



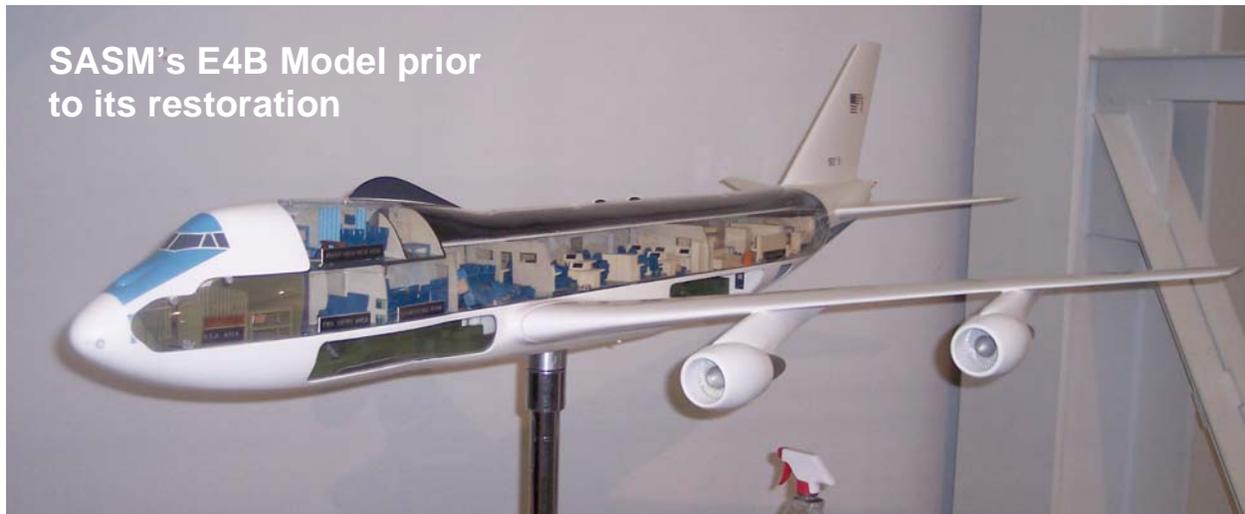
Restoring the Strategic Air & Space Museum's E-4B Model

By Don Joy IPMS Fort Crook

I received a request from the SASM (Strategic Air and Space Museum) to do a restoration of the model. They had a member who was an E-4 guy who offered to pay for a restoration. The model was originally in the SAC lobby and dates back to when the E-4's were pitched by Boeing. No one knows the exact age, but the model is probably 30-35 years old. Over the years, it had received its shares of bumps and bruises and many of the interior pieces were loose and jumbled together.

After checking the model over and discussing with the museum, I told them I would volunteer the time and would only charge them if there was a major expense. I also knew I had the club membership to draw on as consultants for help if needed. I approached the restoration like a project at work. I did a detailed survey of the work to be done, prepared a list, and put together a timeline. I felt the timeline was particularly important so this did not become a project that would drag on for several months. The initial goal was to complete it during January, though it did run longer than that.

The work seemed fairly straightforward. The interior pieces were assembled with double stick tape, which had dried out over time. It appeared the model had been placed on its nose at some point – there was a large gash on the nose and everything had "fallen forward" in the interior. Two antennae were missing, there were some other minor dings to be repaired, markings were either in poor shape or the decals were badly yellowed.



Step 1 was to disassemble the interior. The clear panel was held on by small Allen wrench screws and, of course, no one had a wrench the right size. I ground down a small wrench to the right size but also found a small straight blade screwdriver worked. All the screws were bagged. The clear side was replaced every time, but only 4 screws were used to hold it in place. This reduced the possibility of losing any more screws (4 were already missing) and kept curious museum employees from poking around in the empty interior of the model.

