

## NASA/Ames' attack chopper: *Cobra 736*

By Bob Miller

I got into a conversation not long ago, with a member who was modelling NASA/Ames' AH-1 Huey *Cobra*. He had seen an article, it seems, in which the author said it was used mainly as a chase aircraft because of its high speed capability. Something about this didn't sound right and, as often happens, this casual comment launched me into a major piece of historical research.

The *Cobra*, NASA 736, seems well documented and supported. *Microscale* sheets 72-384 and 48-0159 cover this AH-1G in 1:72 and 1:48, and there have been several applicable kits. (These sheets also provide the best starting points for other NASA aircraft that don't have sets of their own.) Problem is, both sheets cover two different sets of markings. Then, upon referring to Art Percy's usually reliable *Flying the Frontiers*, we read that 736 was a TH-1S, assigned to Ames from "1 March 1978 to current." Yup, there's a *Cobra* (NASA 736) on the line now, all right, but that's no TH-1S! What's going on here?

I had always thought the *Cobra* was a sort of hanger queen, a bird of dubious value acquired when NASA/Ames was assigned as lead center for rotorcraft. It sat with panels

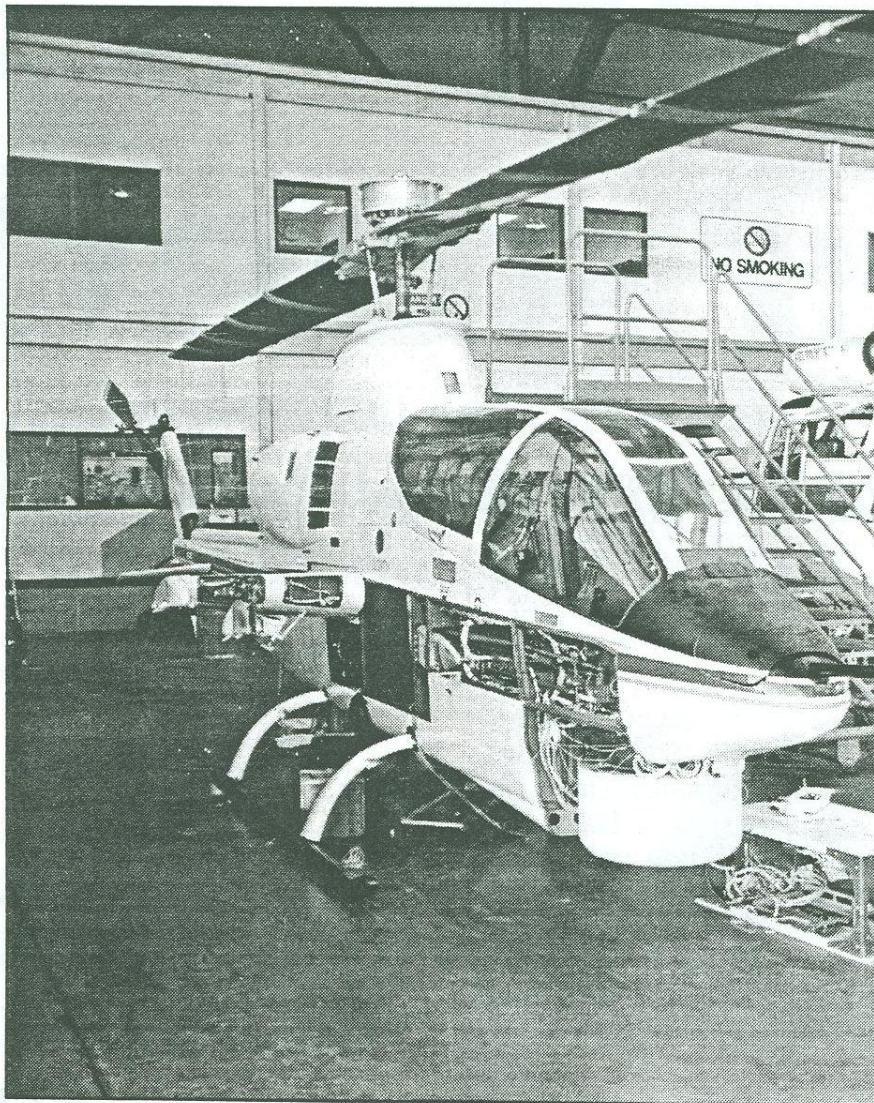
hanging open for a long while, a little tinkering happening to the turret under the nose now and then, and finally the turret was replaced by a ballasted wood dummy. Seemingly nothing useful happened. Little did I know. My problem was that the aircraft was always an Army bird, never actually assigned to

NASA, hence never managed by a NASA organization, so I never knew what was really happening. It actually had a very productive research career. I have two photos dated 1981 showing 736 with its rotor heavily instrumented and the roots painted orange (signifying research installations), lots of wires running outward from the hub, and a drum atop the mast that appears to be bare aluminum on top and bottom and gold Alodine on the outer surface.

The markings correspond to the simpler scheme of the *Microscale* sheets, generally, but on the starboard side, the yellow data blocks are present and the fuel filler is solid red. The Army's usual data graffiti was not applied after it was repainted. On the port side, there was an unusually large red seat-warning triangle.

Note that the blue side stripes need a slight upward bend at the tail boom join in order to end at the right level, rather than

**Continued on page 10**



NASA/Ames' first Huey *Cobra*, an AH-1G, wired with sensors on the rotor to detect sound. This *Cobra* was at Ames until 1985.

## EDITOR'S BRIEF

Modeling is all too often a solitary hobby. For many people who choose not to be in clubs or don't know that clubs exist, their work is done without the input of other modelers. These poor folks have to struggle through problems on their own, and the final product of their endeavors is seen by perhaps their family members and no others.

Luckily, clubs are gaining in numbers, and the Internet is providing a way for modelers to communicate and exchange ideas. If you're like me, you've found that the more people you interact with, the more fun you have in the hobby and the better your modeling will be. This comes from a variety of sources—friends at meetings sharing tips, judges at contests offering constructive criticism, and heads-up from hobby store folks about new products.

### CONTEST CALENDAR

June 7: **IPMS Silver Wings Summer Contest**, at the Ramada Inn, 2600 Auburn Blvd., in Sacramento. For more information, call Scott Bell after 6 p.m. at (916) 428-7217.

June 13: **IPMS Planes of Fame Contest**, at the Planes of Fame Museum in Chino. For more information, call Al Pama at (909) 920-9917.

July 1-4: **The 1998 IPMS/USA National Convention and Contest** at the Santa Clara Convention Center, hosted by IPMS SemiCon and the members of Region IX. Theme: Rockets' Red Glare. For more information, call Chris Bucholtz at (408) 723-3995.

August 9: **The 1998 IPMS Region IX Convention and Contest**, hosted by IPMS Mt. Diablo at the Holiday Inn, 1000 Fairgrounds Drive, in Vallejo. Theme: Over 150 Years of Bay Area Naval History. For more information, call Chuck Speir at (707) 645-0231 or check the IPMS Mt. Diablo website at [www.ipms-mt-diablo.org](http://www.ipms-mt-diablo.org).

September 20: **IPMS Central Valley Annual Contest**, Fresno. For information, call Nick Bruno at (209) 292-5695.

October 10: **Antelope Valley Model Show**, sponsored by the Antelope Valley Group (AVG) at Antelope Valley College, Lancaster. Special award for Best X-Plane. For more information, watch this space.

October 18: **OrangeCon '98**, sponsored by IPMS/Orange County. For more information, call Peter Gatehouse at (562) 426-5818.

The best place for this is club meetings or contests, where a number of us can share secrets, exchange research material and admire each others' work. Another great forum for exchanging ideas is the "buildathon"—basically, a party with several friends whether the main activity is putting together plastic.

Once in a while, this interaction can have downright amazing results. A few years ago, I related the story of the completion of my model of Ted Williams' F9F *Panther*, which came about as the result of two decal designers' response to a rather desperate request for help I published in *The Hook* magazine. While I thought that help had come out of the blue, I recently got an assist that was so unexpected and unsolicited it was almost spooky.

I'm working on a little OH-6A *Loach* helicopter, and I figured out a way to make the quilted material found in the interior of helicopters using lead foil, screening and a hammer. I posted this tip on the R.M.S. Internet newsgroup to share it with the rest of the modeling community, and a few people made comments about it. But one private e-mail really stood out.

"It's amazing what some of you guys figure out!" it said. "You must have a lot of time to think about this stuff! :)"

The amazing thing wasn't the message. It was the sender: COL Hugh Mills.

You see, the OH-6A I'm building was flown by the very same Hugh Mills—the author of "Low Level Hell," "Gun-slingers In Action" and himself a modeler!

Well, I couldn't let this opportunity go by, and now, thanks to the Internet and my willingness to interact with the rest of the modeling community, I'm being helped with my project by the single best possible source I could have!

Hugh has already provided me with information ranging from what color the smoke grenades were to the T-shirt stowed inside the bubble for in-the-field clean-ups! He's steered me toward a fellow who has a restored OH-6A, and even forwarded his phone number in case I get stuck on some details. The result of this very generous assistance will be shared with you in a future Styrene Sheet article, by the way!

So, the next time you have a question, ask around. You may be surprised where your answer comes from.

That's all for now--gotta add bulkheads to an OH-6A!

