No. 247 JANUARY 2007

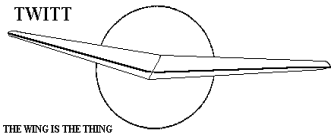
T.W.I.T.T. NEWSLETTER

(ed. – I don't recall which web site I got this picture from, but it represents a gathering of flying wing models in the Alps. I have probably printed it inside a previous newsletter, but it sure looks great on the cover, especially when seen in color.)

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., **0701** means this is your last issue unless renewed.

Next TWITT meeting: Saturday, January 20, 2007, 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 (#1720), east side of Gillespie or Skid Row for those flying in).

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PRESIDENT'S CORNER

Happy New Year to everyone. I hope your holidays were joyous and that you all had a safe and sane celebration to bring in the new year.

I am pleased that TWITT continues to grow, which is a reversal for us from the past several years. We are not up to 89 members from the 72 we had at the beginning of 2006. I attribute some of this to the introduction of PayPal as a method of payment, especially for the foreign enthusiasts since they no longer have to pay with cash or US dollar checks.

I have also upgraded our video reproduction system to include a DVD recorder for converting the VHS tapes into DVDs that won't degrade over time like tapes. I haven't had the time to experiment with it yet, but according to the instructions it appears I can get most of the products we offer, like the Bowers Horten Xc presentation, onto a single disc. I will also be creating discs with historical copies of the newsletters to make sure what we have aren't lost.

I am sorry we don't have a program for January, but as I have mentioned before we really don't have any more resources to choose from for putting on new or aviation oriented presentations. Since I know some don't read this section I mentioned in the program announcement the need for members to help us with the search for programs that can be produced with people living in southern California. So, for our members in this area, please keep your eyes and ears open for any opportunities and pass them along to me.

Andy

JANUARY 20, 2007 PROGRAM

We don't have a program for January, but there will be someone at the hanger at the normal times if you would like to drop by and just chat.

If anyone has any ideas for a program or has a contact point for making a call, please let us know. Don't forget that we can't offer any type of reimbursement, which usually means the speaker has to be living in southern California and can easily commute to Gillespie.

LETTERS TO THE EDITOR

December 7, 2006

Vulture Plans

Hello Bob (Hoey):

Do you offer plans for the Turkey Buzzard you built?

Thanks,

Chuck McClellan
<chuck@imagine-it.com>

(ed. – I sent information to Chuck that we got last month for a possible source of the plans. From what he sent below, he obviously found a way to get the plans. This is the second person that we know of that has or is going to build a Vulture model.)

Thanks for the help. I talked with the folks at the RC Store and it will take a couple weeks to get the plans. The plans are a X-mas present for my dad so hopefully I get them before the 25th of December.

Thanks again,

Chuck

December 13, 2006

Syd Hall [LOPTER]

Mr. Hall's letter in # 238 (April '06) says he wants you to publish a "Statement of Prior Disclosure". He's kind of mysterious about just what it is but it sounds like a coaxial twin rotor ultralight. Apparently he believes some characteristic of it is patentable.

Norman Masters
<nmasters@acsol.net>

(ed. – Thanks to Norm for pointing out what I wasn't finding since I was looking for a drawing and large article for our members to comment on.

Syd, I think what we need at this point is for you to send us all the material you would like published, since we can't find anything in the archives (thanks to Gavin's search) other than your proposal on the feather tailed parasol ultralight. I don't recall receiving the "Statement of Disclosure", which might also be necessary depending where you are in the development process.

This is a rather open publication, so I am sure we would be in a position to publish the material you feel is releasable to the public. We look forward to receiving it.)

December 21, 2006

Tailless Aircraft in Theory and Practice

I was wanting to buy the book Tailless Aircraft in Theory and Practice that is advertised on your website as well as the back of the most recent issue of TWITT newsletter, but apparently it has been out of print and not available for years. Do you know where I can get a copy? I have checked all major used book dealers on the Internet with no success.

