SILICON VALLEY SCALE MODELERS

THE STYRENE SHEET

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Building *Airfix*'s kit of the mighty *Vulcan*

By Frank Babbitt

Britain's global power in the 1960s could be symbolized in the three V bombers: *Victor*, *Valiant*, and *Vulcan*. The *Vulcan* was known by the RAF as the "Tin Triangle" and was greatly admired by its crew for its maneuverability and handling characteristics. The *Vulcan* might be mistaken for a flying wing because of the overwhelming delta wing surface area, but there is a prominent fuselage extending at the apex of the triangle.

The unique *Vulcan* design is appealing in the "if it looks right, it is right" sense. The demands of physics dictate the designs of nature and machines. In this case, the symmetry and proportions are the aesthetic by-product of aerodynamic requirements.

It was probably not easy to peer out of the sparse canopy glazing of the cockpit hood. This hood was jettisonable, as fictionally demonstrated by James Bond when escaping from the cockpit in "Thunderball."

A *Vulcan* B Mk.2 MRR on a low-level training mission over the Atlantic. Note the roundel on the left wing only.

The *Vulcan* is not a subject which is widely represented by model companies. There is a 1:48 vacuform kit available from *Aeroclub*, and it has been advertised to double as an elegant coffee table when assembled. I also read on the Internet that there is a massive kit to build a 1:24 flying *Vulcan* glider.

Leave it to *Airfix* to be the defender of the realm by producing a 1:72 kit of this Anglo aviation wonder. *Lindberg* produced a kit of the *Vulcan* prototype many years ago. The *Airfix* kit represents a B.2, and is a jolly good show compared to the *Lindberg* kit, even though the *Airfix Vulcan* suffers a bit from unspectacular injection molding which includes sink marks, heavy raised panel lines, flash, etc. Fortunately, there are none of the infamous oversized *Airfix* rivets. The kit appears to have correct overall lines without warpage, and faithfully reproduces the shape, which includes the sculpted concave underside at the cranked leading edge.

The *Airfix Vulcan* kit was tooled about ten years ago. *Airfix* has made great strides over the years in their mold engineering as evidenced by the more recent EE *Lightning*. The sun never sets on this British company.

I packed away the old unbuilt *Lindberg* kit of the prototype *Vulcan* that I purchased many years ago, with little hope of building this into anything presentable. I since decided to take a stab at the *Airfix* kit. Before I purchased this *Airfix* kit, I considered that it may be very simple. Just glue together two massive top and bottom delta wing surfaces and paint on it. Well, it is not nearly as easy as it first seems and there are many areas that need special attention. Also, lots of super glue and sandpaper was used up in this modeling project.

I chose to build a *Vulcan* with series 200 engine exhausts. This is different from the series 300 exhausts which are pathetically represented in the kit as some manner of vestigial orifices. There are subtle aspects of the real *Vulcan* exhaust nozzles which are not intuitive. They should be tapered and the outside exhaust should deviate slightly outward from the center. This design was needed to resolve asymmetric handling characteristics.

My series 200 exhausts were fashioned from styrene tubing. This tubing was contoured by mounting the tube on my Dremel drill and rotating at slow RPM using sanding sticks to achieve a taper.

I had earlier purchased a *Flightpath* etch detail set, but was disappointed to find out that later *Flightpath* sets included

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The Styrene Sheet is a monthly publication of the Silicon Valley Chapter of the International Plastic Model Society (IPMS). Articles and comments should be submitted to Chris Bucholtz, Editor, P.O. Box 361644, Milpitas, CA 95036, or by E-mail at bucholtzc@aol.com. Excerpts may be published only with the written permission of the editor.

EDITOR'S BRIEF

As we tip toe toward the holidays, I need not remind you that our annual Veterans Hospital Model Drive is fast approaching. There's no need to go into the virtues of this annual event; clearly, our membership understands its value, since every year we top the prvious year in terms of donations. If there are models in your collection that you know you won't build, put them to use. Better still, invest in a few snap-together kits that can be used to help veterans rehabilitate themselves. These models go to a lot of great uses, from the most basic rehabilitation to providing a connection between grandparents and grandchildren. With any luck, this year's drive will be even more successful than last year's.

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At the last meetin, Brad Chun announced that the U.S.S. *Hornet* museum is looking for model donations. While he hasn't gotten the ship's formal requirements to us yet, let me encourage you to think about this museum as a great spot for your models to make their final residence.

Brad tells us the ship is looking for aircraft to illustrate the types the Hornet operated and the aircraft that opposed her. For many of us, our collections already have many *Hornet*-based subjects, and if your shelves are starting to get crowded, giving your models a place in this collection seems like the ideal way to make room AND guarantee the models' preservation.

The one fear many of us have about donating our models to a museum is that they will be handled improperly, broken or thrown away. At many museums, that's a valid worry; too many museum curators undervalue the power and potential of models to educate. With Brad as our key contact, your editor feels much more at ease reccomending the *Hornet* as a site for your models.

That's all for now—gotta go try to spray that #@!$#! *Testors* yellow zinc chromate!

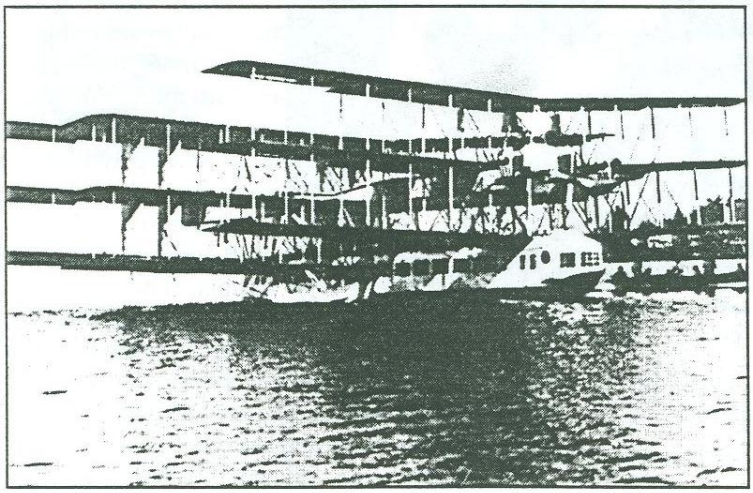
—The Editor

CONTEST CALENDAR

October 18: **OrangeCon '98**, the regional contest for Region VIII, sponsored by IPMS/Orange County. For information, call Peter Gatehouse at (562) 426-5818.

November 7: **Antelope Valley Model Show**, sponsored by the Antelope Valley Group (AVG) at Antelope Valley College, Lancaster. Special award for Best X-Plane. For information, call Nick Kiriokos at (619) 769-4473.

February 28: **1999 Kickoff Classic Model Contest**, sponsored by Silicon Valley Scale Modelers. at the Milpitas Community Center. Theme: "Gone But Not Forgotten." For more information call Chris Bucholtz at (408) 723-3995.



This month's club contest...

That's Italian

(aka "the Italians of October" Planes, cars, armor, surrending figures, etc.—the beautiful and, er, unique from Italy's finest!

And coming up later...

November 98: What if? Vietnam 1980 *and* Mad Max Motoring
December 98: Only & All Vacuforms (No mixed-media conversions!) and Really Resin (all resin kits)
January 99: Snakes (planes, cars, you name it—*Kingcobra, Airacobra, Huey Cobra*, Plymouth Viper, Don Prudhomme's funny Cars, Ford Cobra & Cobra II, Shelby Cobra, models of fantasy or real snakes!)
February 99: Variable Geometry & VSTOL, LTA
March 99: Century Series (F-100 through F-111)

The Orange County Chapter of the
International Plastic Modelers Society Invites You To The:

REGION 8 REGIONAL CONVENTION

ORANGECON '98

MODEL CONTEST, EXHIBITION & VENDOR FAIR

DATE & TIMES

Sunday, October 18th

Open to the Public
9:00 AM to 5:00 PM

Vendor Setup
8:00 AM to 9:00 AM

Model Registration
8:30 AM to 9:00 AM

Contest Room Closed
12:00 PM to 1:30 PM

Awards Presentation
3:30 to 5:00 PM

LOCATION

Sequoia Conference Center
7530 Orangethorpe Ave.
Buena Park, California
Located on Orangethorpe between Beach and Western

INFORMATION

IPMS Orange County
P. O. Box 913
Garden Grove, CA 92642
(714) 631-7142
From April 18 1998, the area code will change to (949)
e-mail: oc ipms@aol.com

Look for additional information and show updates on our web site:

http://comevisit.com/timeelapsed/ocipms/ocipms.htm

ADMISSION

General Admission	$ 4.00
Young Adult (13 - 17)	2.00
Children 12 and Under Free*	

* When accompanied by a paying adult

MODEL ENTRY FEES

Adults, per model	$ 1.00
Young Adult, per model	.50
Children, per model	.50

50 CONTEST CATEGORIES
THEME & SPECIAL AWARDS
GUEST SPEAKERS
VENDOR ROOM
HUGE RAFFLE
SPECIAL HOTEL RATES

VENDOR TABLE REGISTRATION FORM

Name:_____

Address:_____

City:_____ **State:**____ **Zip:**_____

Telephone:_____ **Fax:**_____

Return this completed coupon along with check or money order made payable to: IPMS Orange County, c/o Nat Richards, P. O. Box 3271, Newport Beach, CA 92663. Vendor tables must be reserved in advance, none will be available at the door.

California law requires that all vendors possess a valid California Resale Permit, and a copy be on file with our event. Please enclose a copy of your permit with your payment. Temporary "One Day" permits are available upon request.

