

The Aero Historian



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June 2001



E8N1 "Dave" Floatplane by Jim Kaltenhauser. Photo by Ken Sallman. From the "table" at last month's TCAH meeting!



Russian two-seat conversion of a Hurricane presumably used for artillery correction duties. It is uncertain if this was the only conversion of its kind or if there were others. Photo from the George Mellinger Collection.

Supplements to this newsletter can be found at: <http://www.aerohistorian.com/newsletter>
Information about the Air Guard Museum can be found at: <http://www.mnangmuseum.org/>
Information about the American Wings Museum can be found at: <http://www.americanwings.org/>

TCAH This Month

June 9—TCAH Meeting. Theme: Black Cross/Red Star, Aircraft of the Eastern Front WWII.

June 16-17—MN Air Guard Museum—Open Cockpit Weekend

Corsair Contest

By Johannes Allert

Greetings everyone! This is just a reminder to you all that at the December Meeting we will be having a "Corsair Contest". This is to encourage one and all who have an un-built model of this classic fighter, to break it open

and start working on it over the summer.

You are encouraged to build the kit as well as use any after market products that you have in stock. Keep in mind, however, that your kit will be judged starting with the basics. Clean finish, no seam lines, etc. If you want to build it out-of-box, that's fine too. The important thing is to be creative and to participate in a club activity. I want to say that this different angle was inspired by Steve Jantscher's OOB Contest. I look forward to his next subject. Many have made comments that they can only build in a certain scale or that they want to use the after market products that they have purchased. So this type of contest was created and with that "it's show me time!" Remember - It's any variant of F4U, any scale - but it has to be built THIS YEAR. I will need volunteers to help judge and register. So if you are interested, please contact me.

I will be reminding the club of this event once again through the newsletter and at the meetings. Happy modeling!

In Future Issues...

From Dave Pluth

Bombers and Bummers. A brief history of bomber failures.

From Terry Love

The first two chapters of his upcoming book!!!

From Dick Phillips

A new article about the Corsair.

From Merrill Anderson

A series of articles about WWI aircraft.

TCAH Website Special!

If you want to read part four of Dave Pluth's series on Ebay or you want to see the rest of the Me262 photos, you'll have to download the web edition of the newsletter!

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TCAH Calendar & Events of Interest

See front page for June Events

July 4—IPMS Nationals, Chicago Illinois

July 14—**TCAH Meeting**. Theme: Nightfighters, early onboard radar fighter interceptors.

July 28-29—MN Air Guard Museum—Open Cockpit Weekend/ Military Expo

August 11—**TCAH Meeting**. French

stuff. We do have to include them occasionally.

August 25-26—MN Air Guard Museum—Open Cockpit Weekend

September 8—**TCAH Meeting**. Record breaking aircraft, height, speed, distance, payload, etc.

September 8—Wheels and Wings (tentative), Zenith Book Sale!!

September 15—Nordicon III at the Thunderbird Hotel

October 13—**TCAH Meeting**. WWI Aircraft. Bring your Stringbags.

November 10—**TCAH Meeting**. Club Auction. No theme. Club Elections, recounts, re-recounts.

December 8—**TCAH Meeting**. Early Jets. Heinkle, Whittle, Bell, Yak, prototypes or production.

Do you have something to include on the club calendar? Please let us know at newsletter@aerohistorian.com!

From the President

By Steve Erickson

Well, this months column should be short and sweet as we have hit the lazy days of summer, maybe. If it doesn't stop raining, I may have to join a model boat club. The only club business pending is a price for monogrammed polo shirts. Not a Monogram model but a shirt with the TCAH logo. I hope to get some pricing soon and take orders so we can get them before the IPMS nationals if the price is not too high. The only other business pending is of course our bid for the "nationals".

Ken submitted the proposal and as expected we have had a response with some questions. He will send in our response and sometime in June he will call a special meeting, in lieu of a business meeting to go over our final presentation to the IPMS national committee. The only other thing of note is the museum has been cleaning airplanes to get ready for a series of open cockpit weekends. I took a peek when I was there and you might want to check it out at the next meeting it was nice to get a look at some of those old birds.

HANGARARAGE SALE

American Wings Air Museum will be having their fund raiser on **Saturday June 9th and Sunday June 10th** from 9am to 4 pm (both days). There is no admission cost.

Items for sale: Aircraft related, general household, office items & furniture, sports equipment. Also included: aircraft parts, electronics, propeller blades, survival kits, oil pumps, and Much, much more.

