

NO. 42

DECEMBER 1989

TWITT NEWSLETTER



TWITT
(The Wing Is The Thing)
PO Box 20430
El Cajon, CA 92021

The numbers to the right of your name indicate the last issue of your current subscription, e.g. 8907 means this is your last issue.

There is NO Dec. meeting. The next meeting will be January 20, 1990.

MINUTES OF THE
NOVEMBER 1989 MEETING

Andy opened the meeting at about 1335 by asking if there were any guests in the audience. Maurice Buckam, a Teledyne-Ryan employee, who came to see what TWITT was all about. Andy then outlined the program for the day, and announced that today's raffle prize is a two hour ride in Doug Fronius' Stinson, courtesy of Doug. He mentioned that Harald Buettner had donated 5 audio cassette tapes to TWITT for use in recording the meetings. With no other business to conduct the group watched a short, entertaining, aviation video put together by Harald while we waited for the last attendees to arrive before bringing on the guest speaker.

After the video, Andy introduced Ray Cote, the 1989 Formula One Champion from the Reno Air Races. Ray Cote began by acknowledging the contribution of a dedicated ground crew to support the flying effort. In this vane, he presented his winning trophy to his crew chief, Don. He explained the idea behind Formula One pylon racing was that you could afford to go racing by designing and building your own airplane. Ray did it by picking up other peoples designs and doing extensive redesign and testing to come up with faster airplanes. Robbie Grove has been his primary design architect and builder for the past five or six years. He explained you take a little airplane, a basically stock 100 hp engine, 66 sq ft of wing area put into any number of shapes or sizes, ensure the angles of vision meet requirements, make it all weigh at least 500 lbs empty, have 500 X 5 tires, fix pitched propeller, fixed ignition timing, and 5 gallons minimum gasoline, and you end up with a Formula One racer.

Speeds of around 242 mph are

acheived running the engines at about 4000 rpm, which helps prolong their live somewhat and keep the cost of racing down. Ray explained a little about the stresses these little airplanes are put through during a race. The turns can reach 6 Gs, which means his plane has to be capable of handling higher load factors since he weighs 30 or 40 lbs more that some of the other pilots. Of course this means higher angles of attack, higher induced drag and the airplane slows down, which is not how to win races. His trick is to pickup the losses from the turns while tracking true down the straights. One way he does this is by flying a very precise ground track on each trip around the race circuit.

His ground crew ended up with their work cut out for them the night before the final race. It seems the number 2 cylinder burned a piston during the earlier heat races and there was no telling how long it would last during the next run. Ray was willing to fly it as is, figuring he would just become a glider the land as needed if the engine didn't make it all the way. Besides, he didn't have any spare parts. But the crew said they came to win this thing, so went out a scrounged the parts from #44, Bill Prestons' machine which was not going to race. So after an all night session of engine rebuilding, they fired the engine up (in the hanger, right next to the big celebration party) to check settings for about 20 seconds, which was all the running prior to the actual race.

The weather Sunday was a terrible day, with high winds and a lot of turbulence. But it was just what he wanted, since he had a great deal more experience than most of the other competitors which gave him an edge. He went on to relate how the race progressed from him getting

off the ground last, as usual, and then coming out of the scatter pylon half way up through the pack due to a tighter cut on the turn. He worked his way up through the pack and took over first place on about the fourth lap, and from there pushed it to the wall, full rich to stay there until the checkered flag.

Ray finished his description of the race and opened the floor for questions. He discussed various aspects of race strategy, such as, what position to fly in relation to the other planes, and how to lineup on the pylon to make a clean 60 degree banked turn that scrubs off the minimum speed. He talked about the rigors of competing and how safety of flight usually takes a back seat to winning the race. However, you still have to make sure you don't violate race rules by cutting pylons or flying below the pylon tops.

After a little more question and answers, Ray showed his collection of slides covering his speed record attempts at Las Vegas, New Mexico and then shots of the Reno Air Races from over the past years.

