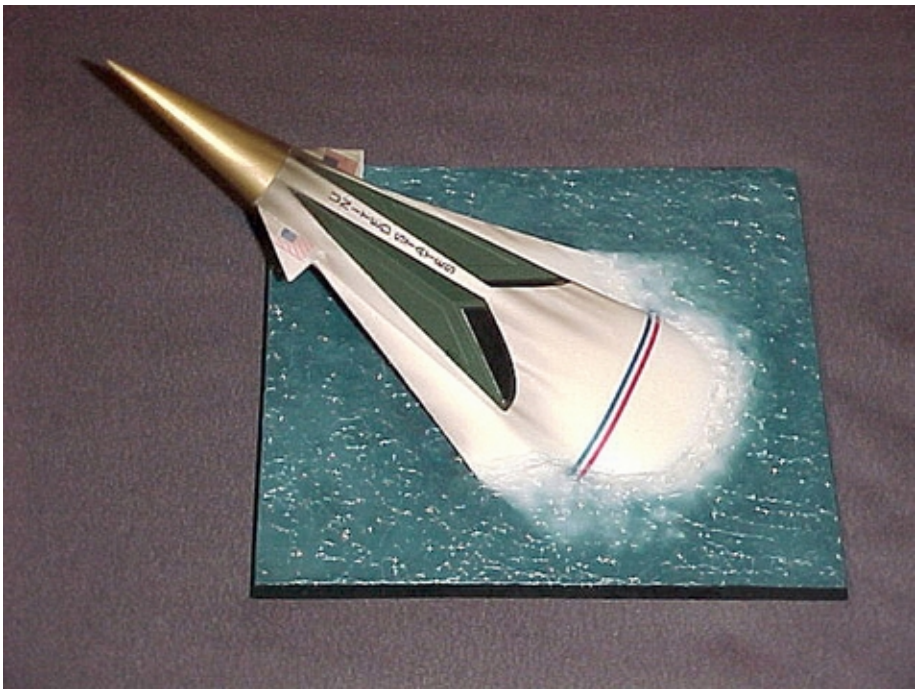
Seattle Chapter News

Seattle Chapter IPMS/USA
October 2004

PREZNOTES



Well, I just completed my twelfth model this year, keeping my average of 11.34 models per year intact. I wish I could say that the twelve were all models I had **started** this year but that's not the case. A handful was previously unfinished from last year (or longer). The most recent project I finished was the *Icarus*, Taylor's spaceship from the original *Planet of the Apes*. The model, by Skyhook Models, is a resin kit consisting of the ship and the water base to which it is attached. I built the model for the Galaxy Hobby Sci-Fan contest, held last weekend. Nothing like waiting until the last minute! It took about five evenings to complete, considering it's basically just a painting exercise. The hardest part of the model is to figure out how to show the part of the ship that's underwater. I think it turned out OK.

Now that the nights are getting longer, I should be getting more time to model (can't mow the lawn at night - no headlight on the mower!). I'm trying to set a goal of getting my Battle of Britain B-25 done before our December meeting. Note that I said trying. There have been too many temptations lately: the Fonderie H-21, the Roden OV-1, among others, that have showed up at the local hobby emporium the last few weeks. Especially the H-21, since I had been threatening to start my old Aurora kit for the last few years. Oh yes, look for an Aurora H-21 on eBay in the near future!

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Public Disclaimers, Information, and Appeals for Help

This is the official publication of the Seattle Chapter, IPMS-USA. As such, it serves as the voice for our Chapter, and depends largely upon the generous contributions of our members for articles, comments, club news, and anything else involving plastic scale modeling and associated subjects. Our meetings are generally held on the second Saturday of each month, (see below for actual meeting dates), at the **North Bellevue Community/Senior Center, 4063-148th Ave NE**, in Bellevue. See the back page for a map. Our meetings begin at 10:00 AM, except as noted, and usually last for two to three hours. Our meetings are very informal, and are open to any interested plastic modeler, regardless of interests. Modelers are encouraged to bring their models to the meetings. Subscriptions to the newsletter are included with the Chapter dues. Dues are $24 a year, and may be paid to Norm Filer, our Treasurer. (See address above). We also highly recommend our members join and support IPMS-USA, the national organization. See below for form. Any of the members listed above will gladly assist you with further information about the Chapter or Society.

The views and opinions expressed in this newsletter are those of the individual writers, and do not constitute the official position of the Chapter or IPMS-USA. You are encouraged to submit any material for this newsletter to the editor. He will gladly work with you and see that your material is put into print and included in the newsletter, no matter your level of writing experience or computer expertise. The newsletter is currently being edited using a PC, and PageMaker 6.5. Any Word or WordPerfect document for the PC would be suitable for publication. Articles can also be submitted via e-mail, to the editor's address above. Deadline for submission of articles is generally twelve days prior to the next meeting - earlier would be appreciated! Please call me at 425-823-4658 if you have any questions.

If you use or reprint the material contained in the newsletter, we would appreciate attribution both to the author and the source document. Our newsletter is prepared with one thing in mind; this is information for our members, and all fellow modelers, and is prepared and printed in the newsletter in order to expand the skills and knowledge of those fellow modelers.

Upcoming Meeting Dates

The IPMS Seattle 2004 meeting schedule is as follows. All meetings are from **10 AM** to **1 PM**, except as indicated. To avoid conflicts with other groups using our meeting facility, we must **NOT** be in the building before our scheduled start times, and **MUST** be finished and have the room restored to its proper layout by our scheduled finish time. We suggest that you keep this information in a readily accessable place.

October 9 **November 13**
December 11

Minicraft 1/144th Scale Boeing 727-200 United Airlines

by Chris Banyai-Riepl

One of the most successful airliner designs in the world today, Boeing's trijet 727 can still be seen in the skies all over the planet. First entering service in 1964, this sturdy aircraft became the best-selling airliner in history in September 1972. Although that place has been supplanted by the Boeing 737, the popularity with both passengers and crew keeps the Boeing 727 in a league of its own.

Minicraft's kit of the 727 has been greatly anticipated in the airliner modeling community. Now that it is out, just what do you get in the box? The kit comes molded in the usual white plastic, with recessed panel lines throughout. The cockpit windows are molded with a large chunk of the nose, making it very easy to blend this piece in and not worry about ruining the windows. The decals are for a single United aircraft and are well printed by Cartograf out of Italy.

As far as construction goes, this kit is a simple one. The fuselage is split into the traditional right and left halves and incorporates the vertical fin and engine intake. The instructions indicate that some weight will be needed to keep this guy on its gear when finished. Speaking of the fuselage, I believe this is the first time I have seen a NACA duct that is actually open. The vent that is on the lower fuselage centerline has been engineered to be open, which means that you will want to paint the inside area there black, just in case, but the end result will look much better than the blocked-off approach kit manufacturers normally take.

The wings are likewise simple in construction, with upper and lower pieces for the right and left wings. The flaps and ailerons are molded solid with the upper wing pieces, which could make it easier to modify to display the wing with the flaps down. It also should make it a bit easier to thin the trailing edges to razor sharpness. The wings have the typical Minicraft tab arrangement that will result in a very positive attachment and should guarantee the proper dihedral angles.