—The Editor

To submit stories, letters, requests for help, or wants and disposals to the

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Write to:

**Silicon Valley Scale Modelers,  
P.O. Box 361644 Milpitas, CA  
or, by E-mail, to  
[bucholtzc@aol.com](mailto:bucholtzc@aol.com)**

# Silver Wings, IPMS



**SUNDAY June 7th**  
**at the**  
**Ramada Inn**  
**2600 Auburn Blvd.**  
**Sacramento, CA**



## **DROP IN!**

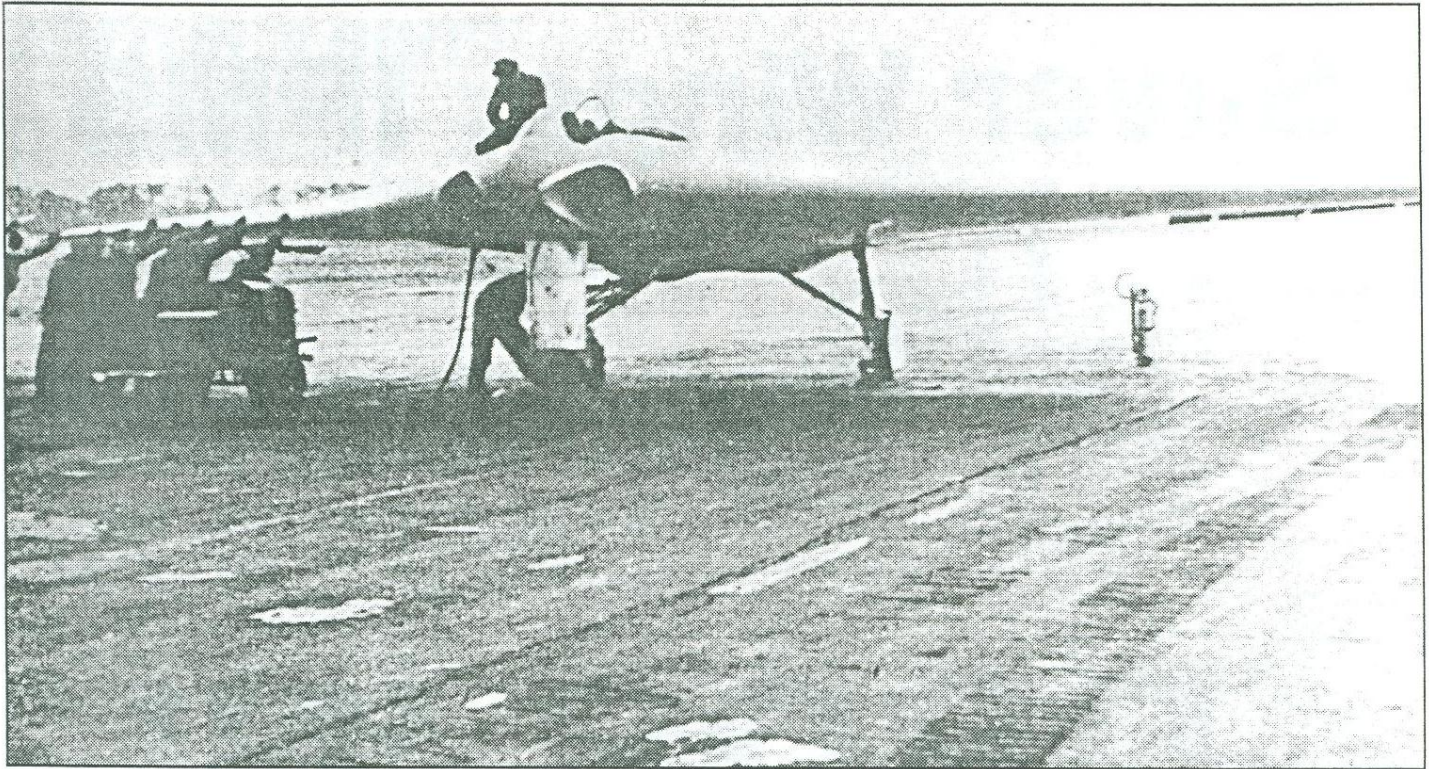
**Doesn't matter how you get there, just get there!**  
**The June contest will be held at the Ramada Inn,**  
**same as December, NO STAIRS.**

**Watch for more contest**  
**information, soon.**

Vendors welcome as usual,  
Tables \$25 each, first come first served.  
More info call Scott Bell at (916) 428-7217.  
Evenings after 6 pm.



# **CONTEST**



The Ho 9V-1 is prepared for a test flight. Note the smaller size of the BMW 003 engines, which allowed for a smoother wing.

## Flying-wing fighter that almost was: the Ho 229

By Ben Pada

The roots of the Horten Ho 229 all-wing fighter can be traced to the early 1930s, when the teenage Horten brothers—Walter, Reiner and Wolfram—were devoted to designing, building and flying all-wing gliders.

Walter, through his career as a fighter pilot, came to the conclusion that the Luftwaffe would need all-wing fighters to defeat Britain's Spitfires. Reiner and Wolfram continued their efforts to design and build their jet-powered all-wing prototype privately, using the unofficial name "Sonder Kommando 3" to describe their secret efforts. The team won the prize offered by the "3 X 1000 fighter/bomber" program, and went on to complete the Ho 9 V-2 in December, 1944. This prototype made a successful first flight, despite of major design changes brought about by the unexpected size of the Jumo 004 engines, which were larger than the BMW 003 engines originally specified for the Ho 9. The Ho 9's blended wing roots and intakes were replaced by two cylindrical bulges above the wing.

Production orders were placed for the aircraft with the Klemm and Gotha aircraft companies with the official designation of Ho 229. Prior to full scale production, Gotha was scheduled to build six prototypes, the Ho 229V3 through V8. When Gotha's workshop was overrun by U.S. troops in April 1945, the Ho 229 day fighter prototype was nearly ready for its first test flight.

The Horten Ho 229 night fighter was one of the planned variants of the Ho 229. A drawing survived the war showing the general configuration of the V-6, which was to be a two-seat trainer, and this was likely to be the basis for the nightfighter, the Ho 229B-1, which would have carried a radar operator's seat and radar equipment where the instructor's seat was on the V-6. To accommodate the second seat, the

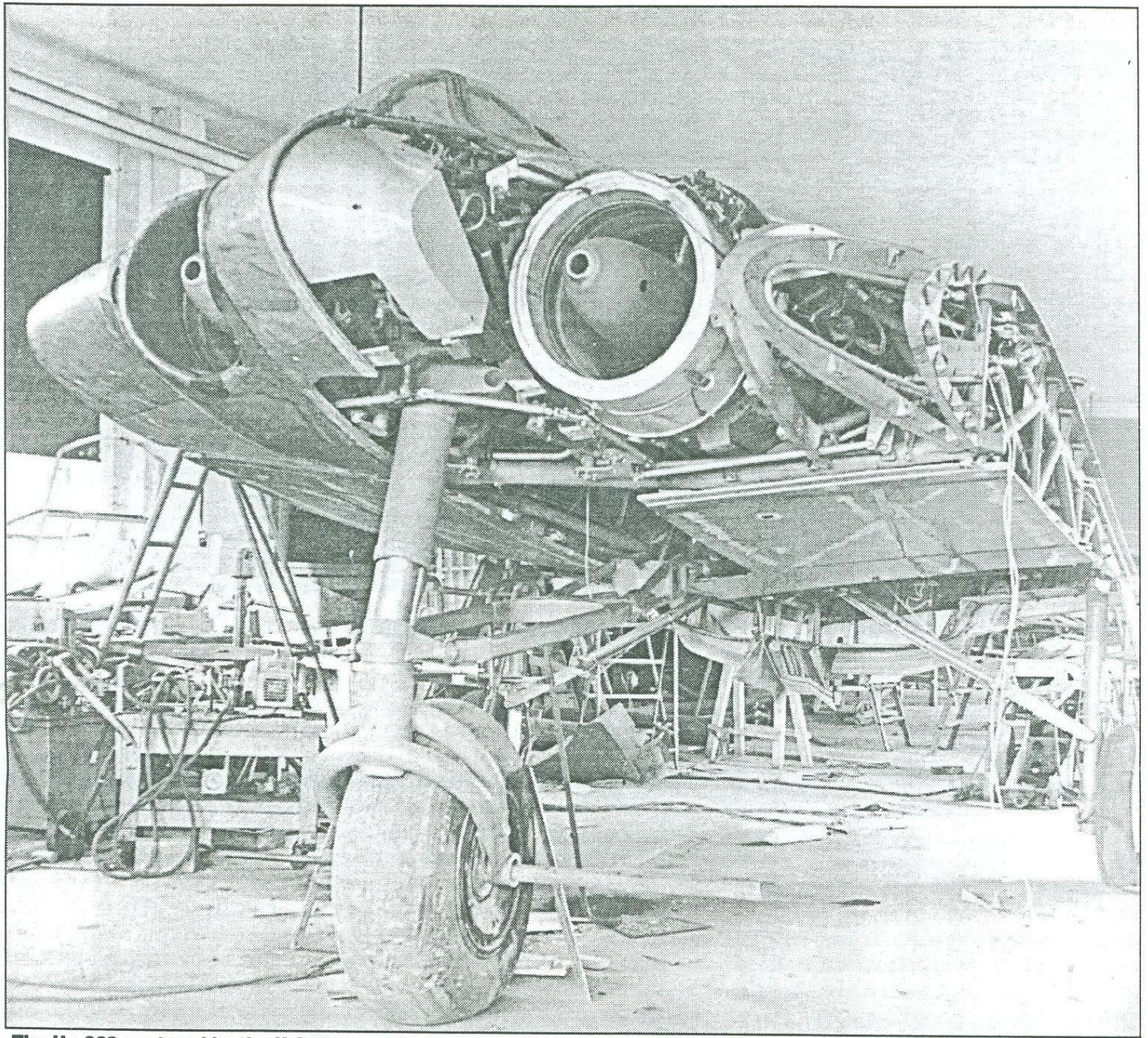
center section was totally redesigned and the nose was extended sharply forward. The Ho 229B-1 was to have featured a pressurized cockpit, along with the FuG 244 Bremen radar.

