the following address, which may or may not still be valid: Larry Whitaker, 321 Brandt St., Dayton, OH 45404. Al Backstrom sent us a copy of an article titled "Rally 'Round The Centerwing" by Larry Whitaker, published in the July 1994 issue of Homebuilt Aircraft, pp. 24-29. Somewhere in all of this, I recall reading that it was powered by a Rotax, but not which model. See a new picture of this homebuilt on page 3.)

You were correct that the Chino aircraft was the Shapel prototype. There is a long story behind the aircraft and some of it is in the past issues, but right now I can't tell which ones. At one point we were offered the wing molds for this aircraft, but having no place to transport or store them, we had to turn it down (like the Kasper papers, a decision we would later regret). Rod Shapel is a member of TWITT, but we haven't heard much from him in the past several years.)

9/4/98

TWITT:

I give you in appendix, two letters that I had prepared some time ago regarding an aircraft which was presented in the TWITT Newsletter of May and June (letter from Bob Bigelow). Since the moment I wrote the letters, I have found that Mr. Roland Payen is still alive and living in the south of Paris (exactly: Athis-Mons). He is still active in the aeronautic field. In his town, there is a museum which is related to the delta aircraft (address: Musée Delta, Rue Jean-Pierre Benard 40, F-91200 Athis-Mons, France). I have not yet visited the museum.

For the first flight of the Payen Pa49 "Katy", there is another version which says that its first flight was on January 22, 1954, with Mr. Tony Oschenbein at the command and that the first Delta aircraft to fly in France was the SFECMAS-1402 "Gerfaut I" on January 15, 1954 on the same airfield of Mellun-Villaroche. My source also says that the official tests were performed at Brétigny around April 1954, by Lt. Dominique Ferrigno. At the end



ABOVE: Whitaker Center Wing on display at Oshkosh.

of the test, the "Flechair" flaps were applied. It seems that the aircraft is now on display at the Musée de l'air in Le Bourget, France. I have to verify this story and the fact that the aircraft still exists. Some photos are available on the internet, but sorry I forgot to take note of the address.

Concerning the company, Texas Aircraft Factory, which is building new Messerschmitt Me262, please note that I have found the address on the internet. There are two sites related to this story which are:

<http://www.tia.net/users/mdupont/luftwaffe/texas262.html>

<http://www.ozemail.com.au/~friends/texas.html>

Unfortunately, the Me262 is built but the first flight is not yet done because of court problems.

For the mystery flying wing which was part of one of my previous letters published in the February issue (page 7), please note that, in addition to the information I gave you in the letter dated May 8th (ed. - part of appendix referred to above), I have seen some other photos of this aircraft in the web site of Mr. Huib Ottens. Mr. Ottens was the man who wrote to the periodical Aeroplane Monthly. His site has the address of:

<http://leden.tref.nl/ottens> and his e-mail address is: ottens@tref.nl

I have seen in the July issue of the newsletter that Mr. Al Bowers will make a presentation at the SHA Western workshop on the Horten gliders. Do you know if copies of this presentation will be available on video or paper support?

I wish you good receipt of the present letter and remain,

Yours sincerely,

Eric du Trieu de Terdonck
Rue Grison, 19
B-7387 Angre
Belgium
eric.du.trieu.de.terdonck@vesuvius.com

(ed. - Thanks for the letters and all the information. I will include those from your appendix in the coming months since they contain some fascinating material.

I tried to two web sites for Texas Aircraft and didn't have any luck with either. It may be that any court case could be restricting access. I will try again in a week or two.

Ottens site did come up fine and his "Mystery Flying Wing" section shows the aircraft was built in Germany by dr.ir. Koehl at the "Ingenieurschule Weimar" probably in 1933/34. The picture shown in the newsletter came from a Dutch aviation magazine called Vliegwereld and was published in September 1934. Also included on the site was a construction picture that came from "Das Buch der Deutschen Luftfahrttechnik, Bildteil" (page 399).

As you may have already seen, Al Bowers made the same presentation at the September TWITT meeting and we did video tape it. As I mentioned in my e-mail to you earlier, I will put this in your order request instead of the duplicate material you indicated.

Eric has also sent along via e-mail a picture of the center section of an Ho-IXc which I will try to include in a future newsletter. Thanks for the support, Eric.)

11/17/98

TWITT:

I have available a modest video tape about the PUL-10 flying wing for \$25. Half of it is in English with much of it shown in flight and the other half of it is recorded from German television news. It can be ordered from me at the address below. Profits from sales will go to add modestly to further development of the kit.

Barney Vincelette
P.O. Box 141
Houston, DE 19954

(ed. - Thanks for the information on the video. Hopefully, you will have some people interested in getting a copy and contributing to the PUL-10 project.

I am convinced that if they ever get a good kit put together for a reasonable price, they will be able to sell a number of them here in the states. The number of people signing on to the nurflugel chat letter continues to grow and they are all interested in having a flying wing of their own, but many do not have the engineering skills to design one.)

11/25/98

TWITT:

Someone gave me a 1990 copy of your newsletter (yes almost an antique - turned out to be November's issue) because he knew of my interest in "wings". I have a very keen interest in Jim Loyd's boomerang wing concept. What happened to that idea?

Let me tell you about me. I am a natural therapist with a series of clinics in the wilds of our State of Queensland in the land of Crocodile Dundee. I travel over 1000 road miles a week going from point to point and it is getting me down. As an ex-bird-dog pilot, I dream of flying instead of driving, but light aircraft suitable for my work are few and far between, besides being very expensive. So I got hold of an ultralight (fully enclosed, mid-wing pusher) to get back into

flying again. When I spotted Jim's Boomerang in our Pacific Ultralight magazine here in OZ.