The engines are fairly decent, with separate fan discs and exhaust sections. The centerline engine intake is molded separately, which should make painting the intake ring a snap. The only downside with this insert is that it is a simple tube, with no attempt at replicating the first bend in the intake ducting S-curve. Hasegawa did this on their 1/200th kit by merely squashing the back of the tube down, and it looks very effective once in place. The other two engines have a two-piece body that incorporates the pylon, with separate intake fronts and exhaust hot sections. These apparently represent an early style of engine, as there are no thrust reverser bumps on them.

The landing gear is very petite and to scale. The main gear has a main strut, with a separate actuator strut and separate wheels. The wheel hub detailing is crisp and will benefit from careful drybrushing. The nose gear also has separate wheels, and the nose gear bay is a separate insert, complete with gear doors, that fits into the fuselage. This is one way to avoid any seams running down the middle of a gear bay!

The decals are for an early United 727, registration number N7621U. The decals include the cheatline, split into two pieces for each side, with the blue, white, and gold sections all included. This results in a large decal, but it also makes painting much easier, as the separation between the white crown and the aluminum belly can be hidden underneath the large cheatline. Some details are provided as decals, including vents on the underside of the fuselage. Two styles of windshield decals are provided, one clear and one black, depending on which method you prefer. My only issue with the decals is with the shade of blue, which seems a bit dark to me. Then again, United had changed from this livery long before I was born, so all I have to compare it to is photos, which is always a fallible study.

Well, the underlying question with this kit remains: is it better than the Airfix offering? The answer is a definite yes. The fine detailing and recessed panel lines, coupled with the simple construction will make this a great addition to the airliner modeling world. I look forward to future releases of this kit, and I hope that Minicraft does the other United liveries as well.

[Thanks to Chris and **www.internetmodeler.com** *for permission to use this and Jim's W 34 review. - ED]*

Airfix 1/144th Scale Boeing 727-100 Conversion

by Paul Hackmann, IPMS Capt James J. McKinstry

On December 5, 1960, Boeing announced that it was going to produce a three-engine medium range jet, which would be targeted for operations at smaller airports. Initial studies for this jet actually began in 1956 when Boeing recognized that there was a need for an airplane that could operate from the fields that their 707 and 720 could not. The design incorporated several innovative features including having all three engines located on the aft portion of the fuselage *[as did the De Havilland DH.121 Trident, which flew over a year earlier – ED]*, a built-in stairway, an internal auxiliary power unit, and a sophisticated slat/flap system (the first of its kind used on any airliner) that allowed shorter landings and takeoffs. Boeing commenced development of the newly-designated prototype 727 upon receiving orders for 40 of the jets from both United and Eastern Airlines.

The prototype 727 first flew on February 9, 1963, and received its FAA Flight Certification in December that same year. The first 727 entered service with Eastern Airlines on February 9, 1964. Nicknamed the "Whisperjet" while in Eastern service, the tail-mounted engines eliminated much of the associated engine noise from the passenger compartments, although anyone close to an airport can attest to the fact that the Pratt-Whitney JT8D's were anything but quiet on takeoff and climb out. Operations with United followed shortly that same month.

Development of the 727-100 led to a family of sub-variants, including versions that allowed changing from passenger to cargo with relatively little effort. The biggest change to the base 727 came in 1967 with the addition of 20' to the fuselage. This stretched version featured an additional 10' of fuselage both forward and aft of the wing, increasing the passenger load from 125 to 189.

The 727-100 continued to be produced until 1973. The 727 -200 continued in production for 11 more years with the last passenger-equipped 727 being delivered to USAir on April 6, 1983. The final 727, a 727-200F, was built for FEDEX and delivered on September 18, 1984. With that, Boeing ceased a 22 year run of 727s with a final total of 1,832 being manufactured. The first 727 delivered to United Airlines, N7001U, now resides Seattle's Museum of Flight. I had always thought that it was the first production 727 was located in Chicago. So I dropped a line to the Chicago Museum of Science and Industry asking about the history of it. I received a very nice e-mail back the next day saying that the registration number for that one is N7017U, that it was the 17th 727 built and was purchased by United in 1964. Then I was wished good luck on my modeling project.

The markings I selected I spotted on eBay one evening while looking for items related to Eastern Airlines. Since I had already built the Airfix 727-200, I really hadn't intended to build another. After hemming and hawing for a day or so, I finally decided that the opportunity was too good to pass up and made my proxy bid. I probably over-paid by a couple of dollars, but by this time had convinced myself that I really needed to have a 727 in the "Golden Falcon" scheme. The Tango Papa decals arrived a couple days later in a sealed plastic bag sandwiched between two pieces of cardboard. I did a little research and found out that these are special custom order decals, so maybe I didn't overpay.

This particular livery lasted from 1964 to 1966, where it was changed to the more familiar blue hockey stick scheme. The upper portion of the fuselage is gloss white, the lower portion and wings being natural metal. The upper surfaces of the horizontal stabs and vertical stabilizer are both painted dark blue. The "Fly Eastern" logo and fuselage cheat lines are the same dark blue outlined by red. The large falcon on the tail is gold with a red outline. A picture of this livery is shown below.

The particular airplane I chose to depict was N8101N. This airplane was acquired by Eastern in February 1964 and flew in various schemes until 1982. A quick search of the NTSB database showed that it made a gear up landing in Jamaica, NY on October 2, 1964. The cause was listed as "Emergency Circumstances – Precautionary landing". This aircraft was leased to Air Niagara in August 1982 and operated with this carrier until they ceased operations in 1983. The aircraft reverted back to Eastern, where it was leased to Mid Continent Bellanca. It was acquired by Aeroexo of Mexico in 1987. Finally, N8101N was written off for parts in October 1995.

The Airfix model of the Boeing 727 represents the -200, or longer version of the aircraft. The markings that I had obtained were for the 727-100 Eastern Golden Falcon scheme of the 1960s. Before starting this kit I needed to find out what the differences were between the -100 and -200 versions and how that could be represented in 1/144th scale. I made a couple of searches of the Web looking for 727 scale drawings to no avail. Finally I decided to do a search of the Boeing Web Site and I found available there downloadable PDF files of airplane characteristic manuals for all of the aircraft Boeing manufactures. From these manuals I was able to get scale drawings of both versions, along with measurements showing where the fuselage was lengthened. The link to all of these files is; **http://www.boeing.com/assocproducts/aircompat/plan_manuals.html**. Another valuable link is here; **http://www.boeing.com/assocproducts/aircompat/flash.html**. Click on the button labeled Airport Technology Data and a list of available reference manuals is displayed.

The scale plans from Boeing helped me determine that the -200 was created with the addition of 10' to both the forward and aft fuselage. Knowing that, I could figure out how much to remove from the Airfix kit to make into its smaller cousin. To make the calculations easier I used 120" instead of 10'. By using that I knew that it had to be a little under an inch on each side of the wing. To get the exact measurement I set up the proportion; 1"/144" = x"/120". The left side of the formula says that 1" on the model is equal to 144" on the real airplane. The right side wants to know how many inches on the model represent 120" on the real thing. So, solving for x in the equation give the resultant x=120/144" or x=5/6". So if I remove 5/6 of an inch (or .83") of fuselage on the model that would be the equivalent of removing 120" (or 10') on the real airplane. After I had done all of this, I found the web page **http://kithobbyist.com/amdiget** that has an excellent article on how to convert the Airfix 727-200 to a 727-100. Fortunately, the author and I came up with the same measurements.