In February 1945, the Luftwaffe created JG400, which initially flew Me 163s but was intended to fly Ho 229s. The pilots would have been trained in the piston-powered Ho 7 wing, and it is thought that Klemm would have had to surrender its orders for Ho 229s to build Ho 7 trainers. The failure of the Me 163, delays to the Ho 229 program and the advance of the allies ended JG 400's history before it could use one of these remarkable fighters in action.

DML released the Horten Ho 229B in 1:48 a few years ago, in 1993, and that's when I bought the aircraft. The model lacks the detail of the single-seat version of the kit, with no engine detail and lacking the removable wings. It has recessed panel lines, but these are a bit on the heavy side. There were sink marks on some of the parts, and flash was present on much of the kit. The plastic also had a pitted texture to it that was less than desirable. The decals that came in the kit were very thick, but the kit included photoetched detail parts.

The interior of the cockpit lacks detail, so before I painted the cockpit I added detail to the sidewall frames. I painted the interior RLM 66, using *Gunze Sangyo* paints, which I mixed myself. The instrument panel was painted flat black and the instrument dials were painted white. Drops of 5-minute epoxy were used to simulate the instrument lenses. I used lead foil for seat belts and added photoetched brass buckles. The interior parts were then set aside until final assembly.

There were no problems with the fuselage, outside of a few sink marks, although the nose piece did require some filling and sanding, as did the joint between the wings and the fuselage. The landing gear has just a few parts, but it looks good upon completion; I painted the gear legs RLM gray 02,



**The Ho 229 captured by the U.S. Army at the Gotha works. The immense nose wheel was taken from the tail of a He 177.**

and painted the tires black.

I built it, painted it and put it back in the box for the paint to cure. Eventually, last December's "Twins" contest rolled around, and I didn't have a twin-engined aircraft to enter. The only model I had close to having finished was the Horten.

So, I jumped into the finishing portion of the project—the fun part. Since the aircraft only made it to the drawing board, you can modify it and paint it as you wish. Initially, I painted the lower fuselage RLM 76 and the upper fuselage RLM gray violet and dark green. I painted the group markings of JG300, and I painted the area just aft of the engines with *Testors Metallizer*.

When I took the model out of the box after four years, I decided that wasn't enough, and I wanted to add to the basic scheme. I started with RLM 76 and added RLM 74, RLM 75 and RLM 02—so there are actually two paint schemes on the

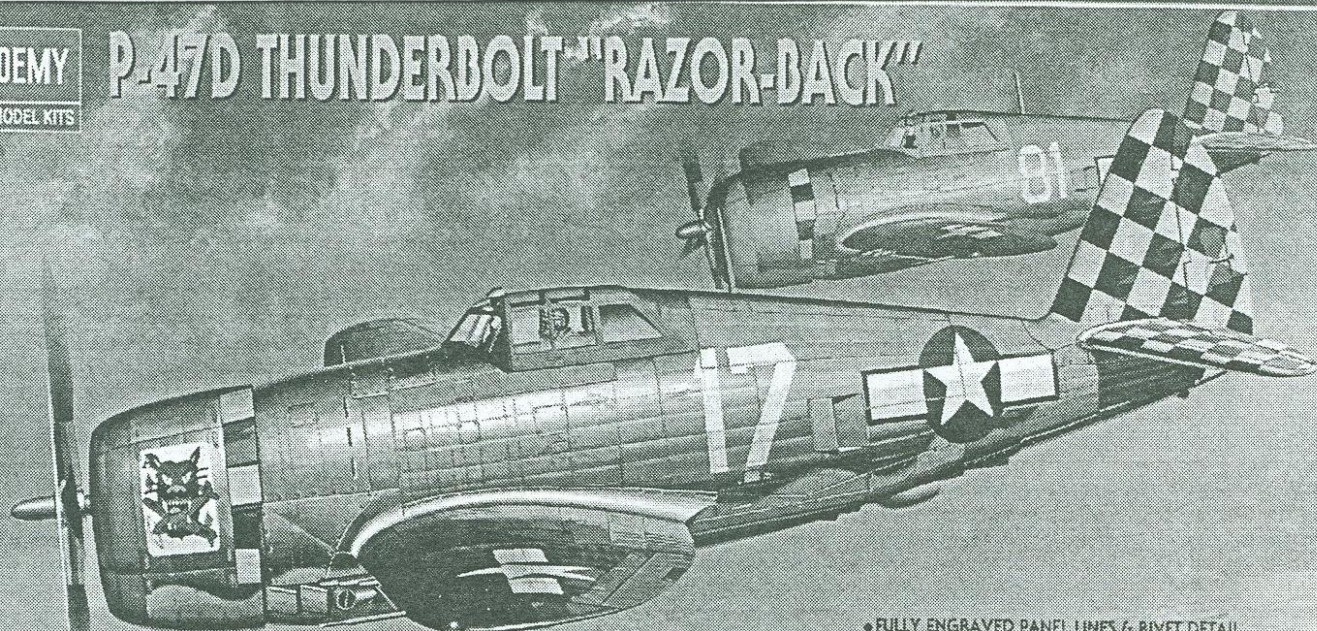
plane, just the way a harried German ground crew would have done it.

I did not add the radar, and blocked off the second seat to make it look like a fighter. The canopy in the kit is a single piece and quite thick, so I went over to Rodney Williams' house and we made a vacuform replacement using the kit canopy to make the mold. I then cut it apart so I could display it in the open position. I next installed the interior and the seat. Before installing the sliding canopy, I made guide rails using plastic strip. To complete assembly, I added the landing gear and gear doors and, finally, the pitot tube. The markings came from spare sheets. I gave it a coat of clear followed by a coat of flat, and used pastels and watercolors to weather the model.

The result is a neat-looking model that gave me a chance to experiment with a paint scheme. If you want to build a hypothetical fighter but not get too far from Luftwaffe reality, the Ho 229 is for you!

ACADEMY  
HOBBY MODEL KITS

## P-47D THUNDERBOLT "RAZOR-BACK"



1/72nd SCALE

- FULLY ENGRAVED PANEL LINES & RIVET DETAIL
- HIGHLY DETAILED COCKPIT INTERIOR & LANDING GEAR BAY
- VARIOUS UNDER-WING WEAPONRY INCLUDED

Dramatic box art from Academy's new P-47D Thunderbolt. Oddly, the unit depicted is the same one shown on Hasegawa's kit.

## Academy does a prop-er job on new 1:72 P-47D

By Barry Bauer

Academy has chosen for its subject an aircraft already well represented in this scale by the Hasegawa offering. How it compares to that little gem will tell if it is worth the \$8.50 one must shell out for it. (Incidentally, the Hasegawa kit is roughly the same price.)

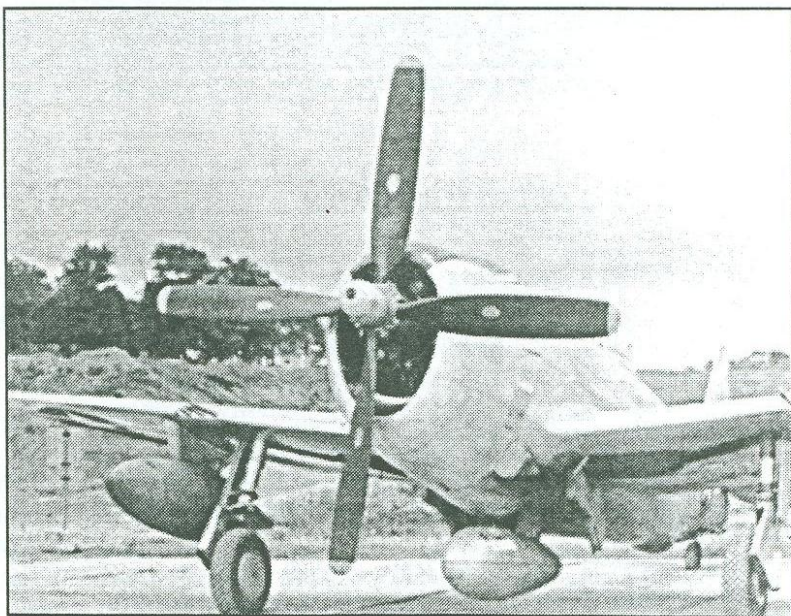
Upon opening the box, one is immediately impressed with the large, colorful decal sheet. Markings are provided for two planes. The first one is from the 317th Fighter Squadron of the 325th Fighter Group in Foggia, Italy. It has a large ace of diamonds card with a black cat devouring a Bf 109 in addition to black and yellow checkered tail feathers (from the same squadron as provided for in the original Hasegawa kit). The other subject, "Anna Louise," is a rather plain olive drab and gray bird from the 391st Fighter Squadron, 366th Fighter Group operating from France in late 1944. The color and registration on my example are very good.

Now on to the kit itself. The parts are molded in a light-gray plastic with finely inscribed panel lines and fasteners. The detail is restrained but effective. The locations of some of the panel lines are questionable when compared to a set of accurate drawings. The shape and fit are quite good with the overall dimensions coming out a few scale inches short on the wing span and a few scale inches too many on the fuselage, according to *Aircraft Archive Volume I: Fighters of World War Two* from Argus Books.

One flaw that must be corrected to obtain an accurate replica is the small louvered section just forward of the turbocharger exhaust under the rear fuselage. Apparently the toolmaker didn't have access to a complete three-view set of plans (or a Hasegawa kit) when he was "creating" his version. It will take a little bit of work but it must be done.

