



A-4 by Frank Cuden

Fujimi 1/72nd scale with the Mig outline superimposed.

A Swept Wing Story

By Don Stauffer

The Sabre Story, by Merrill Anderson, in the recent newsletter brings to mind an interesting story. It tells of how the US could have had swept wing aircraft considerably earlier, but for the organizational climate of the N.A.C.A.

There seem to be two types of organizations in the aerospace industry, the NIH (not-invented-here)

ones and the PWH (prophet-without-honor) ones. The NIH organizations have an inflated ego, and figure their staff is so brilliant that any invention from outside their organization cannot be worth much (else their staff would have invented it). The PWH organizations, named for the aphorism from the Bible, "a prophet is without honor in his own household," has a very low self-esteem, and figures that an idea from its own staff can't be worth much. If it were a good idea, surely

someone else would have discovered it.

Robert T. Jones was an interesting employee at N.A.C.A. He was a brilliant engineer and scientist, but did not have a college degree. Raised in the small town of Macon, Missouri, he was the quintessential aviation buff. Whereas his friends read comic books, Jones read aviation magazines, especially those with hard technical content.

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TCAH This Month

The monthly meeting will be held Saturday February 10, at Fleming Field, South St. Paul, beginning at 1:30 pm. Vendor baiting will begin about 12:30, so come early.

Picture your model here! Send me a photo of your model, and it'll be used to fill these little white spaces at the ends of the columns.

GENERAL MEETING MINUTES – January 2007

The meeting was called to order by our President at 1:30. We had a few guests make an appearance, Terry Sorg and Mack Jacque and a special appearance by Mary Hovden carrying in her husband John Roll, who made his best Chevy Chase impersonation recently and is relegated to using crutches for a while. Axel, John Roll, and Winston gave the members an overview of all the new products, and news of the hobby. Sean Brzozowski then ran the "Show-n-Tell".

Steve Erickson then gave us a presentation of his hobby, which he calls "Aircraft of the Aces", and how he started making models as a kid up until today.

There is possibly a new charter tour coming up, Gathering of Mustangs and Legends "The Final Round Up", September 27 - 30, 2007. Go to: www.stallion51.com for more info.

Ken Sallman gave an update for the "Kits for Troops" project, more info coming up.

We decided on a theme for this years Nordicon "Great Movies, Great Models".

With our 40th anniversary, the club decided to have commemorative mugs made and to be given out in the future. Frank Cuden knows somebody that can make them. It was approved by the membership. There was talk about a model art show at a gallery sometime in the near future. Steve Capiz, Ken Hornby, and Steve Jantscher are following up on that.

There was then an open discussion on our monthly raffle. It was brought up that we use some or all of the funds taken in at the raffle and purchase gift certificates to be raffled off at future meetings. It will be voted on what to do at the Feb-

ruary meeting.

We also had nominations for our club awards:

Modeler of the Year: Bob Maderich, Sean Brzozowski, and Steve Hustad;

Newsletter Article of the Year: Ken Hornby - Curtis, Johannes Allert - RNoAF in WWII, Rick Verner - IPMS Nationals

Historian of the Year: George Mellinger - Lend Lease A/C, Ken Hornby - Book on Chuck Doyle, John Lambert - Pacific War 44-45

And finally I would like to say get well to Larry Donovan, who was under the weather at the time of this meeting and I took on his duties.

Until next month take care,

Bernie Kugel



From the President

by Johannes Allert



Photo taken of me & "Sergeant" 3 years ago – I'm the one on the left in case you're confused.

"It's like deja-vu all over again"
~ Yogi Berra, New York Yankees

Around this time every year as the Club Officers start to settle into their roles and responsibilities, they inevitably begin to encounter the same old questions, posed by the occasional individuals (You know

the type. They only show up once every 7 years and seldom pay attention to the Newsletter or to the "Yahoo Groups" (let alone what's actually going on during a meeting). Like Bill Murray's character in the movie "Ground Hog Day", the Club Officers & membership are forced to endure reliving the same thing over and over again. In order to prevent a (un) co-ordinated strike from the "Good Idea Fairy", we, the Club Officers, have provided a ready-made list of answers to those questions. We think you'll not only find them informative, but instructional as well.