Table Size: 30 x 96 inches

Price per table: $ 40.00*

*** Discounted to $ 35.00 if registration is received by 31 May, 1998. From 01 June, 1998 the cost will be $ 40.00.**

Please reserve____tables @ $ 35.00/40.00

Total Enclosed: $_____

Academy takes a stab at an F-model *Saber*

By Bradley D. Chun

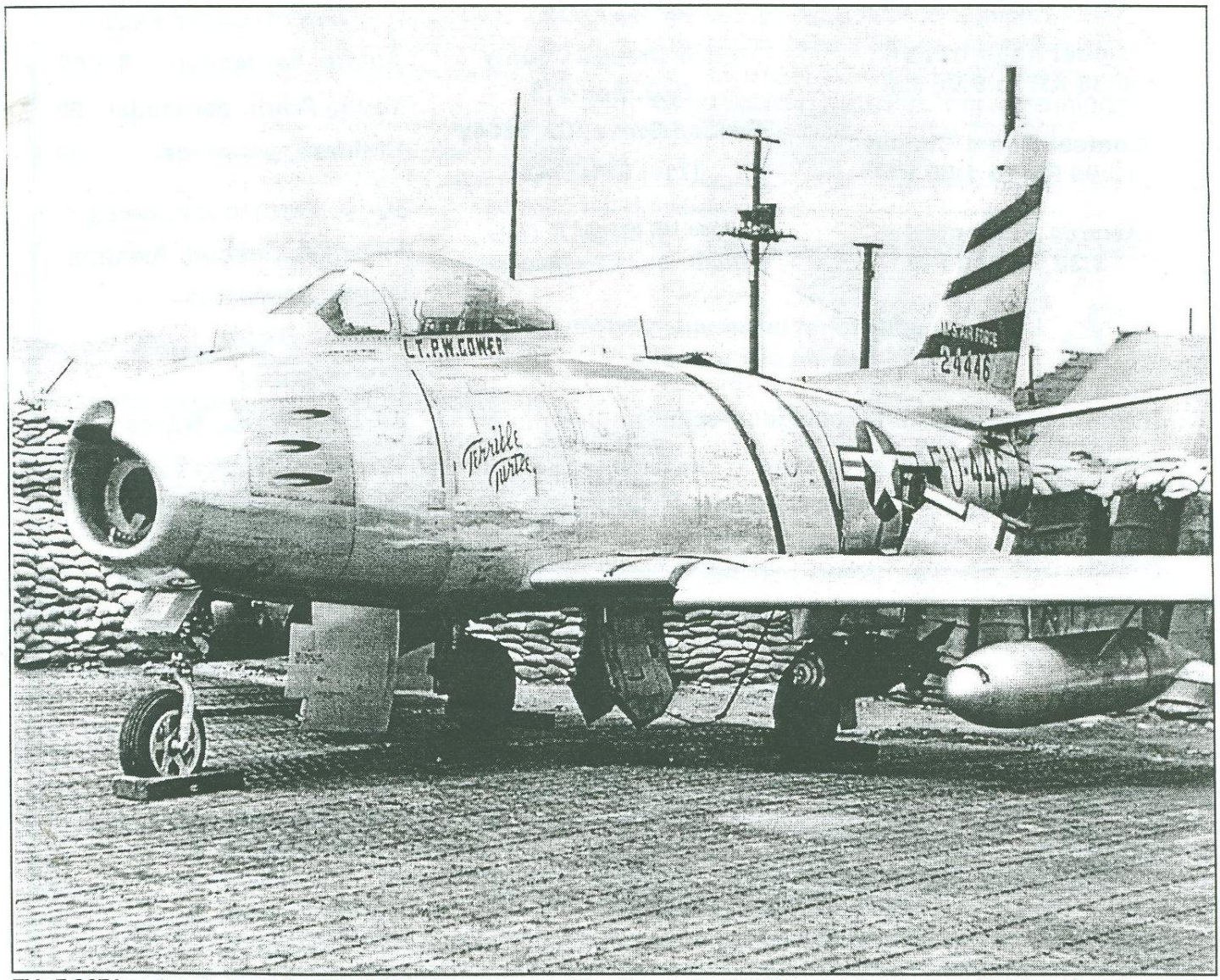
The F-86F is the ultimate clear air, day fighter variant of the *Saber*. It was built in four basic sub-types—narrow chord wing w/ leading edge slats, "6-3" wing with wing fences, with atomic capabilities, and with extended span wings with leading edge slats. One of the biggest gripes combat pilots had in Korea had about the *Saber* was the lack of engine power. It was a great flying aircraft, very safe with its armored cockpit and back up flying systems, but the added weight of all of those safety measures put the *Saber* at a disadvantage to the MiG-15 as far as climb rate and service ceiling was concerned. As a result of this, General Electric began development with the non-afterburning J47, which resulted in the 5,900 lbs.-thrust J47-GE-27.

The increase in power raised the rate of climb to 9,300 ft/min; although this was still less than the MiG-15, it did make the F-86 *Saber* more competitive against the Soviet fighter. Top speed was also increased to a sea level speed of 693 mph. The F-86F-10 had the new A-4 radar ranging gunsight added to its fire control system.

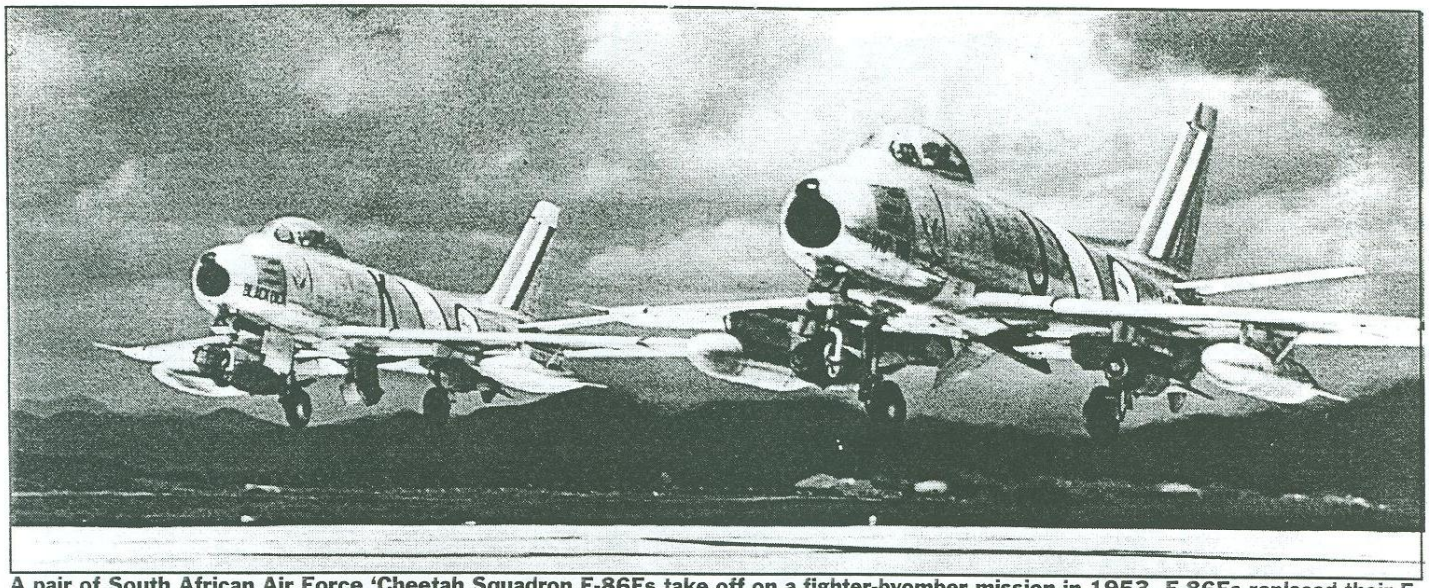
The F-86F-25 variant is regarded by some as the ultimate day fighter of the early 1950s. Initially, the F-86F-25 and -30 were simple modifications with an additional hardpoint added to each wing. The additional hardpoint was for carrying a drop tank or 1,000-pound bomb. In August 1952, North American Aviation engineers tested a new wing design. The wing chord was extended 6" at the root, and 3" at the wing tips. The extension was done on the leading edge, and at the same time, the leading edge slats were removed and replaced with a fixed leading edge. A small wing air flow fence was also added to the wing. This fence helped guide the airflow over the wing and reduce transonic buffeting. The end result was a tighter turning radius at high Mach numbers.

Saber pilots now had an aircraft that could easily out-dive a MiG, turn with and inside the MiG, and had almost the same rate of climb. The MiGs still had an altitude advantage that prevented a complete Communist debacle in the skies over Korea.

With all of the advantages the F-86 pilot had, self-sealing tanks, armored cockpit, radar gun sights and better training,



This F-86F has slatted wing and carries fuel tanks and bombs—identifying trais of the 'F'model. 1st LT Perrin W. Gower flew this F-86F.



A pair of South African Air Force 'Cheetah Squadron F-86Fs take off on a fighter-bvomber mission in 1953. F-86Fs replaced their F-51s in 1953 andoperated as part of the USAF's 18th Fighter Bomber Wing.

the combat results were predictable. In May and June 1953, F-86 pilots, most of them flying the "new" F-86Fs, shot down 133 MiGs, compared to the loss of only one *Saber*.

At the peak of its service, the USAF had 16 wings equipped with the F-86F. North American Aviation built a total of 1,959 F-86Fs, at a fly-away cost of $211,111.00 each. In addition to the North American Aviation total, Mitsubishi built another 300 F-86F-40s for the Japan Air Self Defense Force. The F-86F was never phased into Air National Guard service in great numbers, but, was instead sold to other nations.

I was somewhat surprised to see this kit released after having purchased the offering from *Hasegawa*. After all, I had four of the *Monogram* kits sitting in my closet. I figured that this kit couldn't be all that bad, as I had purchased the Hawker *Hunter* when it was first released. But, I also had a few reservations, as I hoped this kit was not tooled by the same mold maker as the *Minicraft* 1:48 F4U-5N. (We all know how I feel about that kit.) Needless to say, I had nothing to worry about after peeling the shrink-wrap off of the box. This kit was molded in Korea, and not China.