As with all previous offerings in this scale, the wing guns incorrectly follow the dihedral of the wing instead of being parallel to the ground. This is understandable considering the effort that would be required by the mold-maker to achieve the proper effect. Anyway, those picky enough to care should be able to correct such a minor flaw. The interior is nicely provided for, with a nicely detailed floorboard, a forward bulkhead, a combination rudder pedal and instrument panel with nicely molded instrument faces in bezels, a pilot's seat, and a control stick. There is no decal provided for the instrument panel.

The canopy is a two piece affair separated between the



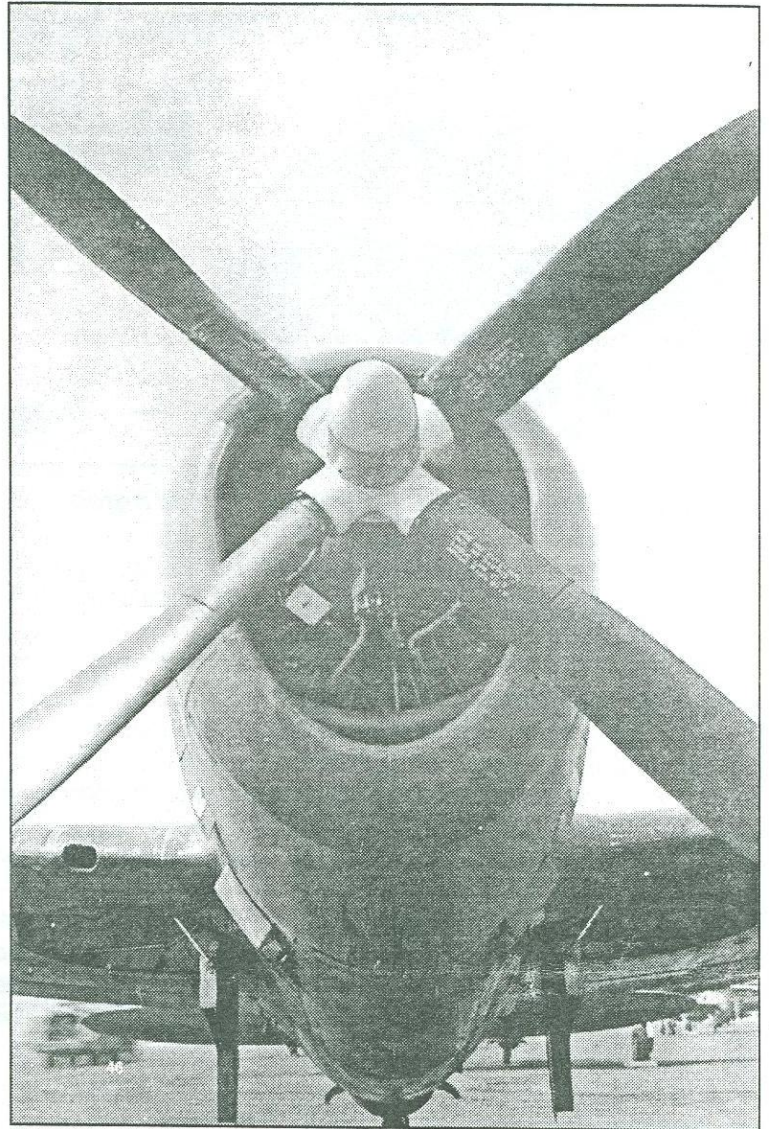
Prop situation 1: the Hamilton Standard prop, finally depicted correctly in the new kit. Corsair fans, take note!

windscreen and the hood/side glazing. One will still have to do some cutting to get an open cockpit. These pieces are quite thin and clear. A clear landing light lens is also included. The main landing gear struts are okay, but lack any extra detail. The main wheels seem to be a bit narrow for a bird of the "Jug's" bulk. They do have a finely engraved diamond pattern tread and open, six-spoke hubs. The tail wheel is very rudimentary, with no detail. The main wheel wells are a curious sight. I was unaware that anyone, either at the factory or in the field, lined the wheel wells of a P-47 with P.S.P. (That's Pierced Steel Planking, a material used in the field to quickly create runways on soft or uneven ground.) That's what appears to be in these. Fortunately, the wells are deep enough to simply lay some .010 styrene sheet down and detail right over the P.S.P.

The Pratt and Whitney R-2800 engine is well represented with two complete banks of detailed cylinders (unlike the Hasegawa kit.) It mounts to the firewall on a rear extension of the engine block. With the divider to split the engine from the air intakes in place it makes a good impression of the powerful engine of the real thing.

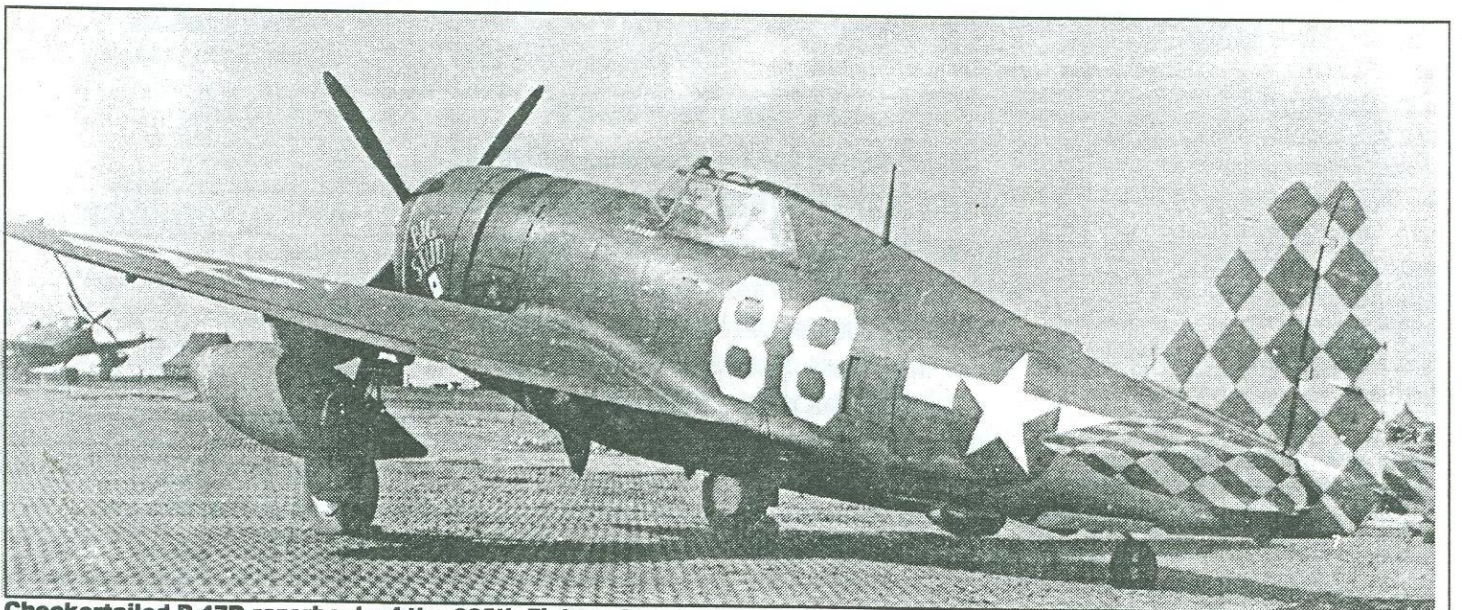
Extra details include one each (!?) of two types of drop tanks, the large pressed-paper early type and the smaller metal ones used late in the war. Also provided are the two triple-tube 4.5 inch "bazooka" type rocket launchers for under the wings. These can be hung from the optional wing pylons included. But the biggest bonus is what goes on the front. *Academy* has answered the prayers of not just *Thunderbolt* modelers but also those who build late model *Corsairs*. They include two propellers! One is the 12' 2" Curtiss-Electric type used on earlier versions while the second is the later 13' 17/8" Hamilton Standard type. Both are accurately rendered in size and shape. There are manufacturer's stencils for the Curtiss-Electric propeller but not for the Hamilton Standard. Now the only one missing is the Curtiss late style paddle bladed type.

Overall, I would say that this is an acceptable kit that will produce an accurate model in the hands of any competent modeler. For many of us the Hamilton Standard propeller



**Prop situation 2: the early Curtiss Electric cuffed prop. Compare this to the Hasegawa kit propeller!**

makes this a worthwhile investment all by itself. *Academy* will also release a "Bubbletop Jug" version later this year.



**Checkertailed P-47D razorback of the 325th Fighter Group, at rest on a pierced steel planking airfield in Italy, 1944.**



# 1998 IPMS/USA National Convention and Contest

July 1—4, 1998

Santa Clara, California

## **This year, the biggest show in modeling is also a great family vacation!**

Come join us for fireworks in Santa Clara, in the heart of the San Francisco Bay Area, at a national event that every member of your family can enjoy!

## **A Spectacular Venue**

This year's contest will be held in the Santa Clara Convention Center, a thoroughly modern facility that routinely caters to the needs of Silicon Valley. The event will be held inside a single 50,000 square foot room, which will be partitioned Friday night to allow for closed judging. Upstairs, seminars will be conducted by some of the modeling world's best—

and for the long-suffering "modeling widows and orphans," workshops on other arts and crafts will be held. It's the biggest site in the history of the Nationals!

## **A First-Class Hotel**

The Westin Santa Clara is located just ten minutes from San Jose International Airport. The hotel offers a health and fitness center, a pool-side lounge area and restaurant, and there's an 18-hole golf course and eight tennis courts at the adjoining Santa Clara Golf & Tennis Club. In the mood for some California nightlife? Take the streetcar from the front of the hotel and head straight for downtown San Jose. And, across the street is Paramount's Great America Theme Park, where IPMS'ers can get discounted admissions during the nationals!