We all gave Ray a hearty round of applause and our thanks for an excellent talk. Bob Fronius then announced Mark Motely was willing to buy a group of Lottery tickets in an attempt to cash in on his Saturday luck (he's won or placed in the last three TWITT raffles). (Ed. Note: There were a number of takers, but alas the results that evening produced no instant millionaires.) We then had the raffle drawing for November, and Carl Hatrack won the Stinson ride. After the drawing the meeting for November was adjourned.

12/5/89

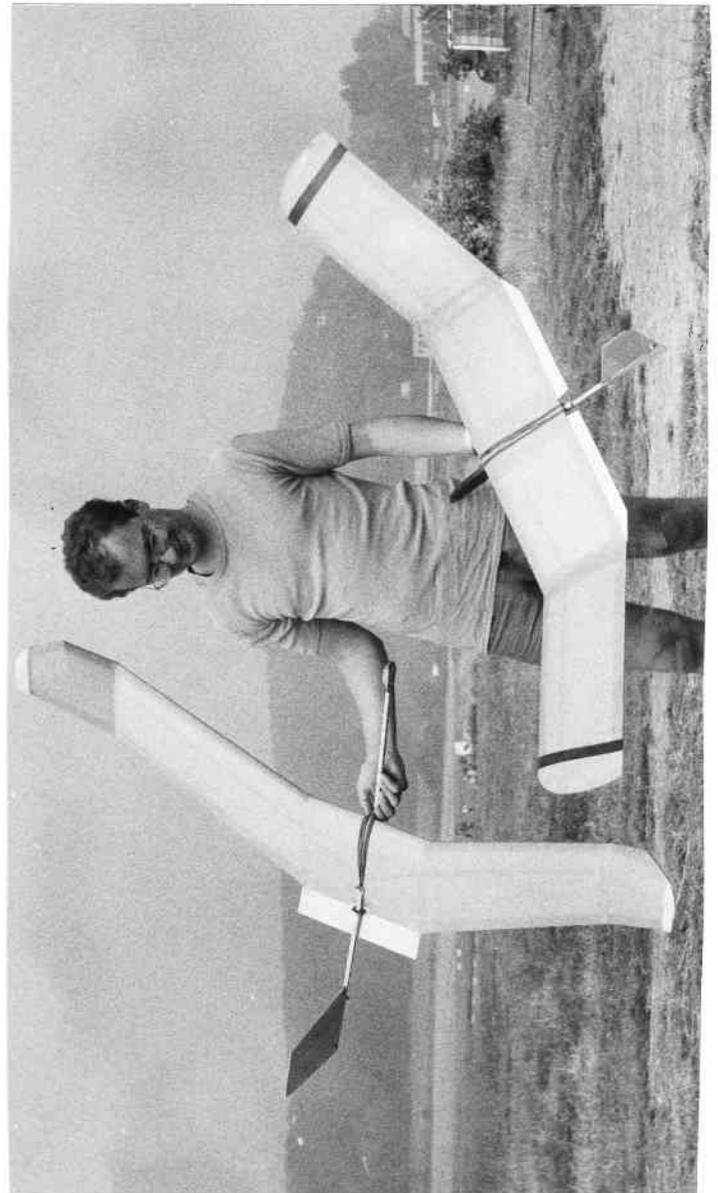
Dear Bob,

Thanks for the memories in the photos. I am enclosing a photo of a couple of Flying Wing models from Czechoslovakia. They should interest the TWITT members.

Al Backstrom

REMINDER

THERE IS NO DECEMBER MEETING
THE NEXT MEETING WILL BE
JANUARY 20, 1990
HAVE A MERRY CHRISTMAS
AND A HAPPY NEW YEAR



PRESIDENT'S CORNER

There is a lot to cover this month, so I will get right to it. First, you will note a letter from Syd Hall which took us to task for allowing the newsletter to decline in quality. He makes some good points, and we the officers of TWITT apologize for the problems. Part of this is due to having too much material for an issue, or conversely not have enough. Myself or Marc prepare the minutes, and as you have seen his are more technical than mine due to his aerodynamicists background. But Harald has brought up a good point in his reply to Syd (see letters section) in that sending a blank audio tape to TWITT along with \$1.00 for postage and handling would allow us to transfer the minutes to your tape and return it. In this way you would have an exact transcript of all the technical material covered that month. If you do this please allow several weeks for turnaround since we do this on voluntary time.

