

## The SH-34J Project



*By Clarence D. Guenther*

### **Background:**

A couple of years ago somebody got the idea for a museum focused on the Glenview Naval Air Station, which had recently been closed. The former air field was being rapidly redeveloped into a high-end housing and retail complex. I think the only evidence remaining today from the Navy days are the chapel, the golf course and the control tower building, kept for "authenticity" purposes.

Since it is a museum devoted to a naval air station, displaying aircraft models was a no-brainer. Now retired and living on the grounds of the former air station, Bob Reder, the co-founder and one-time president of Monogram Models, was involved with the museum effort. Bob volunteered to be in charge of the model building project. I'm not sure how IPMS McKinstry Chapter got involved, but we had the job of building an example of every type of aircraft ever stationed at NAS Glenview. Each model was to be painted and lettered as it was when it was stationed at Glenview. All were to be 1/48 scale, except for some large transport aircraft which would be 1/72 scale.

Originally I was asked to build a F9F-8 Cougar. Bob gave me a hot-off-the-presses Revell Monogram F9F-5 Panther kit and I happily got to work on it, along with an older pressing of it I had in the stash. After a couple of weeks somebody realized the F9F-5 I was working on was the straight wing Panther and that we already had one of those. What we needed was the F9F-8 swept wing Cougar. They don't make those in styrene so I was off the F9F project. Bob let me keep the one I had started and the F9F-5 kits went back into their boxes. Eventually a resin kit of the F9F-8 was found and somebody else built it, since resin was way beyond my skill set.

Our club president, Norris Graser, then asked me if I'd like to build a SH-34 helicopter. I agreed and was shortly provided with the Revell of Germany CH-34 1/48 scale model and a couple of Xerox prints of a genuine NAS Glenview SH-34J: BuNo 148027, modex number 301.

**The Aircraft:**



The Sikorsky H34 series was designed to a U.S. Navy requirement for an ASW (Anti Submarine Warfare) helicopter. It was an extremely successful design, manufactured in three countries (U.S.A. Sikorsky 1,821 units, France Sud-Est 185 units, UK Westland 395 units), and used commercially or militarily in more than four dozen countries. The H34 featured a four blade rotor powered by a nose mounted R-1820-84 radial engine providing 1525 HP. Westland replaced the radial engine with a pair of turbine engines, creating the much used Wessex helicopter. The pilots sat above and behind the engine. The transmission was mounted on the top of the fuselage behind the pilots. The cabin (same level as the engine) was accessed by a single sliding door on the starboard side. Landing gear were non-retractable, with two main mounts forward and a single tail wheel. For storage purposes the rotor blades folded alongside the fuselage and the tail boom and tail rotor could also fold back along the fuselage.

The H34 was extremely versatile and required several different helicopter designs to replace it. It was originally designed to be an ASW helicopter but was easily adapted to other missions due to its load carrying capacity, range, and proven design. In the ASW mission it was replaced by the SH3, which was larger, more fuel efficient and could carry a heavier load. For vertical replenishment and other naval transport duties the CH46 followed that. In the Army the UH1 and CH47 were used. The USMC replaced it with the CH46. The USCG replaced it with the HH52. Lastly, the Presidential transport mission was taken on by the VH3.

All this comes from Squadron's book, **H-34 Choctaw In Action**, my main reference for this project.

### **The Kit:**

The kit was molded in two or three sprues' of olive colored plastic and one of dark gray, in addition to the usual clear sprue. A decal sheet provided markings for a USMC and Belgian machines. The backing sheet had mildewed over the years but the actual decals were usable. I bleached them in the sun anyway just to brighten them up a bit. The instruction sheet was copyrighted 1989 and used the typical exploded diagram style. What text there was (safety warnings such as, "Don't drink the paint" and "Don't stick glue in your eye") was written in seven languages (German, English, French, Dutch, Swedish, Italian, and Spanish).



### **Construction:**

I have to admit that I was a bit apprehensive about this project. I'm still learning basic modeling skills, such as seam filling and quality painting. The last time I had built a helicopter I was in the single-digit age group and my quality standards were a lot less rigorous. What little I remembered about helicopter modeling was that they were delicate and took a lot of room. Furthermore, I was acutely aware that this was going to wind up on public display and might actually be looked at by somebody who flew around in one of these, or even worse, maintained them. Partway through the project I learned that the molds for this kit had been somehow destroyed in the past and that I was working on a genuine high-dollar value collector's item. This only made me more anxious.

