

OHKA 22

Japanese Suicide Planes by Rick Koehnen

By 1943 proposals were surfacing as to the use of special units to make suicidal attacks against growing American forces. The first of these Kamikaze operations was conducted by volunteers of the 201st Japanese Naval Air Group based at Clark Field in the Philippine Islands. They used the unit's Zero fighters with 500 kilogram bombs attached to the aircraft.

With the continual fall of Japanese held islands the outlook became even more grim and in 1944 a Japanese Naval transport pilot, Ensign Mitsuo Ota requested and was granted permission to design a special purpose aircraft for the Kamikaze units. Lacking technical background but with the assistance of the aviation department of the Tokyo University, Ota designed a

small aircraft to be carried into battle under a twin engine G4M2 'Betty' bomber. The design was submitted to the Yokosuka Naval Depot and in late 1944 the design was approved and named OKHA or 'Cherry Blossom'.

Basically of wooden construction with some metal parts, the Okha Model 11 was just under 20 feet long and had a wingspan just under 17 feet. It carried a single large 2,646 lb warhead in its nose, a simple single pilot cockpit and in the rear, twin fins mounted over a cluster of four rocket engines totalling 1,764 lbs/thrust. The 'Betty' mother ship was to penetrate to within 25-50 miles of the target before launching the Okha. Range was dictated by the altitude of release. Eventually two additional rockets were added below the wings to increase the range and allow it to out pace pursuing fighters.

Two other plants began production of the Ohka besides Yokosuka. A trainer version was produced designated MXY-7 and used water ballast to simulate the weight of the warhead. Forty-five trainers were produced.

On 21 March, 1945 the Okha 11 first entered the battle, but all sixteen 'Bettys' were intercepted and released their Okha's short of their targets and tried to run for it. All were shot down. On 1 April they claimed their first victims, damaging the battleship West Virginia and three transports. The first vessel sunk by the Okha was the destroyer USS Mannert L. Abele, off Okinawa on 12 April.

The Betty although it had a great range, also had a reputation as a flaming gas tank when hit. Burdened with its underslung load

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TCAH This Month

The monthly meeting will be held Saturday February 14, 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.

From the Vice President

by Larry Donovan

Hmmm, seems a tad nippy in the garage-cum-workshop this morning. Well I'll just fire up the closed-oil system portable heater, head upstairs, read the email, make some breakfast, write my column for the February newsletter then I'll be able to work on a couple of kits to get ready for Rochester. A reassuring thump on the door...ahhh the Sunday NY Times is here; just the ticket for an english muffin or two and some coffee. Oh here is an interesting book review...and Ben Stein has an article in the Business section, I should read that.

Darn it is still cold in the garage...you know what, I'll bring the heater from the living room down; once I get that puppy fired up maybe it will be warm to work on the Hurricane. I do need it warmer later on; I can't spray the primer on the Mustang when it is this chilly, the stuff will turn to ice before it hit's the fuselage. Hmm, what's this from Johannes...wow, interesting video of a FW-190 found near St. Petersburg, Russia. Oh, better reply to the emails from the siblings regarding going to Omaha and seeing the folks. Wow lunch time already.

Darn, I can still see my breath in here. OK, I'll turn up the heaters to as high as they go; head upstairs and write my column for the newsletter and send it to Bob, our esteemed editor...maybe then I can get some work in. Let's see, a quick update on contests and events:

1. January 30 and 31st Zumbro Valley IPMS Hope it Don't Snow Contest at the Kahler Hotel, downtown Rochester MN. You know, when you think of it this is the kick off of the 2009 Contest and Show season. Could be fun!!
2. February 22 2009 Drastic Plastics NNL Model Show; Papillion

Nebraska

3. March 13 and 14 Mad City Modelers 14th Annual Show and Region 5 Convention at the Madison Marriot West; contact Jim Turek at 608-329-7222.

Locally, in May we have at our meeting Bernie Kugel's Paintbrush Challenge; best paintbrush model (are we still doing something for best airbrushed figure Bernie?). Further afoot, calendar-wise, is the IPMS National Convention in Columbus Ohio, August 19 through 22; and of course Nordic Con is September. At our January meeting we took nominations for our annual award presentation at the April 2009 meeting. Jeff Fries has already very kindly accepted to do the "Gone West" presentation at this meeting; and more details will follow. Meanwhile, the nominations/nominees:

Modeler of the Year: Sean Brzozowski, Bernie Kugel, Steve Jantscher, Kyle Nelson.