Since Harald covered most of the discrepancies noted by Syd I will not go into it any further. However, I would like to add that the printed material on Budd Love's Airlove project was put in so members could see what to expect from the October speaker. Also, the small model pictures were added as filler material, and inadvertently some came out upside down. (Sorry about that.)

I know a lot of you would like to see more drawings and specifications for flying wing aircraft. We would love to give them to you, but recently we have not been receiving anything from the members showing us what they are doing. Bill Hinote's letters indicate he is designing his own wing, and hopefully he will share some of his initial concept drawings with us in the near future. It takes people giving us information before we can give it back to all of you.

Speaking of drawings, I was surprised when none of you wrote to ask us about the various code numbers and the drawing which should have accompanied Tasso Proppe's article in the October (#40) issue. We don't have anything for the code numbers, but elsewhere in this issue you will find a drawing of the mixer assembly that goes with the specifications on page 9 of October's newsletter. Sorry for the delay, and I hope it is useful to someone.

Finally, it is my hope that the next several months will bring you a list of back issues with subjects covered. Also in this plan is a listing of what is in the library, which will take a little longer to get done.

I want to thank all those whose letters appear in this month's newsletter. We do not mind the criticism, since it's what brings about change and pointing out how we can make TWITT better for all the members. Please keep it up, for it's this interchange of ideas that will help TWITT continue to grow and meet the needs of you the members.

We at TWITT hope you all have a safe and happy holiday season.

Andy

TWITT

14 Nov '89

Dear Sirs: (since I can't figure who the heck is running this show)

I send this with some trepidation, since the quality of TWITT has been vastly diluted with trivia about incorporation into Hunsaker Foundation, and what is going to emerge is very much up in the air, but I guess that, for TWITT, is not too bad a place to be.

This is not a flattering letter, since I feel that this issue (#41) and the one that preceded it were outstandingly bad, and this is why. In #41, there is nothing until the lower half of page 4, where there is a list of specs for the HHB II, but no other data or pictures. It does NOT relate to the group of models, shown piled on a piece of plywood (that were also shown, unconvincingly on page 1 bottom). Nor does it pertain to the drawing on the following pages, or does it? The dimensions seem to fit but the credits are HHB II for the figures and and Precomtec R&D for the drawing (tho both are prone piloted). One might guess that the cover sketch is of this bird too, tho there is, again, no credit. And who and why is Harold Buettner? What does he do? Then follows pages 10 & 11, and I hope we will soon be done with all this.

Now, to continue the criticism, I return to #40, and find out that Harald Buettner is a cat I'd like to get a lot more from. The tiny bit that you released on pages 3 & 4 made me wish I'd get the total text of his remarks, but once again

he is jumbled in with the Precomtec R&D. Maybe for the El Cajon residents this kind of jumbled reporting works, but for us who live in the boondocks it is quite difficult. Continuing, the cover and page 5 show the Airlove concept, but again with little comment. My observation based upon the French Escopet jet is that these things get hot (Gluhareff has one too that will fry eggs at forth paces). And to put one inside a wing? Maybe in Hades it can be done successfully. But on to the Mitchell "V", page 12. Why show other Mitchells, why not the "V"? CONFUSION, CONFUSION, CONFUSION

Fortunate for you I am out of paper or I'd blast Precomtec on the body fillets and tips. Nice on paper but in the air they don't pay their freight. At some attitude they produce MORE not less turbulence and, hence, drag. William B. Stout said it, "Simplicate and add lightness." (or was it Sopwith? I forget).