First, I marked out the area to be removed on the right fuselage half. Most of the cuts were made using a miter box, but the cut nearest the tail had to be done freehand. Fortunately the tape acts as a good reference and I was able to keep the cut pretty square. The same process was followed to remove two .8" (OK, I know I said .83", but the darn saw kerfs are wider than .03") plugs from the left side of the fuselage. One of the concerns I had while doing this was that the reassembled fuselage would be weak where the plugs were removed. In order to minimize this, I staggered the joints on each side of the fuselage so that where the plug was removed from one side of the fuselage doesn't line up with the plug removed from the other side. Once the plugs were removed, the remaining pieces of fuselage were given a swipe with a flat file to remove any roughness left by the saw. Each piece was also trued up by rubbing it down on a piece of sandpaper taped to a sheet of glass.

The result was that now I was left with a six-piece fuselage that I needed to reassemble. At this point I was concerned about two things, the fuselage being weak at the attachment points and the cockpit and tail getting out of alignment. To reinforce the fuselage I glued a plastic I-Beam to the central portion of each fuselage half so as to run the entire length of the fuselage nose to tail along the passenger window line.

I then glued shorter lengths of I-Beam around the perimeter of the fuselage, parallel to the fuselage and perpendicular to the cuts I made. When these supports were solid, I secured each mid-fuselage piece to a large sheet of glass. I attached both forward and aft portions of the fuselage to their respective mid-fuselage pieces. To prevent the fuselage from wracking, I ran a piece of masking tape the width of the fuselage from nose to tail securing the whole to the glass. This was all put aside to dry for 24 hours.

The next evening I released each fuselage half from the glass and for about 10 minutes admired what I'd accomplished. When I'd stopped patting myself on the

back, I went ahead and attached the two fuselage halves together and attached the exhaust cone. The passenger windows were to be decals, so the kit holes meant for the windows were filled in with gap-filling CA. A little of the same was needed around each area where the plug was removed and on the exhaust. The fuselage was sanded smooth using 320 grit wet and dry. While I was at it I took the opportunity to make four other modifications to the fuselage. The first correction involves the nose profile, as the kit is too blunt when compared to the real thing. Fortunately, Airfix plastic is pretty thick and soft and it took little time with the heavy sandpaper to get a more acceptable profile. The other three corrections revolve around the central engine intake profile. The intake on the -100 version is slightly shorter and move oval than on the -200. I used the flat file again to remove approximately 1/8th of an inch from the intake. Then I held the aft portion of the fuselage under very hot tap water until the thin plastic making up the front the intake was soft. I squeezed it from a round profile to a more oval one. The final correction to be made is where the intake blends into the tail. On the kit there is a sharp demarcation line, whereas on the real thing the intake blends in smoothly with the tail. Again, 320 and elbow grease made it look more acceptable.

One last problem area on the fuselage was the exhaust cone, which needed so much sanding that the thrust reverser housing ended up being removed. So this had to be manufactured from something and attached to the cone. I had intended to glue on a piece of plastic and sand it to shape, but I found a package of oval beads whose edges matched exactly the profile I needed. By holding one of the beads in a pair of vice-grips I was able to saw off one edge the length and shape of the housing. When attached to the cone, it looked much more realistic than that originally supplied. I ended up doing a similar modification to the thrust-reversers on the two fuselage-mounted engine pods.

After completing all the modifications, the kit's nose was filled in with lead shot (7-½ if you must know) and white glue. The cockpit windshield was attached and the fuselage was set aside in a nose-down attitude to dry. While that was drying, I next tackled the wings. Fortunately there was no modification made by Boeing to the wings and I used them as supplied in the kit. The right wing was slightly warped and needed a dipping in hot water to straighten it out. Each wing was sanded along the join line and then attached to the fuselage. As with the Airfix 727 kit I built previously, there were no problems with the fit.

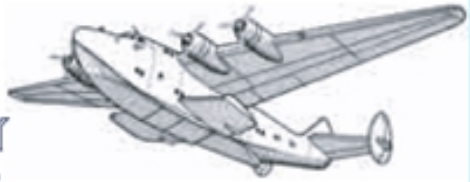
Now that the major sub-assemblies were all attached, the model was given a polishing with ever finer grits of sandpaper ending with 12000. Following this, a washing with warm water and dish soap removed the plastic dust and any finger oils. After the kit was dry, I sprayed the fuselage a flat light grey. This undercoat allowed me to fix any areas of the fuselage that still needed filling. When I was satisfied that it was as good as I could get it, I applied one last coat of light gray. When this had dried, the fuselage was painted a coverage coat of Model Master flat white. This was followed with three coats of a much diluted Model Master gloss white. After a couple of days drying time, the areas to remain white were masked off and the remaining areas were painted with three mist coats of SNJ Aluminum. A little work with SNJ Polishing Compound brought a shine to the lower fuselage and wing leading edges.

I began decaling with the wing walkways and coroguard. These came from a Flying Colors 727-100/200 detail sheet. Also on that sheet were the passenger windows, cockpit windscreen and all exits and baggage doors. Next the EAL specific markings were tackled. The Tango Papa decals went on with little difficulty, although the long fuselage striping broke in two. I think that was my fault for not letting it soak in water long enough.

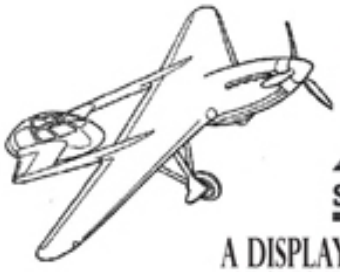
After finishing off the decals, I sprayed the model with a coat of Floquil Crystal Coat. I added the rest of the details, including gear, gear doors, and various antennas. As I wanted to see what a gloss finish looked like, I did not follow with a final coat of flat finish. Building this kit gave me a chance to expand my modeling skills a little bit and add another airliner to my collection. It was fun and easier to do than I thought. Since airliners are basically tubes with wings, they're pretty easy to stretch or shrink as necessary to make a different version. I enjoyed this little project.

THE EPIC OF FLIGHT

IN MINIATURE



...A MODEL SHOW...
SATURDAY AND SUNDAY
FEBRUARY 19 & 20, 2005

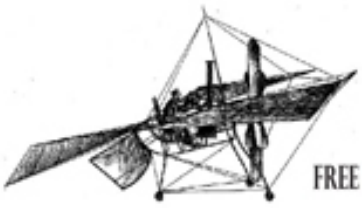


PRESENTED BY
NorthWest Scale Modelers

HOSTED BY
THE MUSEUM OF Flight

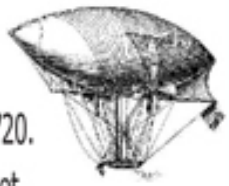
A DISPLAY OF HUNDREDS OF AIRCRAFT MODELS FROM DIFFERENT ERAS ALONG WITH EXAMPLES OF OTHER TRANSPORTATION TECHNOLOGIES, FIGURES, SPACE FACT AND SCIENCE-FICTION.