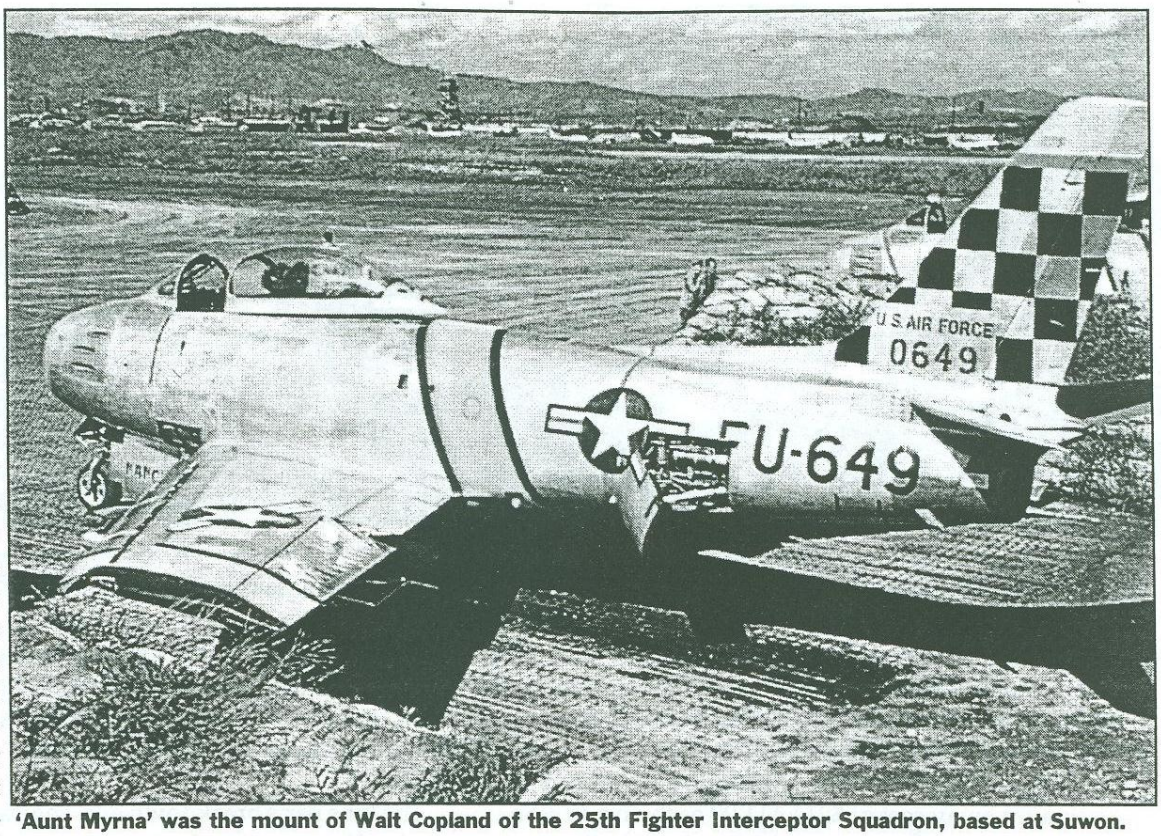
The box art is drawn by L.D. Yon, the Korean version of Japan's Shigeo Koike. The kit is an F-86F-30 with the 6-3 hardwing, but for some reason, the illustration shows an aircraft that looks as if it has the -40,with the extended wingtips. Stranger yet, it shows the slats in addition to the wing fences!?! This boxtop *Saber* is shown shooting down MiG, and the *Saber* pilot hasn't even jettisoned his wing tanks yet. Thank God the box top art doesn't represent the model inside.

The kit's parts breakdown and engineering are very similar to the *Hasegawa* kit. In fact, if it wasn't for the *Academy* headings on the sprues, one might think this was a *Hasegawa* kit. The *Academy* kit includes many extras, such as optional wing tanks, gun bays that can be displayed open with tight fitting access covers, *Sidewinder* missiles, rear fuselage stand, and intake and exhaust covers. I was really surprised to see that this kit has a complete "air system"—full intake duct, leading to a complete jet engine, which is then attached tail pipe. It is sure going to look impressive sitting in one half of the fuselage. Too bad *Academy* doesn't include a clear fuselage half, reminiscent of the 1:48 *Monogram* visible B-17G or 1:32 *Hasegawa* F-86.

The instruction sheet is a single, multi-folded, sheet that includes a very short history of the *Saber*, universal instruction guide, 15-step assembly process with part painting call out, paint guide, and parts location diagram. The assembly process is simple and direct, leaving no doubt about the location of where parts are to be attached.

A 1954 study of the 351st Fighter Bomber Squadron flexing its muscle. Note the differences in the stars on the two left-most planes.

It is also a bit ironic, that both fuselages, *Academy's* and *Hasegawa's*, almost exactly match up with each other. Also, some of the same panel lines that were missing on the Hasegawa kit are also notably absent on the *Academy* fuselage, specifically the ammo door hinge line. For all intents and purposes, and for the accuracy police, its just a simple matter of scribing two lines, from the nose wheel well back to the fuselage wing line. The speed brake doors and wells have nice detail also, and the instructions show the modeler where to correctly cut the lower arm to establish the downward angle of the brakes when they are deployed.



'Aunt Myrna' was the mount of Walt Copland of the 25th Fighter Interceptor Squadron, based at Suwon.

If the kit-supplied intake cover is not used, the modeler has some work cut out for them, as the molded-in wheel well creates a huge gap that will need filling and sanding. I wonder if the *KMC* seamless intake will fit, but since it was made for the *Hasegawa* kit, it might require some sanding or shimming to fit the *Academy* fuselage. The cockpit is also attached to the intake duct, it looks pretty good with a nice, raised, side console detail, and a raised detail instrument panel. There are no decals provided for any of the cockpit details. The seat looks a bit crude, having ejector marks on the cushion and raised, simplified, detailing that is suppose to represent the seat belts. I'll probably pick up a set of *KMC* F-86 *Saber* seats, or maybe even replace the whole cockpit with the offering from *True Details* or *KMC*, or just wait to see what *Eduard* will have in the future. I think I'll just pick up a set of the seats from *KMC*.

The kit supplied GE J47-GE-27 engine provides a good base for superdetailing. If the fuselage is separated, the rear fuselage can be displayed on the previously-mentioned kit support stand. I'll have to dig out my 1:32 *Hasegawa* F-86 instructions, if and when I ever decide to detail the J47.

As mentioned, this is a hardwing "6-3." The wing fences look a little on the thick side; for the perfectionists out there, they can be replaced by brass or thin styrene.

Optional ordinance includes 120-gallon tanks, 165-gallon tanks, and 750-pound bombs. Since the -30 had a new hard point on each wing, *Academy* provides 750-pound bombs to hang there. There are also parts in the kit not for use on this Korean War aircraft—two early *Sidewinders* and associated rails, and alternate tank fins that had the small vertical stabilizers. Hmm, could *Academy* have another version ready for release?

A nice touch, is that *Academy* has included both an early, see-through nose wheel, and a late, solid nose wheel. Tires are non-weighted variety and are accompanied by plain gear struts and subtlely-detailed wheel wells. Gear door detailing is nice, but marred by a prominent ejector mark squarely in the middle of the small door on the nose strut. Fortunately, this will be hidden by the strut, so no problem there.

The separately-bagged injection-molded canopy is clear and reasonably thin, but will require fine sanding and a dip in Future to eliminate the mold line running along the top. Kudos to *Academy* for molding the antenna lines on the inside of the canopy, so that they will not be effected by the sanding and polishing needed for removing the mold line on top.

A very comprehensive decal sheet is provided for two F-86 *Sabers*: "Mike's Bird," F-86F-30, s/n 52-4641, flown by CPT Charles McSwain, 39 FIS/51FIW, Suwon(K-13), Korea, 1953, and F-86F-30, s/n 52-4350, flown by LT Harvey L. Brown, 67FBS/18FBW, Osan(K-55),Korea, summer 1953. A full set of stenciling, yellow/black theater ID bands and separate decals for the speed brake and gun bay doors are provided. Believe or not, I found no problems with registration!

Last, but not least, *Academy* has included two pilot figures—one standing and one sitting. Both pilots have separate heads, arms, and oxygen masks.

Its about time there were a few more 1950s era jets released. I think *Academy* has an outstanding bargain here, especially since, at $24.98 retail, it's $15 cheaper than the *Hasegawa* kit. I guess I'll have to stock up on *SnJ* spray metal and hope that there will be even more aftermarket decals released in the near future. One can only hope that some of the major manufacturers will continue the trend of releasing Korean War-era jets.

Academy's 1:72 P-39 *Airacobra* is a charmer

By Mark Schynert

Academy recently issued a kit of the P-39 *Airacobra*, a subject that is often considered a second-rate fighter, though the Soviet Union happily accepted about 5000 of the type via Lend-Lease and used them to good effect in the fighter-bomber role. The Styrene Sheet has seen a lot of analysis of this aircraft and its successor, the P-63 *Kingcobra*, from Bob Miller and Mike Burton. Whether or not aviation historians gave it a bum rap, it certainly has received short shrift from the modeling world in the recent past.

P-39s, like these operating ina stateside training unit, served in Africa, the Pacific and the Eastern Front with U.S., Soviet, French and even British crews.

Prior to this kit, the best available in this scale was the *Heller* offering. While not a bad kit, it seems to be have a too-narrow rear fuselage, and the surface detailing is not up to present standards. The old *Revell* kit is crude, the ancient *Airfix* is little better, and the only other 1:72 kit I've seen is a Polish vacuform which might be good, but I would rather not have to build a vac kit to get a model of a mass-produced (9500+) WWII fighter. Happily, the *Academy* kit is an improvement on the *Heller* in a number of ways. As I intended to build this kit out-of-the-box, I have noted possible fixes for problems I have found, but I did not implement any of these fixes if they required additional bits, with one exception.

Upon opening the kit, I found three sprues of light gray plastic with more than fifty pieces, a small sprue of five clear pieces, and decals for a Soviet P-39N and a USAAF P-39Q. The surface detailing is delicate, and, except to the extent noted, appears accurate.

Alternate parts for the N and Q model are included, and there are also12-port exhausts and a spinner nose with an extended gun barrel, which are not used by either variant. These are clearly intended for an *Airacobra* I/P-400 release, but the parts are there already if that's what you want. For the N, you will have to open the receiving holes in the leading edge for the .30 wing guns, while the Q variant requires that you drill out holes on the inside of the lower wing to mount the underwing .50 guns. I did the latter now, as I intended to build the kit as a Q.

One external defect with this kit is the fuselage-mounted gunports. The gunports are fairly long troughs, more appropriate for the P-400, and they do not show the gun muzzles; they should be much shorter and have small "eyebrow" fairings over the muzzles. This ought to be correctable without too much trouble, by filling the aft part of the troughs and scratchbuilding the fairings and muzzles.

The clear pieces are interesting in that they include an armor glass insert for the overturn structure aft of the pilot, and the complete port door. The idea is to allow the modeler to mount the door in the open position, and the door can be easily masked and painted, avoiding fragility and alignment issues that would arise if the door and glass were separate. A great concept, but there are a couple of flies in the ointment. First of all, the port door has some nice detail molded into it, including the throttle controls. The problem is, this quadrant was not mounted on the door, but next to it. It would in fact obstruct getting in and out of the cockpit, which is why most photos of open doors on P-39s show the starboard door open. So, if you mount the port door open, recognize that the throttle will be with the open door instead of with the cockpit, where it really belongs. Molding the throttle to the port door would have been okay if the kit were designed so that the starboard door could be mounted open instead of the port door. Except that—oops—the starboard door inside has mirror-image detail of that on the port door. A P-39 with two throttles? Oh well. In fact, if you want to accurize the cockpit detail, the dominant feature of the starboard interior door was a chart pocket, which would be easy to scratch-build and attach after sanding away the misplaced throttle quadrant.