Proceeds benefit AWAM, a non-profit air museum dedicated to restoring and promoting the role of military aviation.

Location:

North end of Anoka-County Airport.
 Between I-35W
 And Hwy 65 (Central), just North of Hwy 10 off Airport Road.

For additional information call
763-786-4146

Notes From The Treasury

By Pat Butler

First of all, I am sorry for not getting my report in last months newsletter. Sometimes real life gets in the way of our fun. Anyway, not much to say this month as real life is still intruding. Joe Grimme and I had a very good time in Des Moines last April. The Plastic Surgeons club were again very generous in letting us return with some of their trophies, and would you believe Joe even brought home an award. All in all, it was a good contest to spend an early spring day attending.

Since my last report we've spent a bit of our \$. A rep for our internet domain, trophy packages at the nationals, and trophies for our own contest, among other things have brought our balance to \$5,119.09.

Well, real life dictates that I must go, so: T.T.F.N.



Meeting Minutes

By Dave Kitchel

(Report by Dave Pluth substituting for Dave Kitchel)

Meeting called to order at 1:30 by President Steve Erickson.

Guests and visitors. Guest Greg Melby, formerly of Hobby Depot fame. Old Business.

Ken Sallman talked about our bid for Nationals. He submitted the bid last week and had not received any feedback as of yet. He expects to hear from the National Committee about the completeness of our bid, if any additional information was needed etc, in the next couple of weeks. He will have a practice run of the presentation sometime in June where he works. He will provide additional details on this when they become available.

Jody Sievertson talked about a color P-47 special that was to be running on the History Channel. Discussion about other color films ensued.

Mark Copeland updated the group on shirts. No word on cost yet, but he expected that to be available by the next meeting.

Terry Love had new copies of his book and talked about it. He also talked about the release of club member Jim Goodall's book on the F-117.

The newsletter was discussed and ideas for additional stories and articles were thrown out.

Steve Hustad gave a Nordicon update.

The raffle made \$53.50. Thanks to Hub Hobby, National Hobby, Roll Models and University Hobbies for their generous contributions to the raffle.

TCAH Memories

by Tom Norrbohm TCAH Historian

June 1980. The talk of the club is new ideas for the new club logo. Members will put ideas to paper (Club Historian has all the submitted drawings in the Club History). Some members expressed that we should lose the 'TCAH' tag in our logo as it serves no purpose and tends to confuse anyone unfamiliar with the organization. All ideas were to be mailed to Ken Ring.

Treasurer Ken Johnson reported a club balance of \$360.00 after printing

of newsletter (\$160.00) . Jim Goodall reported on the IPMS Regional convention in St. Louis, MO and said the overall quality of models was superb. 420 models entered, 200 entrants participated. Member Tim McGovern took the 'Best in Class' and 'Best in Show' with his F-4 Phantom. Tim most likely would have won 'all the gold' but declined in order to make it fair for others. Jack Mugan took 1st Place with his EA6-B in 1/72nd scale.

President Jack Mugan told a stunned membership that due to unforeseen problems and a heavy booking by out-of-towners this year, the Registry Hotel is not going to be the location of the 1980 Metro Scale Model Show.

Suggestions are taken on a location for the show. More discussion on this at the business meeting at Axel's.

Club Photo Contest winners are announced. Len Peterson and the 'Mayer Clan' are the big winners. 10 people entered and 93 photos submitted. Members agree that a Photo Contest held once a year is a good idea.

At Axel Kornfuehrer's Business Meeting, Ken Ring surprised everyone by stepping down as club Editor.

Club Officers: President- Jack Mugan; V.P.- Noel Allard; Treasurer- Ken Johnson; Secretary- Mike Sibley; Editor- Ken Ring.

On the Tables—May 2001

By Dave Kitchel

Jim Kaltenhauser

1/72 AV USK E8N "Dave"

1/72 LS K5Y "Willow"

1/72 Chrozy Japanese Float Plane

1/72 Hasegawa N1K1 Rex Prototype

Steve Hustad

1/35 WWI diorama

Steve Erickson

1/48 Otaki F6F-3 Hellcat

1/48 Tamiya Rex

George Mellinger

1/72 A Model KOR-1 Floatplane

1/72 Airfix KA-25BSL Herman

Ken Jensen

1/72 Unknown Junker 52 Float plane

1/50 SMER Fairey Swordfish

1/144 PBM Mariner

1/72 Unknown Curtiss Seamew

1/48 Monogram Rufe

1/72 Matchbox Dehavilland Norseman

Website of the Month

By "Texas" Terry Love

This is a new column that will highlight some aviation and modeling related web sites that you may want to check out.