## **Tours For Everyone, Including:**

•**San Francisco Shopping Tour** (offered both Thursday and Friday)

•**Napa Wine Country Tour and Tasting** (offered both Thursday and Friday)

•**S.S. Jeremiah O'Brien and U.S.S. Pampanito** (Thursday)

The Liberty Ship *Jeremiah O'Brien*, is the last unmodified example of nearly 2700 built. The U.S.S. *Pampanito*, a preserved Gato-class submarine, allows visitors to experience the sensation of sailing in one of the cramped vessels that helped the allies triumph in the Pacific.

•**Travis Air Force Base and the Travis Air Force Base Museum** (Thursday)

On this day-trip, see the Air Force's active-duty heavy lifters up close, and see how cargo is prepared for transport. Then, stroll around the base museum, home to more than 30 preserved aircraft, including a C-124, two A-26s, a B-52 and a line-up of Century-Series fighters. (Tours of active facilities are available as military conditions permit.)

•**Castle Air Museum** (Friday)

This day trip takes you to the home to more than 50 aircraft, including a B-18 and a B-24M, and other modelers' favorites, including an Avro Vulcan, a B-29 and B-50, a walk-through KC-135, '50s fighters and one of the last RB-36 Peacemakers. Expect open cockpits and great photo opportunities!

•**Moffett Field and NASA-Ames Research** (Thursday)

Moffett Field's 211-foot tall, 800-foot long Hangar One was built to house the airship U.S.S. Macon. Since then, Moffett has been an Army training field, a school for blimp pilots, a base for Navy fighter and bomber units and home to a host of P-3 Orion squadrons. NASA-Ames features 14 wind tunnels, including one that was the largest of its kind when built. NASA also operates a variety of research aircraft at Moffett, including the ER-2.

•**Behring Auto Museum** (Friday)

The Behring Auto Museum displays a rotating selection of 120 cars dating from 1890 to the 1970s. This world-class collection includes a 1908 Mercer, a 1910 Rolls Royce Silver Ghost, a 1936 Dusenber Convertible, a 1931 Chrysler 8-cylinder roadster, a 1948 Tucker 4-door sedan and a 1964 Chevorlet Corvette modified during production with a 375-hp V8, fuel injection and enlarged grill openings. For car modelers, it's a can't-miss tour.

•**Western Aerospace Museum** (Thursday)

This ever-changing museum is home to an extensive collection of airline memorabilia and features tributes to Gen. Jimmy Doolittle and the Tuskegee Airmen. The collection of aircraft includes naval stalwarts like the KA-3B, KA-6D, A-7E, TBM-3E

and A-4M. You've probably seen the museum's star attraction, the Short Solent flying boat—it's the plane that "carried" Indiana Jones across the Pacific in "Raiders of the Lost Ark," and the museum encourages visitors to walk through this historic plane.

## **Just announced!**

**IPMS SemiCon and Eagle Editions present a  
World War II Fighter Pilots Symposium  
With Dan Cunningham (7 kills), Horst Petschler (30+  
kills), Gerhard Krol (1 kill) and American Spitfire ace  
Jerry Collingswood (tentatively scheduled)  
Hear these pilots describe air combat  
in their own words! Tickets are limited!  
Friday, July 3 at 7:30 p.m.**



# 1998 IPMS/USA National Convention and Contest

## Santa Clara, California • July 1—4, 1998

Name (please print) \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Guest Name \_\_\_\_\_

IPMS Chapter \_\_\_\_\_ IPMS # \_\_\_\_\_

Event	Quantity	Price	Total
Pre-Registration (must be received before June 1, 1998)			
Adult (includes 3 model entries)		\$25	
Junior (unlimited model entries)		Free	
Convention Registration (if received after June 1, 1998)			
Adult (includes 3 model entries)		\$30	
Junior (unlimited model entries)		Free	
Additional adult model entries		@\$1	
Absentee Convention Registration		\$20	
Banquet Tickets (Seating limited to 350)		\$32	
Specify: Chicken ___ Beef ___ Vegetarian ___ (# of meals)			
Discount coupons to Paramount's Great America (up to 8)		Free	
<b>WWII Fighter Pilots Symposium (Friday night)</b>		\$25	
Tours (subject to availability)			
San Francisco Shopping Tour (Thursday)		\$25	
San Francisco Shopping Tour (Friday)		\$25	
Napa Wine Country Tour (Thursday)		\$25	
Napa Wine Country Tour (Friday)		\$25	
Liberty Ship S.S. Jeremiah O'Brien and WWII submarine U.S.S. Pampanito		\$20	
Travis Air Force Base and the Travis AFB Museum		\$25	
Castle Air Museum		\$25	
Moffett Field and NASA Ames Research		\$15	
Behring Auto Museum		\$15	
Western Aerospace Museum		\$18	
<b>Total:</b>			

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# Two helicopters, one number: NASA's Cobras

Continued from page 1

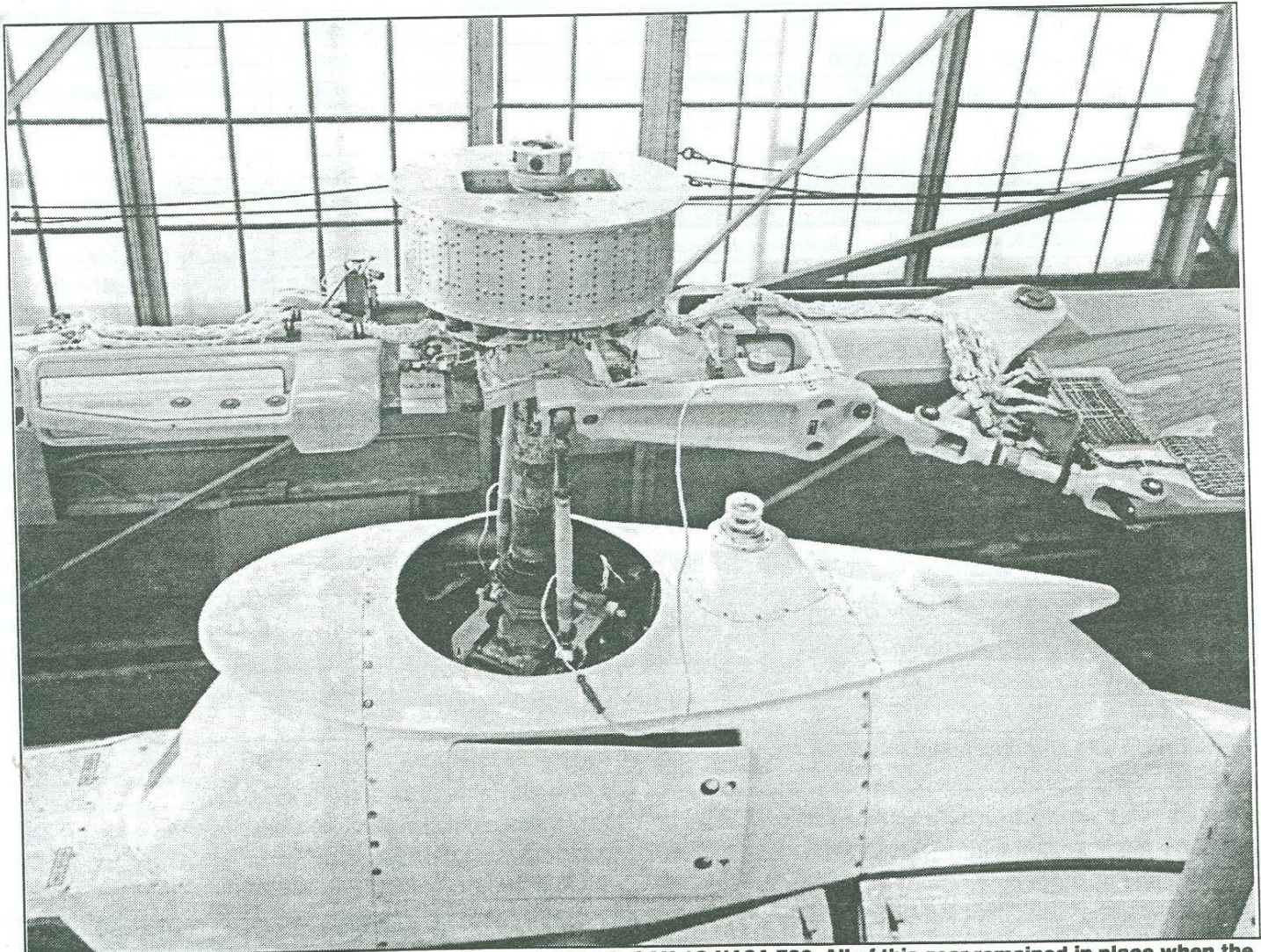
being straight as *Microscale's* drawing shows them.

I recall seeing the bird with the more flamboyant scheme that the *Microscale* sheet portrays, but I do not recall when, why, or with what research equipment installation. Considering the drab colors in which most *Cobras* spent their lives, why not live a little, and put all the markings on?

*Cobras* were probably never used as chase aircraft. Opening the canopy in flight was not a good idea, which meant that if you wanted to shoot photos, it had to be through curved Plexiglas. So what was their value? I've alluded to the instrumented rotor, which allowed pressures and stresses to be mapped out in flight. This was uniquely valuable when coupled with other Ames resources. One of my personal favorites was a YO-3A, a silent aircraft developed during Vietnam for snooping out night movements on trails. These birds were so quiet that, unless you were very still and very alert, they could pass overhead at a few hundred feet and you'd never detect them. NASA's YO-3A is fitted out with sound gear, microphones on each wingtip and atop the fin. By taking up various stations around the subject helo, you can map out rotor sounds unaffected by ground reflections, and define where they are originating and whence they're focus-

ing. Relate sounds to pressure data, (and tie them to flow field data obtained in wind tunnels) and you begin to understand the sounds so you can quiet them. The *Cobra* was just a passive "target" in all this, but that YO-3A is one cool bird, and would make a marvelous modelling subject for some very skilled person.