Syd Hall

(Ed. Note: For Syd's and everyone elses clarification Andy Kecskes is the President and chief business organizer. Dave Pio is the Vice President who handles affairs in Andy's absense. Pillip Burgers is the Secretary and newsletter editor, with the help of Marc de Piolenc and Andy. Bob Fronius is the Treasurer and principle organizer of TWITT. He also puts together a majority of the newsletter after the typing is done, and see to it that it is printed and mailed as soon before a meeting as possible. Hopefully Syd this will help you address your comments to the right person in the future.)

(Ed. Note: Harald has written an answer to Syd's letter, since some of it has questions which concern Harald. We wish to thank Harald for his contribution. Perhaps in a later issue we will be able to include a full transcript of his presentation.)

Dear Syd: 25 Nov '89

In response to your letter of 14 Nov '89 to TWITT, I'd like to help you out of some of your confusion, at least on what concerns you have about me and my sailplane. The list of specs on the lower

half of page 4 is from my wing design HHB II "Gooneybird," which is pictured on the next two pages. Too bad, that the last line of the credits in the lower right corner of the drawing got lost in reproduction. PRECOMTEC R&D happens to be my business name, sorry about that. You're right, much to my own surprise, the cover art is the Gooneybird, drawn by Ed Leiser.

About who and why is Harald Buettner. Why - I actually don't know, maybe you ought to ask my parents. Who - well, just another crazy, wing nut who happens to have a composite tooling and R&D business at Gillespie Field in El Cajon.

For TWITT #40, I suppose you got a different issue than me, because I can't find the word Precomtec R&D, not even once in mine.

For the limited information on pages 3 & 4 I'm sorry again, but maybe if you submit a blank audio tape to Bob, you might get a copy of the original.

About body fillets and tips, you're right, at some attitudes they do produce more drag, but that may just be when you need it. Besides, without them I'll have additional drag all the time, and who wants that?

Well, I guess I got it all covered.

Have a good one 'til next time,
Harald

Dear Editor:

23 Nov '89

Sorry that I have not been keeping you up to date on my "Wing" work.

The enclosed picture was taken October 30th. After 20 more runway flights to altitudes in excess of 40 feet it was decided to do away with this awful landing gear. On the flight of November 14th the gear was dropped and the ship continued to rise majestically. I climbed to 700' AGL (ultra light pattern altitude) made a series of speed checks at full throttle and then departed the airport to circle my home. The turns are beautifully coordinated and a perfect landing on the runway centerline was made on the belly skid after a flight of 25 minutes. More test flights were immediately planned!

Performance figures:

Top Speed - 53.3 MPH

Empty Weight - 227 pounds

Eng Pwr - 9.5 BHP @ 4450 RPM
(up from 8.5)

Fuel Consumption - 1.15 GPH

Prop Efficiency ? (Only 33" Dia)

This is truly a "minimum" aircraft.

A severe windstorm on Nov. 20th tore a 500" hanger door loose - it flew into my wing causing severe damage. My ship shielded a new Piper Archer parked next to me. I SHALL REBUILD!

Sincerely,
Lewis Dewart

(Ed Note: Lewis is a constant source of information. Thank you for your contributions. Good luck on the rebuild and test flights.)

TWITT

20 Nov '89

To Whom It May Concern:

I am an aerodynamics and systems instructor at the University of North Dakota, involved in teaching foreign students how to become airline pilots. Previously, I was a carrier aircraft plane commander as well as a flight instructor with the United States Navy.

Though my interests in aviation are varied, I have always been drawn to the "tailless" aircraft. Of specific interest are the aircraft of Dr. Horten's. I enjoy R/C model soaring, especially the flying wings of some German friends of mine.

I would like to apply for membership in TWITT and, as such, am enclosing \$15 per your add in RCSD. Please send me any application forms necessary as well as a complete listing of any and all available back issues of your newsletter.

Thank you kindly.

Sincerely,

Benjamin M. Trapnell
4201 University Avenue
Box 8009, University Station
Grand Forks, ND 58202

TWITT

14 Nov '89

Letter to the Editor:

As a hungry, information-starved flying-wing aficionado, I was alarmed to hear that you are short of letters-to-the-editor, so here's one to fill the spaces.