A SPECIAL FEATURE WILL BE THE
" SCHNEIDER'49 "



THEATER PRESENTATION: TBD

FREE "MAKE & TAKE" PROGRAM FOR KIDS ON SATURDAY, PRESENTED BY
GALAXY HOBBY
We Take Your Fun Seriously!



Admission to this event is included with Museum admission.
The Museum of Flight is on Boeing Field in Seattle at 9404 East Marginal Way.
Full directions and information are available at www.museumofflight.org or (206) 764-5720.

Contacts: Tim Nelson, timndebn@comcast.net; Stephen Tontoni, tontoni@comcast.net

The *Vesipuhveli* Schneider Racer from Finland

by Scott Kruize

Every single reader of this newsletter has probably seen both books entitled *The World's Worst Aircraft*, and read their scathing denunciations of the Brewster Buffalo. Accounts of the Battle of Midway, like Walter Lord's *Incredible Victory*, quote Capt. Philip White, after the Marine Buffalo pilots' first and only catastrophic encounter with the Japanese Navy's Mitsubishi Zero: "It is my belief that any commander that orders pilots out for combat in an F2A [Buffalo] should consider the pilots as lost before leaving the ground."

Nevertheless, the Ilmailuvoimat (Finnish Air Force) flew forty-four similar Brewster 239s against the Soviet air force for four years, destroying nearly 500 enemy aircraft against a combat loss of only 19. The State Aircraft Factory kept them in repair, made minor modifications and improvements, and even built an aerodynamic copy – the Humu – with familiar Finnish construction methods and available materials, like steel tube and wood. "The more we tinkered with it, the better we liked it."

Surviving Finnish Brewsters continued flying at training bases after the war, and several were still serviceable when the 1949 Schneider Cup Trophy Race was announced.

The ravages of war on the economy, plus reparations to the Soviet Union amounting to $300 million, left Finland with scarcely two markkas to rub together, but the Schneider challenge was taken up anyway. Two purposes would be served:

- Finland could "fly the flag" before the world community of nations and show itself an honorable, respectable member. This would moderate lingering antipathy towards Finland as a wartime ally of Nazi Germany, and
- It would demonstrate Finnish technological competence

The aircraft itself, and the technical expertise to modify and race it, were available. Floats were, too: during the war, Arado Ar 196 floatplanes operated from Finnish ports to patrol the Baltic. These were better armed than most other water-borne aircraft and were employed aggressively, actively taking on enemy ships and planes. They frequently returned to port damaged, and one was left over after the war. Its floats and other fittings were repairable.

Space in the shop facilities, tooling, and materials were made available at the State Aircraft Factory. Most of the work was by volunteer labor. Engineering students at the University in Helsinki designed a ventral fin and auxiliary finlets for the tail, to improve stability and compensate for the side-area of the twin Arado floats. The primary load-bearing struts were anchored to the landing-gear 'hard points'. These modifications were much like those Edo made to its Grumman F4F "Wildcatfish", a "one-off" wartime conversion, and there is some speculation that sympathetic Finnish-Americans who were employed there may have provided some test data and advice. Similarly, some undercover technical help may have come from Wright Corporation, which steadily raised output of its Cyclone R-1820-series engines from about a thousand horsepower in 1940, to nearly 1,500 hp from surplus B-17 engines it refurbished for use in the new North American T-28 Trojan trainers.

Airframe weight was brought down by stripping pilot armor, armament, the gunsight, other military equipment, and the structural reinforcements to carry them. Empty weight of the float conversion was only 2.02 metric tons (about 4,450 pounds), scarcely more than 225 kilograms (500 pounds) above the first XF2A-1.

Christened *Vesipuhveli* (Water Buffalo), the conversion was painted in Finland's national colors of white for snow and ice, and blue for its skies and waters. Trials revealed a maximum speed of 356 kilometers per hour (221mph) at sea level. This

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was substantially less than entrants by well-financed national teams from rich countries, but the *Vesipuhveli*'s sturdiness and reliability proved to be quite high – payoff for all that wartime experience – and it was never late for any of its scheduled runs. In fact, on four separate occasions during Race Week, it flew extra laps around the course for the crowds and news service cameras while one or another cantankerous turbocharged high-tech super-machine was being fussed and fiddled with. The crowd loved its barrel lines and its scalloped color scheme, so reminiscent of the Gee Bee racers of the '30s, and its frequent appearance did carry the message that the Finns were thrifty, resourceful, and competent.

That crowd contained not just aviation and racing fans, but "movers-and-shakers", from around the world, in high-tech industries like airframe, powerplant, and electronics manufacturers. It's impossible to say, now, how much their impressions were later reflected in trade with the re-awakening Finnish economy, but the effort was clearly worthwhile. Finland won prestige that was sorely needed at the time, and that persists to this day.

References:

Tellus Morebuhl, *Mach 2 'Feet Wet' – The Navy's Starfighter Project*, © 2003 by Flying Dutchman & Co.

Haim Joshen & Tontoni S. Pinnochio, *Thunderbolts Over the Sinai*, © 2001 by The Erehwon Press

Nelson T. Crockofeller, *East German Aviation Renaissance*, © 2001 by NewSpeak Publications

Hurricane Bookshelf: *Finnish Aces of World War 2* and *Finnish Air Force 1918-1968*

by Scott Kruize

These two books are from series that have become staples for modelers and aviation history buffs. The older (1969) is #14 from the *Arco-Aircam Aviation Series*, the newer (1998) is #23 in *Osprey's Aircraft of the Aces*.

Let's start with the color cover art, and note the crooked cross in the national insignia. This was used until September 1944, when an Armistice with the Soviet Union was signed. In this current politically-correct climate, it bears repeating that the blue swastika was a symbol of good fortune for Swedish Count Eric von Rosen. During the Finnish Civil War, he gifted the White Army with its first aircraft, a Swedish Thulin 'Parasol', and that emblem was painted on its wings to honor him. This was in March, 1918, long before the German National Socialist Party even existed.

Nevertheless, if you now go looking for kits of Finnish WW2 aircraft, you'll find the box art really strange: the aircraft in odd poses obscuring the insignia, with what's still visible heavily shaded or washed out. Hasegawa has a clever variation: its Fiat G.50 box top shows the round white fields decorated with straight-armed crosses, just like Switzerland's but in blue! This is repeated on the actual decal sheet, so you could finish your model in markings that are totally imaginary - but 'PC'! (To be fair, the kit also contains proper markings.)

Anyway, back to the books: both have useful text and a lot of sharp black-and-white photographs. *Air Force* was written and compiled by Christopher Shores, and has eight pages of adequate aircraft color plates, plus cover art, by ModelDecal's

Richard Ward. *Aces* was written by Kari Stenman and Kalavi Keskinen, who have several other books on the subject. This book's color is exceptionally good: eleven aircraft color profile pages by Mark Styling, a page of uniforms by Mike Chappell, and cover painting by Iain Wyllie.

Both mention and illustrate the Hawker Hurricane, of which the Ilmailuvoimat (Finnish Air Force) bought twelve from Great Britain in early 1940. (While freedom-loving people rooted for plucky little Finland standing up to the hateful Red Bolshevik menace…). These were ex-RAF Mark Is. One was lost in its transfer flight to Finland but the remainder formed a flight of a first-line squadron. Later, Finland had to fight against Hurricane Mk IIs. (Finland was allied with Nazi Germany after it attacked the Soviet Union, requiring Britain to change policy and treat it like a freedom-loving people's ally…).