WWW.AEROHISTORIAN.COM

This is our own web site, and it is great. It has links to almost a hundred other web sites. WARNING!! You could spend hours on this web site alone - it is that good.

WWW.LANDINGS.COM

This site has great links also, but it has access, also, to all N registered aircraft, as well as many other foreign countries. Ever want to see what kind of an aircraft that you just saw, or who owns it? Just note the N number on it, and look it up. It gives their address, also. This web site has hundreds!!!! of links to it. This could be the best aviation-related web site on the internet (after the TCAH one, of course).

WWW.GARCIAAVIATION.COM

This site has some great aviation-related items. I especially like the duplicate nose art painted on aluminum aircraft skin to match the original!! Would you not like to have, say, "The Dragon And Its Tail" hanging on your hobby room wall? These people have lots of catalogs available.

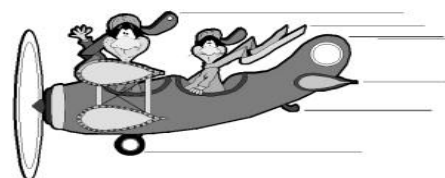
We Need Your Help!

From the Editors

So do you like what you've seen so far in the newsletter? Getting a little spoiled with twelve pages of articles every month? Well, we need your help for it to continue.

To put it simply, WRITE SOMETHING! We need your articles for the newsletter to keep going!

If you're interested in helping out, drop us a line at dpluth@j-aircraft.com.



Me262 Update

By Jim Goodall

Greetings to one and all from beautiful South Whidbey Island, the home of VQ-1, their EP-3E's, minus one right now, and of course, yours truly.

I sent an e-mail attachment to Jack Mugan a few weeks back and he suggested that I e-mail the Newsletter with a very brief story and some pictures of the soon to fly, built new from scratch, Me262s, five in all.



These beauties started life in Ft. Worth Texas after a few guys with more money than sense thought, "Gee why don't we build our selves a few Me262s because we have nothing better to do with our time and money." So the story began. After some time in Texas, the project was almost shut down because of lack of money and proper management. In stepped Bob Bacon, a retired VP for Manufacturing at the Boeing Company here in the Seattle area. All the assets were moved from there Texas place of birth to their new home, the old F-89 alert hangars (much like the MN Air Guard's home) at Paine Field, Everett, WA.



As of about three weeks ago, the five Me262s, four two seat types and a single one placed bird, were undergoing final assembly. The first 262, a two seater, will fly in about 60 days with a good friend of mine, Wolf Czaia, at the controls. Wolf was a IP pilot on F-104 when he flew with the German Luf-

waffe before coming to the US. Wolf just retired from American Airlines as a 757/767 FAA check pilot and is one hell of an airplane driver. He still flies F-104s for "Starfighters" out of Clearwater Beach, FL and will be getting his own F-104S some time this year. It too will be kept at Paine Field. I have been invited to shoot the first taxi tests and of course the very first flight. Wolf will see about getting me in the chase plane so I can shoot some air to air shots, of which I will send off the newsletter.

The 262s are powered by two GE J-85 jet engines, the type used in the AT-37, various Learjet models as well as the Northrop T-38. The J-85s have about 60% more thrust than the original BMW 803 engines and will take some special procedures on takeoff as to not kill the pilot if and when an engine failed on takeoff, more on that later. Because of political correctness, not with in the Me262 Project staff, but from outside sources, the markings will be 100% correct, except they may leave off that nasty symbol of Hitler's air force, the swastika!

As time moves on, I will update you all as to the how's and where's of the newest jets from the Pacific Northwest. Cheers.....Jim Goodall, TCAH member since 1972. (Editors note: See the rest of the photos that Jim sent on the TCAH website edition).

What's new?

By John Roll, Chief Plastic
(and resin and paper and...) Pusher

BIGGEST recent news is the release of Monogram Aviation Publications monumental work on Japanese Cockpit Interiors. Penned by Japanese aviation historian (and former curator of NASM) Robert Mikesh, this is a MUST have for all modelers of Japanese aircraft. Even I am going to get one!