The other details of the cockpit are pretty good, being far better than anything you get with the *Heller* kit, and everything fits together therewith a minimum of fuss. The gunsight is nothing to write home about, and is probably the only other thing I would correct, as it is fairly obvious even with a closed cockpit.

There is ample room ahead of the instrument panel to mount weight so that the P-39 will sit on its tricycle gear. The instructions specify seven grams, but that's not nearly enough; I used seven BB-sized split lead shot before I got it to pivot forward of the wings on a dry-fit of major components. But it turned out even this was not enough, because the nosewheel strut is so long the plane pitches backwards anyway; you need at least eleven of that size lead weight! As I'd already sealed the fuselage by then, I later put weight in the drop tank and nose wheel well to get the right ballast. But there is enough room in the nose for at least a dozen weights of the size I was using.

The wings are another problem area. First of all, I didn't care for the attempt to represent fabric on the lower surfaces of the ailerons. It looks more like melted plastic, and in any event, I've seen no photos or drawings that look anything like it. This would be easy enough to sand flat. The top-half wings attach to the bottom full wing exactly at the trailing and leading edges, aided by three guide pins on the inside, but you must approach this with great care. The bottom wing has some washout at both tips, so that the top and bottom tips do not

want to stay glued to each other. Even with care, I was left with some separation along the leading and trailing edges.

Dry-fitting (done after the three-piece wing was glued together, and the cockpit assembly glued to the starboard fuselage) showed that the central gap in the wings was actually too narrow to receive the completed fuselage. This excessive tightness might be because the cockpit floor was too wide, bowing out the bottom of the fuselage. Some judicious filing of the wing roots, upper wing interior ends and cockpit floor eventually resulted in a snug but satisfactory fit.

The belly of the aircraft has two oil cooler exhausts flanking the radiator outlet. The kit pieces do not blank off the inside of these exhausts; the radiator outlet (at least) needs something to block the view inside. This is the only place I deviated from a strict out-of-the-box build, as I attached a small piece of .020 card to the inside of the radiator exhaust to block it off.

Before gluing the fuselage halves together, I built up the prop assembly (spinner front and back, sandwiching the 3-blade prop.) Because of injection gate residue, the spinner takes a bit of finishing, but goes together well. The 37mm cannon barrel in the spinner is substantial enough that it can be carefully drilled out to a depth of about 1/2 mm, giving a much nicer appearance. I also attached the stabilizers before completing the fuselage. I found that applying the glue from the inside of the fuselage worked very well, leaving almost no seam.

Now came the .50-caliber machine guns under the wings. These guns each consist of a housing and a separate barrel. The housings snapped into the wings so firmly and symmetrically on dry fit that I didn't even need to glue them. I left attachment of the barrels for later.

I found the suggested assembly of attaching the nosewheel to the fuselage before mating fuselage and wings unappealing. It seemed like I would risk knocking the nosewheel off during subsequent assembly. So, instead, I placed the retraction strut into its two guides (and positioned the propeller) as I glued the fuselage together, letting the strut swing free for the time being. Seam reduction was for the most part straightforward, and not even necessary for most of the tail area. The only really difficult spot was the arch above the overturn structure in the cockpit area. Here the arcs of the arch don't touch, leaving a 1/2 mm gap. Although I eventually filled this with CA, it took three tries to completely expunge the seam; I was constrained by the presence of the armor glass in the bulkhead directly below the arch, which I didn't want to fog over.

Once the fuselage was glued together I mated the fuselage and wings. The aft extension of the bottom wing where it met the lower fuselage did not fit well; this took a lot of work to resolve, both because of the joint and because the wing extension didn't quite true up to the fuselage. However, I was able to file and sand it into shape without losing any detail.

At this stage, I re-scribed a few spots where seam reduction had obliterated or thinned the panel detail. I then attached the external store braces to the belly. The kit comes both with a 500-pound bomb and a 75-gallon drop tank. I couldn't get the bomb's fins to true up when I assembled it, but in any event, I decided to use the drop tank, which was the more common external store in the Pacific. A nice touch is that the filler cap is a separate part. Unfortunately, the braces don't fit the tank very well; they aren't wide enough. I did not attach the tank at this stage, as it would get in the way of painting. But its eventual attachment required trimming of the braces so the tank would slide deeper inside them and mate to the ventral hook-up.

Painting and Future application was straightforward. I used the kit decals for the USAAF P-39Q variant, which appeared to be from the Fifth Air Force (Southest Pacific). They were commendably thin, and settled well with the application of MicroSol. However, they were correspondingly fragile, which was a problem with the wing walkways. Fortunately, the kit decals include two walkway sets, so after I destroyed one on the starboard side trying to shift it into place, I got another try, and did much better. One of the star-and-bars for the fuselage also tore; with no spare in sight, I managed to piece it back together, more or less. Suggestion: use only water to position these decals, then apply your decal solvent after you have the decal where you want it. I think part of my problem was that the MicroSol softened the decals very quickly. The decal sheet did not include drop tank or propeller markings, but otherwise seemed complete.

After another coat of Future, I attached the fragile bits (antenna, guns, landing gear, etc.) The landing light on the underside of the starboard wing was a bit too big for the hole provided; the hole needs to be widened just a little bit. Also, the base of the pitot needs trimming for a better fit. After touch-up painting, more Future, and dull coating, the last step was the transparencies. I painted the fore and aft canopy framing, and dry-fit them. I was surprised to find that the aft piece would not fit flush on both sides. There was nothing wrong with the transparency, though; the radio lodged on the aft deck stands too tall. Had I to do over again, I would sand the radio shorter. However, at the stage I was at, I used my Dremel Mini-Mite to grind off the left and right edges on the top of the radio, then touched up the black paint. After that, the aft canopy fit just fine. I attached the two pieces with white glue. The door also presented a problem, because of the misplaced throttle. After thinking about this, I concluded there was no good OOB solution, so I simply removed the throttle detail from the door. The other side still had the throttle; now I have a cabin area the mirror image of what it should be! I mounted the door open at about 40 degrees, and mounted it with CA glue.

Verdict: If you want to build the P-39 in 1:72, look no further. This kit is not a box shaker, but the problems are few, and easily corrected by a modeler of fairly limited experience. For the super detailer, most of the additional effort will go into the cockpit, adding a gunsight, proper throttle, chart pocket, seat belts and so on. This is not an expensive kit; I picked mine up locally for $9.00. By the way, for those who want to do a passel of Soviet 'Cobras, *AeroMaster* offers a whole sheet for the P-39N (and a solitary P-400) entitled "Stalin's Cobras" (sheet 72-037.)

References:

[1] *P-39 Airacobra in Action* by Ernie McDowell (Squadron/Signal; Carrollton, TX, 1980)

[2] *Bell P-39/P-63 Airacobra & Kingcobra* (Warbird Tech V.17) by Frederick A. Johnson (Specialty Press; North Branch, MN, 1998)

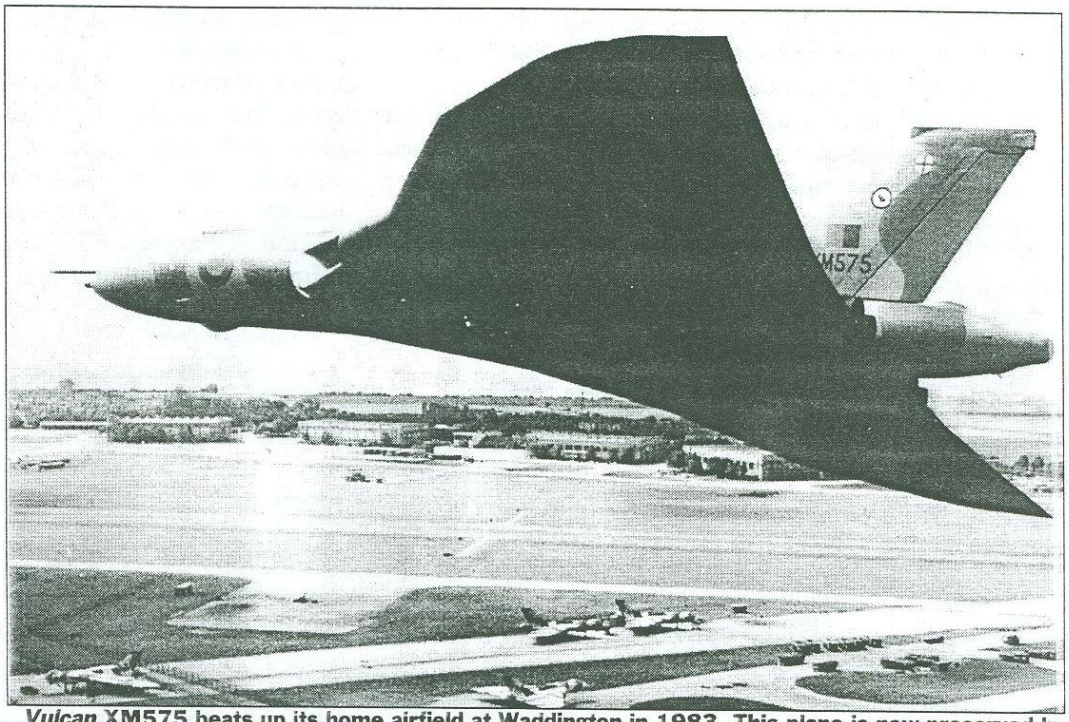
Building Avro's 'Tin Triangle' in 1:72

Continued from page 1

resin series 200 exhausts, which I did not have. The windshield wipers were used to good effect, but much of the set was not used. There was a nicely detailed crew access ladder, but I would be compelled to detail the interior if the access door was open. I also did not use the nicely etched *Flightpath* speed brakes. *Flightpath* provided no brakes for the bottom, but photos show top and bottom brakes open simultaneously. I also had no reference material for the speed brake well area. The etched canopy framing leaves a gap at the fuselage interface, but close-up photos of the real thing shows this gap is large anyway.