This is one of those rare aerial battlefields of WW2 where similar machines fought on opposite sides. So far I've found no reference to any combat between Soviet and Finnish Hurricanes, even in these two books, but if you know of any, you know how to reach me…and by the way, you didn't really think I'd have trouble justifying these books in *Hurricane Bookshelf*, did you? If so, wait'll you see what I drag into future columns!

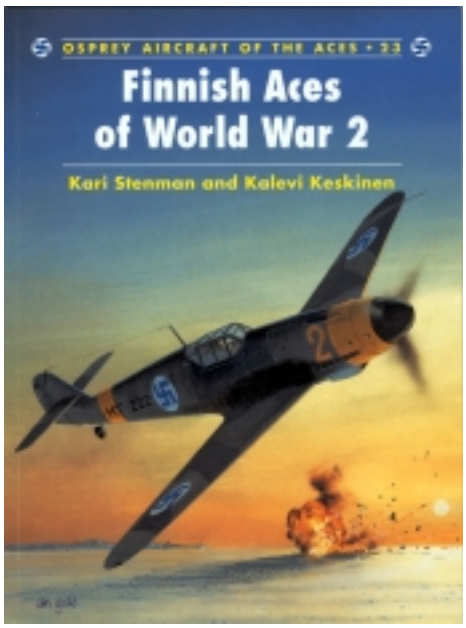
The handful of Hurricanes hardly made up the strength of the Ilmailuvoimat, though. With little money and only one small State Aircraft Factory, Finland had to make do with whatever combat planes they could get, in their confrontation with the Soviet Union. These two books show a remarkably large assortment of types for so small a country and air force. Eight different front-line fighters, for example…

I was so impressed with these books, particularly *Aces*, that I made up "Six Questions" from them for a NorthWest Scale Modelers meeting awhile back. For those of you that missed that meeting, here's an excerpt about all those different fighters:

1.What American army fighter went down to bloody defeat at Pearl Harbor, the Philippines, and elsewhere, but Finland did quite well with?
2.What American naval fighter went down to bloody defeat at Midway and elsewhere, but Finland did quite well with?
3.What Dutch fighter went down to bloody defeat in May 1940, but Finland did quite well with?
4.What French fighter went down to bloody defeat in May 1940, but Finland did quite well with?
5.What Italian fighter went down to bloody defeat over North Africa, but Finland did quite well with?
6.What fighters were sold to Finland by Germany, though they didn't manufacture them?
7.What fighters were given to Finland by Germany, who did manufacture them?

[Um ,Scott, that's seven questions! – ED]

Since 1944, the Ilmailuvoimat has switched to a respectable roundel, still in the national colors of white and blue, but without the crooked cross. Finland is a bit touchy about its role in WW2, claiming not to have been an "ally" of Nazi Germany but only a "co-belligerent" against the common Soviet foe. Regardless of your view of this, it's easy to read these books and admire this little country and its remarkably effective fight with a veritable potpourri of equipment against an enormous and powerful enemy. My admiration increased as I read that, unlike all other air forces (including our own), they didn't over-claim their successes. Official claims were for 1807 enemy aircraft destroyed in aerial combat, and "recent research in Russian files has revealed that 1855 aircraft were downed by Finnish fighters" (*Aces*, page 74). An incredible 496 of these Finnish victories - as we've all heard but can scarcely credit - were made flying the answer to my second question: the Brewster 239, aka the USN's F2A-1 'Buffalo'! And this throws my loyalties all into a tizzy: 48 of them were Hawker Hurricanes!



Here are the answers to the other questions:
1) Curtiss Hawk 75 [USAAF P-36] 3) Fokker D.XXI [most made under license by the State Aircraft Factory] 4) Morane-Saulnier MS.406 5) Fiat G.50 6) Again, Curtiss Hawk 75 [captured by Germany in occupied France] 7) Messerschmitt 109s.

Special Hobby 1/72nd Scale Junkers W 34 Hau, Bramo Motor

by Jim Schubert

The W33 and W34 Junkers of 1926 were both developments of the precedent F 13 four passenger airliner of 1919. They were both designed for use as airliners carrying six passengers and a crew of two or as freighters with a crew of one or two. A few were also sold to private parties for use as corporate airplanes - Learjets of their day as it were. The principal difference between the two was that the W 33s were powered by Junkers L5 six cylinder in-line, water cooled, engines whilst the W 34s were powered by a great variety of air-cooled radial engines in the 500 to 800 hp range. The kit subject has the Bramo model 322, nine cylinder, radial of 650 hp, enclosed within an NACA long-chord, bump-cowl. Luft Hansa had Junkers build a strengthened version of the W 34 to withstand the stresses of catapult launching and with a larger empennage. This Ju 46 on floats was used for the Luftpost relay from Germany to New York.via two service ships in mid-Atlantic.

The "Hi" version of the W 34 is described as having an "internal start" and the "Hau" as having an "external start". I infer from this that the "Hi" had the flywheel of its inertia starter spun up by an electric motor and the "Hau" had its flywheel spun up manually with a hand-crank. Does any reader know about this? Please let me know if you do.

I bought this kit anticipating that it would be an easy conversion to one of the interesting civil applications of the airplane - it isn't.

The kit comes in the standard flimsy Czech, end-opening, box, which was only slightly pre-crushed this time. The box art attractively illustrates one of the two color schemes provided for by the decal sheet; a Luftwaffe navigation trainer in dunkel grun uber licht blau. Dull. The kit is a revised reissue of the MPM W 34 Hi kit of about nine years ago. All of the parts of the original issue are still on the sprue trees so you do have the option of a Townend Ring engine cowling if you wish.

The kit provides 59 parts cleanly injection molded in medium gray styrene, two parts cast in a pale cream colored resin, eight parts injection molded in clear styrene, one small decal sheet for two Luftwaffe color schemes - the other is a splinter camouflage scheme of dunkel grun und schwarz grun uber licht blau, and an eight-page instruction folder. The only deviation from conventional kit engineering is that the fuselage bottom is a separate part to avoid compromising the quality of the corrugations on the belly. This is a large airplane; the wingspan is 9-11/16" (246mm).

Converting it to a civil version will require changing the shape of the cockpit cutout (easy), making a new windscreen and hood (easy), and reshaping/deleting windows (the reshaping and deleting are easy but the reskinning is tough). Most of the civil versions that I have looked at had corrugated skin between the cabin windows whereas the Luftwaffe birds had smooth sheet aluminum in these areas. I'll try embossing corrugated aluminum to match. I'll place a small wood block inside the rear of one of the fuselage halves, lay a sheet of kitchen aluminum foil over the corrugated fuselage skin, place a piece of rubber (cut from a tire inner tube) over the foil, another block of wood over that and squeeze the sandwich thus made in the jaws of a bench vise. I usually get useable sheets of corrugated aluminum this way. I spread a thin layer of two-part epoxy over the inside of the corrugations for strength and when that's set, I cut pieces of the corrugated sheet as required to fit where needed. I'm looking at two Canadian Airways, Ltd. W 34s on floats and a DNL Norwegian airliner on floats. Arado 96 floats, from either Airfix or Heller, can be easily tweaked to be suitable for this application.