Chris Doughty
<chris.doughty1@gmail.com>

(ed. – The advertisement was related to AIAA, which I have found doesn't list the book any longer. I have now taken the ad out of the newsletter and from the web site so there is no confusion in the future.

Since I had seen a similar thread on Nurflugel, I put the word out and got the following information back that might be of help in locating a copy, although the price has gone up significantly because of the limited numbers printed.)

This book is now printed to order in the UK. Here's the link to Amazon UK: <http://www.amazon.co.uk/gp/product/0340614021/ref=olp_product_details/203-2964796-2756730?ie=UTF8&seller=>

Note that on the right side of the page there is a listing of other sources, with prices starting at substantially less than the main page shows.

Our main book search site is BookFinder.com. Entering Nickel and Tailless gets you to <http://www.bookfinder.com/search/?author=Nickel&title=Tailless&lang=en&submit=Begin+search&new_used=&destination=us&currency=USD&binding=*&isbn=&keywords=&minprice=&maxprice=&mode=advanced&st=sr&ac=qr>. You might want to check that search engine every few days, as this book disappears quickly once it's posted.)*

December 21, 2006

I receive press releases from various organizations that cover research and development in various fields. The following came in today regarding an executive order signed by the Chief Executive today purporting to establish the nations' first aeronautics research and development policy. This one really irked me. Does anyone out there remember NACA?

http://www.spaceref.com/news/viewpr.nl.html?pid=21520

"FOR IMMEDIATE RELEASE Contact: Kristin Scuderi
December 20, 2006 (202) 456-6124
kscuderi@ostp.eop.gov

WASHINGTON—Today, President Bush signed an Executive Order (EO) establishing the nation's first Aeronautics Research and Development Policy. The EO was accompanied by release of a supporting Policy document developed by the Aeronautics Science and Technology (S&T) Subcommittee of the National Science and Technology Council (NSTC). The overarching goal of the Policy is to advance U.S. technological leadership in aeronautics by fostering a vibrant and dynamic aeronautics research and development (R&D) community that includes government, industry, and academia."

Regards,

Henry E. Whittle
<gulfrose@juno.com>

(ed. – To see the entire text go to the web site shown above. I would hope that this renewed interest in aeronautical research and development will actually result in some new initiatives, but only time will tell.)

December 22, 2006

Tip Feathers

Mr. Bob (Hoey):

I am wondering what type of material you used for the wing tip feathers on your model flying vulture.

Realistic, isn't the word for your model. What degree of improvement have you seen using the winglets compared to not using same? I'm attempting to develop a composite wing tip feather grouping that could be incorporated onto the outboard wing tip of a flying wing. I'm thinking that with a blended wing body and tip feather grouping, one would have a much improved and efficient design.

Noel K. Desmond,
Noelchefld@wmconnect.com
Chiefland, Florida

(ed. – If I remember correctly, the tip feathers on Bob's models were made of balsa (probably hard) since they were going to get broken and needed to be made of something easily repaired in the field.

Hopefully we will hear more about his results with feather type tips on an actual flying wing.)

December 23, 2006

Wing Shown Below

Can you please tell me who designed the wing pictured here and on your web site. Also, are plans available for this aircraft?

Thank You

Noel K. Desmond

(ed. - This was Scott Winton's OPAL flying wing from Australia. If I recall correctly, Scott was killed in an accident with the aircraft and the family has never released any plans due to the associated liability issues. I think it flew relatively well, but don't recall the specifics behind the accident.)

December 23, 2006

A Merry Christmas to You and the Flying-Wing fans.

Best regards,

Reinhold Stadler
<mw40200@mucweb.de>

(ed. – Even though we are passed the holiday season, I wanted to share this with everyone.

I hope everyone had a great set of holidays and are enthusiastic about the new year and continuing with their projects.)