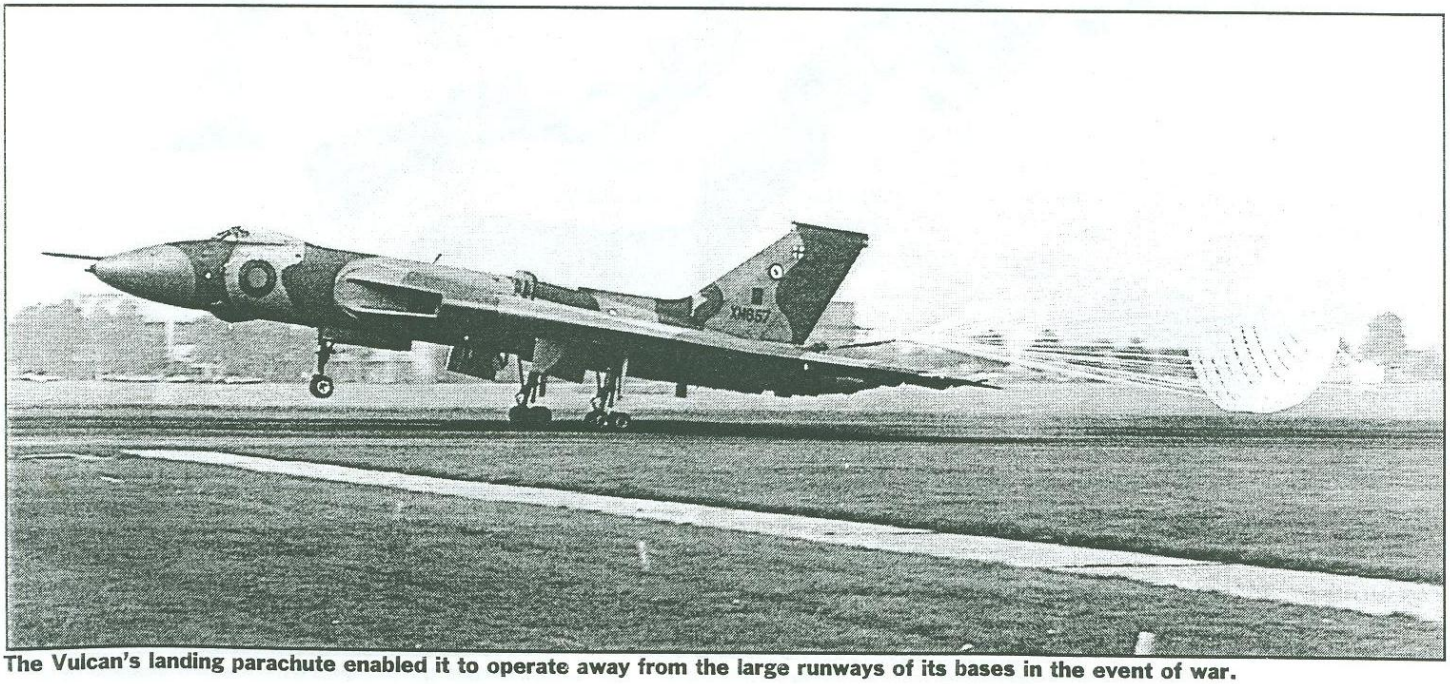
The engines are positioned in the rigid wing root, which conforms to typical British practice of the 1950s. Gobs and gobs of super glue were needed with lots of sandpaper to avoid seams in the intakes. Flat white *Gunze Sangyo* paint was sprayed inside before mounting the intakes to the fuselage. I find it flat colors be sanded and have better hiding capabilities than gloss white acrylic paint.

The flaps were sawed out of the wing and dropped to an angle observed in a photo of an unoccupied *Vulcan* on the tarmac. Resin seats were added, but can hardly be seen through the cockpit glazing. The crew portholes at the navigator's station had to be drilled out, and clear styrene was used for the windows. This was then sanded and polished to blend into the fuselage. The use of *Krystal Klear* for portholes of this diameter is not as realistic, since it drys to form a concave porthole, which is good only if your porthole is also a lens. This concave effect might be minimized by repeated application of *Krystal Klear* .



***Vulcan* XM575 beats up its home airfield at Waddington in 1983. This plane is now preserved by the East Midlands Airport Volunteers Association.**

Much sanding and super glue was needed for the wing interface to the fuselage and the tailcone. Both wings and tailcone need careful alignment. I could not tolerate the heavy raised panel lines and rescribed them all. There are



The Vulcan's landing parachute enabled it to operate away from the large runways of its bases in the event of war.

many panel lines to be scribed, but this was not too difficult because after all, it's just a big ol' flat honkin' delta wing with no complex surfaces after assembly. This was then painted with *Gunze* and covered later with *Floquil* clear flat.

Crest toothpaste and water were used as polish on the *Floquil* to achieve a uniform finish. I used a soft toothbrush and water to get toothpaste residue out of the engraved panel lines. As successful as this process was, I don't think that the slogan "It's not just for teeth anymore!" would increase toothpaste or toothbrush sales.

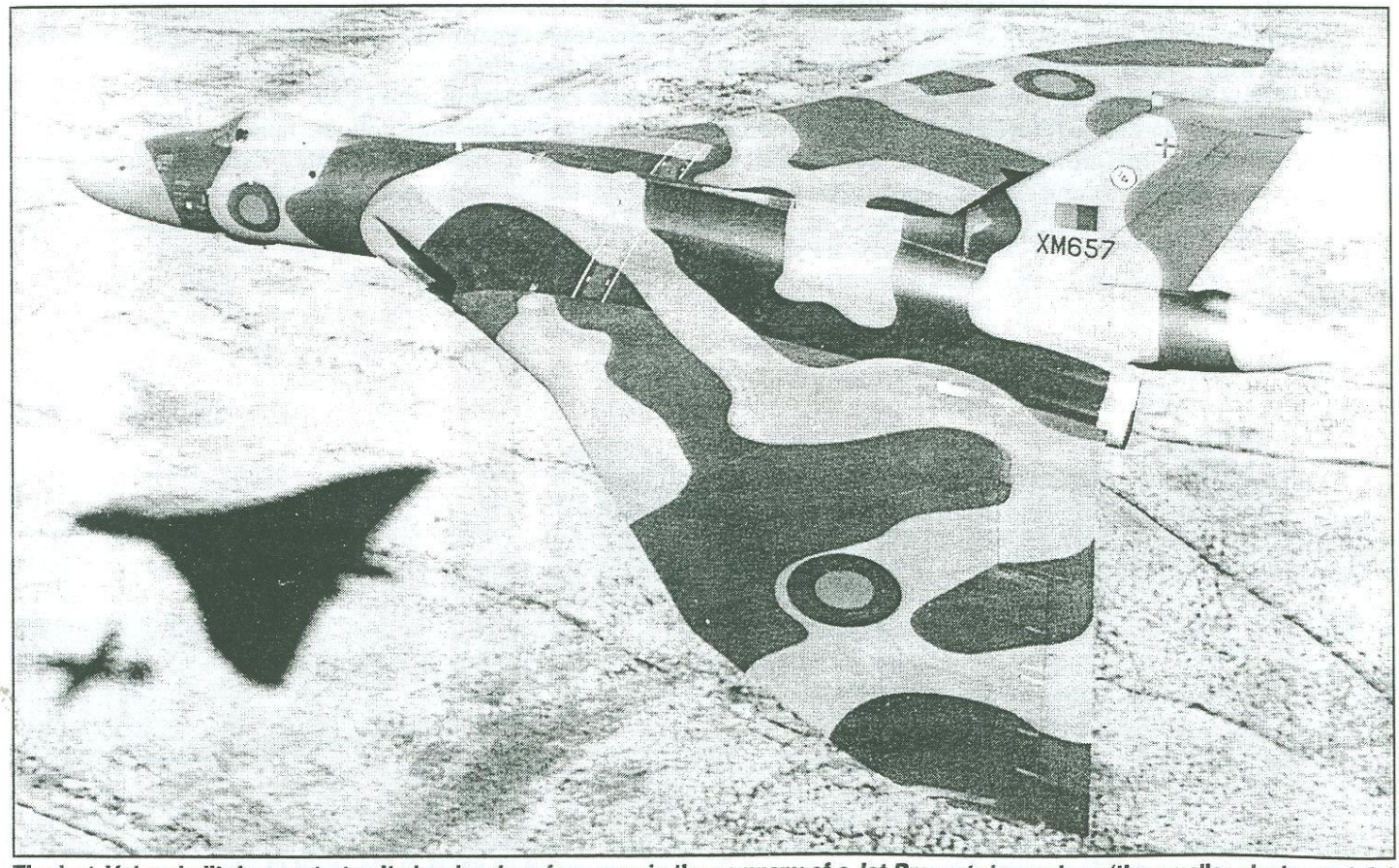
The landing gear is properly represented in the *Airfix* kit. Extreme care is needed to achieve correct alignment and strut angles due to the complexity of the eight-wheel carriage of each main gear. I broke the gear a few times during assembly due to the delicate nature of the design in plastic.

One thing to note is that no *Vulcan* would be complete without the tiny spring-loaded tail skid sensor on the bottom of the tailcone. This warns the pilot if the angle of attack is too great on takeoff.

I chose XL320 in mid 1960s markings as my subject. This machine logged the 500,000th *Vulcan* flight hour in 1981 before being scrapped in the same year. This was a *Vulcan* B.Mk 2A version which in the early sixties was fitted with the huge *Blue Steel* standoff missile that had a range of 115 miles. This was after the refueling probe was added, but before the terrain following radar housing was added to the nose. This missile had many teething problems while being developed and not all *Vulcans* were equipped to carry the *Blue Steel* due to the difficulty of integrating and handling. This missile had an unusually volatile fuel mix and the Scampton base had a special pit to taxi over for dumping this fuel in emergencies. The *Vulcan* was expected to continue as a nuclear deterrent with a replacement for the *Blue Steel*, known as the *Skybolt*, but this plan was never realized. The *Skybolt* would have had a 1000 mile range.

The *Vulcan* was subjected to several camouflage changes over the years. The first ones were painted reflective white to help withstand an atomic flash. Pastel roundels were used for the same reason. A camouflage of standard dark green and gray was added to the top surfaces in the mid 1960s with the reflective white underside, which was later changed to light gray. The roundel markings of this period were standard blue/white/red. The roundel position on the wing was top left only, which was unusual because other British aircraft had six position roundels. The last version was a full wrap around dark gray and green scheme, with the blue/red roundel positioned on top of both wings and sometimes only the left wing.