I have been a Nurflugel (flying wing) fan for many years. I was first exposed to the concept at the age of about ten (I am currently 42) when I saw a primitive RC sailplane which was a pure flying wing of swept-wing, high aspect ratio design (a good flyer, too!). In 1975, I built and flew the first of three Easy-Riser hang gliders, an improved version of the famous Icarus series of rigid-wing, biplane designs. In 1981, I purchased a Mitchell Wing kit which I partially completed before selling; during the same period I considered and rejected the concept of buying the M Company from Jim Meade (manufacturers of the Mitchell Wing kits).

I own an original piece of art by famous aviation artist Hal McCormick, which depicts the first flight of the Northrop YB-49; it is signed by Max Stanley and is mounted with verified pieces of the wrecked aircraft in the framing - a real collector's piece.

My current aviation activities are taking 2 very diverse paths; I am an active glider pilot, including national-level competition with my ASW-20 sailplane; and, I am also actively pursuing a lifelong dream: to design, build, and fly an aircraft of my own conception.

This airplane is going to be a high-performance, 2-place side-by-side flying wing design of composite construction: the powerplant is well under way to completion, and will contribute significantly to a 7 to 1 power to weight ratio.

I would welcome any input (opinions) or advice anyone would care to offer - I have tried to educate myself as much as possible before attempting any design decisions, but I am still in the conceptual phase of the airframe, and would welcome as much input as offered.

Bill Hinote
Griffen Aircraft Co.
P.O. Box 390
San Luis Obispo, CA 93401
(805) 543-3705

(Ed. Note: Bill, if you have any drawings or sketches of your ideas please forward copies to us. We will be glad to set up a discussion forum at a future meeting and give you all the feedback you probably can stand. Keep us informed of your progress.)

Also from Bill is the following information.

Those TWITTs wishing to satisfy their craving for an exotic flying wing may wish to know about an interesting RC model kit by Robbe, a German manufacturer. The VAMPIR is a high-performance, high-aspect ratio flying wing of about a 12' span. It has flaps for speed and glide-path control, and elevons for pitch and roll. It has no vertical surfaces, apparently relying instead on substantial multiple sweep and dihedral for yaw stability.

I am nearing completion on my kit and will report to this newsletter on its flight characteristics, including stability and control.

If any other members have flown this model, I would be interested in hearing from them.

(Ed. Note: It looks like Bill and Bud need to coorespond with each other on any problems encountered during the construction phase.)

TWITT

18 Nov '89

Gentlemen:

I would like to order back issues of two TWITT newsletters. Since I don't know the price I have made a guess and am enclosing my check for \$2. If this isn't enough let me know.

My interest in flying wings goes back to the late '30s when my dad and I built gas models. While mine were more conventional my dad built tailless free flight models. I have two of his 1941 tailless models and have just finished drawing a set of construction plans for one of them.

For the past 20 years I have been flying radio controlled sailplanes. About two years ago I got the bug to build a flying wing R/C glider. Currently I am flying a modified Wind Freak and a modified Klingberg Wing, both with good results. I also have a Robbe Vampir kit waiting to be built.

I guess you would like to know the two back issues I want. They are #4 & #10.