December 31, 2006

Emailing: actuel_eng.htm

From: Howard Allmon
<howardallmon@netzero.net>

(ed. – Howard sent along what appears to be an English translation of the web site showing the remarkable photos of a man-sized flying wing.

It seems obvious from some of the pictures that the pilot actually jumps from a plane like a sky diver before unfolding the wings and powering up the rockets. He then re-folds the wings after expending his fuel and lands with a high performance parachute.

It is all very interesting, but not very practical at this point in time. They still aren't to the point of "Rocket Man" from the old days that could do a running takeoff and land on his feet using a power reducing descent.

You can check out all the pictures at the following link:

http://www.jet-man.com/actuel.html)

2006 : Batman's Rival

Man, forever obsessed with the dream of flying; Icarus' myth, tried time after time to fly like a bird. The best ever achieved are flying machines in which men lock themselves in, created by some of mankind's greatest pioneers in this area.

Over the past decade whilst still keeping the idea of flying like a bird in mind, various flying apparels were imagined and created such as hanggliders, para-gliders, and gliding wing suits. All of these use the various air currents to fly on and with.

However, no one will ever forget the human who could actually fly and who appeared on earth in 1939. This man could jump and fly through the air at whatever chosen moment: Batman… Cartoon character created by Bob Kane.

Today, Batman can leave behind his cartoon books and movie theatres and fly above the Swiss Alps, this person is Yves Rossy and has finally

achieved Leonardo Da Vinci's greatest fantasy and can fly through the air.

Following a line of predecessors of flying men, this Swiss man who's lifetime passion is flying, once flew for the Swiss army at the command of the Mirage III, then went on to fly as captain on Airbuses, and now has not only created and developed wings which allow him to fly, but also built and personally tested them over the past 7 years.

Finally, and this since last Autumn, his dream became reality mainly because of 4 model-engines which were built under his wings. With these, he can fly at over 200km/hr at the conquest of mountain summits. During the flight, Yves's body becomes the likes of a bird and other than a gas handle, Yves does not pilot his wings but virtually flies it, by using various light body movements that he has learned to handle with perfection. These body movements are equal to those that birds use to fly...

And like Batman, when he flies alongside airplanes they can only look and admire him when he activates the acceleration button which makes him disappear at an incredible speed through the blue skies.

The most important part of this project has been achieved, however there still remains some fine-tuning which needs to be achieved before allowing Yves to take-off, do aerobatics, vertical climbs, and participate at various air shows. To this day, Yves is extremely proud to have arrived at this point in this project and this alone and with the help of several friends, especially as many people judged this project impossible. Having such high potential, finding sponsors and support should be an easy task so that Yves can finally achieve the next steps...

Following the “Flying Man” project, the logical “next step” was to accomplish the secret dream of being able to fly like Superman or the Rocketeer. To do this, motorizing the wings was to be achieved in order to be able to let the first flying man ever to fly horizontal level!

Yves had already contacted in 2002 the worlds leading model jet engine Company, “Jet-Cat”, based in Germany. This company specialized in motorizing miniature planes, quickly showed its interest to help Yves install engines onto his wings.

To perfect the performance, the aerodynamic wings were improved and their span was increased to 3 meters. As of 2004 and because there was a loss of rigidity due to the inflatable side of the wings, Yves had to stop his collaboration with “Prospective Concepts” and work only with “ACT Composites” who then created foldable carbon wings, able to be used from a Pilatus Porter plane.

Finally, at 7:30pm on June 24th, 2004 and after the 3rd trial of the day (6th motorized trial), Yves finally drops out of the Pilatus at an altitude of 4000m over the Yverdon airfield. Before pulling on the little lever that controls the opening of his wings, Yves lets himself glide for a couple seconds and at the altitude of 2500m, he starts the ignition of the engines and waits 30 seconds for them to be able to stabilize. Once they are steady, he can finally speed up the engines and suddenly the dream comes true… He manages a horizontal flight at 1600m from the ground for more than 4 minutes, at a speed of 100 knots in formation with the Pilatus!