Reference publications about the *Vulcan* are scant, but there is lots of info and photos on the Internet. There is great nostalgia in Britain for this plane as evidenced by the web pages. Castle AFB has a real 1:1 scale *Vulcan*, but I did not drive out there to take pictures. This *Vulcan*, XM605 is on indefinite loan from Her Majesty's government and has its own web site. The detail photos of this plane are on the Internet. "Wings of Fame" Magazine Volume 3 has an excellent article about the *Vulcan* in volume 3, with a complete history of each aircraft. "Aeroguide 6" has black and white details. *Vulcan , Last of the V bombers*, by Duncan Cubit, has many color photos of the late variants and chronicled the last sad days of the bomber's operational life and the demise of many as scrap metal.

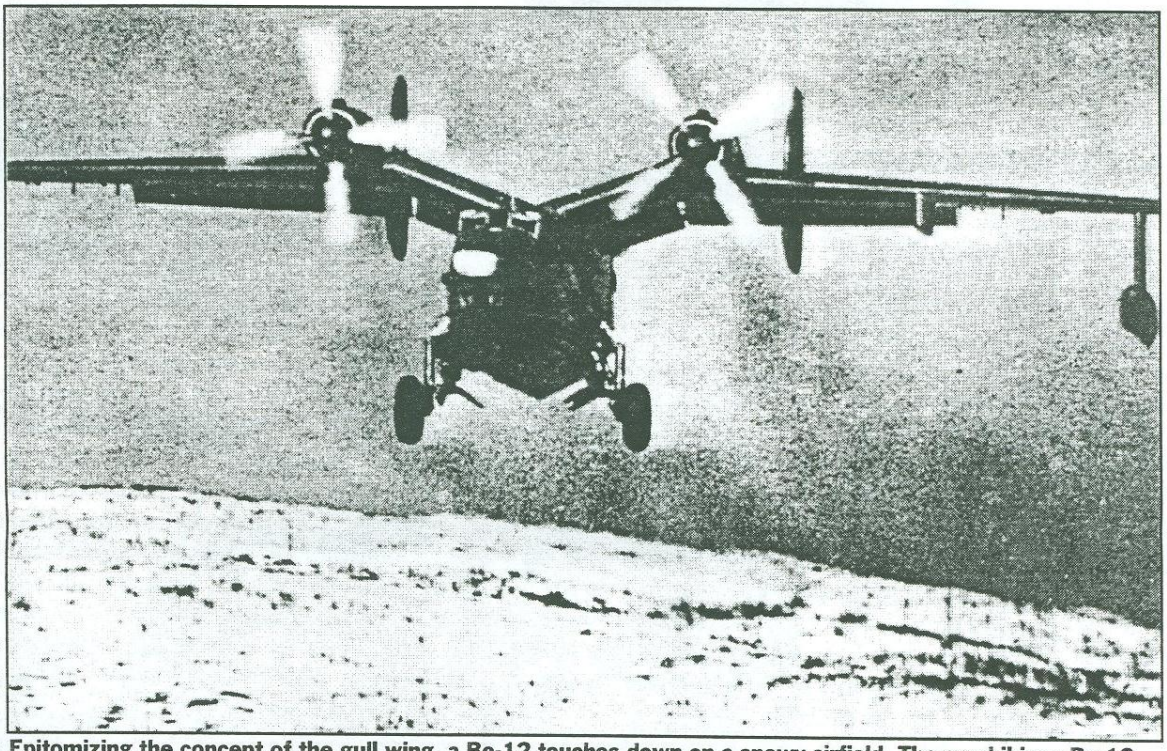


The last *Vulcan* built demonstrates its low-level performance in the company of a *Jet Provost* chase plane (the smaller shadow at left.)

Gear is a hitch in delivering *Masterkit's* 1:144 'Mail'

By Bob Miller

When Ken Miller and I first compared notes on our common interest in flying boats in 1:144 , and hatched the idea of sharing a series of articles on the subject, my first article topic was obvious: it would be the *Masterkit* Beriev Be-12 "Mail." This is an interesting airplane from several aspects, the most basic being that, along with Canadair's CL-215 and the Shin-Meiwa PS-1 (which are not available in 1:144 to my knowledge) it almost surely represents the last generation of big 'boats that will ever be seen. The prototype has been built in significant numbers (reportedly, 100+ copies) and had a long service life, as well as setting a number of records for the class, including an altitude record near 40,000 feet. Besides, in contrast with the slender and elegant PS-1 and the boxcar-utilitarian looks of the CL-215, it is one aggressive-looking aircraft, with characteristic Soviet design style adding to the dictates of flying-boat form.



Epitomizing the concept of the gull wing, a Be-12 touches down on a snowy airfield. The amphibious Be-12 was much more versatile than its Beriev predecessors.

The Be-12 was the final extension of Beriev's flying boat family, built using much of the knowledge gleaned from the Be-6 in a manner similar to the Lancaster/Shackleton evolution. The addition of landing gear and turboprop engines made the Be-12 a much more versatile and dependable aircraft, even if it did come about at the sunset of the flying boat. The top speed of the Be-12 was 379 mph, while the Be-6 lumbered along at 256; payload increased from 9000 pounds to 15,000 pounds. All defensive armament was removed, giving the Be-12 a much more modern appearance. An it offered its ground crews conviences, too: the high-mounted engines had cowlings that dropped down to provide sturdy working platforms.

Eventually, the Il-38 and the Mi-14 assumed the Be-12's ASW role, but the Be-12 is still employed for mapping and high-speed search and rescue duties.

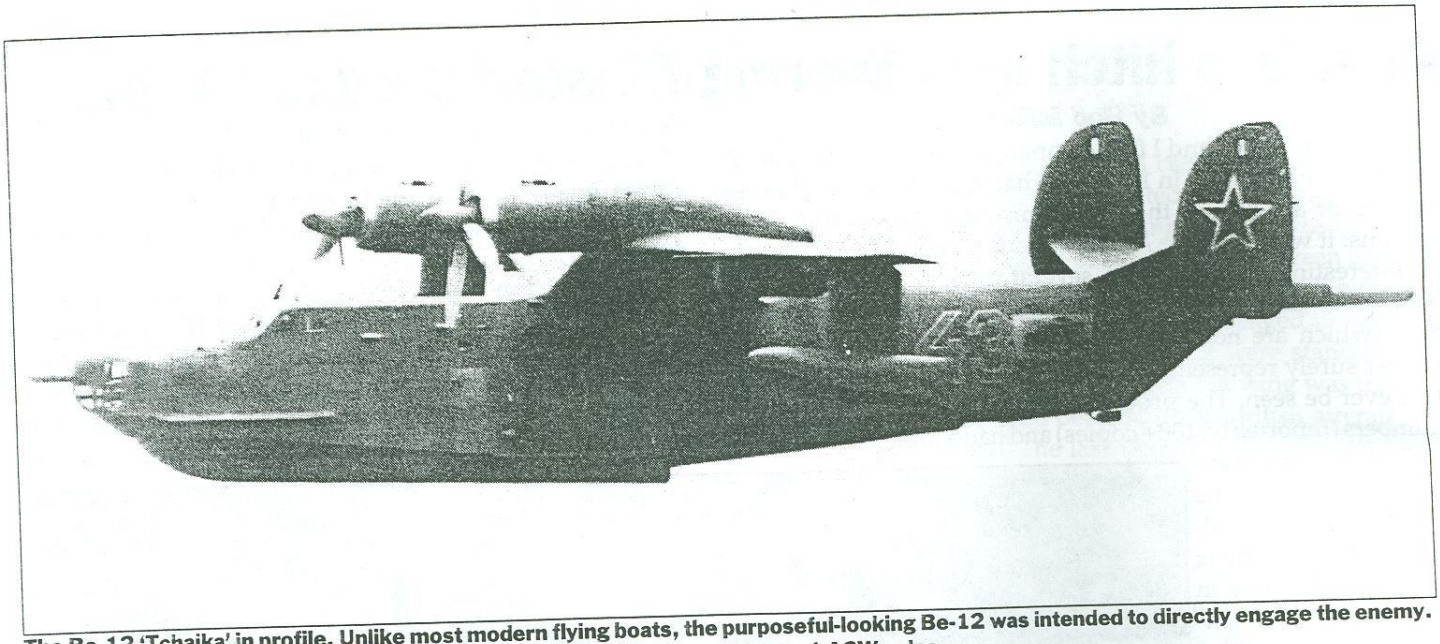
Besides all these attributes, MY Be-12 was well on its way to completion and I could write with some authority.

So, here we are, a year later. Ken has carried this hypothetical series alone, my Be-12 has barely progressed. And my authority has pretty much evaporated. What happened? Quite a litany of things, actually, and in case there are copies of the kit out there waiting to be started, the review may be worth while, along with some suggestions and cautionary notes.

Note number 1: *don't glue anything together until you've checked fits and collected your sources.* "Well, duh!" you're thinking. "That's always rule 1." True, but for this kit, that's serious advice. To say that this is not a very good kit doesn't begin to convey the problem. For openers, consider kit layout and design.

It's a short-run injected kit, which immediately implies some problems, but it has flaws that go far beyond the usual. For instance, the nacelles for those big turboprop engines are badly out of round. If you simply clean up the mating surfaces, you will find on assembly that they are elliptical, and the annular inlets look very wrong. Check them with calipers or micrometer before gluing. I ended up sawing mine apart again and re-fitting.

Another problem area is the one-piece center section of the gull wing. It has a complicated intersection with the top surface of the fuselage, and a large fillet that should meet the sides of the fuselage smoothly. The only problem is that it is wider than the fuselage. The builder is faced with a major sanding job to blend that fillet into the fuselage sides, or you can do what I did: saw it apart at the center line, sand it down until the fillets meet the sides, and glue back together, trying to preserve the dihedral angle. Down the line, you face the task of assembling the top-and-bottom outer wing-panel assemblies to that infamous center section, but they have no tabs or other guides to set the correct anhedral angle. There is only a template on the plan to be cut out for a guide. Of course, having narrowed down the center section, it doesn't fit, so I did that assembly with blocks. But photos of the aircraft seem to suggest that the outer panels are angled downward too steeply. It looks quite dramatic this way, but half to two-thirds the angle shown might be more nearly correct.