Question #1. "When are we moving back to the old place again?"

Answer – As soon as you find a way to get past the guards and security checks backed up by guard dogs and heavy firepower. While you're at it, make sure that we'll have just as much room as we have now for the same cost we're currently paying. If that happens, then we're all for it. By all means "Eisenhower", lead the way! Until then, we're staying put!

Question #2 "Can we change the logo back to the way it was?"

Answer – When you say, "was", are you referring to the Spitfire & Stuka, Flying Tiger, or the Wright Flyer & Space Shuttle? Oh, you didn't know there were others? Well, perhaps you need to stick around a little longer. You'll find out that the club is made up of more than just its logo. All four are great, and all four reflect a change in times.

Question#3 "Can we sponsor a scholarship for children?"

Answer – As soon as we sponsor one for dogs. How's that sound?

Response – You must hate children!

Retort – No more than you hate dogs, but this isn't about the children or dogs. It's about the hobby.

Send your kid to one of the military academies if you want a free ride. I'll send my dogs to obedience school and we'll call it even, OK?

Question #4 "Can you guys have a model show at the Mall of America?"

Answer – (Counting to 10 very s-l-o-w-l-y before our temper blows) For starters, does the phrase "you guys" actually include you too? Or are we just here to provide pony rides and balloons for your personal entertainment?

If you does not count you in the equation, then count us all out. Besides, the last time we did this, some kids wrecked Mr. Perfect's aircraft that he built from scratch. To top it off, some lady threw pig blood at me and accused me of being a Nazi because I was being "politically incorrect" for having swastikas on my plane, which turned out to be my Brewster Buffalo--in FINNISH markings! The moon-bat!! We go to contests and places where we're welcomed, and that can accommodate our hobby!

Question #5 "I've got a friend who just got out of prison. He hates minorities and people of various religious backgrounds, but I think he'd find this club a nice diversion. Can he come here?"

Answer – 1-800-GET-HELP.

Response – Does this mean you'll pick him up and give him a ride here too? He lives in Two Harbors.

Retort – 1-800-GET-REAL

Question #6 "Can you bring up fill in the blank at the next meeting?"

Answer – "I've got a better idea. How about if I put your name down, and call upon you to talk

about it at the next meeting?"

Response – "Are you kidding?! I'd look like a chump up there!"

Retort – "Well, at least I wouldn't feel so lonely."

OK, so I have a sharp sense of humor. Call my attitude a bit jaded, but it's only because I've witnessed and/or heard of these situations occur in our club as well as others all across IPMS Land. The point is that we're a hobby club - Nothing more, nothing less. To be honest, none of us has the time or energy to spend chasing our tails over things that are out of our control, or that don't have the backing of the members, let alone those who came up with the ideas in the first place. The people that actively participate in clubs, do so to get away from the surreal, not to relive it! With that said – see you at the meeting! Oh, and happy Ground Hog Day!



Airline Chatter by Terry Love

Delta Airlines is going to hire about 200 pilots this year. This is the first time in six years for Delta. All pilots have been called back that were on layoff. In 2006, Delta called back 340 pilots, 900 mechanics, and 1200 flight attendants.

Delta Airlines lost \$49 million in the month of November.

Boeing is starting the new year off running!! A continuation of last year's record sales!! Boeing received an order from Jet Airways, India's largest domestic airline, for 10 Boeing 787-800 Dreamliners.

Boeing sold 1040 airliners in 2006. Of those, 729 orders were for the Boeing 737 model. The other orders were 157 for the Boeing 787 Dreamliner, 76 orders for the Boeing 777, 10 orders for the Boeing

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767, and 92 orders for the Boeing 747-800 series. These orders came from 76 customers.

Northwest Airlines retired the last Douglas DC-10 on Monday, January 8 with the final flight being NW98 from Honolulu to Minneapolis. Northwest Airlines flew its first Douglas DC-10 in November of 1972 with NW72 from Minneapolis to Milwaukee to Tampa. This was part of a 22-plane order. In 1991, Northwest started to obtain the Douglas DC-10-30 variant of the DC-10. Northwest's Douglas DC-10 fleet peaked in 2001 with 21 DC-10-40s, and 24 DC-10-30s - a total of 45 DC-10s. By 2002, all of the DC-10-40s from the original purchase of 22 were gone. Douglas built 446 DC-10s. Northwest Airlines carried 125 million passengers on the DC-10s.