Sincerely,

Bud Manning
1822 Wickham
Royal Oak, MI 48073

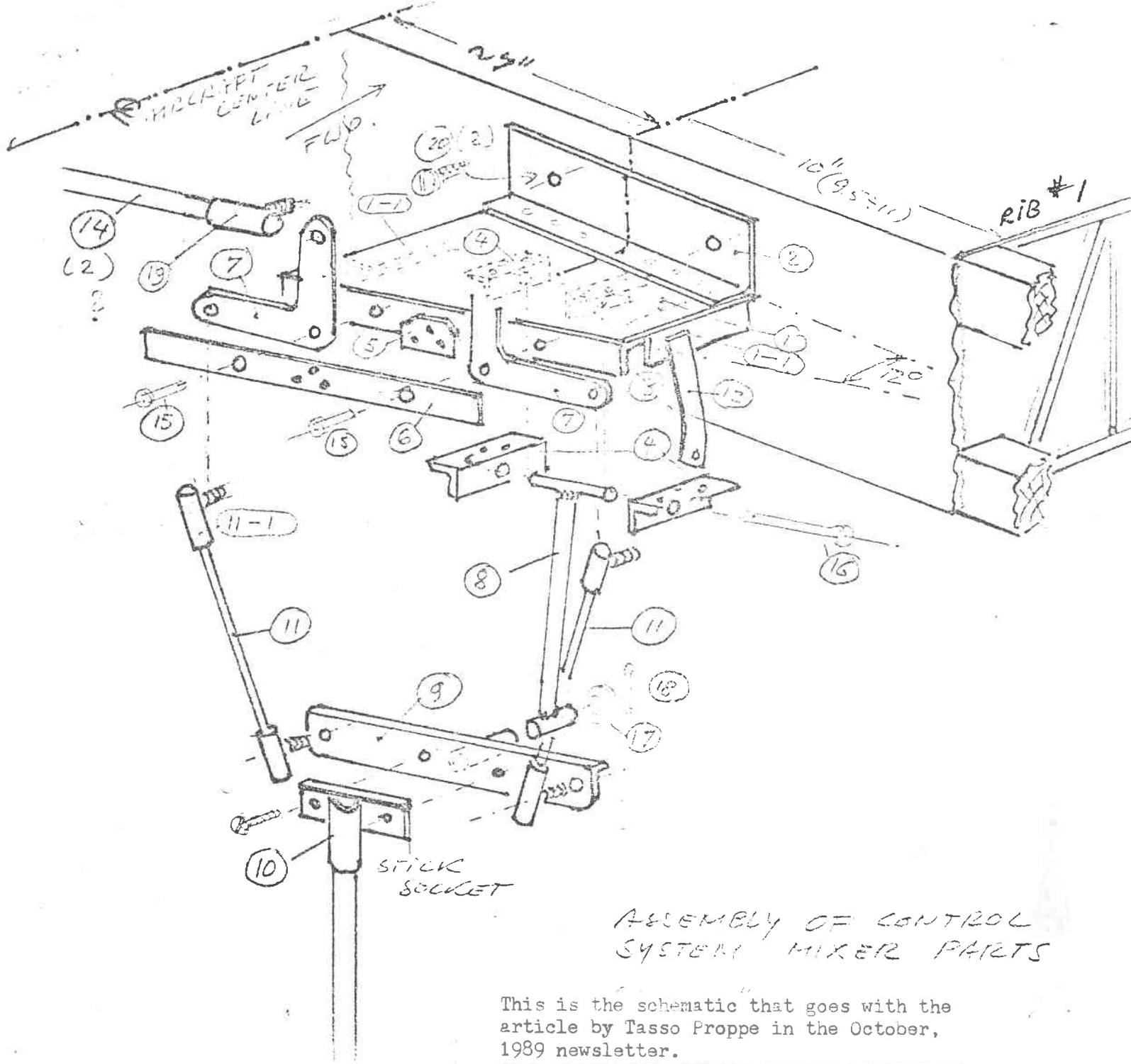
(Ed. Note: Bud and Ben are among the growing number of modelers joing TWITT after seeing our ad in Radio Control Soaring Digest. They are looking for technical material that can be turned into flying models, which will benefit all of us. We welcome all of you modelers out there.)

Dear Sirs,

Please include our ad for Horten H1c plans as follows.

Horten H1c construction drawings with full size airfoil layout. 30 sheets 24" x 36" with specification manual. \$115.00 to Flight Engineering and Developments, 2453 Liberty Church Rd., Temple, GA 30179.

Thanks,
(404) Henry Cherry
562-3512



This is the schematic that goes with the article by Tasso Proppe in the October, 1989 newsletter.

T.W.I.T.T. (The Wing Is The Thing)

T.W.I.T.T. is an organization of engineers, scientists, pilots, sailplane enthusiasts, model builders and many other persons having an interest in flying wing/ tailless aircraft technology. Write to T.W.I.T.T., P.O. Box 20430, El Cajon, CA 92021 to find out how you can participate.

