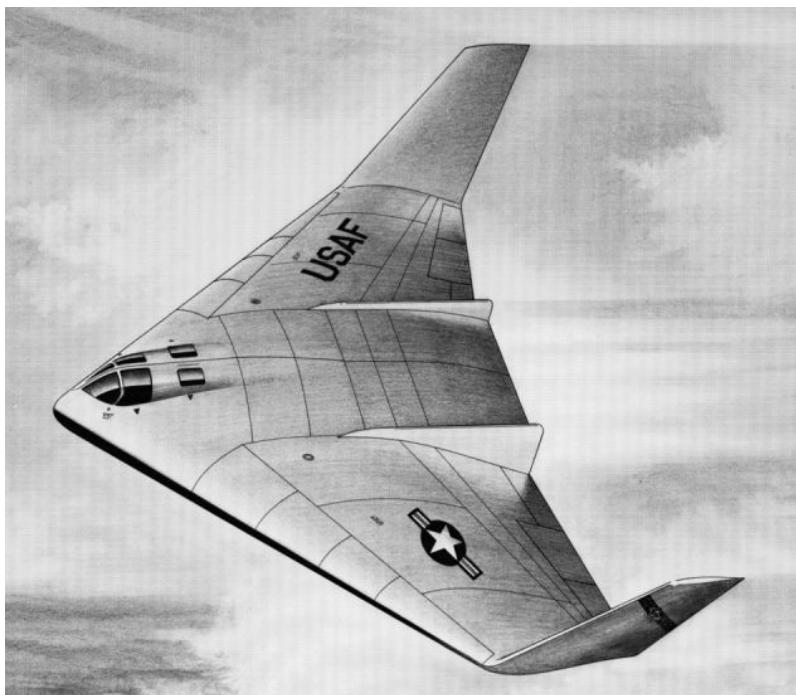


No. 364

OCTOBER 2016

T.W.I.T.T. NEWSLETTER



I haven't seen this concept drawing before. It is associated with the Navy's terminated A-12 program that can also be seen on the source's web site. Worth checking out.

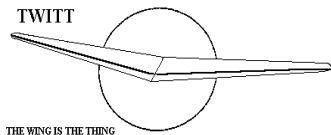
Source: <http://foxtrotalpha.jalopnik.com/so-what-were-those-secret-flying-wing-aircraft-spotted-1555124270>

T.W.I.T.T.

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



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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 (#1720), east side of Gillespie or Skid Row for those flying in).

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PRESIDENT'S CORNER

This is late again, but I have a very good excuse that I hope none of you experience. My main computer contracted the nasty FedEx virus that eventually wiped all my working files, many of which had not been backed up for a number of months. If you should happen to get a message from FedEx delete it immediately and then delete it from your trash/recycle folder. The virus encrypts your non-program files (doc, xls, jpg, etc.) so you have to pay \$300 in bit coins for them to give the decryption key.

I have tried to reconstruct the membership roster the best I can from existing files, PayPal payments and manual records of renewals. I imagine I am going to miss someone or get your expiration date wrong, but this can be worked out over time. So if you see the wrong year/month on your mailing label, please let me know what it should be by dropping me a note to: twitt@pobox.com.

I will be moving from San Diego, CA, to Austin, TX, during the month of November right about the time the newsletter should go out so it might be a missed issue. If so, I will extend everyone's expiration date by a month, so don't be surprised if there is nothing in the mail. The above e-mail address will always reach me since it is forwarding service and I will be updating it as I update the other TWITT address due to the move and changing to a different Internet provider.



LETTERS TO THE EDITOR

Phil Barnes Inherits the “Carmichael Albatross”

Following his ESA Western Workshop presentation *“Principles of Fast and Efficient Electric Flight,”* now posted at the website

www.HowFliesTheAlbatross.com,

ESA leadership presented Phil Barnes with Bruce Carmichael’s wandering albatross scale model, in appreciation of Phil’s numerous technical presentations to ESA over the years. Were Bruce still with us, he would certainly have approved, in accordance with his e-mail to Phil of a decade ago:



Murry Rozansky (right) presenting the award to Phil after his presentation on electric flight.

