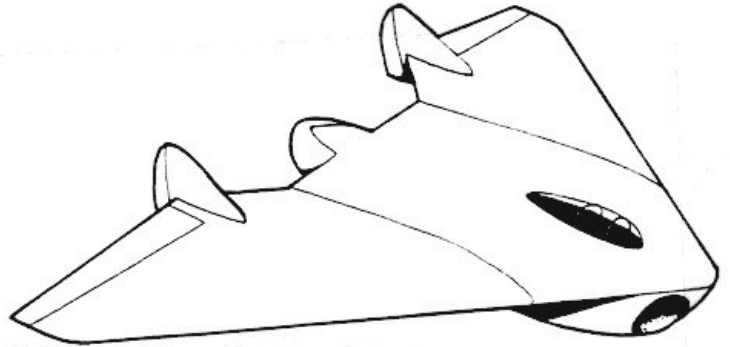


# T.W.I.T.T. NEWSLETTER

## Arado E.581-4

An interesting but somewhat clumsy delta-winged concept, the E.581-4 remained in basic sketch design form only. It had a deep boat-like fuselage which housed a single Heinkel HeS 011A turbojet fed by two side-by-side intakes in the extreme nose. Intended as a single-seat fighter with tricycle undercarriage, it was to be armed with two 30mm cannon. Wing span was 29ft 3½in (8.92m) and length 18ft 5in (5.57m).



Source: David Master's German Jet Genesis, contributed by Kevin Renshaw.

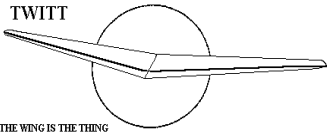
## T.W.I.T.T.

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., 9801 means this is your last issue unless renewed.

Next TWITT meeting: Saturday, January 17, 1998, 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.

**T.W.I.T.T. Officers:**

- President: Andy Kecskes (619) 589-1898**
- Vice Pres: Bob Chase (818) 336-5485**
- Secretary: Phillip Burgers (619) 563-5465**
- Treasurer: Bob Fronius (619) 224-1497**
- Editor: Andy Kecskes**

The T.W.I.T.T. office is located at:  
 Hanger A-4, Gillespie Field, El Cajon, California.  
 Mailing address: P.O. Box 20430  
 El Cajon, CA 92021

**(619) 596-2518 (10am-5:30pm, PST)**  
**(619) 224-1497 (after 7pm, PST)**  
**E-Mail: NBKP63A@prodigy.com**

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| Wt/#Issues | FRG   | AUSTRALIA | AFRICA |
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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**

**W**ell, I hope everyone had a enjoyable holiday season and got through the new year's celebrations without to big of a hangover. If everything went right many of you now probably have some type of new building project to work on during the remaining winter months. My daughter gave me a Wright Flyer model to build which can be used as a hanging model or a kite. Now I just need the right kinds of glue and I will go to town cutting wood and laying on the tissue paper.

With the holidays member correspondence has kind of dried up, so I will take the opportunity to publish a new membership roster since many have been asking for a way to identify members in their own area. It has been almost a year since the last one, and we have had a growth spurt to an average membership of about 155 worldwide. This time around I will sort the roster by location to make it easier to locate people around you. This will also give everyone a sense of the international flavor of this organization, which I have found also runs throughout Doug Bullard's nurflugel mailing list group.

Speaking of Doug's group, he is about to offer a new nurflugel book through his web site. This book is The Horten Brothers and Their All-Wing Aircraft by David Myhra. It's 320 pages with lots of photos that have never been seen before. It is currently offered by Barbara Byrd at Aeroplane Books at a cost higher than that estimated by Doug. This is primarily a biography on the Horten Brothers and their development of an incredible series of "all-wing" aircraft. The photos include them and Goering, Rudi Opitz, Hanna Reitsch, other Luftwaffe folks, as well as their mom and dad, dogs and kids, shots of building the Ho-I and Ho-II in their parents' living/dining room, etc. David got the photos from Reimar's personal collection during two trips to visit (and live with) Reimar in Argentina (a month's stay each time). David Myhra has succeeded in answering so many questions with photographs alone and also raised some intriguing new ones, that not even the most casual Nurflugeler should miss a chance to own this magnificent work.

I will get back to you with more information on how to get this book as soon as it becomes available on the internet.



**JANUARY 17, 1998  
PROGRAM**

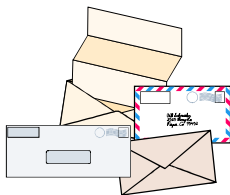
**W**e have a double-header program for you this month. The principal speaker will be **Phillip Burgers**, TWITT Secretary, who will be relating some of his personal experiences while visting Argentina in search of more information on Dr. Reimar Horten and his various projects. Of particular interest this time around will be the I.Ae. 38 Horten Flying Wing Cargo Plane.