Since this first, Yves did more than 30 motorized flights, improving this first prototype with the help of his team. He could fly as long as 6 minutes 30" and even with a little climb rate.

The potential foreseen with this first motorized wing is huge, and is waiting to be explored. Yves is actually occupied to develop a second wing with accessional and aerobatics capacities. And we don't speak of the future take-off possibilities...!

Thanks to his professional aviator's approach during his tests: "Always have a plan B ready" and coached by computer simulation program of the Polytechnic School of Lausanne, Yves guarantees a very high level of SAFETY in the project, what should incite SPONSORS to give him confidence and support! The project received the authorization of the Swiss Federal Office for Civil Aviation and is insured in liability.

January 1, 2007

Great Web Site

I really enjoyed visiting your site... The seagull was particularly impressive. I'll be back.

Paige Anderson
< paigeanderson@mac.com>
futureslopedesigns.com

(ed. – I have been pleased that more people are visiting the web site and showing an interest in flying wings. In this case Paige also produces slope soaring flying wings as shown in the picture above. Check out the web site and see if one of them is for you.)

(From the Nurflugel Bulletin Board discussions.)

December 19, 2006

Trailing Edge Sweep And The Wing

Posted by: Mark Balogh <boreger@toons.hu>

Because of the sudden death of the telemetry board's microcontroller, the last few days I have collected my design ideas and worked on the list of proposed aerodynamic test bodies (i.e. models) for my projects.

During this process, I run into some questions about the efficiency of the wing and the sweep of the trailing edge.

I know, if I sweep the leading edge backward, the flow will slip outward. But how about, if I sweep the trailing edge forward? My instincts say it has the same effect, except the slip will happen somewhere at the last third of the chord. Am I right?

How will it effect the efficiency of the wing?

Mark "Boreger" Balogh
HUNGARY

(ed. – I found it interesting that over the ensuring weeks there were no answer on the bulletin board on this subject.)

December 22, 2006

UCAV Pros / Cons / Pics

Posted by: Larry Witherspoon <ssspoon@aol.com>

Well, this is kind of a sideline thread from the Joint Strike Fighter, but UCAV craft in this discussion do not have tail feathers so might be more appropriate subjects for this board, though the X-45 might not quite qualify for flying wing status since it has a distinct fuselage...where do you purists draw the line(s)?

For me it's not a flying wing but that is just a picky bit of semantics since I suspect the designers were concentrating on using the least material to get skin around a package which includes engine, fuel tank, and some hydraulics systems, then sticking a wing on that would permit controlled flight.

On the other hand, a smoother fuselage / wing transition like that of the X-47 might actually be easier to build, however, access to internal components might not be as easy.

What are some of the other considerations?

Check the Air Force URLs I have inserted in the article below for pics and more info.

I hope they are gremlin free.

Unmanned planes on RAAF list
The Age 12/21/2006
Author: Brendan Nicholson

The RAAF is considering unmanned jets for dangerous attacks on heavily defended targets without risking pilots.

The jets would be controlled remotely from the ground or from another aircraft, such as the two-seater Super Hornet.

On his recent trip to the US, Defense Minister Brendan Nelson announced that Australia was negotiating to buy up to two-dozen Super Hornets, a hugely upgraded version of the F/A-18s operated by Australia.

The editor-in-chief of Australian Defense Business Review, Trevor Thomas, said the Super Hornets could provide a bridge to new unmanned combat aircraft. Ultimately, the Unmanned Combat Air Vehicles, or UCAVs, could operate with the versatile Joint Strike Fighter. "That's the future," Mr. Thomas said. "We don't like pilots dying in combat."

The magazine will report this week that the UCAV has considerable advantages over a conventional aircraft. They are the size of a normal fighter and they are highly maneuverable, because designers need not worry about G-forces blacking a pilot out.