Historian of the Year: Bob Steinbrunn, Mark Copland

Newsletter/Presentation of the Year: Noel Allard "History of Mohawk Aviation Co."; Bob Friskney "50th Anniverary of the Jet Age"

We will reopen nominations at the February meeting, briefly, if anyone has others to add. Finally a BIG Thanks to Bernie for his organizing of the paint-in at Fleming on Friday January 23rd. If you have never been to one of the paint-ins, you really should go, even just to see who's working on what, trading tips and hints, and catch a movie or two.

DARNIT....it is still too freakin' cold down here! Yes honey, I am coming up to help with dinner.... So where do you model in the winter????????

See you at February's meeting!



Airline Chatter

by Terry Love

COPA Airlines ordered 4 more Boeing 737-800s for Boeing's last order of 2008. COPA currently has 27 Boeing 737s and 15 Embraer 190s.

Delta Airlines passenger traffic is declining, so, in order to fly equipment with high loads, Delta is focusing on cargo and maintenance operations, to beef up revenues. Learning from Northwest Airlines and their cargo operations, Delta will add some significant cargo-generating potential to Africa, Asia (where NWA was really strong), and Australia later this year. Delta Airlines will become the first airline to provide service to all continents, except Antarctica, when they begin service to Australia.

Japan Airlines and All Nippon Airlines have both cancelled their orders for the Airbus A-380, as cuts to capital spending, and weak passenger demand.

Boeing says that the Boeing 787 Dreamliner will end up being 2 years behind schedule. That is okay for most airlines that were hard hit last year with high jet fuel prices and high monetary losses.

Airbus is seeing a surge in orders for its 15 year old Airbus A-330 model. This is due to a stop-gap measure until the Boeing 787 becomes available for some airlines.

U S airline traffic fell 2.3% in 2008, for the first time since 2003. This is only the fifth drop in traffic in the last 45 years. It will likely drop in 2009, also.

Boeing received only 662 airliner orders last year, a drop from 2007 of 53%, ending a three year increase. Orders included 484 for the Boeing 737-800s, 93 for the Boeing 787 Dreamliner, 54 for the Boeing 777, 28 for the Boeing 767-300, and 3 for the Boeing 747-800. Last year Boeing delivered 375 airliners,

which Airbus delivered only 303. Therefore, Boeing will lay off about 7% of its production personnel or 4,500 workers.

Air France/KLM bought 25% of the bankrupt Italian airline, Alitalia, for \$429 million.

Fed Ex exercised options to buy 15 more Boeing 777 freighters worth \$3.75 Billion, but at the same time, deferred delivery of some of the aircraft.

ATA Airlines will recall 60 pilots from furlough in expectation of the busy summer season ahead.

China Eastern Airlines, the second largest airline in China, forecasts zero capacity growth this year, and may cancel, delay, or sell all new planes delivered in 2009.

Delta Airlines expects 2000 employees will opt for early retirement this year as lots of employees refuse to transfer to Atlanta from Minneapolis.

Airbus delivered 483 planes in 2008, keeping its lead for the sixth straight year over rival Boeing, but Boeing deliveries were worth more value. Airbus delivered 386 Airbus A-320s, 85 Airbus A-330s, and 12 Airbus A-380s.

USAF is planning to order some new Air Force Ones, to replace the existing Boeing 747-200s. Expected date of delivery is 2017. The Air Force is looking at three existing designs based on present commercial wide-body airliners. In the running are the Boeing 787 Dreamliner, the Boeing 747-800, and the Airbus A-380.

Airbus booked 777 orders in 2008 valued at about \$100 Billion. Airbus delivered 483 airliners in 2008 as compared to Boeing 375 deliveries. Boeing received orders for 662 airliners. Airbus has a backlog of 3715 airliners ordered.