Norris had started building this kit sometime in the past, but had only painted the interior parts: cabin, benches, and cockpit bulkheads. The rest of it was unpainted plastic. Construction started with the cabin and cockpit. That was uneventful once I had detail painted the parts. I used the decal sheet for the instruments. My notes show some of the cockpit colors. I think I used Model Master Enamel gloss Gull Gray #1729 FS16440 for the instrument panel and center console. Model Master acrylic aircraft interior black #4767 FS37031 was used for the center console top (where the switches would be). The seats were painted flat olive and “some other green”. These were Model Master and Polly Scale acrylic paints. I don’t remember the exact shade of these.



I should have narrowed the cabin floor as it wound up spreading the fuselage so that the bottom had an open seam. I tried filling this with white glue with fair success. Using CA as Norris recommended worked much better. Other than that the fuselage went together without any problems. According to the instructions I was supposed to install the rotor hub plate and tail rotor housing late in the construction. I didn't do that. I assembled them into the fuselage along with the other transmission covers, figuring correctly that would make it easier to fill seams and paint.. The rooftop transmission covers and cooling vents did have seams which I filled as best I could with the white glue and wet rag wipe method. I consoled myself with the thought that these were hatch covers and had seams in real life, anyway. Rough assembly of the landing gear (no wheels) and fitting of the cabin hatch completed the basic construction. I

deferred rotor construction until later because of damage concerns, and it was off to the paint shop.

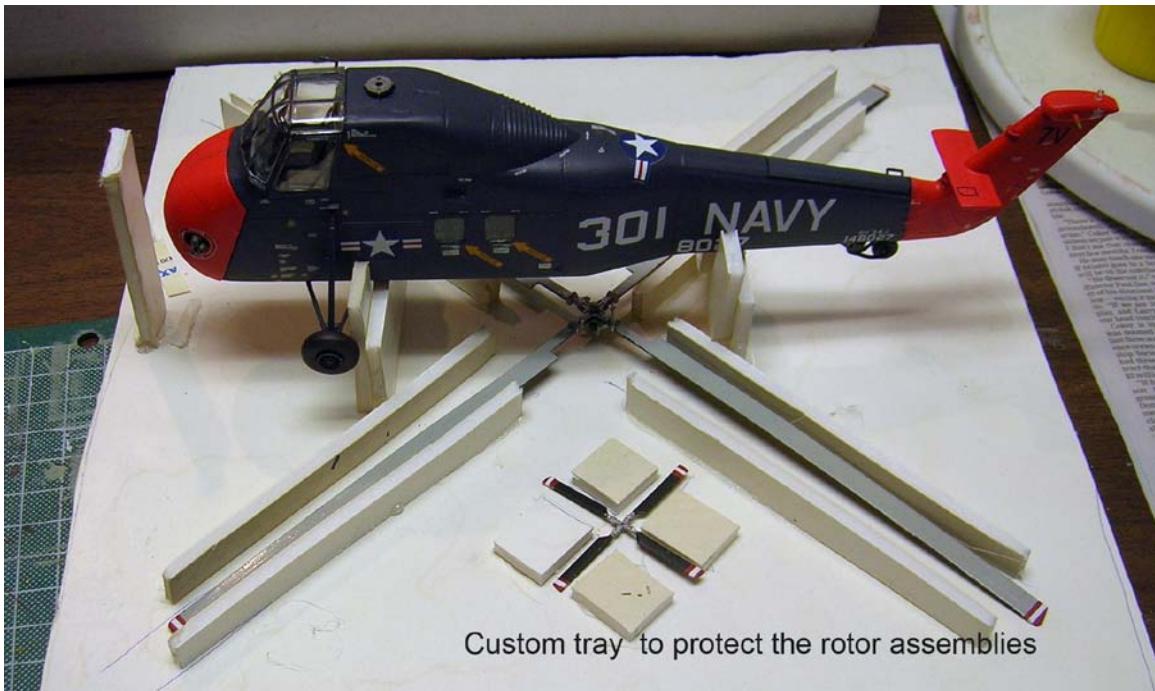
**Painting:**

This was a perilous time for the CH34. Most of my modeling projects die in the paint shop, but this one lived to tell the tale. This model was 100% brush painted (not counting the Norris painting) because I did not have a workable spray paint system. All paints are Model Master acrylic unless noted. Stock numbers and FS numbers (if any) are listed.