From: Brucehcarmichael@aol.com
Sent: Friday, January 27, 2006 9:34 AM
To: Barnes, Phil
Subject: Re: Windprop design and performance

Paul (MacCready) did write a paper on Regenerative Solar Powered Soaring...I am sure he or his secretary will be happy to send you a copy of the paper. He has written many other landmark papers and I am sure if you mention your landmark paper on the Albatross his secretary might send you others of his papers. People like you and Paul have added so much interest to my life. –

Bruce



The albatross model, one of only a handful surviving of 13 originals cast for the 1993 ESA Western Workshop, was sculpted and molded with epoxy resin by ESA master craftsman, Harald Buettner. Bruce’s model apparently sat in the sun and the wings had drooped. Phil repaired the cracks with epoxy, heated the model with a hot-air blower to remove the excess droop, drilled holes for the eyes, and applied white primer to finish the model, now prominently displayed over the fireplace. Thanks, Bruce, Harald, and ESA members!



(ed. – This is a well deserved award and it was great that it could be given to Phil during the Western Workshop with so many members present.)

(ed. – I received this from Doug Fronius, son of our illustrious founder Bob Fronius, that he received from Francis Humbert who he knew from his European vintage sailplane events. “Here is some interesting Horten material. I can’t quite follow the story, but it is about who was actually designing and building the H.229/H IX. Seems there was a lot of confusion!”)

From Bernd Diekmann to Paul Williams and Huib Ottens. Translation by Bernd. He hopes it is not too bad. (ed. – I did a little cleanup but this is about the way it came in. The photos are what accompanied the article but the descriptions weren’t translated. There are a lot of pictures on the Internet found with an Ho 229 images search.)

This is a copy of the article from Marton Szigetti about H.229. Maybe of interest a new German article about H.229. New is: V-3 is really V-6 and only a dummy. All based on original papers, not on the strange and hole-full memories of Reimar and Walter.

Museum's Dummy

The fairy tales around the Ho 229 always provides not many information to discharge fact or fiction. Based on original documents first time the real identity of the wondervogel, war prized in 1945 at Fridrichsroda by US units, is possible

Half a year ago 30 pages of forgotten original documents formed the basis for a fresh, unclouded view of the Horten H IX, or Ho 229 as it was later called (Klassiker der Luftfahrt 2/2016). Most of them were captured documents from the Gothaer Waggonfabrik (GWF). A very reserved view of the "high-tech" jet aircraft could be traced on the basis of the statements made in this report. The gap between the experimental construction by the brothers Reimar and Walter Horten in Göttingen on the one hand and the manufacturing requirements of the aircraft industry on the other hand. Fact is: The Gothaer Waggonfabrik did not have much to do with the constructional drawings and documents of the Horten brothers, and the engineers of the GWF spent several months to do drawings on the drawings of the Horten Flugzeugbau GmbH, until many of the original structure wasn't remained. After the transfer of

knowledge to Gotha - the company was ultimately commissioned by the Reichsluftfahrtministerium (RLM) as licensee - the communication between Göttingen and Gotha simmered on a little flame (German speech for no contact).



So both companies worked parallel, not together! This fact is important to understand the following events. Reimar and Walter Horten worked on the completion of the V2 in Göttingen, which was equipped with the Jumo-004 engine, according to the notes from the trial site Rechlin. All warnings to better use the BMW 003 engine (GWF document of 25 October 1944), were gone with the wind, which was to avenge itself in Oranienburg on 18 February 1945. The Ho 229 V2 crashed by an engine failure, the wreckage buried the Pilot Erwin Ziller.

Anyone, who still approved the Jumo installation over the notes by the Rechlin-board, had to take over the responsibility for the death of Ziller. Rumor had it that Himmler's SS have interfered.

Back to Gotha- the really exciting part of the story begins here. While General Feld Marschall Erhard Milch was thrown out of the RLM, his postmaster General Luftzeugmeister was dissolved, and on 1st August 1944 the new office "Chief of Technical Air Equipment (Chef TLR)" open under the young General Major Ullrich Diesing, the serial building of Ho 229 was near end of project in Gotha. According to the guidelines of the Technical Office and the Commander of the Testing Grounds (GL / CB Missile No. 75 of September 10, 1942) the GWF had to present and take it off a dummy before the first serial line can start in production, the assigned V6.