There's a whole BIG new list of Part 1/72 and 1/48 Photo-Etched detail sets. This guy seems to be releasing a new set (1/72 and 1/35 armor included) about every three days! The 1/48 list is:

Control Horns & Turnbuckles
Parabellum m14
WW1 Fabric Stitching
Dornier Do 335A-12 Trainer
Dornier Do 335A
Focke-Wulf FW 190D

FW 190A/D/F/G Wooden Flaps
FW 190/D/F/G Metal Flaps

And in 1/72, there is:
Control Horns & Turnbuckles
Pfalz D.III
Pfalz D.IIIa
BF 109E-4/7
Parabellum m14
Heinkel He 177A
Dornier Do 335B-2 Destroyer
Spitfire Mk. V
Dornier Do 335 A-12 Anteater
WW1 Fuselage Stitching
Dornier Do 335A-1 Pfeil
Sukhoi Su-2

A new concept in reference material from none other than Tamiya is a series of CD-ROM references on various modeling subjects. I have not had a chance to review these myself so if anyone has I would like to hear your opinion. The list of subjects (so far) is:

Panzer VI Tiger Tank
T-34 Tank
Sherman M4 Tank
P-51 Mustang
Supermarine Spitfire
Messerschmitt BF 109

This is an interesting concept that has great potential but I suspect that it will all depend on the way that the information is presented. My understanding is that the disks will work on BOTH PCs and Macs.

Not a new thing but a new thing to Roll Models is Mister Kit acrylic paints from Italy. I have heard good things about these paints but have not had the chance to try them personally. I am looking for someone willing to do a review!

One of the most exciting things (well for ME anyway) was a 1/72 FW 190A-3 that was found in a listing from VLS Distributors. This has NOT been confirmed by Tamiya, but I find it very likely to be true! YEE-HAH!

Eagle Editions have released two sheets of very colorful BF 109G-6's in their Eagle-Cals line. These are aircraft from their recent Augsburg's Last Eagles book by Brett Green. Also now imported and distributed by Eagle Editions (with a price decrease!) are parts of the line of RV Resins Focke-Wulf FW 190 kits and conversions. While there are a large number of subjects, Eagle Editions is importing just some

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of them. But, they include the hottest subjects. Conversions in 1/48 include FW 190 D-9 to D-13, D-9 to D-12 and D-9 to D-15. The Focke-Wulf Ta 152C is a complete kit in 1/48 and the Focke-Wulf FW 190D-13 is a complete kit in 1/72. These are wonderful subjects that are quite obviously a labor of love of the manufacturer.

Well, my finger-tips have dried-up so I'll sign off for now.

Happy Modeling!

Why The Differences?

By Frank Cuden

Over the 30 years I have been a member of this club, I have seen modelers come and go, and I've also seen varying degrees of modeling - we all have. Each modeler is at a different level of intensity, if you will. For example, I remember when Bob Steinbrunn showed up one Saturday and blew us all away! All that intricacy in miniature. Or how about Tom Norrbom's mastery of Floquil Old Silver? What about Skip Nelson's fantastic 1/72nd scale aircraft? Or, Steve Husted's dioramas and Japanese aircraft and World War One models? Jack Muga's artistic abilities shine through on each model he builds. I'm not just talking plastic here either. Lets look at Ken Jensen's balsa models - works of art, me thinks! I'd challenge a lot of you to take a set of plans, as Ken does, and produce an accurate miniature from scratch! I could go on, but I think I'd have to list every member of TCAH! Yeah, I think we're all that good!

Anyway, it got me to thinking about how we got here. My Dad built wooden models (pre-Strombecker) and I can remember playing with them at a very tender age. That, coupled with the fact that I lived some great pre-teen years on a farm that just happened to be located across the highway from a grass strip airport, got me into modeling at that time. Since I've been a member of TCAH, I have learned much about modeling. Bob's articles in FineScale stimulated me to try my hand at writing and its worked. Try as I might, I cannot duplicate what he does, nor can I spray Old Silver like Tom can. Again, could you do what Steve does? I know I can't. Noel's miniatures from scratch

represent yet a different set of skills. I can't do that either!