Airline full-time employees

dropped 6.5% last year. United Airlines is down 10.7%, Delta Airlines is down 7.2%, Northwest Airlines is down 5.9%, US Airways is down 5%, American Airlines is down 4.3%, Continental Airlines is down 4.3%, and Alaska airlines is down 2.3%.

Atlanta, Georgia is building a new \$1.6 Billion passenger terminal. How are they going to pay for it? Delta Airlines says if they raise the lease and rental rates to pay for the new terminal, Delta might move a "portion" of their hub to another location. Lots of empty of NWA space is available in Minneapolis.



Check Six

by Mark Krumrey

I often hear about 'the good old days' or 'the golden age of modeling' in reference to either the distant past or the past of our youth when we couldn't wait to get an allowance and go to the local 'dime store', get a model, build it and play with it. I grew up in the Nokomis area of South Minneapolis and there were a number of Hobby Shops that were both near and far; Rings on 39th and Cedar in South Minneapolis, Woodcraft on Lake and Bryant, and Gagers are some of the ones that come to mind in addition to the local drug store, hardware store, grocery store, and the above mentioned 'dime store'.

There was also one called 'Joes Hobby Shop' on 38th and Chicago. Joe's specialized in plastic; no RC, trains or wooden boat kits at Joes, only plastic and all the stuff you needed to help you out. That is the one I went to when I wanted to find a specific plastic kit. Joe was unique, kind of a nerdy guy, but for every dollar spent you got a coupon worth ten cents. If you bought a bottle of pop and it had a dot on it, you got something of equal value

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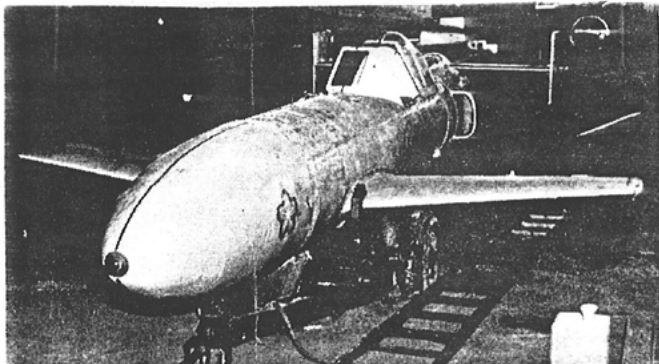
it was slow and cumbersome compared to the Hellcat fighters pursuing it. Having to penetrate so close to the target nearly guaranteed the loss of the mother ship as well. In March of 1945 production was halted of the Okha 11 with 755 being completed.

To improve the chances of the Okha to be successful it was known

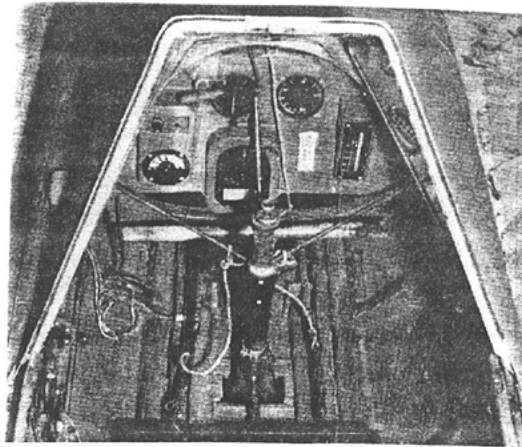
(Frances) the wing span had to be reduced over three feet. Yet, with the jet engine and requirement for fuel the empty weight went up nearly three hundred pounds to 1,202 lbs. But loaded, the Model 22 weighted over 1,500 lbs less than the Model 11 since the warhead had to be decreased from 2,646 lbs to 1,323 lbs. This gave both aircraft about the same wing loading

the aircraft immediately went out of control and stalled. Nagano escaped from the aircraft but died as a result of a malfunctioning parachute.