Grupo Marsons, a Spanish tour company, ordered 12 Airbus A-330s with options for 10 more. Deal is worth about \$2 Billion.

Air Asia of Malaysia, ordered 50 Airbus A-320s plus options for 50 more. Deal is worth about \$3 Billion. This is a huge order for beleaguered Airbus.

Singapore Leasing ordered 20 Airbus A-320s and 20 Boeing 737-800s. Total cost is \$2.8 Billion.

Airbus sold 20 Airbus A-330-200F freighters to Intrepid Aviation Group, a leasing company. The cost for these freighters is about \$3.5 Billion.

Flyington Freighters, a cargo airline of India, ordered 6 Airbus A-330-200F freighters from Airbus for about \$1 Billion.

Airbus sold 790 orders for jet airliners in 2006, well behind rival Boeing's 1044 orders in 2006.

American Airlines earned \$231 million in 2006. This was the first yearly profit for American since

2000. American says that it has plans to buy or even look at the Airbus A-380.

In 2007, most American will come out of bankruptcy or earn a profit for the first time in many years. That is IF, and that is a big IF, fuel prices stay about the same, and there are no major terrorist attacks. They have been working hard for the last few years to trim costs, and streamline their operations. This has just about been completed.



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He did attend the University of Missouri for two terms, but was not financially able to continue. He started his aviation career as a mechanic for a barnstormer. He then worked for the Nicholas-Beazley Company in Marshall, Mo. That company went out of business.

Jones ended up in Washington, D.C. during the depression, and felt lucky to get a job as an elevator operator. He studied aeronautics at night, especially taking classes from the great Max Munk (formerly of N.A.C.A.) at Catholic University. He met his hometown congressman a number of times, and the latter knew of his interest in aviation and his admiration of the N.A.C.A. During the depression the government had set up apprenticeship programs, and got Jones appointed to a six-month apprenticeship at that organization.

This was very successful and the N.A.C.A. strongly desired to hire Jones as a full-time engineer. There were two problems. First, because of lack of funds in the depression, there was a hiring freeze. Secondly, the government regs said that a candidate for the first level engineer slot *must* have a college degree. They got around the first problem by hiring him for several successive temporary positions. When the freeze was off and they could hire Jones full time, they found a way around the red tape by

hiring him as a level TWO engineer. There was nothing in the books requiring a degree for that!

Jones was a very adept mathematician, and that did not fit well with most of the rest of the staff. At that time the N.A.C.A. was very much an experimentalist organization. One of the main theoretical problems aerodynamicists were working on was predicting the flow of air around a wing of finite span, especially one of low aspect ratio. The existing model was a two-dimensional model that did not account for airflow around the wing tips of a real wing. It worked well on high aspect ratio wings, such as those on a glider, where the flow around the tips is small compared to the rest of the airflow over the wing.

Now keep in mind that when a wing is producing lift, there is a high pressure on the bottom of the wing, a low pressure on the top. Some of the high pressure air near the wing-tip flows sideways and curls around the tip to spoil some of the lift (lower pressure air) on the top. In a low aspect ratio wing, this airflow is a substantial percentage of the airflow of the wing.

Jones was studying some work by H.S. Tsien at CalTech. Jones found when he analyzed the flow with Tsien's formulations on delta wings, or wings with a sweepback, something strange happened. Just before the start of WW2 Jones was working on guided missile design. Such missiles were expected to fly in the transonic or even supersonic flight regime. The N.A.C.A. was already well aware of the compressibility problem with transonic flight, and was working on the problem for the P-38. Lockheed had lost a prototype P-38 to suspected compressibility problems and Lockheed and the Army asked the N.A.C.A. to look into the problem.

Jones saw, at least using this new model of 3D airflow, that a swept wing or a delta would delay

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the onset of compressibility problems. He decided to publish a paper on this. However, the N.A.C.A. review committee balked at the paper. Few understood the math, and there was no way at N.A.C.A. to experimentally verify the theory- their transonic and supersonic wind tunnels were not yet operational.