The *Cobra* was used on several other projects. One involved a helmet-mounted TV display that showed the pilot an outside view by sensing where his head was aimed and pointing a camera mounted in the turret in the same direction. (You thought virtual reality was new, did you? This was "real" virtual reality, in a sense.) But *why*? I never heard the Army's side of this, but NASA was investigating the problems of flying a helo with only the helmet-mounted view and no actual view outside, such as you would get in either a remotely-piloted craft or a bird armored to such a degree that there weren't even vision slits to look through. (Tell me now, considering all that vulnerable ironmongery thrashing around about four feet back of you, how much sense does scenario two make to you?) This was a serious effort, because helos are notoriously hard to fly with restricted outside views (even our early 48-degree wide terrain-model displays were seriously



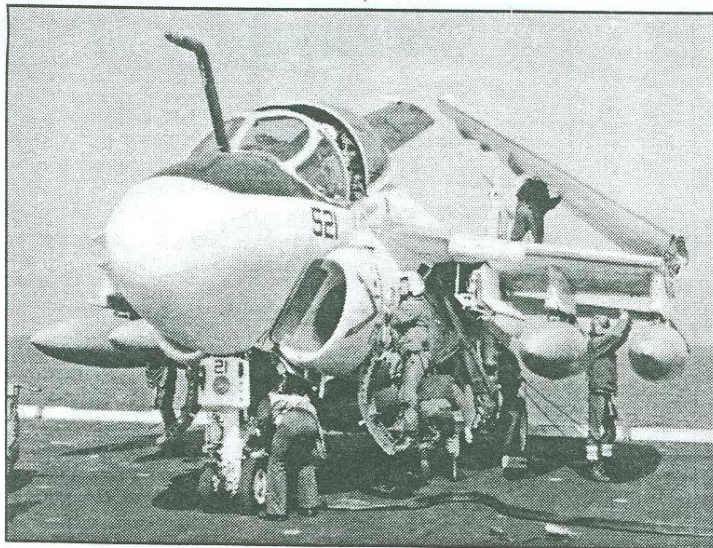
**A view of the drum and instrumentation atop the rotor head of AH-1G NASA 736. All of this gear remained in place when the aircraft flew.**

handicapping to the pilots, and these head-slaved ones were narrower), and also because head-slaved displays could induce some awesome vertigo if they were still slewing when your head had stopped at its final position, leaving the whole outdoors rolling like the inside of a frat house when the upperclassmen were pouring shots of whiskey into a new pledge. I moved away from simulation before the results came in, so I never knew the outcome.

*But what was (is) 736?* Okay, I'll drop the other shoe: two AH-1's have carried that number. The first was an AH-1G, numbered 66-15248. It was at Ames until about mid-1985. (The usually reliable Percy missed badly on this one.) To model this one (*Microscale's* subject) in detail, you might wish to add that drum atop the rotor mast and the wiring on the blades, as seen in the photos. The *present* one is reportedly an NAH-1S, 70-15970, which arrived in early 1988. It has an extremely simple decor job, consisting of the blue stripes, which are straight and wrap around the bottom of the tail boom, centered a couple of inches below the intersection of the skid, plus a small (about 4" high) "736" on the pylon in black with "ARMY" centered below and about 2.5" high. There's no NASA marking now, although it had the "worm" marking at an earlier time. As a rather personalizing touch, there's a small (about 3" long) decal of a waving U.S. flag below the aft port-side window. It's all white except the anti-glare panel, skids, and the antenna low on the port side of the tail boom. (Rotor colors are standard.) That simple design is the good news. The bad news is that I don't think it matches any kits. The standard

AH-1S's have heavily-framed flat transparencies, whereas this one appears to have a -G style canopy. Instead of a carrying a missile sight, the underside of the nose is faired smooth, but it is flat on top, and mounts the experimental camera that feeds the helmet-mounted display. An upward-turned IR-suppressing exhaust is fitted, and as a nice bonus for weathering enthusiasts, the tail pylon has considerable exhaust staining. As simple as the paint job is, this one would take some effort to model correctly, not the least in just getting close enough to document it.

Most of the NASA/Ames research aircraft I've written about had some distinction, a hook on which to hang a modelling story. This is no exception: NAH-1S no. 736 is the last *research* aircraft at Ames to wear the white-and-blue that has marked these craft for over 30 years. There will be *platform* aircraft, presumably, like the telescope-carrying Boeing 747, but Mad Dan Goldin's bizarre decision to move research aircraft to Dryden, away from researchers and complementary resources like the wind tunnels and simulators, spelled the end of NASA flight research here. 736 remains because it's an *Army* aircraft, belonging to the Airmobility Lab and out of Goldin's reach. So are the two *Blackhawk* helos that add up to the only flyable occupants of the once-busy hanger, but they are in Army camouflage, barely distinguishable from any other service H-60 with their doors closed up. It's full-circle, in a way: back to the beginning when *Mustangs*, F6Fs, and SB2Cs wore service colors. But that was the beginning of the story. Looks like this is the end.



***At this month's meeting...  
Let the club get a close  
look at what you have  
planned for July!***

***Nationals  
Sneak Peek  
Contest!***

***And, coming up later this year...***

**June: NASCAR and Choppers (bikes & copters)**

**July: Straight Wing Jets**

**July 98: Area ruled (F-102, F-105, Chargers, all Mopars, etc.)**

**August 98 : NATS LOSERS CONTEST (Home Of the Plastic Whipping)**

**September 98: Air Racers**

**October 98: That's Italian (aka "the Italians of October" (planes, cars, armor, surrendering figures, etc.)**

**November 98: What if? Vietnam 1980 (Linebacker 2000) and Mad Max Motoring**

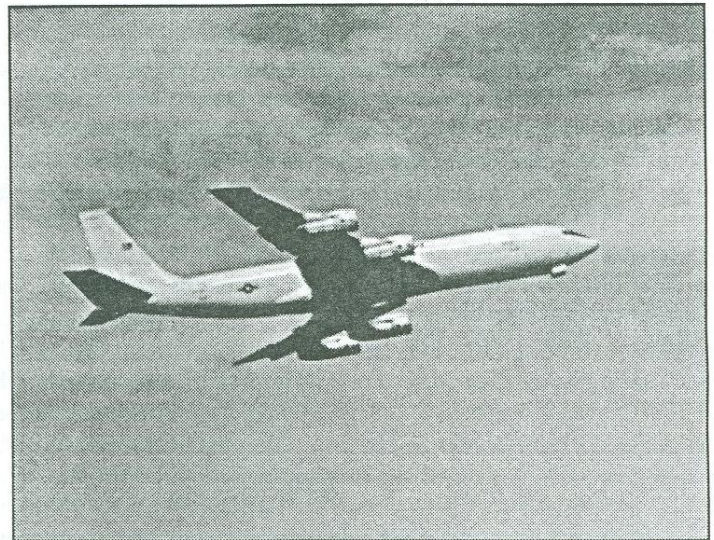
## OUR FAVORITE MUSEUMS

# The Museum of Flight, Seattle

Located at Boeing Field just south of Seattle, the Museum of Flight is one of the best-organized and best-run aviation museums on the west coast. The museum has three major components—the large, airy main gallery; an outdoor display area; and, most interestingly, “The Red Barn,” the building where Boeing started business—first as a boat maker and later as an airplane manufacturer. The building was moved from its original site to the museum and has been refurbished; its two stories trace the history of Boeing and aviation in its golden age.

The aircraft on display run a wide gamut. There’s an F-4 Phantom II and a MiG-21; an F9F-7 Cougar; an MD-21 Blackbird, along with its recently-declassified drone; a Boeing P-12; the Apollo capsule used to train astronauts in water survival; A Ryan mailplane; and a replica of the B&W, Boeing’s first plane. Outdoors, an A-4, F-86, G-91 and a 707 used as Air Force one are on display. In addition to these types, a host of pioneering light planes, including a car-plane and a beautifully restored J4N left skin-less, chart the full history of aviation.