Brigadier Mayor Brigadier Ojeda, of the Argentine Air Ministry. told Dr. Horten that he wanted to build a city in the middle of the orange groves at Santa Rosa. Brigadier Ojeda had in mind using a large cargo glider to ship the oranges the approximately 1000 km to Buenos Aires. The idea included snatching the glider off the ground by a low flying Lancaster bomber from the Argentinian air force, although a powered version of the aircraft could also be considered.

A prototype, four-engined flying wing aircraft was built and flown as a result of this project, and that is what Phillip will be showing and telling us about.

The second part of the program will feature **Gerry Heflin's SKYLER**. He will have the glider's framework at the meeting for everyone to walk around and ask questions. It uses an E474 section for good low speed performance and the nearly flat bottom will allow the wing to plane on the water surface until liftoff (yep, you read it right, this will be capable of water and foot-launch). Other design considerations, like dihedral and leading-edge sweep are also being maximized for possible water operations. Attitude control will be primarily by weight shifting like hanggliders, but it will include a controllable elevator to provide quicker pitch response throughout the operating speed range.

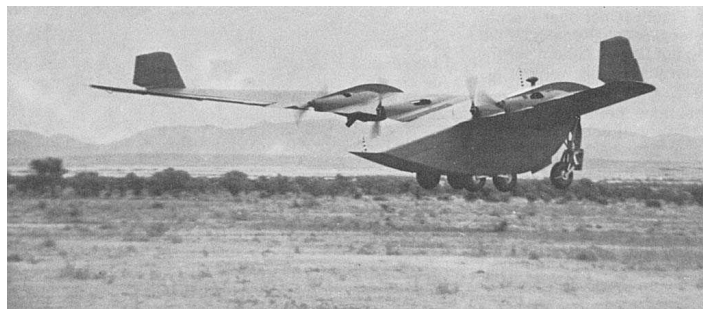
This should be a very interesting and fun program with a little bit for everyone. Mark your calendar and plan on joining us. Bring a friend and introduce him/her to the world of flying wings.



**LETTERS TO THE  
EDITOR**

TWITT:

**I**wrote this letter for EAA, but realized it is a flying wing so I photostated it and enclosed a photo. I did post a very tightly wrapped photostat of the Fauvel



**ABOVE: Picture of the I.Ae. 38 Horten cargo plane. Source: Nurflugel web-site.**



**ABOVE: Fish-eye lens view of Gerry's SKYLER under construction in a hanger at Gillespie Field.**

AV-60 construction drawings in June, did you receive them?  
I enclose a cheque for renewal sending it via sea mail (which is cheaper) versus air mail. Purchasing a cheque in your dollars costs \$10 Australian, which is not cheap.  
I still enjoy the magazine and wish you all the best with it.

Cheerio

Alan Lewis

- Here are parts of the letter Alan sent to the EAA.

Scott Winton won 3 altitude records with his machines which used 2 stroke Rotax engines and specially build propellers. These were world records, with only one of them currently remaining in Scotts name, since people in the USA broke the others except for the highest one.

Sometime later, Scott was flying one of his machines over his mother's home when the center spar broke and dumped

him. He was doing about 150 kts at 40 feet up. I know little more of the crash or the construction on the spar.

Enclosed is a photo of Scott in one of his several machines. (Unfortunately, the photo did not reproduce very well for inclusion in the newsletter. The plane was of a low aspect ratio flying plank style, with two small vertical fins on either side of the pusher propeller. There was a streamlined fuselage section sticking out past the leading edge, with the pilot in a reclined position. It looked very clean on the upper surface like it was built for racing or record setting.)

*(ed. - Thanks for the information on the flying wing. I am sorry it has taken so long to get part of it into the newsletter, but it got lost in the shuffle of paperwork on my desk.*

*Yes we did receive the Fauvel drawings and have added them to the library. Thank you very much for going to the trouble and expense.*

*Alan also commented about the problems with paying for TWITT membership from an overseas location. He noted that getting a US dollar money order or cheque sometimes is costly. I have mentioned in the past that if this is a problem, you can always send the actual dollars instead of trying to convert them into some type of financial instrument valid in US dollars. A word of caution, however, would be to make sure to wrap the money in such a way it is not recognized from outside the envelope. We have had members put it inside of carbon paper (light won't pass through to reveal \$\$) or light cardboard so the package feels like photos instead of money. I hope this information is of help to others of you having the same difficulty.)*

12/19/97

TWITT:

**O**n Tuesday, December 9th, I received the two video tapes. They work fine with my video recorder and contain very interesting videos. Thank you for sending them.