The fuselage was painted with thinned Engine Gray #4749 FS36076. One of the lessons I learned on this project was the importance of properly thinned paint. I had been using this bottle for a while and it was pretty sludgy. Thinning it with distilled water made it useable again. (I got that tip off a Web site.) It took two or three coats to build up sufficient color density, but there were no brush marks. I was happy about that. The nose covers and tail section were painted with Model Master enamel fluorescent red-orange #2041, FS20410. Not knowing any better I painted it directly over the dark gray paint or green plastic. I found out that red paint doesn't cover very well. Nine hundred or so coats of paint later I had achieved sufficient color density. Lesson for next time: use light gray or white primer paint under red or yellow paint. The engine exhaust pipes were painted Model Master metallizer enamel burnt iron #1424. Green zinc chromate #4852 was used for the exhaust pipe mounting plate.

Main rotor blades were painted Model Master enamel flat gull gray #1730 FS36440 and Polly Scale Steam Power Black #F414110. Tops were gray and bottoms were black. This was so dopey maintainers wouldn't install the blades upside down. The tail rotor blades were steam power black on both sides. The warning stripes were two insignia red #4714 FS31136 with one white stripe Polly Scale Reefer White #F414113. I only had to strip the paint off the rotor blades (both sets) once because I got the warning stripe order backwards. I did two white, one red, but I wanted two red, one white. I painted the main colors (black and gray) out to the blade ends and then painted the stripes. To paint the stripes I masked the stripe background area (the blade end), painted the tape edge one time with the underlying black or gray to fill any gaps (Ha! As if!) and then painted the entire blade tip white. Once satisfied with the color saturation I masked where the white stripe would go with precut Tamiya tape. Again I painted both sides of the masking tape stripe with white, then painted insignia red until satisfied – many less coats than the fluorescent red! Unwrapping everything showed some touch-up was needed, especially the first time around. I used a Sharpie pen marker edge to dress the blade edges and that most finicky part was complete.



The rotor transmission parts were painted various metallic silvers, mainly Polly Scale ATSF silver #F414143 and flat aluminum #F414299. I was trying to simulate the different metals and finishes you would find in a rotor control system. Lastly, the tires were painted Testors enamel rubber #1183 (in the little square bottle).

The canopy and other clear parts were dipped in Future floor wax. The flat panes were trouble free, but the compound curved canopy needed a couple of tries to get the waxing right. Once I had a satisfactory coating of Future I masked the many window panes with Scotch tape and painted it flat black (the interior color) under engine gray. Eventually unmasking it showed lots of paint bleed through so it was back to the ammonia bath for more stripping. It helped that the paint was also acrylic. Once clean the canopy was dipped in the Future for what was now the fourth or fifth time. This time I painted flat black on clear decal sheets and let it fully dry. Once I was sure the black was dry (a week later) I then coated that with the engine gray. Once that had fully dried (another week) I sprayed the decal with semi-gloss to seal it and match the final coat on the model. Once everything was truly cured (I couldn't smell paint or gloss coat anymore) I cut off strips and decaled the framing strips onto the canopy. That worked. I think I got the idea from the ARC Web site.

#### **Decaling:**

The first thing I did was spray the fuselage with gloss coat so the decals wouldn't silver when applied. The kit decals were for USMC and Belgian helicopters, but not the USN. Fortunately, SuperScale released 1/48 USN style lettering and numbers in both white and black so I was able to replicate the desired aircraft. (White letters: 48-994, white numbers: 48-995, black letters: 48-1019, black numbers 48-1027) I started with the white characters. First; the 24-inch large "301" and "NAVY" on the tail boom. Both of these were placed one character at a time, vertically aligned with a convenient panel line and evenly spaced horizontally. Once that had dried I did the 12-inch "8027" and the three-inch "SH-34J" and "BuNo 148027". Again, I was careful to align these vertically and horizontally. The orange tail boom was marked with 12-inch black characters, "7V" for Glenview. This completed the custom lettering.

As previously stated the kit sheet had USMC and Belgian markings and a complete set of stenciling. I used the kit stars and bars and stenciling. It took several days to do all the stenciling, but I think it really makes the model. Lastly, I sprayed everything with semi-gloss to show a well-maintained machine.