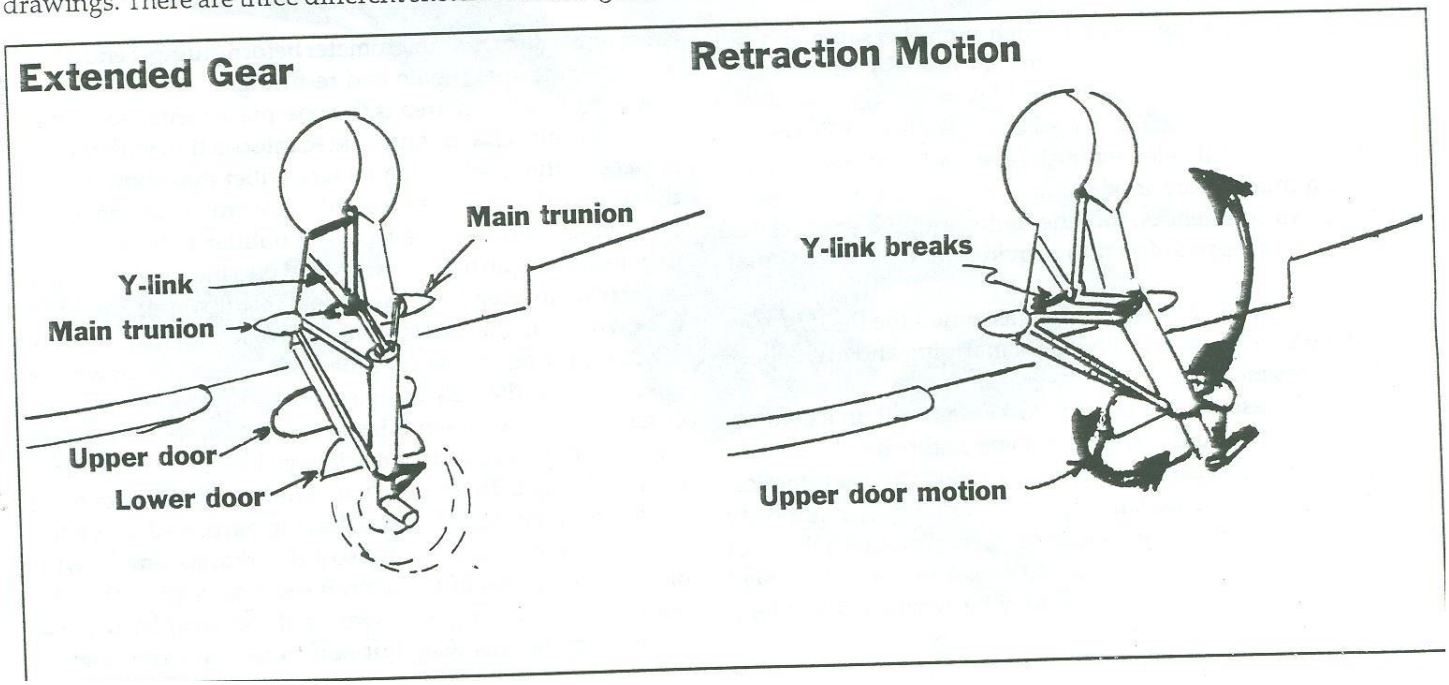


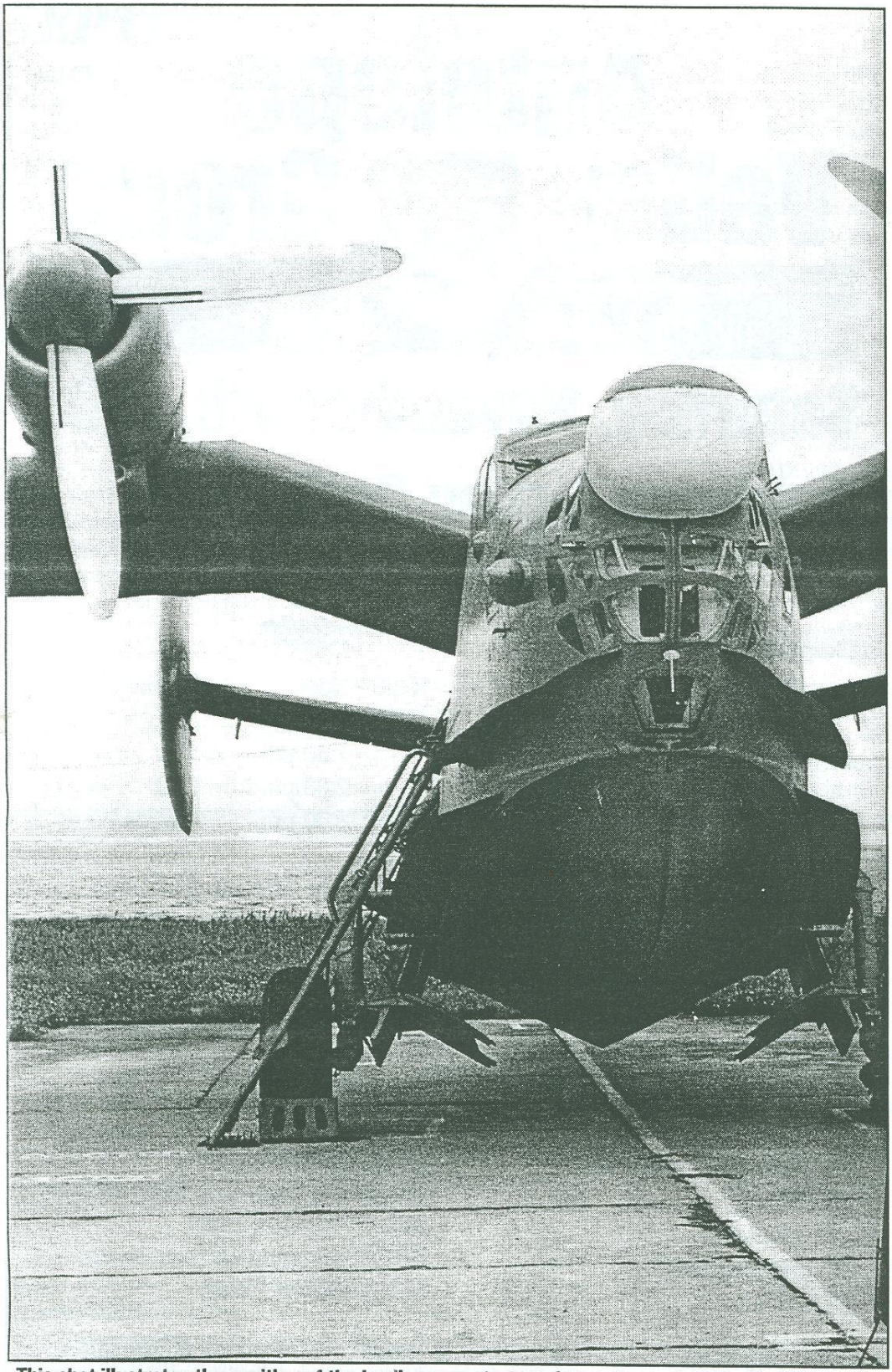
The Be-12 'Tchaika' in profile. Unlike most modern flying boats, the purposeful-looking Be-12 was intended to directly engage the enemy. The Il-38 and the Mi-14 have supplanted the Be-12 in the intelligence and ASW roles.

Another little frustration: The tip floats and struts were molded in one piece, but the dies were not in good registry, so the inboard and outboard halves were displaced vertically by 40 or 50 mils. Out came the razor saw again, to saw them apart at the parting line, sand smooth, glue together with a styrene sheet to replace the kerf, and more sanding to shape.

Next, there are some issues to resolve with the landing gear. There's a one-piece tailwheel assembly provided, with locating holes in the blunt lower aft hull. The only problem is that there is no provision for a tailwheel bay or for doors, and they are clearly needed, unless you decide to pose it gear-up in the water. (This would be rather a pity, in a way: this must be the last major military fixed-wing type produced anywhere with a tailwheel gear.) So here I am, quite dissatisfied with the tailwheel area, but I'm certainly not going to saw the fuselage apart at this stage to fix the problem.

Another issue with the landing gear involves the assembly drawings. There are three different sketches showing assembly of the main gear, and none of them agree, either with each other or with the 12 or 14 parts provided. I found the solution in the book *Soviet Wings*, by A.M. Dzhus. (Many thanks to whoever contributed it to the '97 pizza feed and theft-fest, as well as to the person I nabbed it from. It's a good one.) The retraction motions are unusual enough that I will attempt to sketch them here. The key to understanding is a Y-shaped upper link, which is actually two links that break in the middle. In addition, the gear doors must be cut into upper and lower sections: the lower section effectively swings with the bottom triangle, while the upper section does a sort of backflip and ends up under the hull with gear extended. One might think that a rational person would have given up long ago, built it with gear retracted, and posed it in the water, but puzzling out how the bizarre thing worked was just too challenging to abandon. (Hey, that doesn't even begin to address the question of how rational any of us are, to get this involved in this hobby, anyway!) This doesn't exhaust the





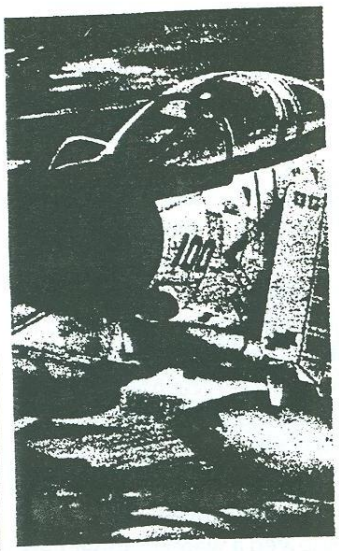
This shot illustrates the position of the landing gear struts and gear doors when the Be-12 is on the ground. Not the lower gear door, which is rotated nearly 270 degrees from its retracted position.

problems, but listing them all one by one would surely exhaust your patience. Let's leave it.

The kit claims 48 pieces, most in medium grey plastic. (I didn't count them.) There are two transparencies, an astrodome above the cockpit, which doesn't appear in any photos, and the big observer's bubble abaft the wing. Other windows are solid, to be faked in by black decals. I know other people have used this method successfully, but I cannot envision it working for me, so I opened up the windows and filled in with Krystal-Kleer. This looked to be a problem with the vast observer's greenhouse in the bow. Help came in the form of a feature on "Borate Bombers" in *Scale Aircraft Modelling* , December 1995, which showed a water bomber version of the Be-12. Eureka! It would be a hypothetical production version of this aircraft, with no bow greenhouse, with civilian avionics antennas only, and I would replace the badly molded MAD boom with a short fairing.

Is the kit accurate? I'm not sure. Digging through sources, I found four drastically different sets of dimensions. I assume *Soviet Wings* is correct at 97.5 ft. span, 99 ft long, which makes my span 2.5 percent too large, despite cutting out some center section. With the cropped MAD boom, my length is not comparable. The shape of the vertical tail is subtly wrong, but the overall impression is good. The nose radome looks wrong at first glance, being broadened horizontally instead of round, but this is actually correct, per *S.W.* So let's give it about a B- for shape and dimensions.