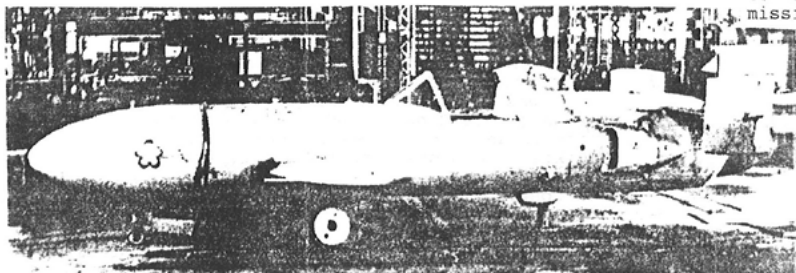
There were numerous other versions being planned including the Model 21 which would have utilized the rocket packet from the Model 11 into the Model 22 airframe. The Models 33, 43A, and



Front view of Okha 22 on dolly as capture in Japanese factory. Note thin line down centerline of fuselage and 'Cherry Blossom' on nose. Note how far forward it sits on dolly with warhead installed, although rear view also shows jack under tail. (USN, ref.1)



Simple cockpit of the Okha 11 shows the basics needed to reach ones destination on a one way suicide mission.



Side view of same Model 22 as in front and rear shots, as captured in factory. Aircraft was nearly 3 feet longer than Model 11 but wingspan was reduced by nearly the same, giving only 2/3 the wing area. (ref.2)

they would have to be launched farther out from their targets. The Okha 22 was designed for that purpose. In place of the four short duration rocket engines, a Campini-type jet engine was installed, designated TSU-11. It consisted of a 100 hp Hitachi four cylinder engine acting as the gas generator and could generate 551 lbs/thrust. It would more than triple the range of the Model 11 from 20 nautical miles to 70 nautical miles, but the speed of the aircraft would be less, from 403 mph (350 kts) for the Model 11 to 276 mph (240 kts) for the Model 22 at altitude. Designed to be carried by the faster nimbler bomber P1Y1 Ginga

73.1 to 74.3 lbs/sq ft. But with only 2/3 the wing area, the Model 22 was a flying bomb without the warhead- It Stalled at 207 mph and impossible to land.

Dai-Ichi Kaigun Koku Gijitsusho delivered fifty Okha Model 22's and follow-on production was assigned to Aichi with three major subcontractors. But by the end of the war production was being done in underground factories by Dai-Ichi awaiting Aichi's plants to come on line. Only one flight was made with the Model 22. Lt Kazutoshi Nagano, chief Okha testpilot was launched from a P1Y1 at 12,000 feet. Auxiliary rockets attached to the wings misfired and

43B would have utilized the Ne-20 axial flow turbojet of 1,047 lbs/thrust as used in the Nakajima Kikka. The 33 would have been roughly the same size as the Model 11 but was to be launched from the G8N1 Renzan, but only four of these heavy bombers were ever built. The Model 43's would have been much larger (29.53' wingspan, 26.8' length) and heavier (5,000 lbs) with the 43A having folding wings for catapult launch from fleet submarines, while the 43B would have utilized land based catapults.

There is a Okha Model 11 dis-

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played at the Planes of Fame Museum in California, another in the NASM storage facility at Silver Hills Maryland, while the USAF Museum at Dayton Ohio has a MXY-7 reconfigured to look like a Model 11. At least one Model 22 was returned to the United States and displayed on a concrete stand at the US Naval Academy, Annapolis, Maryland. Disposition of this aircraft is unknown.

References:

1. Japanese Aircraft of the Pacific War: R. J. Francillon, Naval Institute Press. (7-pages, history and specs of all Okha models 11, 22, 43B) 7 photos (4 on Okha 22), 3-view).
2. Kamikaze, Aero Series #7; Aero Publishers, 1966. 3 pages of Okha 11 history, 26 pages with 52 photos of model 11 and 22 (5 photos) as well as gun photos of shooting down of Okha's and damage inflicted by Okhas, color 3-view of model 22, color side view of Model 11 and Baika. Book also covers Ba 349A Natter and FZG-76 manned V-1.
3. Mitsubishi G4M "Betty", Profile 197; Rene Francillon, Profile Publications 1971, (also Volume 9). 20 pages on development and history of the G4M including color 5-view of Betty carrying Ohka Model 11 and 4-view of Model 11, 3 pages on Okha development and use including all Okha models, 3 model 11 photos and shoot down photos of Betty/Ohka.
4. Suicide Squadrons; Richard O'Neil, Salamander Books, 1981. Book is 300 pages and covers all 'human type weapons', their development, tactics and use, including all nations midget submarines, manned flying impact weapons, surface suicide boats, and personal UDT suicide squads. 58 pages are dedicated to the 'Kamikaze' development and use, including daily accounts of missions and results, 24 photos (none on model 22), four line drawings of various

kamikaze aircraft (including Okha 11 and 22); seven tables comparing vessels sunk, converted aircraft, special built aircraft, Japanese compared to German types, USN AA guns; 1 deployment map, two tactical approach drawings and a map showing approach and disposition of the 22 aircraft that attacked the USS Laffey in an 80 min. period.