A historically significant subject, physically well executed by Special Hobby and rendered insignificant by its presentation only as an obsolete, mundane, military trainer. Had they offered two or three civil options it would have been a more interesting kit with broader market appeal. There are **so** many dull military color schemes out there; do we really need two more?

Kudos to special Hobby for a fine kit and a Ho-Hum to them for their choice of markings. Phoo!

References

Hugo Junkers and His Aircraft: Gunter Schmitt, Transpress - VEB Verlag, Berlin, 1988, ISBN 3-344-00303-8.

MacMillan Color Series - Flying Boats and Seaplanes Since 1910: Kenneth Munson, MacMillan, New York, 1971, Library of Congress #73-142284.

Aeroplane Monthly - July 1987: John Stroud's *Wings of Peace* series; "Junkers W 33, W 34 and Ju 46".

www.geocities.com/hjunkers/ju_w33_a1.htm.

Diorama Construction, Part Ten

by George Haase

Wood Structures (So nice, so friendly)

Basically, the wooden structures in this diorama include the doors and doorframes, windows and window frames (which, along with the attic ventilator grill, will not be used except for the side and transom lights around the door), the sub-roof and its supporting structure and a few other bits and pieces.

The first things you need to do are a bit of engineering and to decide what the structure will really look like. From this a materials list can be developed. Both the dimensions of the wood and the required length (i.e. ½ x ½ inch by 20 inches, 1/8th x ½ inch by four and a half feet, etc.). Once assembled (in this case meaning gathered together), the wood needs to be pre-treated. Leaving it "natural" just screams at you so some sort of coloring will be required. As mentioned above, this needs to be done before the cutting. Not only is it easier but also the glue will cause problems with getting a wood treatment to uniformly penetrate the wood if the treatment is done after pieces are glued together.

One thing to consider is whether the wood trim on this building is be painted. In the US it would be common practice to paint the wood components exposed to the elements, even on stone or brick buildings. Since the builders would want their construction to last, exposed wood would be painted or wood wouldn't be used. While other forms of wood preservation are available, I don't think that they would creosote the wood used for trim. While this would "exempt" the sub-roof structure, the doors, frames, posts and eaves, and other supports would be subject to the requirement that it be painted, it would not exempt the material from the pre-treatment. On the other hand, since this is a German building, would any exposed wood surface not receive a coat of paint?

Continuing, for now, with the subject of the wood elements that need painting, my research has not revealed, yet, any color pictures of German WWII railroad structures. Either the pictures are not in color, or you can't tell the color the trim may have been painted as the few splinters that remain after the fires aren't big enough to get a good read on the color one part of them was once painted. Several of the European model railroad kit manufacturers offer European prototype railroad buildings. They all seem to have picked a medium green color for the trim. Usually the trim pieces are molded on a separate sprue from the wall or roof sections. Given that the manufacturers could have picked any color they wanted to when they mold the separate pieces of trim, I do not think they would have chosen a spurious color. On the other hand, I have also seen these kits include mailboxes, garbage cans (both of which may well be green) telephone poles, electrical wiring boxes. and other accessories molded in the same sprue as the trim pieces. I have come across some post-war (1950s) color photographs of German National Railway (GMR) steam engines (did you know they paint just about everything below the running boards red) at station buildings. The problem here is that the station is in Switzerland, where the trim was painted a very bright white. There were also flower boxes on the windowsills, white picket fences and green grass adjacent to the passenger platform. Extremely cute, but I don't think it is quite the look we're after. Furthermore, the black and white photos I've seen of German railroad stations certainly do not support the notion of white trim. The gray color of the painted woodwork in the B&W photos could well be red, but I am not any flavor of expert on photo color interpretation. I have been racking my brain to recall the color of painted woodwork in such Hollywood spectacles as *Von Ryan's Express* and *The Great Escape*. While I seem to recall the color being either green or white, that may be because the location for the filming was Spain, Yugoslavia, Switzerland, or England.

OK…enough of this. Off to the Internet and a Google search on "German National Railway". After getting through the mess about the GMR suing the Google people (not to take anyone's side in this but I hope the judge throws this one out of court so fast that heads don't have time to spin before they fall off) I found a web site for a museum in England that features real equipment (some of it still operating) and authentic reproductions of equipment and facilities from various European railroads, including the GNR (**http://www.dampflokmuseum.de/Englisch/museum/portrait.htm**). Along with a couple of photos of engines in the GNR portion of the outdoor sections it also includes a picture on the second page features a couple of children taking a close look at the front wheels of an engine. In the background is a station building made of brick. The windowpanes are green. Settled. Done. Finished. Furthermore, I wanted to paint them green anyway so I searched the databases until I found enough proof to validate my hypothesis.

Gather the wood that will become the doors, frames, eaves, and supports, and paint it green. I could have used an acrylic paint. For the first coat, I would have thinned acrylic paint (actually I used artist's tube acrylics) a bit with rubbing alcohol (as a carrier, it penetrates wood fibers better than water). This is because I would have wanted to get the color into the fibers of the wood and not have the paint sit on the surface of the wood like, well, paint. At least, at this point. Later, I would have painted it again with an only slightly diluted version of the same color.

In fact, however, I happened to be in the IKEA store and noticed that they have pint cans of wood stain for their line of natural wood products. One of these is a green that looks just like the light, medium green in the picture on the web site mentioned above. This material does its thing admirably well (colors and penetrates, etc.) and it appears to be a nice color.

OK, so we got that done, now what about the rest of the wood. Since the builders would have acquired the building material at one time, it should be pretty much the same color. There are lots of colors of wood stain available - check the stain section of the hardware store. The arts and crafts store may also have acrylic wood stain as well. They will also probably have something like the same selection of wood stains as the hardware store and in volumes no larger that a lifetime's supply (a quart). The problem will be the price. The craft store price will be some multiple of the hardware store price. Whatever you choose, do not use the type that includes a poly-urethane component like Poly-Shades. You really do not need it at this point in your life, at least not for this purpose.

At any rate, assemble the lumber and stain it according to the product directions. For wood left unpainted, I usually use an 80/20 mix of rubbing alcohol (80) and black shoe or leather dye (20) No, not shoe polish. And yes, it took a big effort to find some. Tacoma Mall has a cobblers shop in it down near the J C Penney's store; at least they did 10 years ago. A real shoe repair shop is about the only place to find this stuff and a pint **is** a lifetime supply. Just dip the wood in the solution, of apply it liberally to the wood. The wood takes up the dye and its color is instantly transformed to that silver-gray, really old wood look.

While this is generally a good/great idea, it may not be applicable here. The wood under the slate roof will be very well protected and thus will not be subjected to the ravages of the weather. On the other hand, I still haven't overcome the idea that our meticulous little German carpenters wouldn't have had the painters protect all the exposed wood with something at one point or another. On the, again, other hand, I don't want to paint all this stuff the nice green of the doors and frames because it will all disappear up there in the shadows against the background of black felt (construction paper). In the attic spaces of the houses and buildings I've been in (lots of exposed wood there) that were built in the 1920s, the wood appears a medium to dark brown. This is very much darker than anything at the local lumberyard. The floor is the same color. To cut the debate short, I want some color up under there, not the "old wood" silver-gray color, so I will stain the lumber for the sub-roof with Minwax "Light Oak".