I felt that it was the machine for me - Jim has incorporated several of my needs in that design. Tandem seating - I would remove second seat and use the space as cargo bay. Engine - Use auto engine as powerplant that clinched it for me - I hate Rotaxes, having had nothing by troubles with a 503 then a 532 (both times I was protected by my guardian angels and, a good friend in France destroyed his composite ultralight because of Rotax engine failure. Jim, I am very interested in a set of construction drawings if you'd care to do this for me.

In regard to TWITT, that 1990 copy was interesting and I wonder how a 1998 copy looks like. Also, have you organized some way of receiving subscription moneys via credit card? I have only VISA for my international dealings. The banks here are money hungry and I avoid them like the proverbial plague.

Regarding wings, in my early flying days I had a couple of flights in a Fauvel glider. I can't recall any details of those machines - anything on file? In the 1990 issue you had a mini write-up on a Swedish wing LA-3 Spectre by Hakan Langebro that looks sleek and, details of that unit would be much appreciated too. Is there any of those flying in Europe?

Back to Jim Loyd's design. Due to the fact that I do have to go where my work takes me, I would need an aircraft capable of landing and taking off from rough bush strips. I feel I'd need some sort of spoilers and flaps and/or slats. What do you (Jim) think? If you could also redesign the cockpit 6" wider please, it would accommodate my medicine containers too. You, the flying wing people are not well known here in Australia and I hope to be able to change that in the very near future by flying my own tailless aircraft.

Happy flying and I hope to receive some good, informative news soon.

Andre A. Maertens
1682 South Bruce Hwy
Kybong QLD 4570 Australia

(ed. - Obviously Andre is not a member, yet, since he was asking for more information about the current status of the newsletter. We have sent him a standard information package and hope to be hearing back from him soon.

I am not sure where he got the information on the Boomerang, since there was nothing in the Nov. '90 newsletter on this design. Jim Loyd is not a current member, but if anyone knows something about this I would appreciate you dropping me a line and letting me know if he ever produced a flying prototype and/or has considered plans.

If Barney V. is listening, Andre looks like a good candidate for the PUL-10 in its revised, tandem seating version since it used a BMW engine. Talk about a perfect fit if the back cockpit area was big enough to handle his equipment and medicine boxes. Depending on where PUL-10 development is, you might want to advise him of your video or send him one on consignment to peak his interest.

Do any of our European members have any knowledge of what happened with the Spectre design concept? This was one of the winners in an Aircraft Spruce competition and was supposed to be a single seat composite sport plane.

Right now we only have two members in Australia and none appear to live in the Queensland area. Maybe with all his traveling, Andre could get together with them if they would give him a call someday.

If I hear back from anyone on any of the above questions or with comments on Loyd's design, I will be sure to pass them along to everyone.)

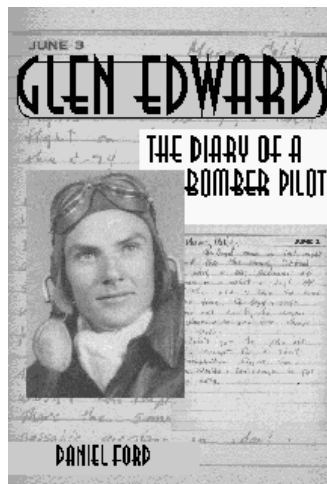
WHO WAS THAT MASKED TWITT

At the March 1998 TWITT meeting someone handed our speaker, Dr. Paul MacCready, a big picture of Paul flying the Orlik in the Los Angeles area during the celebration of an airport opening. Paul would very much like to get in touch with this person. If you read this, please give him a call at AeroVironment, (626) 357-9983, ext. 205.

GLEN EDWARDS

The Diary of a Bomber Pilot

by Daniel Ford



Situating Glen Edwards' diary in the context of WW II, the development of flight testing, and the advent of an independent U.S. Air Force, Dan Ford shows how military pilots during the 1940s were expected to augment seat-of-the-pants bravado and precision flying skills with rigorous academic training. Edward's diary entries trace the full trajectory of his career: the near-daily bombing missions over

Africa and Italy for which he won the Distinguished Flying Cross; a record-breaking cross-country flight in 1945 as the lead pilot of the Douglas XB-42 "Mixmaster"; his assignment to Wright Field, "the Mecca of all Army pilots; a stint at Princeton to study aircraft stability and control and; participation in developing the Northrop YB-49 Flying Wing.

Setting Edward's career in historical context and describing the strengths and weaknesses of the planes he flew, including the controversial Flying Wing, a precursor of the B-2 Stealth Bomber, Dan Ford provides both a first-person look at the life of a bomber pilot and a broad view of aviation in an era of extraordinary change.

This book can be ordered through your local book store using the above title and author along with the ISBN of 1-56098-571-2 at \$24.95. Or you can call directly to the publisher at 1-800-782-4612 (Smithsonian Institution Press). Or order it from Amazon.com for \$17.47 plus \$3.95 for shipment in the US and \$5.95 for other countries.

KENDALL'S RIGID WING

The picture below was taken at Tehachapi, CA during the 1998 SHA Western Workshop. It features Floyd Fronius holding a 1/4 scale version of a foot launchable, rigid-wing flying wing radio controlled model designed by Greg Kendall. So far he has also built a full sized spar and pilot pod structure (nose of which can be seen just jutting out below the leading edge).

Construction is proposed to be a carbon box spar, foam ribs, fabric skin and foam leading edge. The specifications are:

Empty weight:	135 lbs.
Span	42 ft.
Wing area	165 sp.ft.
Lateral control	Ailerons
Pitch control	Weight Shift with some elevon mixing