Therefore, my theory is that each one of us has not only God-given talents to apply to modeling, but also each of us has learned as we have journeyed down the modeling path. Jack's artistic abilities I'll never have, so he's got me in that department but I've learned a lot of tricks from him. I don't have the finesse of Bob or Steve, but I've managed to pick up a few skills from those guys too, haven't you? And that's the point of all this: we all bring different skills to modeling, some more than others. That's the way it is. However, we can learn and learning keeps us going and out of the rut that some modelers get into. Trying new things may seem scary, but if you succeed, look what you've accomplished. Obviously the aftermarket companies have made our hobby a lot easier what with the proliferation of all the add-on stuff. And there again, my theory proves correct. Not everyone has the moola to buy everything available for a given kit. We're all of different means. So then what? Well, the next time you're at our "Show and Tell", ask questions if you see something you like. Ask the modeler how the result was achieved. Not everyone needs 50 bucks of resin to do a decent job. Maybe scratchbuilding a part or two will achieve the same result. What's wrong with that? I know I've spent a lot of very content hours making seats from drawings or using plastic sheet to wall off a wheel well. Just start simple and go from there as your confidence builds. Hey, its only a hobby and nothing to get upset about if you screw up the first time out. Challenge yourself to do better and learn from others. Don't be afraid to ask questions. You can take the answer home with you that Saturday and apply it at the workbench that evening or maybe the next day. I've always felt our club members are very willing to share their tricks and I think its made us all better model builders.

So think about what got you into this hobby of ours and also contemplate how you've gotten to the level you're at now. Are you willing to go to the next level? If not, then just keep turning out the good models that you do. One day, you'll come across some tip somewhere, apply it to your current project and be astounded at the result. Hap-

pens all the time. And, that is the beauty of this hobby. Not only new kits and aftermarket products, but new skills, tools, or whatever to make our hobby more fun.

Me? I just got a new catalog in the mail and I'm going to order a few things tomorrow! Things I've never seen before that should make my modeling more fun! Good Modeling!

Free Russian SIGNALS

By George Mellinger

In celebration of the new Aeromaster sheet, Falcons of the Red Star II, this month I'll dig into the archives, and tell a bit more about the aces Aeromaster chose to include on their sheet. This month we'll look at Pavel Karavai.

Pavel Petrovich Karavai was born in Smolensk in 1921, and in his teens he studied flying at one of the many aeroclubs which had been established in every corner of the Soviet Union flat enough to allow a small biplane to take off. In 1940, as soon as he was old enough, Karavai joined the Red Army in order to attend flight school. He completed flight school at Stalingrad in 1942, and was promptly dispatched to the front in October as a Senior Sergeant pilot. He was fortunate to be assigned to the 897 IAP which was flying the Yak-7b, one of the relatively few Soviet fighters at that time which could compete on approximately even terms with the Messers. Not that there wasn't attrition anyway. By the end of his first month in the squadron, Karavai was already commanding a zveno of four aircraft, and by early 1943 he had gone from sergeant to Senior Lieutenant, a move of one enlisted and three officer ranks upward. Vacancies occurred frequently, and surviving fighters were promoted quickly. But perhaps the promotion recognized that he was not only a talented fighter, but also a dedicated leader. When one of the new pilots, Pavel Boikov, showed unwillingness to complete missions and appeared cowardly, Karavai coached him and helped him gain confidence by giving him a victory on December 18. Boikov got over his fear and blossomed into a brave and skilled fighter in his own right (15 & 4 victories). On December 27, Karavai's flight was bounced by a BF-109 out hunting, but

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quick reactions allowed him to outmaneuver the attacker and shoot him down. A few days later, about the end of the year, Karavai had the rare experience (for a Soviet at least) of shooting down a Yak. The Germans had been flying a captured Yak on the Southwestern Front causing the Russians notable losses and worse confusion and paranoia. Karavai and his wingman and another pair from the 659 IAP were flying when the German Yak tried to attach himself to their formation. When the Russians noticed their new fifth companion and took evasive action, the German Yak opened fire. But Karavai avoided with a quick turn and then maneuvered him into a box between the other Yaks and shot down the imposter. At this time, Karavai was flying a medium green Yak-7b "White 31". In February Karavai received a green Yak-1b, "White 28", (one of the Aeromaster subjects) which he flew until June 10, 1943. Transitioning from the later Yak-7 to the earlier Yak-1 may seem strange to us, but most of the Russian pilots actually preferred the lighter, more maneuverable, and better-climbing Yak-1. On June 10, Karavai's airfield at Butovo came under heavy attack by a formation of 27 Stukas and 20 BF-109s. Karavai, and two other pilots, the duty flight, scrambled under attack and rose to defend their field. Barely had they gotten their wheels up, when the Germans shot down Karavai's two companions. But Karavai was able to dodge the first attack, and desperately climbed to gain a little altitude. As he was doing so, he noticed a single "Messer" off to the side, which seemed to be hovering around as if directing the whole operation. Deciding that this must be the formation leader, Karavai turned in behind him and shot him down with a single long burst. But the odds were still 19 to one, and now the experienced Germans were also mad. Moments later Karavai's White 28 burst into flames. Karavai was able to bale out, but was badly burned. He was rushed to the hospital where he spent several months before returning to the front. Soon after he returned to the regiment he was promoted to Captain and 2nd squadron commander. At the beginning of April 1944, he received a new Yak-9T finished in the usual gray camouflage, which