Now, it turns out that an associate of Jones at the N.A.C.A.. John Stack, was the N.A.C.A. guru on high speed flight. He was in charge of the development of a research aircraft, the XS-1 (later referred to as just the X-1). He had attended a famous conference in Italy, in 1935, the Volta Conference on High Speed Flight. At that conference he had received copies of a number of papers, including Buseman's famous paper on wing sweep. He did not deem it important at the time, and forgot about it. Further, the paper was in German. In the spring of 1945, while Jones was getting his paper through the N.A.C.A. hierarchy, a friend found a British translation of the paper, done in 1942, in the N.A.C.A. library, and called it to Jones's attention.

About the same time, Operation Paperclip, the Allied effort to mine German technology after Germany surrendered, brought back more information on German high speed flight, including Buseman's swept wing work (ironically, Buseman was later brought to the US and worked at the N.A.C.A. under Stack). Jones and several supporters now suggested to Stack that the XS-1 try a swept wing. Stack declined. While this decision has been roundly criticized by Monday Morning Quarterbacks, Stack did have good reasons to keep the XS-1 wing straight.

In any case, Jones was soon vindicated. In the US, some regard Jones as the inventor of the swept back wing. Even if we do not consider Buseman, swept wings far predate WW2 (although the swept wing was done for other reasons

than compressibility). So Jones certainly did not invent the swept wing. Nonetheless, he independently discovered the use of sweep-back (along with Buseman), and became America's guru on swept-back transonic and supersonic wings. If his N.A.C.A. superiors had been more open minded, America might have fielded swept wing jets even earlier than they did. As it was, the North American engineers were fast on the bandwagon when Buseman's and Jones' work did see wide dissemination.



Spraybooth Logic Sheer Joy – The New Years Resolution!

by Dave Pluth

Dogs are very simple creatures (oh no not another dog column!!) a stuffed toy, a bit of food and a "job" and they are about as happy as they can possibly be.

Recently my wife had the opportunity run our dog Sam at a field trial in Wisconsin. Now you need to understand that Sam is a pretty good hunting dog but she is a very average to slightly below average field trial dog. You see, Sam was not gifted with shall we say a very athletic build (I think most of us understand this quite well especially at our advancing ages).

Sam runs hard, she tries hard and she does find birds. Unfortunately she doesn't run far enough out in front nor can she maintain her speed burst for the full 30 minutes that is required to be competitive at a field trial or other types of hunting competitions. None of this stops us from allowing her to run as it is what she really enjoys.

While at the trial in Wisconsin, a lady walked along on the brace (two dogs running in the same field at the same time) that Sam ran in. After the brace she stopped to talk with my wife and told her how much fun she had watching Sam run and

that while she probably wasn't the best dog that she'd seen all day, she was having the "most fun" and that she ran "with great joy".

In thinking about this I found a lot of parallels that were both present and missing in modeling.

I've had an opportunity to meet a number of people over the years that find great joy and excitement in modeling. To be honest few of these people are great modelers but all share one thing about the hobby, they love to build models and they are enthusiastic about doing so!

Some produce between two and five models in a week and others may produce one in an entire year, the quantity matters as little as the quality does. What does matter is the way they share their experience that they had with the model and the fun they had building it.

The funny thing about this joy of modeling is that it is contagious.

When someone is giddy about what they have produced, no matter the quality, it's easy to feed off their energy and even look forward to getting home and sitting down at the workbench with a project of my own. I want to find that same feeling with my hobby as they have found with it.

Now on the other hand when you hear people complain about everything from the price of the kit to the box art it does really suck the joy out of the hobby. I often struggle to understand why these guys continue to model if it is such a chore doing so. After all, isn't a hobby supposed to be fun?

When I look at my model building I find that Sam and I have a few things in common. I'm a pretty average modeler who just doesn't have the skills to move to that next level. I'm ok with that and have

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come to accept it after a dozen or so years at it. My hands aren't steady enough and the practice of my skills is not consistent enough to break through that barrier.

Where I fall short is in the joy part. Years of reading internet reviews (hack and slash to make sure you are the first one to brutally pan a new kit) and listening to all the crud that is out there about various kits has left me very tainted and joyless.