These directives are clear and unambiguous, stating that a final record could only be released after construction of the first model aircraft was completed, after all the complaints made by the type attendant at the test site at the dummy. The GWF began in September 1944 with the construction of the dummy Ho 229 V6, which was inspected on 13 October 1944 for the first time by the Rechlin leader Oberleutnant Brüning.

A five-page list of shortcomings (GWF-document of 13 October 1944) prevented a decrease - the GWF must improve hardly. In addition the Horten Flugzeugbau GmbH in Göttingen was apparently unable to produce the required test cells V3, V4 and V5, based on the sustained delays with its V2. In a discussion between Chef TLR, the testing center Rechlin, the Horten Company and the GWF (GWF document of 24 November 1944) it was finally clarified that the three airplanes now changed to be manufactured now by the GWF, according to the V2-pattern. The basis for the serial production remained now to the V6, whose dummy changed in the meantime several times their appearance. In the winter of 1944/45 not much happened. Due to the chronological sequence, it can be assumed that the Gothaer Waggonfabrik worked quite half-heartedly on the licensed production Ho 229. If this was a delaying tactic to wait for the advancing Allies or simply business sense to get the order of the own flying-wing design P-60 into discussion this all remains speculation.



But the fact is: on 22nd February 1945, the Rechlin supervisor Oberleutnant Brüning, together with the two GWF engineers, Wundes and Schaupp, inspected the non-flight able dummy of the V6 at the GWF factory site. Again shortcomings were listed (GWF document of February 22, 1945), which should be changed or

repaired as soon as possible. Among other things, the seat height with parachute was not sufficient, the pilot pushed with his head to the cap. Inadvertent triggering of the catapult seat was also objected and the restricted visibility based on the wrong installation angle of the armored glasses, also incorrect arrangement of instruments and oxygen devices.

In the same document the decisive sentence was made: "It was decided that the final inspection of the dummy should be held in Friedrichroda on March 5, 1945." At the beginning of March 1945 V6 model was still being in work and there is not even one sentence about the completion of an airworthy pattern - the allegedly V3 - is mentioned in the official industrial supply plan for V-patterns of 31st January 1945. That's based on a reason!

The GWF's priorities were based on "their" V6 and not on the prototypes V3, 4 and 5, which were additionally forced into the program. When the company did start this work the V6 dummy was already at a comparatively advanced production stage. And precisely in this state US troops discovered it after 8th April 1945 the four fuselage frames at the workshop of the Ortlepp furniture workshop in Friedrichroda. The Americans tried to find the secrets about the strange ones in some questionings with Production engineer and designer Eckhardt Kaufmann (US Interrogation Report of May 19, 1945).

Kaufmann confirmed, among other things, two fuselage frames in the advanced state, one in the shell and a ready-made dummy for the Gotha series pattern. Which framework was now which V-pattern, is not noted in the document. It was only the British engineers of the Royal Aircraft Establishment (RAE) in Farnborough that had led to confusing statements.

The Wilkinson-RAE Report F.A. 259/1 from October 1945 states that the V3 captured in Friedrichroda had been the model aircraft of the GWF series. This assertion could already be proved wrong by the original GWF documents; of course it was the V6. But how did RAE get this information? Not by the Americans at all, probably they based on a survey report from Reimar Horten, who did not have a close look at the work of the GWF. So the dummy of the V6, which looks near a real airplane, suddenly mutated to the V3. On the other hand, the RAE report on page 40 referred to the solution: "They were nearing completion of the V3".

Up to the present day the designation V3 pulls over decades through the literature for the aircraft stored in the USA. It is now time that the restoration work, currently started in Washington, has been completed under the correct designation "Dummy V6".

The article is bundled with a report about GWF G-60 and its designer. Please have a look inside this some new information about GWF.

Just to note: I am with this thesis of Marton of course it based on original documents.



But (!):

Eckhardt Kaufmann all GWF experts don't know his position. It looks like he never was a Production engineer or designer at GWF, but he led the construction-drawing studio and also was liable for some GWF-orders, maybe as a salesman or substitute of Hünerjäger. The GI's take him for some weeks to Paris. No one knows what is going on with him later. Did the GI's ever understood that he was not a leading engineer of the 229 project? It looks like he was the highest worker from GWF which they can get at Gotha or Erfurt. Hünerjäger himself escape from Gotha to Düsseldorf in the last days of the war. Did the US also talk with him??? Did they talk with other engineers of the project? We just knew they never talk with Arthur Hartung who lead the work for GWF at Friedrichsroda.