They could reach thousands of kilometers from Australia, refueling from aerial tankers on the way, and could conceivably stay aloft for days.

Without the weight of the pilot and the life-support system, they could carry more fuel and weapons. Two being developed are Boeing's X-45 and Northrop-Grumman's X-47, both still experimental.

http://www.airforce-technology.com/projects/x%2D45%2Ducav/
http://www.airforce-technology.com/projects/x47/

The most recent version of the ADF's planning blueprint, the Defense Capability Plan, says the ADF will "investigate acquisition of complementary systems" - longhand for looking at UCAVs. The plan says a decision will be made only after 2014, and if they are considered a good option they will be delivered by 2020.

At this stage the UCAV is not considered a viable option because it has not reached the stage where they could defend themselves, and would be "sitting ducks" to attacking fighters. But the companies developing them are confident they can make them more versatile.

The technicians who will "fly" these new planes from the ground would now be 15-year-old computer wizards fighting battles in space games.

Asked if UCAVs were being considered, an Australian Defense Force spokeswoman referred The Age to the Defense Capability Plan.

Mr. Thomas said the greatest danger for pilots now was ground attack missions. "They call it SEAD, suppression of enemy air defenses," he said.

The UCAVs would be "flown" by a technician on the ground or in the back of a two-seater, such as the Super Hornet. They are designed for aircraft carriers.

Critics argue that a serious issue would be the lack of a pilot, who can decide to abandon an attack if, for instance, he decides civilians are in danger, as has happened to Australian pilots in Iraq.

Mr. Thomas said the UCAVs had practiced bombing runs, but because they were not yet capable of air-to-air combat they would need to be protected by fighters.

They have been flying for three years, and are being evaluated by the US Navy. A decision is expected in 2008.

Unmanned aircraft are already heavily involved in Iraq and Afghanistan.

(ed. – I thought this was an appropriate piece based on our November program covering Northrop-Grumman's X-47 by Doug Fronius.)

January 3, 2007

Okay, Which One Of You Guys Was Flying An RC Nurflugel In Chicago?

Posted by: Greg <evolbaby@aol.com>

This story is growing by leaps and bounds. It's a story about pilots and ground crew at Chicago's O'Hare Airport who reported to authorities that they saw a saucer shaped aircraft on Nov. 7, 2006. What bothered me were two things.

One of the witnesses I listened to the other day said the object was typical delta wing shaped. Below is the CBS story based on the Chicago Tribune story.

(http://www.cbsnews.com/stories/2007/01/02/tech/main2323918.shtml)

If things didn't get worse, now AVWeb has also posted the story.

(http://www.avweb.com/eletter/archives/bizav/776-full.html#194136)

Greg

Posted by: Bill Daniels <BILDAN@COMCAST.NET>

Okay, we are supposed to believe a UFO hovers above ORD one of the busiest airport in the USA on one of the busiest days of the year and nobody got video or even a digital image.

That's hard to believe since there are millions carrying palm video cameras in hopes of getting something cool for YouTube or at least carrying cell phones with cameras. You'd think a UFO wouldn't stand a chance.

Bill

Bill, that's the first thing I thought of. With all the cell phone cameras and multiple cameras on the airport grounds somebody would have gotten off a pic or video.

Guess what I'm looking at as I type? Yep, pics and video stills of the object. I've even gotten emails asking how much money could they get if they sold their vids and pics.

If they pan out to be legit, and they are of the O'Hare Airport, then they have some info that accents the valid reports already given. I'm looking for any delta winged craft as one fellow reported. So far all I'm looking at are elliptical objects.

I'm not the only one looking at pics. I have half a dozen news bureaus asking me about the pics and vids they have. I figure soon as everyone sorts out who has what we'll have something for the debunkers to sink their teeth into.

Greg

(ed. – I guess I must have been on another planet during all of this, since I don't recall ever seeing any pictures or big news stories. If anyone has access to pictures, please point me in their direction.)