5. Suicide Weapon, Ballantine's Illustrated History of the Violent Century - weapons book No. 22; A-J. Barker, Ballantine, 1971. 160 pages devoted entirely to Japanese suicide tactics on land, in air and on and under sea. Numerous photos (25+ none on Okha 22) mostly USN photos under attack or damage photos. Several side profiles of launch and modified aircraft.

6. The Jet Aircraft of the World; William Green and Roy Cross, Hanover House, 1956. 1/2 page in development section with rear photo of Okha 22. 1/2 page with photo of model 11 and side photo of model 22 with 3-view of same.

7. World War II Fighting Jets, Jeff Ethell and Alfred Price, Airlife Publishing, 1994. Chapters on each jet powered aircraft of World War II. Okha 11 has 14 pages, 7 photos including 1 photo and paragraph on Model 22.

Reference 1 is still available as a reprint. It was originally published in the Putnum (Funk & Wagnalls in US in 1970) series and photos are sharp and especially good for modeling while the history is concise but complete.

Reference 2, because of its many photos (half page size) is the best modelers reference and can be found in many used book stores for \$5. More history development than Ref-1 but only data on Okha 22 is the photo captions.

Reference 4, while only spending one page history on the Okha 22 and follow on versions is the more readable, informative and valuable of all the references, if you have more

interest in these types of suicide vehicles.

Reference 7 is a new hook, actually an expanded version of an earlier work of theirs entitled "The German Jets in Combat" to now include Japanese and Allied 'jets' which saw combat, or nearly so.

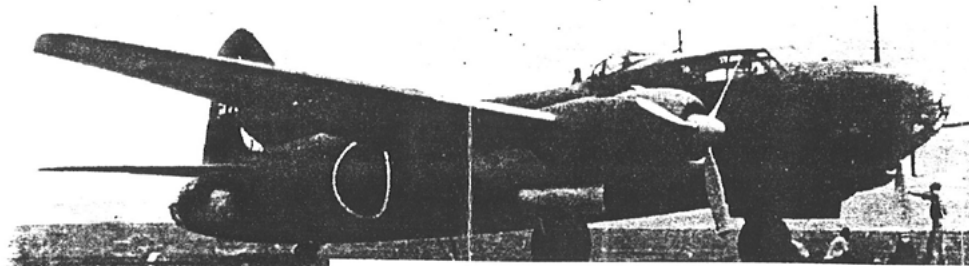


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for free. So it was always fun to go to Joes. I had to take the bus to get there, but I always enjoyed the trip as there was always an air of expectation.

As with any enterprise, Joe's finally went away as the population aged, demographics changed etc. When I was fresh back from Vietnam in 1970 or 1971, I went to a place called 'Custom Model Hobby' on 35th and Cedar avenue south. The guy behind the counter looked familiar, but I couldn't place him. I bought my model and he gave me a couple of coupons, and then I knew; it was Joe! Joe Bennet was his name and he was back with a vengeance, albeit short. He ended up selling the place to Mae Schroeder who increased the line of kits, offered a line of decals by Microscale and Scale Master, magazines and guys were hanging out there. She ended up moving the place to 44th and Minnehaha where Custom Model Hobby became the premier plastic model hobby shop in the Twin Cities and probably the five state area. In addition to a vast array of your Garden Variety Monogram, Aurora and Revell, Custom offered Tamiya, Fujimi, Hasegawa, Otaki, Airfix, Frog, Matchbox, Heller, MPC, Vacu-forms, more decals than 'Carter has Pills', sheet plastic, square and round tubes of every imaginable size of plastic, a variety of cement, every possible model magazine imaginable to please the most discriminating modeler; a showcase full of quality and not so quality built models, contest winners, guys that knew the