he flew until March 1945. However, in November 1944 he received a second aircraft, a Yak-1 "Red 12", one of two dedication aircraft marked "Zhirnovskii Kholkozniik" (Zhirnovskii collective farmer) given to the regiment. It seems that he flew both aircraft alternately, but scored most of his kills in the Yak-9T. In March 1945 he was promoted to Major. He also received a new Yak-3 which he flew for the rest of the war. Karavai had difficulty with staff officers who denied him credit for some of his victories and sorties. According to the official record, he completed 172 sorties and fought 35 air combats, scoring 16 individual and 7 shared air victories. However, he has been unofficially credited with 232 sorties, 42 air combats, and 31 individual and 7 shared air victories, and 2 aircraft destroyed on the ground. Karavai was awarded the HSU on August 18, 1945. He remained in the Air Force and reached the rank of Colonel before retiring in 1973.

GE's First Jet Engines

by Don Stauffer

One of the popular myths of aviation history is that the US was caught napping by the advent of jet propulsion in the early years of WW2. Only after being given the drawings of the Whittle engine did the US learn about jet propulsion. That popular myth contains far less truth than myth. And, did you ever wonder why GE got the contract to build the US version of the Whittle engine?

The answer was a man named Sandford Moss- Dr. Sandford Moss, that is. Moss got his BS degree in Mechanical Engineering at the University of California in 1900. Even then he was dreaming of developing the first practical gas turbine engine. He did not think up the idea- whoever first did is not well remembered by history. Further, many others at this time were trying to make a *practical* gas turbine engine. Moss went on to work on a doctorate at Cornell University, and his thesis project involved an experimental gas turbine engine. While touring the Cornell lab at that time, the famous educator and engineer, William Durand, who would become the first technical head of the NACA, saw Moss's experiment, which involved using the gases of combustion to spin a turbine

wheel from a small steam turbine. Moss graduated from Cornell with his Ph.D. in 1903.

Like the idea of the gas turbine, the person who originally thought of the exhaust turbo-supercharger (or turbo-charger) is little known now. But the French engineer, August Ratau, was its main proponent during WW1. While he never got a successful turbocharger working, Ratau certainly roused the interest of the allies. The Army Air Forces development laboratory at Wright Field decided to begin a development effort to develop a US aircraft turbocharger. When they asked Durand, he remembered the young engineer he had seen at Cornell, and knew he had gone on to work for GE in their steam turbine division.

One of the early uses envisioned for a gas turbine engine was the driving of electrical generators. The steam turbine had worked very well driving electrical generators, and was replacing the reciprocating steam engine in that application. GE had a big business selling both steam turbines and the electrical generators they drove. The gas turbine seemed a natural for GE's business.

The technology was not there, however, to make an efficient, money-making gas turbine. While Moss was probably further ahead than any of his peers, who were mostly working in France, GE had pulled the plug on the project prior to WW1, and GE put Moss's excellent skills to work in the design of steam turbines.

GE was happy to get the contract to develop the turbocharger, even though the division was already very busy supplying steam turbines to the US Navy. Still, getting into aviation was the dream of almost any large US company.

The war ended before the turbocharger project had barely gotten off the ground. While many research and development projects were canceled shortly after the armistice, the Air Corp wisely kept the turbocharger project open. The technology turned out to be far harder than anyone imagined, but the Army and GE stuck with it. The result was that by the early thirties, the US had an unbeatable lead in turbocharger technology. All the high altitude long-range strategic bombers (B-17, B-24, B-29) that saw service in the

upcoming war used GE turbochargers on their engines.

While Moss became world famous for his successful development of the turbocharger (he was also considered the world's leading expert on centrifugal compressors also), he never gave up his interest in the gas turbine engine. Since his group at GE worked closely with aero engineers, the group was also well aware of the limitations that propeller compressibility raised with high speed aircraft. Moss' group had continually advocated that the military fund research in gas turbines in general and also in what would later become known as the turbojet engine. In 1937, Moss was reaching retirement age. He decided to take a trip to Europe and Britain and stop in to see work at Thomson Houston, which had a close corporate connection with the American GE company. While there, he learned of the Whittle project. Whittle's group, Power Jets Ltd., was primarily a development shop and did not have the wherewithal to actually fabricate high temperature turbines. They contracted with Thomson Houston to build the turbines. Moss was able to advise the group on materials and other issues.