(From the Mitchell U-2 Bulletin Board discussions.)

(Photo source: http://groups.yahoo.com/group/U-2Wing/)

Canopy

November 16 to November 29, 2006

Posted by: "ghgidf" ghgidf@yahoo.com

I have been doing a lot of reading but not responding. Also been doing a lot of building on my U2. Closing in on needing a canopy to build up the area around it. I have looked in several places on the net, but with no luck. Can anyone point me in a good direction?

Another question. When leveling the aircraft for weight and balance. What is used for level flight? If I level the cord line on rib 7, the wing doesn't look right. When I set up the 7-degree angle of attack, is this normal flight attitude, and where the weight and balance should accomplished?

Would also like some inputs on eng. HP. I don't think the 20 HP the plans call for is enough.

Russ

Posted by: Dave Gingerich <dgingerich@cox.net>

Due to fuselage modifications, we are not going to use the canopy that came with the U2 kit. Tom Rose is the owner of the kit. His e-mail address is/was wingnut@mfire.com. I haven't talked to him about it, but he probably would sell it.

Ours will be a flat wrap like a Duster sailplane, or a Kolb.

Dave

ABOVE: The U-2 kit referred to by Dave.

Posted by: Richard Avalon <mitchellwing@earthlink.net>

You might try "Todd's Canopies" or airplane canopy manufactures, on the web.

The U-2 flies through the air at 7degrees positive. You can set the wing at 4 or 5 deg positive on the ground, pilot in ready to fly. Also, pilot in, ready to fly, the nose wheel should weigh 13 pounds. You can adjust this when you start doing your taxi tests.

Plans say CG is 3" in front of main spar in cockpit

Richard

ABOVE: Example of a U-2 cockpit section.

Posted by: Guy Provost <guy.provost@sun.com>

I do not usually interfere here not having too much time, having my hands full building a Choucas. But it's mandatory for safety. Do ****NOT**** put the CG at 3 inches in front of main spar.

I do not know where those figures come from unless there has been drastic changes in the plans in the last 25 years which I doubt. This CG is so forward that to get airborne you will need excessive speed and the bird will have a STRONG tendency to dive. I do not even know if the elevons would be big enough to generate enough down lift to counteract the nose down forces.

Good CG would be from the center of the spar to 1 inch back from the spar. I fly mine at about .5 inch from the back of the spar and when reaching stall speed, the bird will start to mush and nose down by itself. Even CG in the center of the spar will give a good nose down but it is flyable that way and it is a good start for fine tuning.

Also, forget about this 13 pounds at the nose wheel unless you build exactly per plans with the same very small motor they had in those days. Go with the CG instead.

Worth to mention that a 7-degrees angle of attack at ground level will allow you to take-off without too much transition. At take-off speed (35-45 mph) it will transition almost by itself but you have enough authority to keep it on the ground if needed (crosswind take-off).

Note that if you designed a flexible landing gear of your own, make sure to sit in the machine to check this 7-degrees angle of attack. The U-2 airfoil, contrary to the B-10, is more forgiving and this angle of attack on take-off could be from 5 to 8 degrees.

ABOVE: Guy's U-2 inflight.

Posted by: Roy Russ Russom <ghgidf@yahoo.com>

Center of gravity concerns. My plans have 3 different pages of CG statements, which I will type word for word and identify the page and location on that page where the statement is located. First on page 2, center bottom. CENTER OF GRAVITY with three wheels on the ground and main gear located 6 inches aft of rear face of main spar and wing set at 7 degrees angle of attack. With pilot and fuel onboard, the nose wheel should require 12 pounds of pull at the forward bulkhead for the nose wheel to break ground. c.g. is the main spar aft of cockpit.