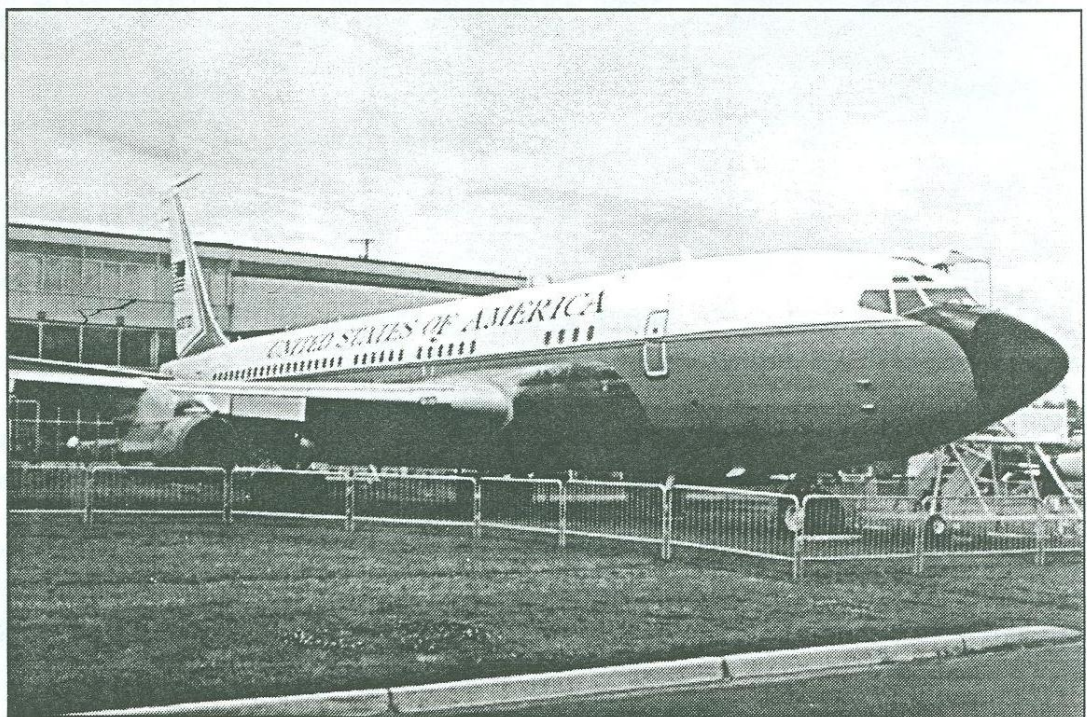
**At right: a 707 used as Air Force One, which visitors may walk through. Did you know the pale blue and yellow paint scheme was originally chosen by Jacqueline Kennedy?**



**A reminder this is Boeing country: a TACAMO EC-135 departs**



**This immaculate (and flyable!) F4U-1D was pulled out of nearby Lake Washington**



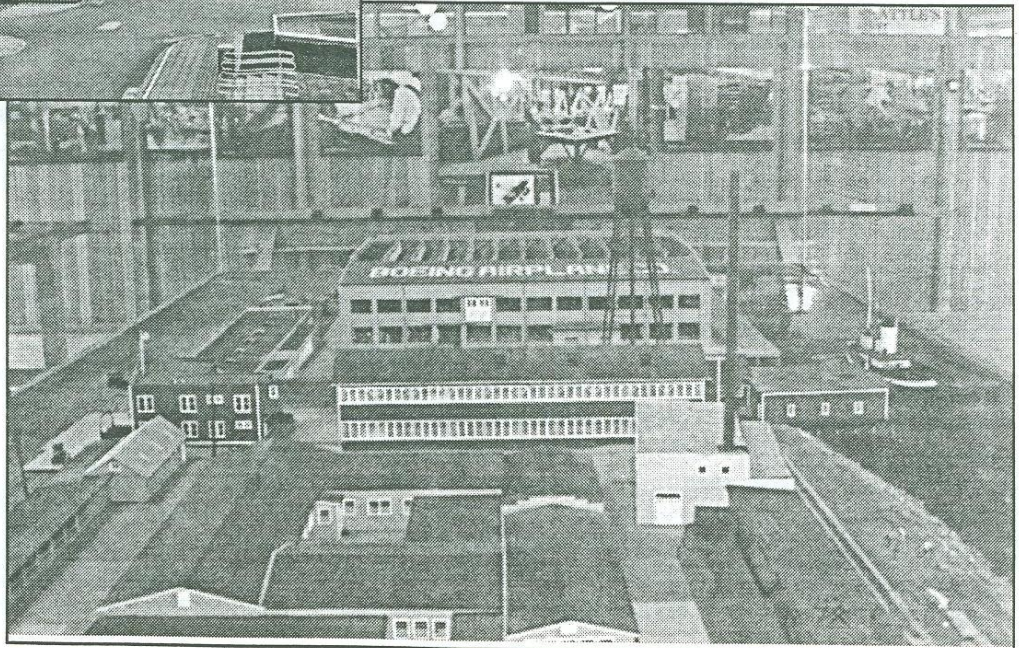


**The airplane that led to the museum: Boeing Model 80A. The last example of its type, it was spotted at the Anchorage City Dump in 1963 and rescued from oblivion by the Pacific Northwest Aviation Heritage Foundation, the founders of the museum.**



**Below: Modelers from a Boeing employee's railroad club built this detailed 1:72 model of the 1920's Boeing plant, now proudly displayed in the Red Barn (the model of which is at center, just in front of the water tank).**

**Above, other treasures awaiting attention: from the left, a B-29, the prototyp 747, and an RB-47**



# Hughes' \$25 million mistake—Spruce Goose

By Ken Miller

If a modeler wants to build a model of the Howard Hughes' Spruce Goose he is limited to a 1:200 kit first marketed by Entex and now by Academy/Minicraft. Even in 1:200, the kit is large, with a 19-inch wingspan.

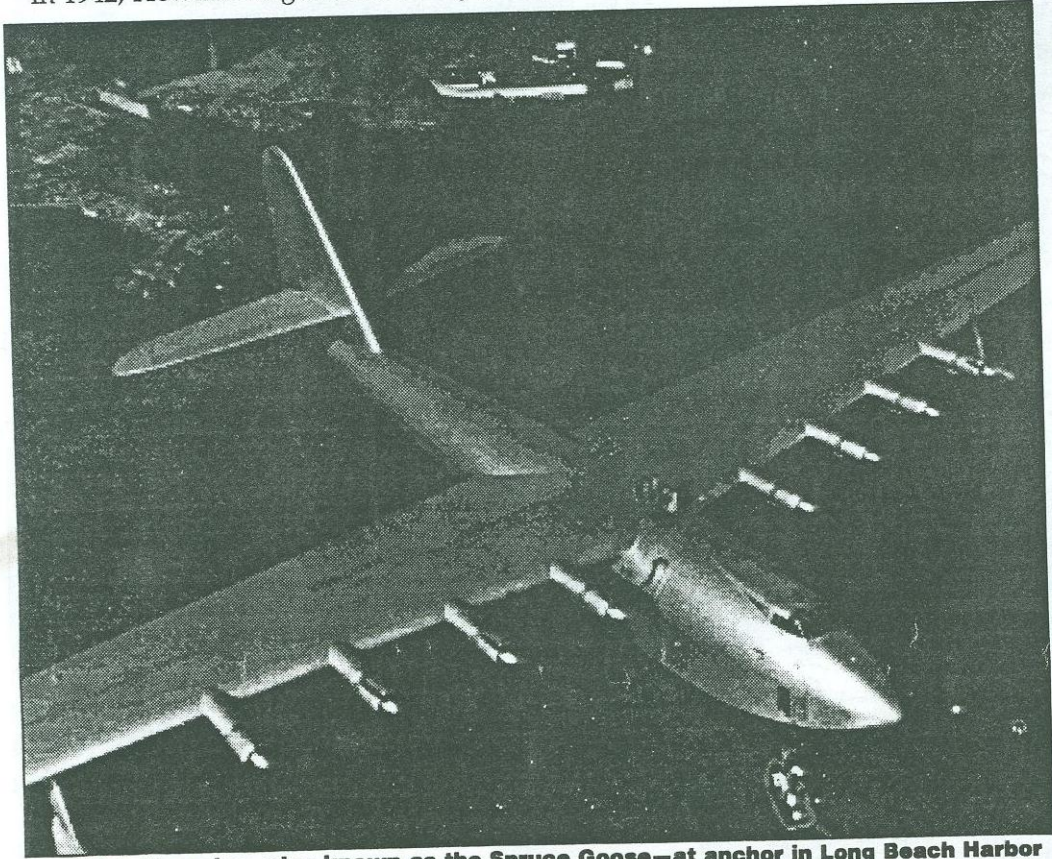
In 1942, Howard Hughes and Henry J. Kaiser conceived

by admonishing the Senators that "during the war I got less than one percent of the aircraft contracts, and now I'm getting 99 percent of the investigations."

Even though the investigation was over, the plane had yet to fly. The city of Long Beach refused to give Hughes a permit to fly the plane, fearful the HK-1 would break up in flight and

shower the city with flaming debris. In 1947 Hughes promised to take the aircraft out for a taxi run to test its seaworthiness, but, according to Hughes, "the plane got away from me," and he took the plane on a 60-second hop, never getting more than 70 feet above Long Beach Harbor. The flight cost Hughes \$117,000 for each second of flight and cost the taxpayers more than \$300,000 for each of those seconds. The plane was impounded by the city, and went back into her hangar, never to be flown again.

Even in 1:200, the kit is moderately sized, consisting of 50 pieces, including a three part clear stand. The wings, fuselage, and horizontal stabilizers are all in two halves. The eight engine nacelles are about the diameter of a pencil, without any detail. Nothing is terribly fancy about the kit, but I'm it is the only game in town. The Academy/Minicraft kits go for about \$10 and I got my Entex version for \$2 at a swap meet.



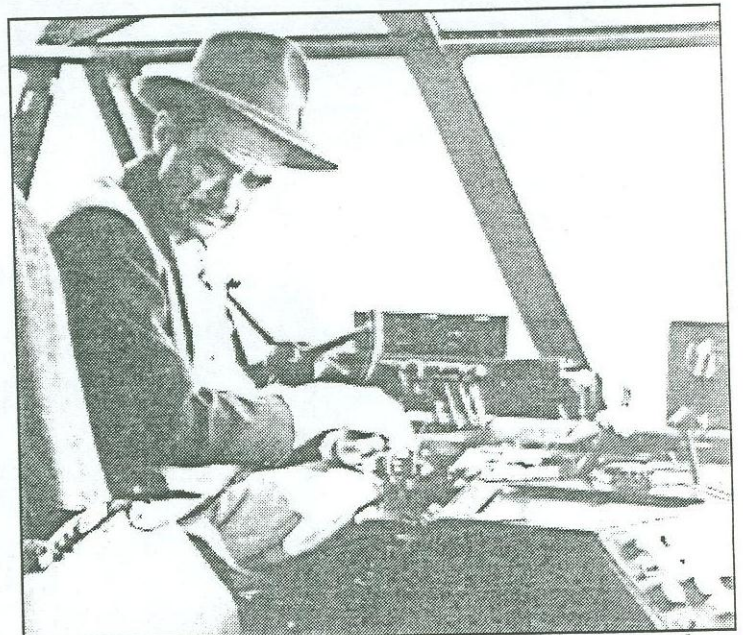
**The HK-1 Hercules—also known as the Spruce Goose—at anchor in Long Beach Harbor before her only flight.**

the idea of a fleet of flying boats that could avoid the threat of German U-boats by flying cargo across the Atlantic. Kaiser was given a contract to build three prototypes after personally approaching William Leahy, President Roosevelt's chief of staff.