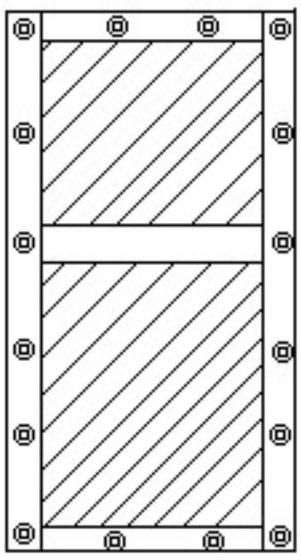
Once the stain is dry begin assembling (meaning constructing) the roof. Having engineered a roof structure, cut the parts needed and go at it. The most difficult part for me is getting a cantilevered structure to hand in mid-air. Remember our slice of life approach to set design has one end of a structure hanging in mid-air. Good thing our building components don't have scale weight!

Props and jack might be needed to hold things in position while glued joints dry. When all is assembled, go back over the structure with the appropriate stain or paint to catch any exposed board ends or other nicks or scrapes that may have exposed unstained or unpainted wood.

If any, or most of the above, is a mystery, a trip to the home construction and remodeling section of the local library will provide the how-to books that will explain all. Just remember the dating concept. The traditional methods (dimensional lumber, nails, etc.) have been around for a long time so follow those methods when building a period piece. Plywood flooring, factory made roof trusses, particleboard, glue laminated beams, and engineered trusses are really relatively new additions to the scene. Do not use them unless it is appropriate.

There are a couple of other wooden things that need a comment or two.

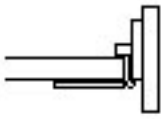
First, the doors on our warehouse should be fairly heavy. In HO scale I would apply an edge frame to a section of scribed siding.. Here in 1/35th scale I do not have scribed siding **and** we need to detail both sides. Sounds like a stick build job to me. In the 12 inch to the foot scale what we might do is establish a two perimeter frames (one for the inside and one for the outside) of 2x4s and rabbit out a channel. Diagonally cut 2x4s would be fitted into one of the channels and nailed or screwed into the rear frame. The front frame would then be bolted to the rear frame capturing the diagonally cut 2x4s between them and the channel. A whole lot of scale 2x4 pre-painted in green will be needed for the doors. Cut, cut, chop, chop, and in our case glue, rather than nail, them together. The hardest part of this exercise, after the need for patience, will be forming the frame with the channel in it. I cut a slit in the middle of the board about half way through the thickness. I then placed the board on edge and again sliced down the middle about half way through, but this time it is in the other direction. Theoretically, the two cuts will meet and the channel will be formed. A little dressing with sand paper and a square file will make things perfect.



Applying the diagonal cuts to the 2x4s to fill in the frame takes a lot of patience. Assemble the frame. Mark and cut each 2x4 and glue it in place. Cut, cut, glue, glue until completed. Then assemble and attach the other half of the frame. Finish the door with some Grant Line bolt heads. Use your

own pattern. The one I drew for illustrative purposes puts one in each corner and two more equidistant along the top and bottom and four equidistant along each side. As soon as I drew it, however, I noted that there was no place for the hinges. In addition, carriage bolts would be appropriate here so one side of the door gets the cast bolt head and the other side gets a round head with washer. The bolt could also pass through the hole in the hinge and serve both the purpose of holding the door together and attaching the hinge. But what the heck, I'm gonna use bolt heads on both sides.

We'll need some latching hardware and hinges. I think that our doors should hinge so the doors swing outward. The left door should pin to the floor and the right door would have a latching mechanism that will allow it to be locked from the outside. Big strap hinges will be needed to support the door. But this is all metal work and we'll take that up later. Grant Line is no real help here, so be prepared to make your own.

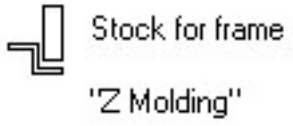


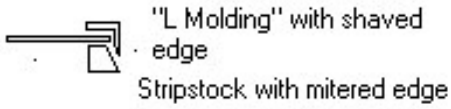
Cross-section of door and frame

The windows are sort of like the door except that everything is thinner. Again, start with the engineering and draw up what the windows and frames are supposed top look like. Remember that the sidelights, the transom. or both should open for ventilation. They would probably be of the casement variety and would not have screens for them. This means that you need to build a window frame that sets into the building and then an actual window that is hinged and sits into that frame. The frame shouldn't be larger than 1x2 and, given that the window units are only one foot wide or high, they probably shouldn't be any thicker either.

Once again, it is time for yet another trip to the model railroad shop. This time go to the Northeast Wood Products rack and find some shaped wood pieces. For the window frames, start with a piece of stock to which you add a piece of "Z molding" (see the drawing). The "Z" will form the face the side and the stop for the window. The windows will use a piece of "L molding" and a piece of strip stock between which we will trap the piece of glass. Before doing any trapping, trim the inside of one of the legs of the "L". Also, trim what will be the inside of the rest of the window piece. The idea is that once the two parts come together to trap the glass the result will appear to be a single section of wood with the glass imbedded in it (see last figure below).

Glass! Glass! Did somebody say glass? OK! We'll cheat a little here and use clear plastic.





You will just love the Safety Fence: Bear with me for a moment - this is not really a digression. First of all, allow your feminine side to rule for a half of a paragraph. Hearken back to those thrilling days of yesteryear called your youth (OK, so what if it **was** the last century?) Someone, somewhere, showed you how to fold a piece of paper four, six, or eight times and cut a design in it. Be it a snowflake or a doll-like figure, when you unfolded the paper you had a set of connected identically shaped snowflakes, dolls holding hands, or what ever, one for each fold of the paper. We're going to do something just like that here for the safety fence. OK?

Now, let your testosterone rage, again. The fence will only go along the side of the stairwell and will thus have a post at each end, a top and bottom rail and a set of decorative styles along the middle. The arrangement is such that open-end grain is minimized and weather side (up) penetrations are few to non-existent. See figure 1 below.

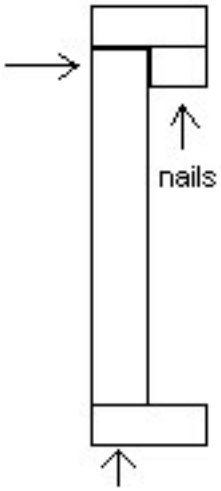


Figure 1

Calculate the number of styles (the vertical pieces) you will need (make sure it's an even number, and adjust spacing or style width accordingly) and cut them to length from scale 2x4 pre-painted in green. Stack the styles and clamp them together firmly. Cut half of a decorative pattern into one side. We'll call this the "A" pattern. Remove two styles and cut a complementary half pattern into the other side. We'll call this the "B" pattern (See Figure 2 below). When finished, dress the edges with a bit of sand paper, re-stack the styles adding back the two that were removed, one on top and one on the bottom. Now "un-fold" the styles arranging then so that the "A" patterns are the adjacent edges of adjacent styles. The two half patterns now adjacent to each other result in a completed pattern. This puts the adjacent "B" pattern edges together and, like the paper dolls you get "A" pattern, "B" pattern, "A" pattern etc. (See Figure 3 below) as

you go down the fence.(see the diamonds and circles below right). The two removed earlier have no “B” pattern and are placed against the posts at each end (see Figure 4 below). Assemble the fence and re-paint as necessary.