As Paul knows I don't think for a SS-sponsoring (if it ever really start it ends latest in mid 1944 with the

changing from May Company to GWF for 229 project) the question is if Diesing or Göring himself are able to sponsor the work with V-2 at Oranienburg???

Reimar later note his visit at the CC and that SS-Männer help to work for V-2. But why Reimar do just visit Oranienburg as the designer it will be much better that he have a look over the work for V-2. Also we knew from their own statements and from people around them that the Horten brothers clashed again hard in Winter 1944/45 (maybe short before or soon later as V-2 change from Göttingen to Oranienburg), most possible Horten Company was only led by Walter in this days, Reimar tinker with new projects at Bonn and maybe Göttingen.

So the story around the Horten Broth. and their planes are still very interesting! And this will raise new discussions I hope!

But it looks like the *Genius*-myth will be gone.

Mitchell U-2 Thread

I joined because I have the opportunity to trade for a once flying Mitchell wing and a U-2 kit in crates. The Mitchell wing has a 377 Rotax on the fuselage but the wing is rough looking.. Two big crates contain the U-2 kit.

I have no use for them presently...but plan to store them, covered in my barn..

Any interest? They can be traded or sold...haven't a clue as to value? Anyone? The trade is a Fisher 101 complete and covered airframe.

Actually the U2 kit came from Mary Carlson of Carlson aircraft several years ago. I saw the ad and told a buddy who bought it it was traded, along with the wing to another buddy who now wants to trade for the Fisher 101 that I have. The fisher at 1300 bucks is not selling and I thought I might be able to part with the Mitchell designs easier...Half goes to charity and half to me...Estate settlement...

Herb
South Central KY

I assembled a U2 from a 1980 kit (for a friend). We had to buy very little extra stuff. IMHO it would be very difficult to build without the kit, and is not for the

inexperienced builder, even with. I enjoyed it immensely, and learned a lot, but going from a completed aircraft to a flying aircraft would add a whole other dimension! It's a dirty shame, but the kit is probably worth no more than \$500, if sold outright.

Dave Gingerich

I figured as much...thanks... The Mitchell wing is complete...a bit of damage but nothing major...I figure it is worth about the same...does come with the instruments and under carriage with prop and 377 Rotax...

Herb

My experience selling airplanes for estates is that they wind up going for a song. The U2 I built was sold partially covered when my friend died, and the proceeds donated. I don't remember how much, but very little. It didn't make me a sustaining member of anything! He also had a Skybolt and an Aeronca C3 which his lawyer sold for peanuts. At least that made two guys happy.

As I said, the kit has almost all you need to build a U2, but very little that could be used to build something else---except for a lot of 1mm plywood. Maybe the plywood would be worth \$500 at today's prices.

Dave

You mention plywood...My deceased buddy bought 6 sheets...4X4 of 3 or 4 mm. Over 40 bucks a sheet and that was 10 years ago...!! I found the bill of sale with the roll. I was left 5 projects in the will...half to me and half to charity...2 J3 Kitten's, the Fisher, a Hi Max and a Z max.

I sold one of the J3 Kittens, minus engine for \$3500 and have just finished covering the second wing for the Mosler powered Kitten. It will bring 5 to 6k when finished and flown.. The Z max is complete but unflown for several years now.

The U2 is a very interesting design...I see the ones on you tube... and could get excited about re covering the Mitchell Wing...and doing some hangar rash repairs...the 377 has been sitting a while...but I have new seals and pistons and rings for it... If I do the trade. I will post some pics. The U-2 requires a long table and my garage is full at the moment.. Just bought a Rans S-14 with HKS engine. I cannot find hangar space for it...so offering it to trade for a Kolb

Firestar 1 with hks...(not likely to happen!!) Always had Kolbs for I can store them in the garage and fly off of my strip here at the farm...

Herb

Clay Thomas and I had a look at the B10 and U2 a few months ago and neither of us were impressed with the workmanship or how it has aged.