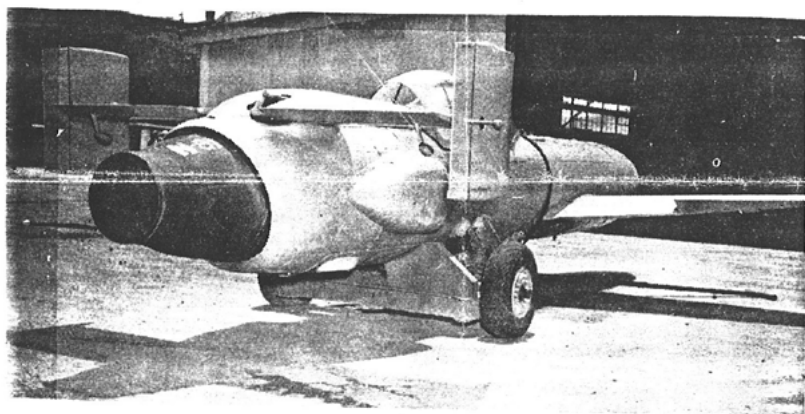
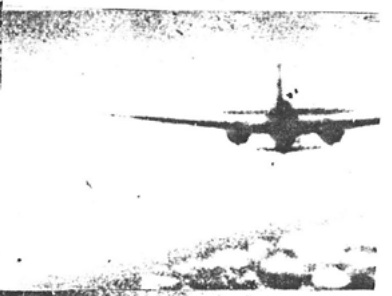
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G4M2 Betty bomber was the principal Model 11 carrier, but by wars end was slow and cumbersome, let alone considered a flying torch when hit.



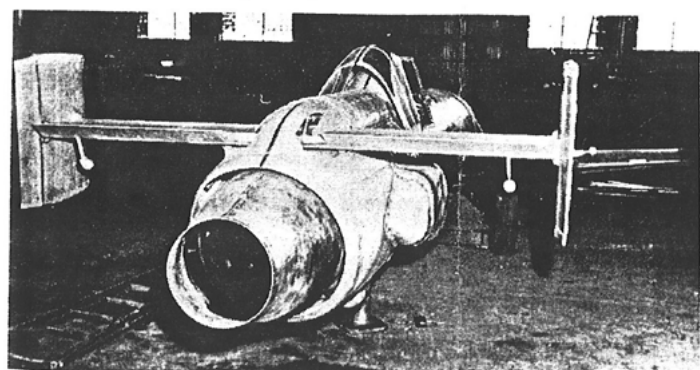
Yokosuka P1Y1 Ginga "Milky Way" (Frances) was to be the primary carrier for the Okha Model 22. It was faster and more maneuverable and was to carry sea-search radar. It also suffered engine development problems. It was used to test flight the TSU-11 engine for the Model 22. One version mounted 10 forward firing 20mm cannons.



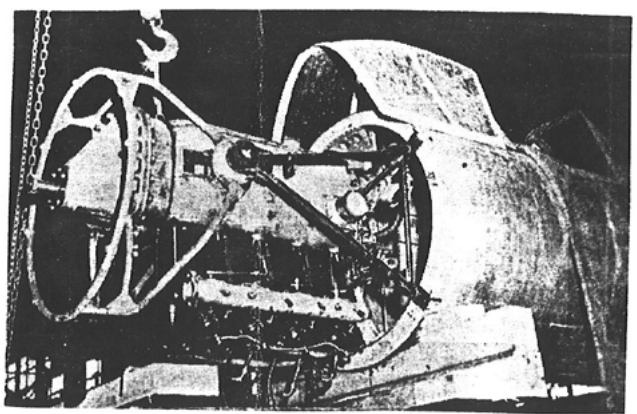
Rear quarter view of the Model 22 on dolly with slight aileron deflection, strap over nose and good view of exhaust and intake rear. Note exposed control bellcrank for elevator. (Ref.2)



USN gun camera shots of a Okha laden Betty being put to rest by the fleet's fighter cover.