Funding was contingent on finding a way to build the planes without the use of "strategic materials" like aluminum. By the end of 1942, the U-boat threat had passed, but construction of the prototype had just begun.

By March 1944, \$13 million had been spent without a completed aircraft. The government canceled the two unbuilt aircraft, but said the original prototype could be completed. The first prototype was built primarily of birch plywood and was given the nickname "Spruce Goose." Finally, in June 1946, the HK-1 Hercules was completed at a total cost of \$25 million. The government paid \$18 million and Hughes contributed \$7 million of his own money. The plane was enormous, with a 218-foot length, 320-foot span, and 200-ton weight.

The plane had sat in a Long Beach hangar for a year when Hughes was called before the Senate War Investigating Committee and accused of fraud. He survived the hearings



**Hughes at the controls. Had the plane not 'gotten away from him,' the flying boat would never have taken to the air.**

# APRIL MINUTES

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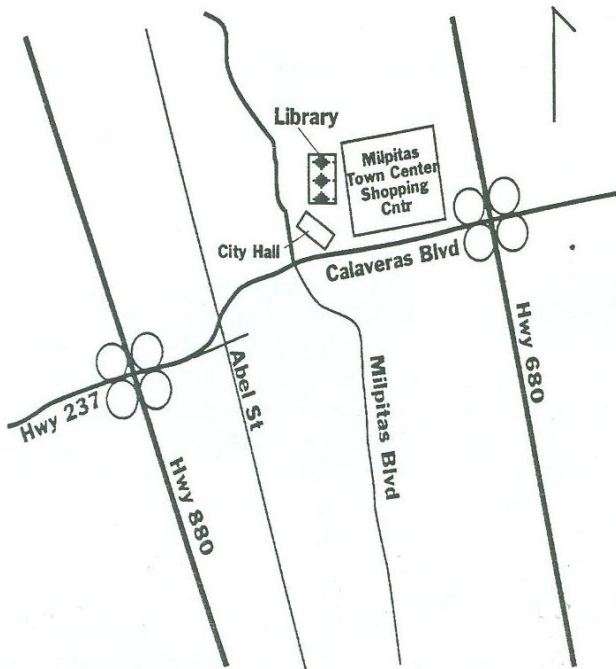
Cliff Kranz let everyone know that the Collings Foundation's B-17 and B-24 will be in the Bay Area during the last weeks of May. Keep an eye out for local dates and times for these aircraft; they offer you a great opportunity to see, tour and even fly aboard a vintage WWII bomber!

Randy Ray has volunteered to be the club webmaster, and the electronically-inclined should point their browsers toward <http://www.tsoft.com/~rjray/svsm>, the SVSM website! While you're on line, be sure to check the 1998 IPMS/USA Nationals site at <http://members.aol.com/ipmstomcat/nats/home/htm>.

In model talk... Peter Wong is decking out his *Revell* 1:96 *Constitution*, quite literally—he's adding basswood strips to the deck, to make it look more like... wood! Bert McDowell showed the master of the soon-to-be-released *Tom's Modelworks* 1:350 early *Essex*-class aircraft carrier. The kit will have a cast resin hull and deck, photoetched details, and the option of building a full-hull or waterline model! Lou Orselli is getting himself ready for the upcoming choppers contest; he's bashed together *Revell* shovelhead and drag bike kits with the gas tank from an *MPC* sportster to create a unique motorcycle. Lou also took the *Elliot* vacuform kit of the A-26K *Invader* and fashioned a lovely replica of the prototype Vietnam-era A-26 as it appeared during its trials in the Canal Zone. Lou said the parts from the *Monogram* A-26 fit the vacuform kit beautifully! Also in Lou's collection of in-progress works is an *OEZ* Su-7, which will be finished as an Indian Air Force aircraft. Brad Chun, himself a vac-master, has added a *Hawkeye* interior to his *Falcon* Bf 109G and has the model almost ready for painting. Tom Trankle is using *Eduard's* photoetched sets and scratchbuilt bulkheads to add detail to *Monogram's* He 111 kit. Mark Hernandez' *Planet Models* Arado Project 2 is nearing the painting stage, having received its wings' engine nacelles and painting to its nicely detailed cockpit. Randy Rothhaar's known for turning them out, but we didn't know he was a machine—he's added Borg technology to the *Monogram Voyager* kit. Randy used decals from the deluxe edition kit to finish his improved Starship. Randy's also bashing together another "Star Trek" starship, the details of which will be thought up—er, revealed later! Dave Balderrama was practicing safe blimp with his *Glencoe* airship; he's had less success in space with his *Testors* Roswell UFO, which he says has been causing lots of problems because of the makeup of the plastic used to mold the kit. Dave plans to finish the flying saucer in bare metal and light blue. Chris Bowman used *Tamiya* paints to put the finishing touches on his *Tamiya* A6M5 Zero fighter. Ben Pada showed two of his *Tamiya Mustangs*—a D and a B—both in the same 52nd Fighter Group markings. The B model is new; Ben used the *Jaguar* interior, and dropped the flaps and opened the spokes on the wheels. He's also working on his second jet of this year, the *Tamiya* F4D *Skyray*, which he says has a good fit. Jim Priete is gritting out a conversion of an F2G *Corsair*; he says it's advancing more quickly than he anticipated. Angelo Deogracias showed that he knows how to use masking tape—it was holding together the parts of his brand-new *Tamiya* A-1H *Skyraider*. Ed Van Brabant has been work-

ing hard to close the booms on his *Minicraft* P-38E *Lightning*; he's also dropped in the gear wells and detailed the cockpit, but he still says that it's a kit for masochists! On the other hand, he says, *Hasegawa's* 1:48 *Hurricane* is a great kit, with just a few sink marks. Ed plans on finishing the kit in a desert scheme. Roy Sutherland continues on his quest to create an upgraded *Spitfire* V. John Range—also known as "the guy from D&J!"—built his *Tamiya* Panzer III virtually out of the box. Joe Fleming's Tiger Is have had more work done to them, including weld beads, road wheels and the completion of the hatches. Joe says the scratchbuilding work is done, and now—on to the photoetch! Dennis Ybe says the *Peerless Max-Italeri-Zvezda* kit of the M3 White scout car still has a good fit despite its age and many makers! The detail is nice on this box-style kit, says Dennis. Mike Burton's obsession with *Monogram* P-51Ds continues; his latest examples are a license-built *Mustang* in Australian markings and a CBI-based 2nd Air Commando Group P-51 equipped with rocket tubes taken from the *Hasegawa Mustang*. Chris Bucholtz is armed with references and plans to detail his *Italeri* OH-6A Loach as an Aero Scouts helicopter from Vietnam. Kent McClure's March A26 in 1:43 from *AMR* will be finished as the Red Lobster Car. Kent also presented some wargaming spaceships, including some very expensive but very detailed pieces from the "Starblazers"/"Space Cruiser Yamato" series. Walt Magnus is nearing the completion of his rather dramatic conversion of an M728CV recovery vehicle. Barry Bauer found photos of Shermans with 76mm guns and HVSS suspensions rolling through the German town he lived in, and has toured the battlefield they fought on, so his *DML* Sherman project has special meaning to him. Cliff Kranz took a 1:72 *Minicraft* PV-1 *Harpoon* started by Larry Roberts and finished it up in the lovely three-tone scheme. Cliff also displayed his *THIRD Glencoe* blimp—this one, he's keeping, he says! Alan Weber is using the *Lone Star Models* resin tank to convert his *Accurate Miniatures* TBF *Avenger* into a firebomber. Jim Rasp treated a Warhammer 40000 tank as if it were a real armor piece, and the results were stunning; Jim finished it in a weathered winter scheme. Rodney Williams started his sparkling white Thunderbirds F-100 *Super Saber* four years ago, and he's back at it! He's also in the home stretch on his Grumman *Gulfhawk*, and his 1:32 F2G *Corsair* (which will be depicted crashed at Akron) is also inching toward completion. And the model of the month goes to... Joe Fleming and his BA-20, lovingly crafted from a *KARO-AS* kit. Joe used some weathering sleight of hand to cover up some of the kit's shortcomings. Way to go, Joe!

Our club contest this month was Squadron Hacks, and we had just three entries, though they were all quite attractive. In third place, with a bright yellow T-6 *Texan* built from the *Encore* kit, was Ken Fadrigon. In second, with a *Heller* T-28 *Trojan* in Philippine Air Force markings, was the same Ken Fadrigon! And in first, with a P-51B two-seater, was Mike Burton! Mike's *Mustang* is a combination of a *Monogram* "B" with the filleted tail of the *Monogram* "D!" Nice job of blending, Mike!



Next meeting:  
**7:30 p.m.,  
Friday,  
May 15**

**at the Milpitas  
Public Library  
40 N. Milpitas Blvd.**

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