I removed the side, and then took photographs of each section of the interior before I removed anything. I removed all the loose pieces in each section and placed them in their own zip lock bag. The main deck is composed of 5 sections and they can all be removed individually. The upper deck is pinned to the lower deck by a brass rod that is the center post of the spiral staircase. The lower equipment bays were photographed and loose pieces removed. I boxed the interior sections to take home and work on them, and then closed the model back up.

Fixing the interior was pretty simple. No parts were missing, but a couple of chairs had arms broken off. Since the model was closed up, even the arms were still there. I went thru section by section and tested each piece that was still connected. If I could remove it, I did. I removed the old tape from the pieces, cleaned the section with canned air and a duster, and then reattached all the pieces with super glue gel. I mixed some paint to match and went thru and touch up any place where the paint was damaged. This was easily done in a couple of evenings.

A big question mark was the lighting system. With the interior out, the lighting system was easy to get to. I attached a power source with alligator clips and determined all the wiring was good. I discussed with Fort Crook members Jay Chladek and Brian Smith about replacing the entire system with LED lights, but decided not to do that once I determined the wiring was good. I replaced all the individual bulbs with LED bulbs. The plug in cord for the model was gone, so I also replaced that part of the wiring. Other than that, I left the lighting system "as is".

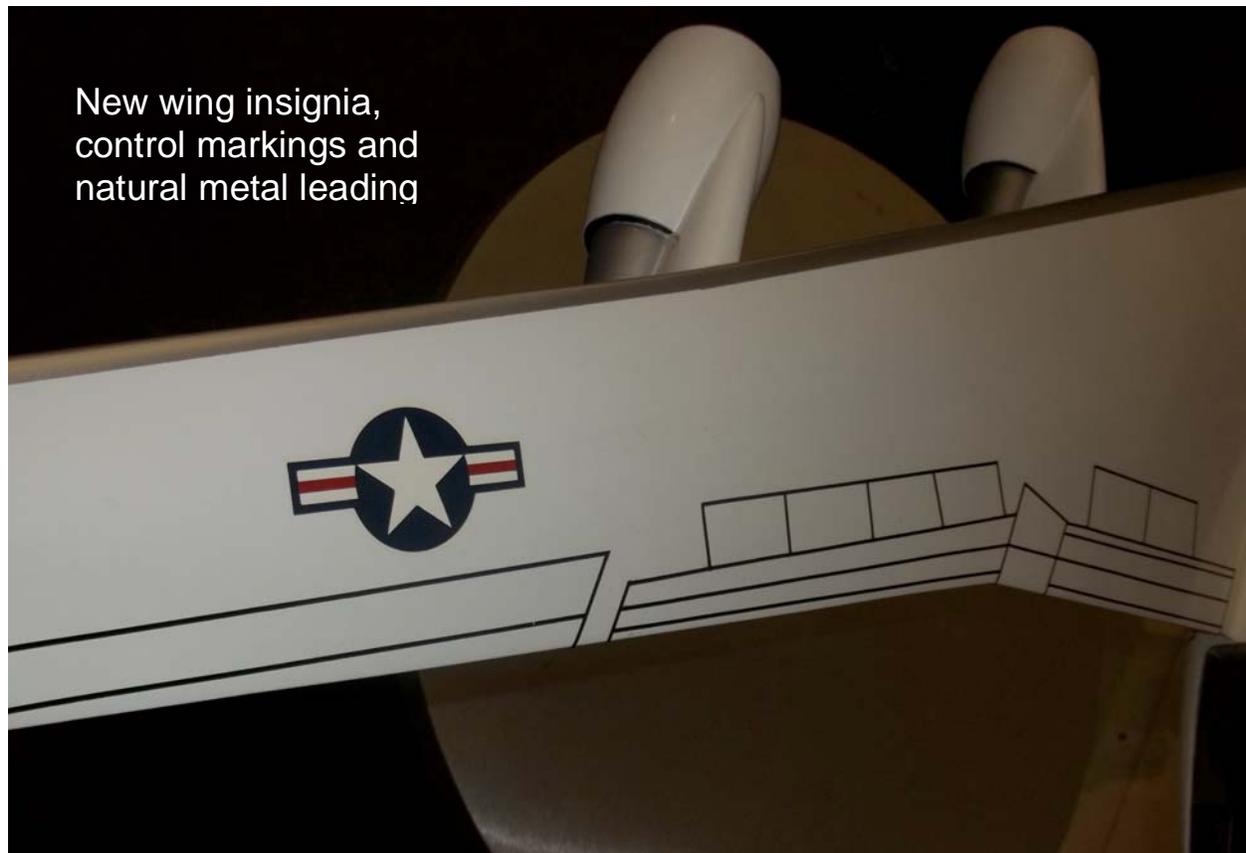


The toughest part of the project was the clear panel for the lower rear equipment bay that was missing. There are actually two clear panels for the lower bay, but the smaller one was found inside the model. I made a new master for the missing piece using PVC and Bondo. It turned out I have a vacuform platen big enough to do the piece, so I bought a sheet of clear from Hobbytown and manufactured the replacement part.



Once the interior was completed, I turned my attention to the exterior. Initial plans called for replacing the decals and touching up the paint. The more I looked, though, the more the bland white exterior just bugged me. So I went to the Internet and downloaded numerous pictures of the E-4B. The paint scheme is pretty simple: white, some blue stripes, silver leading edges, dark gray engine turbines, and radomes in either gray or black.