I'm not trying to blame anyone for my lack of joy, after all I could have just closed the browser and not read that review or I could simply have looked at the pictures. Nope, I totally took it upon myself to enjoy every ugly detail and with every detail I found yet another reason not to build and not to try new techniques.

I have come to the conclusion that this needs to change for me to get back on track and begin enjoying my hobby again.

So I'd like to propose a New Years Resolution challenge. My challenge to all is to stay on the positive side and remember why you love (or at least supposedly love) the hobby.

Yeah there are problems with kits, there always has been but that is no reason to crush someone else's joy in building that kit. No one will die because the panel lines aren't exactly right or the kit is 3 millimeters too short.

For now, shut up and build and this time do it with a smile on your face.



AT-9 by Frank Cuden

Pavla 1/72nd scale with Mike Grant rivets on the panel lines

Masking Circular Patterns

by Frank Cuden

I picked up a little trick the other day and wanted to share it with all the members. My current project is the Special Hobby Lockheed L-10A in 1/72nd scale. Seeing Draw Decals sheet (www.drawdecals.com) for an L-10A in Northwest Airlines markings, circa 1940, I thought it would be an interesting diversion from my normal military aircraft builds.

Part of the scheme, that must be painted, is a sweeping dark blue area on the sides of the nose, extending from the side cockpit windows forward around the side of the nose and culminating to a point underneath. I have attempted such patterns before with varying results. It has been most difficult to get each side equal. Then, I saw someone achieve it on another model and right away, I knew I could "steal" the technique and make it work for me.

To produce the circular "sweep" as the dark blue color travels around the side of the nose, I first cut out an appropriately-sized circle from masking tape, Tamiya Masking Tape in this instance. I placed the circle exactly where the curvature needed to be. Then it was a simple matter of cutting a strip of tape to connect evenly from the side of the circle, extending to the cockpit window frame. The same held true for the bottom side of the circle. Filling everything in with tape, I was able to successfully spray the dark blue onto the model.

When everything was said and



done, and the masking tape removed, I was happy to see a nice rounded area on either side of the nose. Most importantly, they both matched! Then it was on to the horizontal stabilizers. The blue on the end closest to the fuselage swept forward on a curve and the outboard side swept down. Cutting out another circle, I placed it almost completely on the top trailing edge of the stabilizer and the left over "hole" in the tape was used for the outboard side, thereby having the inside sweep up in a gentle curve and the outside gently sweeping down at the outer edge of the stab. Connecting both ends with a strip of tape completed the job and once again, I had success.

I realize this might be confusing without seeing a photo of the process, but if you have a chance, download this article and try it on some plastic. The only variable is what diameter to make the circle of masking tape. Some years ago, *Scale Aircraft Modeling* magazine in England marketed a couple of scale metal rulers and through a friend in the UK, I was able to obtain them. They incorporated a saw-tooth edge on one side for ultra-thin cutting, with the center of the 12-inch ruler containing circle templates of various sizes. Both 1/48th and 1/72nd scale were also etched on the ruler so converting to feet is a breeze for me these days. They also included a smaller, thinner ruler without the circle templates but including both scales again. I used the 12-inch one to cut out the circle templates as the metal will not allow for "slips." A scalpel will give you a fine cut.

The circle I ended up using was probably 1/4 inch in diameter. I had determined that by "eyeballing" the area on the side of the nose of the model. If an oval shape is needed rather than a circle, check out an artist's supply store as often "French Curves" will give you what you need for a template. Prior to obtaining the rulers, I had relied on

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Outline for the February Meeting 2007

by Johannes Allert

I hope those who attended the "Hope it don't Snow Contest" down in Stewartville had a great time. Thanks to the Zumbrota Valley Crew for putting on a great show!

Welcome to the February meeting at TCAH. This month, we will be hearing from Dave Pluth. He will be sharing information on Japanese aircraft.

We had good feedback from you regarding the new format. Here's the general outline:

Welcome guest & new members
 What's new? Word from our vendors.
 Show & Tell
 Expo – Dave Pluth
 Break
 Business Old & New
 Raffle
 Wrap up

This month's business agenda will be the following:

General Meeting - Business Topic
 Outline for February

TCAH Model Art Event –
 Steve Jantscher, Ken Hornby &
 Steve Capiz

TCAH Celebrates 40 years – Frank Cuden & Johannes Allert

Kits for Troops – Ken Sallman

Nordic Con - Bob Maderich to update

Update on Membership Renewal &
 Newsletter On Line - Steve Jantscher

Nominations for:
 Modeler of the Year
 Historian of the Year
 Newsletter Article of the Year



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 a circle template made of hard plastic. Needless to say, the template was no match for a sharp X-acto knife and many cuts were made into the side of the template when I was cutting. The metal ruler solves that problem.