Send SASE for membership application and flyer: "What is T.W.I.T.T." or, send \$2.00 for full information package including one back issue of our newsletter, postpaid. Full membership is \$15.00 per year and includes twelve issues of the newsletter. Back issues of newsletter are \$.75 each, postpaid.

SECTION 14. CONDUCT OF MEETINGS

Meetings of the Board of Directors shall be presided over by the Chairman of the Board, or, if no such person has been designated or, in his/her absence, the President of the corporation or, in his/her absence, by the Vice-President of the corporation or, in the absence of each of these persons, by a Chairman chosen by a majority of the Directors present.

Meetings shall be governed by Robert's Rules of Order, as such rules may be revised from time to time, insofar as such rules are not inconsistent with or in conflict with these Bylaws, with the Articles of Incorporation of this corporation, or with provisions of law.

ARTICLE 6. OFFICERS

SECTION 1. NUMBER OF OFFICERS

The officers of this corporation shall be a President, Vice-President, Secretary, and a Chief Financial Officer who shall be designated the Treasurer. The corporation may also have, as determined by the Board of Directors, a Chairman of the Board, and one or more Vice-Presidents. Members filling other positions, such as, Assistant Secretary, Assistant Treasurer, etc., will not be considered officers. Any number of offices may be held by the same person except that neither the Secretary nor Treasurer may serve as the President or Chairman of the Board.

SECTION 2. QUALIFICATION, ELECTION, AND TERM OF OFFICE

Any person who is a current member may serve as an officer of the corporation. Officers shall be elected by the Board of Directors, at any time, and each officer shall hold office until he/she resigns or is removed or is otherwise disqualified to serve, or until his/her successor shall be elected and qualified, whichever occurs first.

SECTION 3. SUBORDINATE OFFICERS

The Board of Directors may appoint such other officers or agents as it may deem desirable, and such officers shall serve such terms, have such authority, and perform such duties as may be prescribed from time to time by the Board of Directors.

SECTION 4. REMOVAL AND RESIGNATION

Any officer may be removed, either with or without cause, by the Board of Directors, at any time. The missing of three consecutive meetings without due cause or the providing of notification of an intent of missing a meeting, shall constitute cause for removal from office. Any officer may resign at any time by giving written notice to the Board of Directors or to the President or Secretary of the corporation.

SECTION 5. VACANCIES

Any vacancy caused by the death, resignation, removal disqualification, or otherwise, of any officer shall be filled by the Board of Directors. Vacancies occurring in offices of officers appointed at the discretion of the Board may or may not be filled as the Board shall determine.

SECTION 6. DUTIES OF PRESIDENT

The President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, supervise and control affairs of the corporation and the activities of the officers. Unless another person is specifically appointed as Chairman of the Board of Directors, he/she shall preside at all meetings of the Board and all meeting of the members.

SECTION 7. DUTIES OF VICE-PRESIDENT

In the absence of the President, or in the event of his/her inability or refusal to act, the Vice-President shall perform all the duties of the President, and when so acting shall have all the powers of, and be subject to all the restrictions on, the President.

SECTION 8. DUTIES OF SECRETARY

The Secretary shall:

Certify and keep at the principal office of the corporation the original, or a copy, of these Bylaws as amended or otherwise altered to date.

Keep at the principal office of the corporation or at such other place as the Board may determine, a book of minutes of all meetings of the Directors and members.

See that all notices are duly given in accordance with the provisions of these Bylaws or as required by law.

Keep at the principal office of the corporation, or other such place as designated by the Board, a membership book containing the name and address of each member.