Rather than painting the model on site, I brought the wings home and painted them thru the week. "Dings" were repaired with Mr. Surfaced white. Leading edges were masked and painted with lacquer silver because I felt that would hold up better to the abuse of being a museum display model. The engine faces were painted dark gray and circular white decals applied to the center. Since the model is "in flight", I just used circle decals instead of the actual "comma" shaped markings on the actual engines. A happy coincidence is that the circles I used were from SEA British markings. This left me with 4 blue circles with clear centers that worked perfectly as the landing lights. I also painted the engine exhausts to get closer to the look of the actual plane.



Control surfaces were added using 1/16th pin stripe tape. The model scaled out at 1/41st so I printed of an upper and lower wing in that scale. This is when I found out the model doesn't really scale out well. Drawings had to be scaled and stretched to fit the actual size of the wing because cord didn't match span according to the drawings. This makes sense from Boeing perspective. They don't need a dead on scale model for their purposes. Something that looks like a 747 is close enough.

With that done, I brought the fuselage home the following weekend. That may sound simple, but remember the fuselage is 6 feet long. I fixed the major ding in the nose with Bond filler. The one new thing I added was to put on the radome stiffeners on the nose. I masked off and painted the radomes and leading edges of the tail surfaces being very careful to not damage any of the window or door decals. (More on decals in a bit).

Fuselage gear doors were added with 1/16th pin striping. With that all done, everything was put back in the fuselage it was sealed up.



I made replacements for the missing wingtip and tail tip antennae from Evergreen tubing sanded to shape. Holes were pre-drilled for mounting with a brass tube into the wing and into the antenna. I waited for final assembly before mounting them. The whole model was transported back to the museum the following Saturday and assembled in the display location.

At this point, the model was complete except for the decals. Another Fort Crook member Randy Fields created the replacement graphics and I found ink jet printer decal film on the Squadron site. I ordered the film and waited for it to arrive – and we went off to the regional in Madison that weekend while the film was in transit. I printed the decals when the film arrived, including some extra to experiment with. Basically, they printed fine. I sprayed 2 layers of clear gloss and they worked perfectly. There is no adhesive on the clear decal film, so I used Future as the adhesive.

That's pretty much it. It took 10 weeks instead of the planned 4. If I had it to do over again, I would disassemble the whole thing and take it home immediately. My initial goals were timid, because I did not want to deal with replacing the door and window decals on the model. In the end, decals were one of the easiest steps. Live and learn, I guess.



**New nose with stiffeners,
repainted radomes and decals**



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Custom
made
Decals for
the E-4B
Restoration
project