Yes, in case you are wondering, while I know that the idea has been around for eons, the how to do it hit me at the “Snow White and the Seven Dwarfs” ride at Disneyland and I’ve been just dying to use it somewhere.

To be continued...

Figure 2

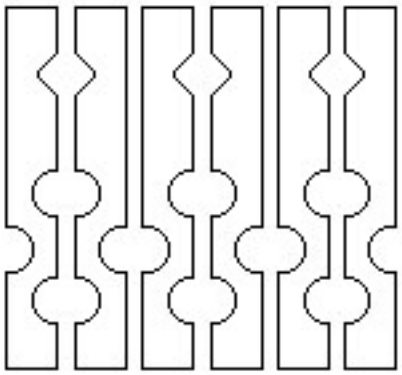


Figure 3

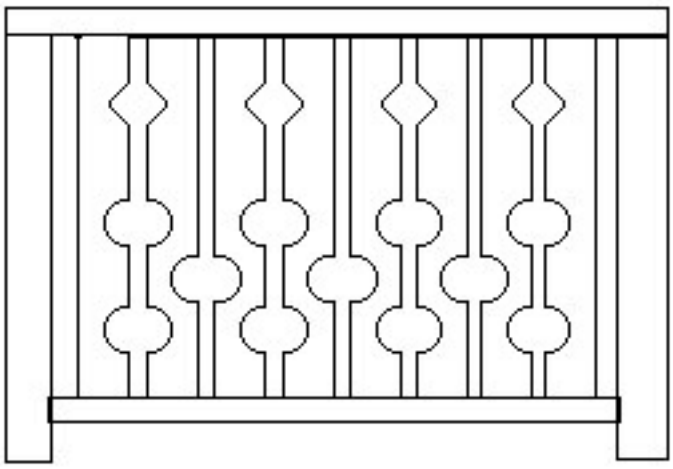


Figure 4

Preznotes

from page 1

I recently picked up a two-DVD set on the original William Wyler *Memphis Belle* documentary, produced by Aircraft Films (**aircraftfilms.com**). If you have a chance to buy this DVD, do it, as they have completely remastered the film. It is truly a spectacular film to watch now. The incredible amount of detail that now shows in the restored print makes this a very important DVD to have. Not only has the clarity been restored, a number of flaws (reversed images, primarily) have been corrected. The second disc in the set contains a number of scenes not used in the final cut, outtakes, and much more. I did a side by side comparison with a DVD I purchased about a year ago and there is **no** comparison. It’s muddy, dark, grainy, and now, completely unwatchable. I deep-sixed it. Aircraft Films has also released a DVD set on the F4F Wildcat, F4U Corsair, and F-86 Sabre. I have the Wildcat DVD but have not watched it as yet. If it’s half as good as the *Memphis Belle* DVD, it is definitely worth having in your film library.

It would appear that I will be at the Vancouver contest (for the first time in nearly 5 years), but which is the same day as our meeting, so Keith will be running the show again. I guess I...

...won’t see you at the meeting,

Terry

Upcoming Model Shows and Aviation Events

Saturday, October 9
IPMS Vancouver 34th Annual Fall Model Show & Shop Meet. 9 am - 4:30 pm. Admission: Adults, $2CDN; 16 and under, free. Model registration: Adults, $5 CDN; 16 and under $2 CDN. Bonsor Recreation Complex, 6550 Bonsor, Burnaby, BC, Canada. For more info, contact Warwick Wright, 604-274-5513; e-mail jawright@telus.net; web site, www.members.tripod.com/~ipms

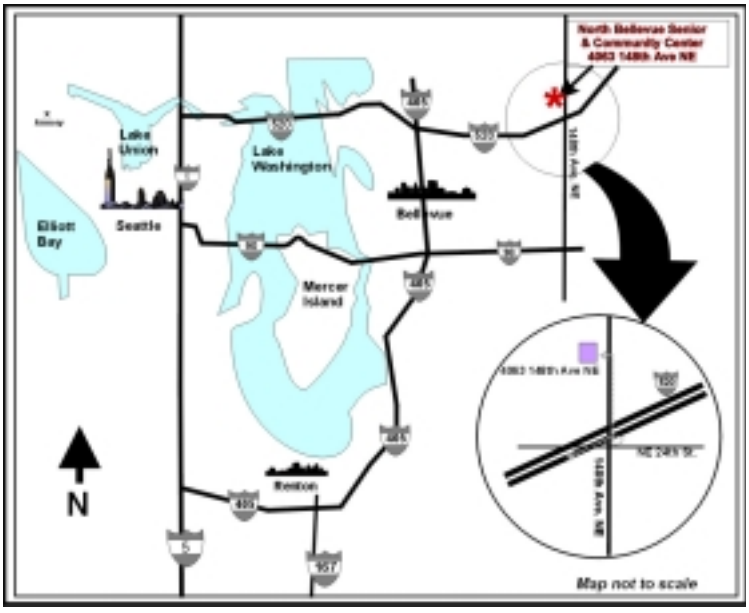
Saturday, October 9
Aces Symposium, Air Power Strategies from WW2 to Korea. 2 PM. Museum of Flight, Seattle. World War II flyers Col. Stephen Bettinger, (Ret.), Capt. Albert Hover, and First Lt. James (Lou) Luma will offer their firsthand accounts of combat over Europe to Museum visitors. Bettinger and Hover also fought in the Korean War and will discuss their transition from prop planes to jet military aircraft. Greg Pierce, president of the Eighth Air Force Historical Society, will be the moderator. The Northwest Chapter of the Friends of the American Fighter Aces in conjunction with the Northwest Chapter of the Distinguished Flying Cross Society brings this presentation to the Museum. The seminar is open to the public and is free with Museum admission.

An autograph session will take place following the seminar and will be open to Museum of Flight members, Friends of the American Fighter Aces members, and Distinguished Flying Cross Society members only, but applications to join these organizations will be available at the door. Please call 206-768-7155 for more information on the seminar, the panelists, or about joining the Friends of the American Fighter Aces.

Saturday-Sunday, October 23-24
7th Annual Model Show and Contest, presented by Aleutian Tigers/ IPMS Fairbanks, Alaska. Date TBA. Entry fees: $1 per model up to five models, additional models free. Pioneer Aviation Museum, Pioneer Park, Fairbanks, Alaska. Web site, http://www.alaska.net/~gidg/2004%20Contest.html

Meeting Reminder

October 9
10 AM - 1 PM



North Bellevue Community/Senior Center
4063-148th Ave NE, Bellevue

Directions: From Seattle or from I-405, take 520 East to the 148th Ave NE exit. Take the 148th Ave North exit (the second of the two 148th Ave. exits) and continue north on 148th until you reach the Senior Center. The Senior Center will be on your left. The Center itself is not easily visible from the road, but there is a signpost in the median.