I tried several times to send you this by e-mail, but it always bounced back to me. I think the bug is on my side. So I sent this postcard.

Merry Christmas and Happy New Year

Dietrich Rotert  
Hannover, Germany

*(ed. - I'm pleased you liked the video material. It has been well received which makes it worth the effort to have put it together. I do change it periodically as I find new things on the TV (if I catch them fast enough), but the main part of the tape remains the same.*

*I tried e-mailing you and got my message bounced back from your address which I have used successfully in the past. I haven't had any trouble with other messages so must agree that the problem is probably at your end. Let me know when you have it fixed.)*

## SHA PRESS RELEASE

**T**he Sailplane Homebuilders Association (SHA) is proud to announce the publication of The Collected Works of Stan Hall. This is a compilation of all the writing of Stan Hall, a prolific author about sailplane design, construction, testing and flying. Writings in the collection encompass the 1950s into the 1990s.

This publication includes Stan's work from other publications, such as, Soaring, Sport Aviation, Sailplane Builder and SHA Talk. It is a marvelous addition to any airplane and sailplane enthusiast's library. It is over 300 pages and all profits go to the SHA to support sailplane building activities.

Copies can be obtained from Dan Armstrong, 21100 Angel Street, Tehachapi, CA 93561 USA. Initial offering prices are: \$23 prepaid to a US address; \$25 US dollars prepaid to a Canadian or Mexican address, and; \$28 US dollars prepaid to other addresses. Price includes tax, postage and handling.

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## NEWSLETTER BACK ISSUES

**L**ast month I ran a short piece on back issues being available as a holiday gift idea. As I went back over it this month I found I had only included the price of the postage to various locations without including the cost of the appropriate number of newsletters. In quantities of 12, the newsletter cost would be \$9, so if you add this to each of the categories listed you will have the total cost delivered to you. Example: For 24 issues the total price, including postage and handling, would be \$19.75, and for 36 issues it would be \$29.25. I hope this clarifies any misunderstanding that may have occurred as a result of the ad.

These prices are our everyday prices. If you want a quantity in something other than a block of 12, you will have to use the postage figure for the next highest number of newsletters. Example: For 18 newsletters the price would be \$15.25 (\$13.50 for issues, \$1.75 postage).

## HORTEN IV MODEL

**B**ob Fronius and a couple of other people are in the process of developing and building a quarter scale version of the Horten IV, including the original trailer used to transport it around Germany.

They could use some help in the research area, since it has been hard to come up with specific information about the version that was shipped to the US after the war. If anyone has more information than that provided by Russ Lee from the Smithsonian (see below), please send it to Bob through the TWITT post office box. Thanks, in advance to anyone contributing to this project.

According to Nurfluge! (Horten and Selinger), the POF H IV has the following lineage: Wrk.Nr. 25, D-10-1451, LA-AC, BGA (British Glider Association) 647, N79289. As for pre-U.S. markings, well... a bit of guesswork there. Photos of

the glider from that period in its history are hard to come by. I fair guess on the centersection would be silver paint (not natural metal) overall with black markings, registration in block letters and an aircraft data "block" painted on both sides of the trailing edge of the ventral fin. This data block was written in a stylized German script. I can send you a photocopy showing precise placement, specific information listed, etc.--let me know. The wings: I have learned that without a photo, its impossible to verify a specific scheme but I will go ahead and postulate the following: I know that Reimar employed a top-coat of varnish as a streamlining measure on the NASM Horten II and I believe he used this on some of his other gliders. Acknowledging Reimar's keen interest in all-out performance presumes that he would build most of his gliders as light as possible so I believe he did not paint the H IV. Also, it was apparently very common for the Germans to clear dope the wings of their gliders. Again performance was an issue (lightness) but also aesthetics was a factor (see-through wings on a

sunny day). So I believe its reasonable to postulate that the wings were clear-doped with a final coat of varnish that would have turned the wooden areas a medium dark brown and the fabric areas a light sand or off-white color. Hope this helps.

Russ Lee

*(ed.- The rest of the original newsletter was a roster, which is out of date and the classifieds section that is also of little value in this restored version.)*

**BELOW: This appears to be an initial prototype of Gerry Heflin's SKYLER without the vertical fins & elevator.**



**RIGHT: Fauvel AV-60 photo provided by Alan Lewis.**