When Moss returned to the US, he was clearly impressed with the work Whittle and Thomson Houston had accomplished. His group put together a detailed, strong proposal to Wright field to develop a turbojet engine. The GE proposal was not the only proposal Wright Field received to design and build a turbojet. An engineer at Lockheed had designed a particularly forward-thinking turbojet engine using an axial flow compressor. And, Lockheed had designed a radical fighter design around the engine. Lockheed went to Wright Field with a proposal to develop both the engine and the airplane. Wright Field had their plate full, however, funding further turbocharger research, development of the Allison V-12 engine, and continuing R & D of high-powered radial engines. There was one additional factor that caused the US to delay funding of jet engines. Because of limitations in materials, World War 2 era jet engines were tremendous fuel hogs. This caused them to be useful only for high-speed, high altitude interceptors with very short range. Britain certainly had need of

such planes. Germany would soon be subjected to the 8th AF strategic bombing, by high altitude bombers. This resulted in their greatly increasing the priority of their jet fighter development.

The US, however, envisioned a war where the US would be the attacker, sending its strategic bombers over long distances to enemy targets. Short range interceptors played little role in their strategy. While they hoped the bombers could get through unescorted, they were actually hedging by developing long range fighters capable of escorting the strategic bombers. The P-38, and later the P-51, epitomized this type of fighter. A jet engine would not be appropriate for this role.

Although the 8th AF had not yet begun their bombing campaign- indeed the US was not even in the war yet- the success of the British and German jet engines and the performance predicted for their fighters caused the AAF to hedge again. Maybe the US should develop jet engines for fighters. If the US did have to escort bombers over Germany, they might be faced with German jet fighters.

Two efforts began almost simultaneously. A joint Army-Navy effort funded gas turbine research (both turboprop and turbojet), issuing contracts to steam turbine builders Allis Chalmers and GE. Hap Arnold also decided to have a US company build copies of the Whittle engine. GE got the contract because the company had, in Moss's group, an understanding of the gas turbine unmatched elsewhere in the country. It is interesting that security forced the two GE projects to be completely isolated from each other.

The Whittle design became, when produced by GE, the I-14 engine, and was to go into the P-59 fighter. It differed from the British version only in manufacturing details. The GE team saw, however, some beneficial modifications and the resulting engine, a modified I-14, became the I-16. In a hedge, the Navy ordered a fighter designed with the turboprop T100 engine GE was developing with the other team, and the I-16, both. The pure turbojet would provide the thrust for the highest speed, while the turboprop would provide good static thrust for takeoff and acceleration. A similar design hybrid, the XP-81 for the AAF,

would team up the I-14 with the T-100. While the Moss's GE group were the world's leaders in designing high efficiency centrifugal compressors, some in the group felt that, as a result of work done by the NACA, axial compressors were now feasible, and might have advantages over the centrifugal type. The group working on the strictly indigenous, not under quite as severe a time push, elected to pursue the axial flow design in both their turboprop, the TG100, and in the turbojet derivative, the TG-185.

The P-59 was proving a severe disappointment to the AAF. While it flew, its performance was decidedly inferior to the ME-262, its likely adversary. GE proposed a completely new engine, that became known as the I-40 to GE, and eventually the J33 to the AAF. There is much argument between the US and Britain over the design of the J33 versus the Rolls Royce Nene. Some claim that the J33 was merely a US copy of the Nene. GE claims instead that the Nene used many design features from the I-40/J33. It is certainly true that both engines benefited from the close cooperation between the US and Britain.

Wright Field approved development of the I-40/J33, and, recalling the Lockheed interest in a jet fighter, contracted with them for the P-80. At last the US had a fighter that could stand up to, and even beat, the ME-262. While some P-80s actually did reach Europe before the armistice, they did not see any combat sorties before V-E day.

For a country that is said by the myth to have had no knowledge of jet engines in the years leading up to the war, by war's end the US (specifically GE) had in production the I-14, I-16, and I-40/J33 turbojet engines, and the T-100 turboprop. The T-180 axial flow turbojet, which would later see the AAF designation J35, while not into production by war's end, was nearly so. Not bad for a backward nation!

Hey, it's summer!!

The Editors

With summer upon us you may have noticed that the newsletter is shrinking a bit. That does not however mean that we don't need articles! Get them in for a future issue, we can always use them.