If you're not sure about using the technique or if I haven't been clear enough in my explanation, just get in touch with me and I'll walk you through the process. I hope to have the model ready in a couple of months and I plan to bring it to a meeting so you all can see how the process worked out.



1946 Fairchild 24R by Noel Allard

1/72 scale scratchbuilt, so don't look for the super details. There is a pilot figure in the cockpit.—Noel

ON THE TABLE JANUARY 2007

Modeler	Kit	Manufacturer	Scale
Ken Hornby	Curtis F3C	Finemolds	1/72
Bernie Kugel	Mil-24 Hind	Monogram	1/48
Jeff Kurth	F-86	21st Century	1/18
Don Stauffer	USS Lexington	Trumpeter	1/350
Don Stauffer	'32 Ford hot rod	Testors	1/8
Steve Hustad	Ju.88 x 2	AMT	1/72
Sean Brzozowski	M4A3 76	Hobby Boss	1/48
Sean Brzozowski	Panzer IV	Tamiya	1/48
Johannes Allert	Neuport 17	Eduard	1/72
Johannes Allert	M3 Grant	Mirage	1/72
Johannes Allert	M1A2 Abrams	RVG Germany	1/72
Steve Macey	SH-60J	Hasegawa	1/72
Bob Maderich	Phillipines Taxi	ESCI	1/24
Bob Maderich	Hs.123	ESCI	1/48
Fletcher Warren	Panzer 38(t)	Tristar	1/35
Stever Jantcher	Panther D	Dragon	1/35
Stever Jantcher	Le Clerc	Tamiya	1/35

Directions to the Club Meeting Location

Where: South St. Paul Municipal Airport, a.k.a. Fleming Field, located on the southern extremity of South St. Paul, south of I-494, west of Concord Street and East of Highway 52.

If coming from the western Twin Cities going east on 494:

- Exit at the 7th and 5th Avenue exit (Exit No.65)
- Turn right (South) on 7th Ave and go approximately .6 miles to a 4-way Stop sign. This is South Street W. To your left there will be a McDonald's; to your right front there will be a Walgreen's.
- Turn left (East) at the 4-way Stop onto
- South Street W and go approximately .6 miles. Along the way you will encounter three more Stop signs—the third Stop sign (Henry Avenue) will be a "T" intersection. At the "T" intersection on your left will be homes and on your right softball fields.
- Turn right (south) onto Henry Ave. and go approximately .2

miles toward the Fleming Field airport terminal building.

If coming from east Twin Cities on westbound 494:

- Exit at the 7th and 5th Avenue exit (Exit No.65)
- Turn left (South) on 7th Ave and go approximately .6 miles to a 4-way Stop sign. This is South Street W. To your left front there will be a small strip mall; to your right there will be an Amoco station.
- Turn left (East) at the 4-way Stop onto
- South Street W and go approximately .4 miles. Along the way you will encounter two more Stop signs—the third Stop sign (Henry Avenue) will be a "T" intersection. At the "T" intersection on your left will be homes and on your right softball fields.
- Turn right (south) onto Henry Ave. and go approximately .2 miles toward the Fleming Field airport terminal building.

The terminal is on the right with parking available.

Twin City Aero Historian
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Return address requested

The Aero Historian is published monthly by the Twin City Aero Historians, Inc., a joint chapter of the American Aviation Historical Society and International Plastic Modelers Society/USA, for members and readers as part of their annual dues or fees.

The group is open to aviation enthusiasts from teenagers on up who are interested in aviation modeling, photography, collecting, art and writing. For more information contact Ken Hornby at 651-552-0888

The Twin Cities Aero Historians (TCAH) meet the second Saturday of every month at 1:30pm.

See above for the new meeting locations and directions.

Mail Newsletter material and address changes to the treasurer.

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