The hang cage has a good bit of galvanic corrosion. Flyable? I'd say a toss up. Also some unique things in that the gas tank is rigged on the outside of the cage close to the CG and the engine is moved in toward the seat since it's pretty heavy. Don't know if it changes the pitch sensitivity much, etc. but a good chance it does. Huge engine for a B10 and very likely puts it outside the weight for 103 operation. Overall though the cage could be fixed IMO. I would definitely check every rivet because who knows how much corrosion is on the inside of the tubes.

The wing itself is also a toss up IMO. There's dark coloration toward the bottom of the spar that appears to be water damage. The D tube ply is also pretty dinged up. Clay and I weren't really interested in the wing itself since we both have wings that are in much better shape (Clay's is beautifully built by him) so I didn't inspect it that closely.

As for the U2 it has obviously been stored in a barn. Lots of mouse poop in the crate. Would need to go through everything to make sure of what's usable. Foam might be questionable.

The U2 was what caught my attention but the more I thought about it the less enthused I was just because of the age of the components and how it was stored.

Mr. Cash, the owner is a really nice guy. He was gonna sell the U2 to me for \$400 which is definitely fair. We (Clay especially) was most interested in the cage but for the price it would be more effective just to build from scratch.

Overall, if you're willing to put in the work it could turn out well! Good luck with the trade.

Rick

Milford told me that someone looked at it recently...good to hear an appraisal...The Fisher is in good shape..on the gear and covered and painted...but it is not selling...so I thought I could do

better with these two projects.. Guess not! So I will be bringing the Fisher home from Gainesboro...It is the last thing in the hangar and I need to be out by December...

Herb

AVAILABLE PLANS & REFERENCE MATERIAL

Coming Soon: Tailless Aircraft Bibliography Edition 1-g

Edition 1-f, which is sold out, contained over 5600 annotated tailless aircraft and related listings: reports, papers, books, articles, patents, etc. of 1867 - present, listed chronologically and supported by introductory material, 3 Appendices, and other helpful information. Historical overview. Information on sources, location and acquisition of material. Alphabetical listing of 370 creators of tailless and related aircraft, including dates and configurations. More. Only a limited number printed. Not cross referenced: 342 pages. It was spiral bound in plain black vinyl. By far the largest ever of its kind - a unique source of hardcore information.

But don't despair, Edition 1-g is in the works and will be bigger and better than ever. It will also include a very extensive listing of the relevant U.S. patents, which may be the most comprehensive one ever put together. A publication date has not been set yet, so check back here once in a while.

Prices: To Be Announced

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VIDEOS AND AUDIO TAPES



(ed. - These videos are also now available on DVD, at the buyer's choice.)

VHS tape of Al Bowers' September 19, 1998 presentation on "The Horten H X Series: Ultra Light Flying Wing Sailplanes." The package includes Al's 20 pages of slides so you won't have to squint at the TV screen trying to read what he is explaining. This was an excellent presentation covering Horten history and an analysis of bell and elliptical lift distributions.

Cost: \$10.00 postage paid
Add: \$ 2.00 for foreign postage

VHS tape of July 15, 2000 presentation by Stefanie Brochocki on the design history of the BKB-1 (Brochocki, Kasper, Bodek) as related by her father Stefan. The second part of this program was conducted by Henry Jex on the design and flights of the radio controlled Quetzalcoatlus northropi (pterodactyl) used in the Smithsonian IMAX film. This was an Aeroenvironment project led by Dr. Paul MacCready.

Cost: \$8.00 postage paid
Add: \$2.00 for foreign postage

An Overview of Composite Design Properties, by Alex Kozloff, as presented at the TWITT Meeting 3/19/94. Includes pamphlet of charts and graphs on composite characteristics, and audio cassette tape of Alex's presentation explaining the material.

Cost: \$5.00 postage paid
Add: \$1.50 for foreign postage

VHS of Robert Hoey's presentation on November 20, 1999, covering his group's experimentation with radio controlled bird models being used to explore the control and performance parameters of birds. Tape comes with a complete set of the overhead slides used in the presentation.

Cost : \$10.00 postage paid in US
\$15.00 foreign orders

FLYING WING SALES

BLUEPRINTS – Available for the Mitchell Wing Model U-2 Superwing Experimental motor glider and the B-10 Ultralight motor glider. These two aircraft were designed by Don Mitchell and are considered by many to be the finest flying wing airplanes available. The complete drawings, which include instructions, constructions photos and a flight manual cost \$140, postage paid. Add \$15 for foreign shipping.

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