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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 Steve Erickson at (763) 521-9948

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

Meetings are held at the Minnesota Air National Guard Museum, a half mile south of Hwys. 55 and 62 on Minnehaha Avenue. Phone (612) 713-2523.

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Ebay Sales Part IV

By Dave Pluth

Thus far we've covered buying stuff on Ebay and also the basics of selling. In this installment, we'll cover some of the finer points of selling as well as the actual listing process and some software that may be of use for you.

When getting ready to list an item, the first thing you need is a photo of the item. From my experience, an auction with a photo will generally get you 20%-40% more money than an item without. Photos don't have to be great quality, but should show the box and any extras that you are including with the item you are selling. Digital cameras come in really handy in this case as you can shoot a large number of photos without the expense of developing film.

When you have photos, you will also need a website to display the photos and URL link (web address link) to it. In most instances, this isn't too big a problem and you have several options. With AOL or Compuserve or many others, you get a small amount of web-space with your account. You would simply upload the images that you want to your free space and then put a link back to them. There are also some hosting places that will host your image for you, some are free and others charge a nominal fee.

It's now time to create your listing. There are a couple ways to do this. To start with, you can click on the "Sell" tab at the top of the Ebay screen. You will be walked through a series of prompts as to what category your item fits into (this is extremely important as we'll talk about later) and several other questions. This is where all the previous homework that we talked about in part 3 will pay off as you'll just need to fill in the blanks.

After listing a few items this way, you will begin to realize how cumbersome this process is. There are several programs out there, Auction Assistant and Auction Assistant Pro. Both are by Blackthorne Software (an Ebay subsidiary). The Auction assistant is decent and it's reasonably priced. Auction Assistant Pro is much more full featured but is also almost \$200. There is another product called Auctionmate that is about \$25 which looked great, but I had a heck of a time

getting to work. There are also many others out there and if you get serious about selling, you will need one of these to keep things straight.

So, you've listed your items and the auction is now coming to a close. When the close occurs, several hours will pass and Ebay will send you off a confirmation. This confirmation will also contain the buyers e-mail address, which you will need to send your notification. They will also charge your credit card for their share of the closing price. You will now need to contact the buyer to let them know where to send the money etc. I use a standard letter and simply change a couple pieces of information. Here it is:

Hello,

I noticed that you were the winning bid on the 1/32nd scale Revell P-47D kit that I had listed. Congrats!!

To see the results click on the link below.

<http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=41567746>

Please send a check/money order for \$17 (including shipping to all US addresses, no international orders accepted) to:

Dave Pluth
112368 Eitel Circle
Chaska, MN 55318

Please include a copy of this message with your check. Also, if you could drop me an address and confirmation that you've received this, so I can get your kit ready to ship, I'd appreciate that. Also, I have to ask that payment be sent within 10 days of the closing of the auction, or other arrangements made or I'll have to cancel the sale. This isn't to be a jerk, but simply there are 1% of the folks out there that don't pay and I need to be able to close out sales without a big fight.

Feedback. Feedback will be posted upon the completion of the transaction (the receipt and acceptance of the kit by the buyer and acknowledgement thereof), but not before.

If there are any problems with the kit, please let me know as soon as possible and I will do my best to fix the situation.

I greatly appreciate your bid!

You can tailor this to fit your needs, but it seems to cover everything that needs covering.

Once the responses start rolling in with addresses, get your items packed and ready to go. I've found it's much easier spending one evening packing items to ship than to pack as the money rolls in.

Some final points to think about. Depending on the price you are selling for, you may or may not want to accept personal checks. I have only had one bounce in a few hundred transactions, but I still don't take them for amounts over \$50.

When you ship an item, you may want to send the buyer a confirmation of receiving payment and a notice that the item shipped. This will allow them to watch for the item in the coming mail.

So what happens if someone doesn't pay? Well, basically all I can say is, get over it, it happens. There are deadbeats out there, especially if they have grossly overpaid for an item and come hard to that realization (\$240 for a 1/32nd Revell J2M3 for instance) and they simply don't pay. Ebay has a function for non-payment that will give you your fees back. File your paperwork with Ebay, leave the buyer negative feedback and offer the item to the second highest bidder. If there's one thing that Ebay teaches you, it's that it takes all kinds.

So there you have it. You've got all the basics and you're ready to sell! If you have questions, please drop me a note at dave@j-aircraft.com and I'll answer them in next month's edition of the newsletter!



AGM5 Zero Nightfighter (note the oblique cannons. (Albert Pluth Collection)



1:1 Me262 Build
Photos by Jim Goodall