Page 3, lower left side of page. C.G. is 1" aft of main spar in cockpit aft CG forward C.G. is 3" forward of main spar in cockpit. Page 12, lower right. CENTER OF GRAVITY- MODLE U-2 with all three wheels on ground and main gear located 1" aft. of rear face of main spar and wing set 7 degree of angle of attack, with pilot and fuel aboard, the nose wheel should require 12 lbs. of pull at forward bulkhead to break ground. C-G is the main spar of cockpit.

With all 3 of these statements, I still don't know what the C.G. WINDOW is. I do know the FAA, or a representative will want to see a weight and balance data sheet on the craft before a airworthiness cert. will be issued.

No place in the previous 3 page statements mentions how much fuel and where it is located, which will definitely effect weight and balance. Also no place can I find anyone making any statement about leveling and weighing the plane, which will have to be done to determine true CG.

Am I asking too much and the only one that wants to know just how safe this plane is?

I cannot go any further until I have the some answers. Richard, do you have any comments?

Posted by: Richard Avalon

Maybe this will help. According to the plans, forward CG is 3" forward of main spar in cockpit. Rear CG is 1" aft of main spar in cockpit. On page 12 of the plans I think that is a "six" and not a "one" in that statement. This way it would match the statement on page 2. Your fuel tank should be closer to CG and be about 1/2 full for measurements.

You can weight the airplane using three accurate bathroom type scales, one under each main wheel and one under the tail skid. I doesn't have to be level to weigh the airplane.

Russ, please don't worry, one thing at a time gets the job done.

Good luck and hang in there and just think what a nice airplane you will soon be flying and enjoying.

Posted by: Dave Gingerich

You have given the location of the Center of Moments at least twice. Could you give them to us one more time? This is the point the thrust line should pass through, to avoid causing a nose-down or nose-up moment with power changes.

I have not been working on the U2 very much lately, but Tom, the owner, just purchased a fan-cooled Rotax 277, with gearbox, pusher prop, and exhaust system, off a pusher ultralight. The next task will be to invent an engine mount and turtledeck/cowling. I have a working plan/elevation drawing in AutoCad, which I will use to get a preliminary design for the mount frame, hence the request for CM location. Does anyone know of a source for a drawing of a mount template for this engine? Also, the location of the thrust line from the mounting points.

Dave G.

December 6, 2006

Victory Wing

Posted by: kavoth@psctelcom.net

I hope I'm not doing a "No No' by asking, but is there any chance of the "Victory Wing" flying again? You may go to www.twitt.org/MitchellVictoryWing.html to see what I'm talking about. I already had the U-2 plans but found out I had to use the B-10 plans if I wanted to stay Ultralight. The decrease in L/D was disappointing to say the least. Are there any simple changes in the B-10 that would improve the L/D? After I get through Christmas I am going to order some 1 mm. plywood and get started. Kenneth

Posted by: Raymond Landa <RaymondLanda@hotmail.com>

I have the Victory wing now and I'm working on restoring it. I am replacing the landing gear with the leaf spring from a 1995 corvette. It's composite and only weighs about 8lbs. It even looks like it should be a landing gear.

Also I am stripping the paint and repainting it. I'm going to use walnut shells with low pressure to blast the old paint off. I haven't decided on the paint yet but whatever I decide on will be very light. The skin of the victory wing is epoxy glass so whatever is used to paint it needs to block the UV light. But one thing at a time.

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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3114 Edgehill Road
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Bruce Carmichael brucecar1@juno.com
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VIDEOS AND AUDIO TAPES

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

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
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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 Aerovironment project led by Dr. Paul MacCready.

Cost: $8.00 postage paid
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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
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VHS of Paul MacCready's presentation on March 21,1998, covering his experiences with flying wings and how flying wings occur in nature. Tape includes Aerovironment's "Doing More With Much Less", and the presentations by Rudy Opitz, Dez George-Falvy and Jim Marske at the 1997 Flying Wing Symposiums at Harris Hill, plus some other miscellaneous "stuff".

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