Rear view showing the jack under the engine area, large exhaust and space between fuselage and tail cone. Also note weight balances under each elevator as well as outboard of each rudder. (USN, ref.1)



Model 22 with rear fuselage removed exposing the 4-cylinder Hitachi engine which acted as the power generator section of the TSU-11 cambrini type jet. 100 hp engine produced 551lbs/thrust. (USN Ref.1)

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hobby and how to build, and the star of the show, Bernie Fletcher with his side kicks, Steve Ericson and Mark Copeland. What better way to spend a late Saturday morning and afternoon than by going to Custom. If the shop didn't have it, Bernie could get it, if not; you didn't need it. People came from as far away as Alaska to listen to Bernie pontificate on the state of modeling, offering up his take on the latest and greatest with such comments as 'nice surface detail', 'it's about time', and 'if it wasn't for me I doubt Monogram would have produced the B-36!'

Custom also spawned the Wednesday night Bernies Club meetings at the Air Guard base, where modelers of every stripe would come and work on kits and share techniques and ideas. One of those that came was Paul Murphy. Paul saw the need for a quality plastics only, local mail order shop that could also bring the kits to the modeler, and formed 'Battle Hobbies'. Sadly, in 1982 Custom ended up being sold by Mae as she didn't want to run the business any more and there were no takers from the modelers to buy it. The inventory was sold off, much of it going to Doug Gardner's fledgling 'Scale Model Supplies' in St. Paul. Meanwhile, the Wednesday night meetings continued on and Paul Murphy's business grew; there was no place to go hang out any more and modelers wanted their kits and the latest and greatest plastic modeling

had to offer and Paul delivered. Along with models one needs reference material and Axel Kornfurher supplied all the books and written word that would dazzle the most ardent modeler and historian, all brought to the modeler.

Nothing stays the same and the Air Guard base was no exception. With a ton of money from the Fed, the old WWII era buildings were slowly demolished, new ones were built and security intensified which meant the Wednesday group had to go. Bernie passed away in 1984 from cancer and the Wednesday group was no more. As time went on, Paul sold the business to John Roll of Roll Models.

The Twin Cities Aero Historians were always around and many of the folks at Bernie's Wednesday group were members of the TCAH. Soon John Roll and others were bringing models to the TCAH meetings for the members. Other online hobby shops also sprang up, Wings-n-Treads, and DRAW Decals for the most discriminating Air

Line Modelers. As the demographics shifted, more and more shops went out of business, and these people, bringing kits and supplies to the meetings took on a greater importance. Now, as we near the close of the first decade of the 21st Century, we can truly say that these are the good old days and are the golden age of modeling. Where else can you have models and supplies brought to you the modeler? Who in their wildest dreams would have ever thought to see the myriad of aftermarket decals, accessories, books and kits that are available today, and the stuff just keeps on coming. So, the next time someone rues about the 'Good Old Days' remind them of the old saying, 'If Mohammed can't go to the Mountains, then the Mountains have to go to Mohammed' and here we are, the Stuff comes to the Modeler.

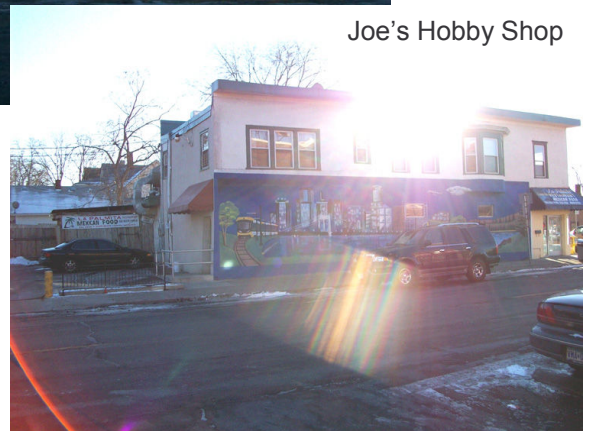
So friends, as a curmudgeonly modeler once admonished me, 'shut up and build'.



Custom Hobby on Minnehaha



Original Custom Hobby



Joe's Hobby Shop

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
Rick Schmierer
 1852 E. 39 Street
 Minneapolis, MN 55407

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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