But otherwise, this is a very disappointing kit. That's as much for the promise held out by the manufacturer as by the model itself. The box claims a product line including the Convair C-131 and a KC-97L in 1:144 and an Mil-6 "Hook" in 1:72, among others. Decent kits of these subjects would have been welcome, but after this review, would you buy one? The company seems to disappeared without a trace. So, while the Beriev had no problems I couldn't fix, the same wasn't true of the company. More's the pity.



Best of Show

Theme Award

Best Automobile

Best Finish Awards

People's Choice

Best X-Plane

First thru Third Place Plaques

Antelope Valley Group

Presents The Second Annual IPMS Contest

Saturday, November 7th, 1998

Antelope Valley College

Cafeteria Entrance • 3041 W. Avenue K • Lancaster, CA

Categories

1. 1/72 Allied Prop Aircraft
2. 1/72 Axis Prop Aircraft
3. 1/72 Jet Aircraft
4. 1/48 Allied Prop Aircraft
5. 1/48 Axis Prop Aircraft
6. 1/48 Jet Aircraft, 1940 - 1959
7. 1/48 Jet Aircraft, 1960 - Present
8. 1/32 Aircraft
9. Tanks
10. AFV, Artillery
11. Ships
12. Auto - Competition
13. Auto - Street Machine
14. Auto - Custom
15. Auto - Miscellaneous
16. Figures
17. Diorama
18. Miscellaneous
19. Junior

Schedule

10:00 - Noon	Registration
12:00 - 2:00 pm	Judging
1:00 pm	TBD
2:00 pm	TBD
3:00 pm	Awards

Adult Entry Fees are $3.00 that includes 1 admission and 3 entries. Additional entries are $1.00 each.

Juniors (15 and below): FREE.

Spectators: FREE.

Best Finish Awards.
We will be presenting three awards:
Automotive Best Paint,
Best Weathering Technique, and
Best Metalizer Finish.

The Theme for this year's contest is Desert Warfare. Any entree that qualifies for Theme consideration is automatically entered regardless of class, scale, or division entered.

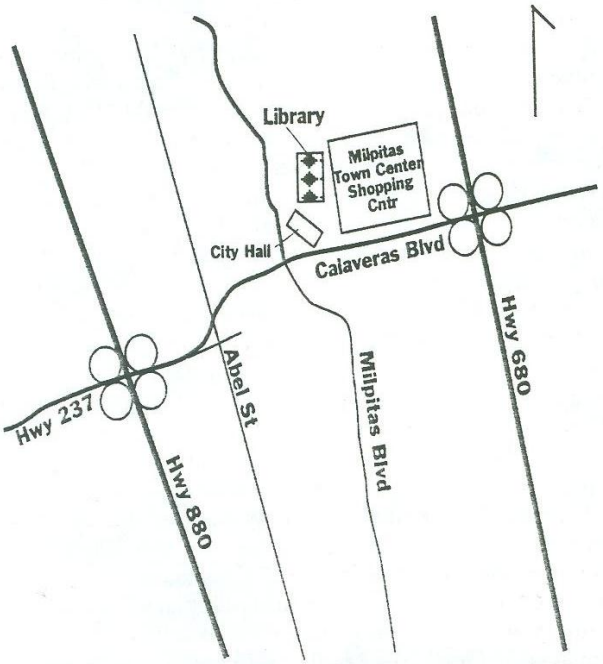
IPMS Chapter Contact: Don Butzke at (805) 942.9827.

SEPTEMBER MINUTES

Brad Chun started off September's meeting by announcing that the U.S.S. *Hornet* will open as a museum on Feb. 20, 1999, and that the museum would like to build a model collection to illustrate the types operated from the illustrious ship. Brad will have more for us on this topic next issue, but if you're interested and your at the October meeting, he'll let you know how you can help.

In model talk... Peter Wong built his *Smer* MiG-17 after seeing the real item listed in Aerotrader for a paltry $25,000! When he weighed this sum against the cost of a mail-order bride (a jibe directed at his wife), it was decided that... he should build a model! Bert McDowell is updating *Skywave*'s *Bogue*-class escort carrier, outfitting it with a new deck and many new gun tubs. The ship will appear as she did in 1944, says Bert. An old *Revell* B-25 served as a testbed for Lou Orselli, who scratchbuilt the cockpit, explored weathering with his airbrush and finished the plane up in desert pink. Unfortunately, not all things went Lou's way—over time, the plane's decals fell off! Lou's also building an escort in the form of a *Monogram* P-51B; in a moment of self-hate, Lou decided to paint the checkertail markings... And they came out darned good, too! Toby Martin combined a *Testors* S-4 UFO with the clear plastic dome from a vending machine toy capsule and a G.I.-Joe-scale alien to make a very funny fugitive from "Invaders From Mars." Tom Trankle is using tips he received at the nationals from Bill Koster himself to make improvements to *Monogram*'s 1:48 He 111. Cliff Kranz built the AMT '63 Chevy panel truck when the kit came out—actually, when the pick-up truck came out; way back when, in the days before plentiful styrene sheet and superglue, Cliff cannibalize the kit's trailer to complete the panel truck conversion! Chuck Medieros scratchbuilt a 1:700 *speerbrecker*, a surplus merchant ship used to clear a path through minefields by the German navy. Kent McClure has his Austin armored car painted in a lovely shade of RAAF green, and he'll combine this with some Russian World War I figures also in 1:72 to make a diorama. Kent also showed some '50s-style spaceships—all chrome—and a few gaming figures, including a red bondage queen from "Armitage." Chris Bucholtz displayed the early-stage masters for his *Jet Provost* T.5's cockpit and the nearly-ready-for-paint *Condor* A-36 and *Hasegawa* P-47. Mark Schynert, who wrote the review of *Academy*'s P-39, actually built the darned thing, finishing it as P-39 "Snooks" / "City of Fresno." Mike Burton plans on finishing his *Monogram* 1:48 P-47 as one of the T-Bolts flown by the Tuskegee Airmen for a brief time, and he has a second P-47 whose livery has yet to be determined. Mike also managed to get the ancient *KP* L-29 *Delphin* together and looking respectable, and he's battled *12 Squared*'s XP-77 into a nearly completed condition. Steve Travis' latest Bucket T from the *Monogram* "Green Hornet" kit is finished, painted and polished—just two to go in his collection of bucket Ts, says Steve. The extra parts from that model helped to detail his '34 Ford, along with an improved frame, running gear and a chopped top. Peter Olesko used a keen eye and patience to assemble, paint and rig a 1:72 Halberstad. Chris Bowman says he had a lot of fun with *Hobbycraft*'s 1:48 I-16, which he built in just six hours! Chris is investing more time in *Hasegawa*'s Bf 109E. Randy Rothhaar, unlike most Japanese and German servicemen of the early to mid-1940s, thinks the *Beaufighter* is "cute," and he's been inspired to give the *Tamiya* kit his attention. Randy's also building a purple BMW for his mother, and adding zimmerit to a *Minicraft* Tiger. Robin Powell did a fine job of representing the RAF, making the *Aeroclub Venom* FB.I into a beautiful replica. Ed Van Brabant added the *Cooper Details* cockpit and *Ministry of Small Aircraft Production* decals to dress up his *Spitfire*. Joe Fleming is building an insurance salesman's nightmare, combining *Italeri* and resin parts for the front end of a crashed truck, which will occupy an important position in a diorama. Joe's completed T-34/76, as depicted in last month's Styrene Sheet, was present; Joe is also building a B4C self-propelled demolition charge, whose white-metal suspension "sucks," in Joe's words, and the *ADV* T-60. Roy Sutherland replaced the prop and spinner on his 1:72 *Spitfire* IX with a set made by... well, you can guess! He used *AeroMaster* paints to finish the model and used decal strips for the canopy framing. Roy also used the *Cooper Details* interior on the 1:48 *Airfix Spitfire* 22. Cooper Sutherland did a fine job on a model of his own, an A-10 *Warthog*. To the best of our knowledge, no resin was involved in this model! Mike Yamada is working on a *Revell-Monogram* Impala SS, imagining what might have been had the Impala line continued. Mark Hernandez moved a couple years back from his usual subjects, building the *Special Hobbies* Sack AS-6 "flying beer tray," a plane that was actually built! Dave Balderrama spent some time relaxing with small scale subjects—a 1:100 *Tamiya* Il-28 "Beagle" and 1:144 versions of the Bf 110 and He 111. Ken Durling says his YS-11 kit came with "just right" scribing that made the kit a pleasure to build. Ken's also enjoyed building *Hasegawa*'s D3A1 Val in the markings of the aircraft that led the attack on the *Yorktown* at Midway—all it needed was adult-size seats to make a lovely model. Jim Lund demonstrated himself a Fokker fan, showing his vacuformed T-2, equipped with a Liberty engine, "Question Mark," the T-2 that set an endurance record and conducted the first air-to-air refuelling, the Atlantic C.2, predecessor to the F.7, and the Fokker-VFW short-field airliner. Ben Pada's "Tojo" fighter is an all resin-and-brass effort; his *Corsair* is plastic—*Tamiya* plastic, to be exact—with plenty of additions, like the interior and the positioned rudder. Rodney Williams has his F-100 in Thunderbirds colors all finished off, resplendent in a base coat of *SnJ*. At about the same time he started the F-100 (five or six years ago, he says), he also started the *Hawk* F8F *Bearcat*; it's now done and dressed in the markings of the Gulfhawk promotional aircraft. And the Model of the Month goes to... Ron Wergin, whose first appearance at the club brought with it a *Monogram* Bf 109, a Zero, CR.42 and Fw 190 from *Revell*, a *Bandai* Panther with a full interior, a MiG-17 from the *Hobbycraft* kit, A *Revell* P-40 and an Su-25 "Frogfoot." Great models, and lots of 'em!

The Air Racers contest was a three-entry event. In third, with a "Swee' Pea" built from the rather brutal *Pegaso* kit, was Dave Balderrama. In second with a "Midget Mustang" from another brutal *Pegaso* kit, was Kris John. And the winner, with his 1970s Enco-sponsored XP-47H from *MPM*'s kit, was Mark Schynert! Congratulations to our fast-moving winners!



Next meeting:

7:30 p.m., Friday, October 16

at the Milpitas Public Library 40 N. Milpitas Blvd.

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