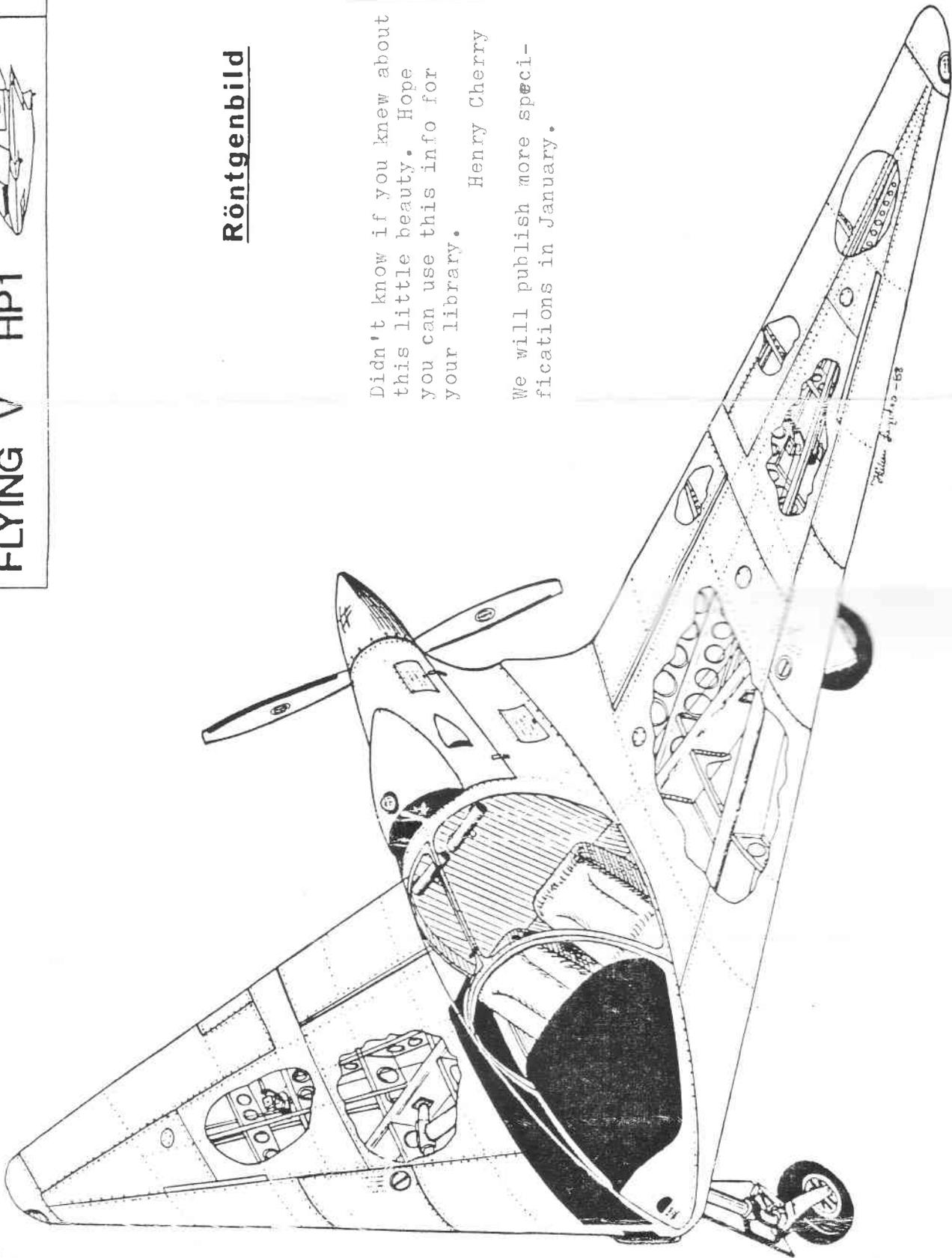
FLYING V HP1

Röntgenbild

Didn't know if you knew about this little beauty. Hope you can use this info for your library.

Henry Cherry

We will publish more specifications in January.



One word
can be heard
everywhere...

Whisper it
and it will even rise above
the noise and clamor...

Sing it
and it will climb
up to the heavens...

live it
and it will ring out
through all the world...

One word...

Peace.

May this Christmas
bring peace and happiness
to you and those you love.

T. W. I. T. T.