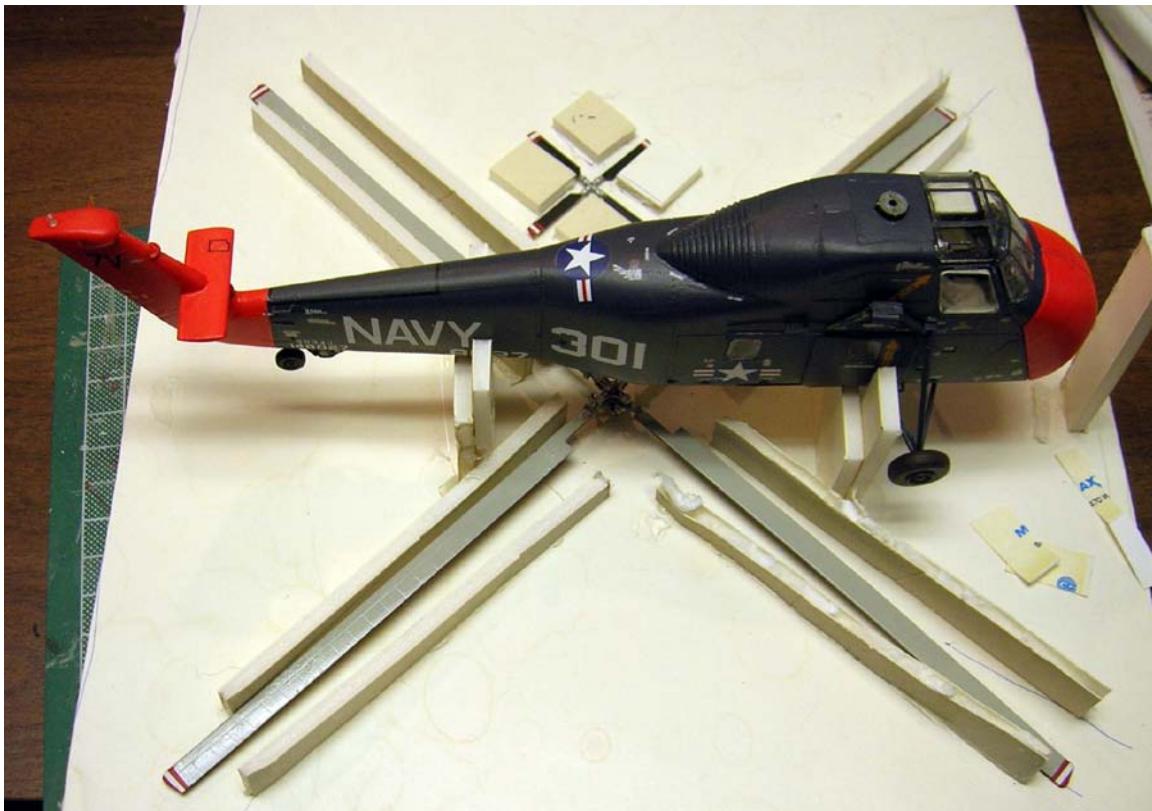
#### **Final Construction:**

Once the painting was done it was time for final construction. On the fuselage this meant attaching the canopy and other clear parts, the nose cones, wheels, and several small hand-holds and antennas. I discovered while doing this that the tail wheel strut had broken off sometime during construction. I fabricated a new one from brass wire, painted it and glued it to the remaining tail wheel assembly with super glue – another learning experience for me.

The only thing left was the two rotor assemblies. First, I had to repair a tail rotor blade that had broken when I cut it off the sprue. The itsy bitsy mounting socket

had snapped off. I carefully glued it back together and held my breath assembling the tail rotor. It all held together, but the one blade isn't exactly 90

degrees to the other three. The main rotor was easy to assemble. The only problem was one rotor blade was missing the stub for the control linkage bar. I think I glued that linkage bar in place on one end and left the other end floating. I did not glue the rotors to the fuselage because I was concerned about breakage during transport. I made a carrying tray out of scrap foam board and hot glue, and the CH-34 was ready for delivery.



#### **Errata and Final Thoughts:**

I discovered while writing this that there was rotor blade stenciling that never got applied. There was supposed to be an additional serial number on the orange tail boom, but I must have forgotten it because the numbers weren't cut out of the decal sheet. There also was supposed to be a weathered black panel on the bottom under the engine, undoubtedly to hide the oil leaks endemic to the radial engine.

This was a real learning experience for me. I had my doubts all the way through this, but I am pleased with how it turned out. I think it's the best job I've yet done, but it may be a while before I try another helicopter.