

Yakovlev's first success: UT-1 in 1:72 resin

By Chris Bucholtz

Although little known in the west, Yakovlev's UT-1 played a vital role in the growth of the Red Air Force, both before and after the German invasion of 1941. Although it was small in size and had just a single seat, it was the Russian equivalent of the T-6 *Texan*, especially before American lend-lease shipments began, and served as the principal Soviet advanced and aerobatic trainer for the early part of World War II.

The Yakovlev UT-2, a two-place basic trainer powered by the M-11E five-cylinder air-cooled radial, preceded the UT-1. The smaller UT-1 was powered by the

same engine and was built to be rugged, simple and easy to maintain. The plane was only 18 feet, 8 inches long and had a span of 23 feet, 9 inches, and weighed 1300 pounds, but could reach a top speed of 158 mph and was both maneuverable and forgiving, making it a logical choice for advance training duties.

In order to reach production status, the then fledgling Yakovlev firm entered two UT-1s in the Moscow-Sevastopol-Moscow air race of July 24, 1937. The 19-entrant race turned into a two-plane duel between the two UT-1s, which finished the course in 10 hours 41 minutes, at the time a class record. Of the seven competitors that completed the course, none were within 15 minutes of the UT-1s. On the basis of this performance and ruggedness, the UT-1 was ordered into full production.

The UT-1 found immediate favor in military and civil flight schools and in sport flying clubs, all of which were being carefully organized by the Stalin regime to prepare for war. It was often presented by the Communist Party as a gift to the Osoaviakhim, the Soviet organization that supported and promoted interest in aviation. The plane could be fitted with two pontoons, and in this configuration it was known at the

VT-1. A The UT-1 set an altitude record of 10,700 feet in October 1937, and a VT-1 set an altitude record for floatplanes shortly afterward.

When war came, the UT-1 was pressed into emergency service, training the pilots who would combat the invading Germans. The plane made an excellent liaison aircraft, and in 1942 the UT-1 was pressed into combat duties. A total of 21

aircraft were modified to carry a machine gun mounted externally on each wing and two RO-82 rockets under each wing. Starting July 16, 1942, these aircraft began flying night harassment missions against the German invaders from the airfields at



The sporty, little UT-1 had an importance beyond its appearance, serving as an important trainer in the early years of World War II and even seeing combat as a night harassment bomber.

Koukharevka and Semenovka. The pace of these missions was high during August and September, and by the end of the year only seven of the modified UT-1s was left in service.

The UT-1 was produced in significant numbers, 1241, and for many years, from 1937 to 1948. It helped build interest in aviation among the men who would build the Soviet Air Force, and for that reason it is a very significant aircraft.

The *Neomega* kit of the UT-1 is not the first in 1:72; *Wings 72* produced a UT-1/VT-1 vacuform kit some years ago. The simplicity and detail of this kit made it an attractive departure from my more involved projects, and the Osoaviakhim presentation scheme offered an opportunity to add some color to my collection.

The kit comes in a brittle, bright green resin. Ribbing and fabric structures are portrayed in restrained and realistic manner. The chief components are the wing and fuselage, each a single part; the wing includes the floorboard detail for the cockpit, and the fuselage has the pilot's entry doors already separated from the fuselage. The engine cylinders were separate, well-detailed parts, which made them easy to paint. Small details, like the control yoke and pilot's seat, were

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EDITOR'S BRIEF

You probably have no idea how close the club to not having an editor any longer, let alone a newsletter this month. For the second month out of three, there were no articles turned in except for those written by the editor until the Thursday before the issue had to be out. Thanks are due to Mike Burton, who, for the second month out of three, is the person most responsible for you getting a Styrene Sheet at all. This newsletter is the club newsletter. It is not the editor's newsletter. The editor cleans up the stories (and writes the minutes), lays them out, picks pictures to go with them, prints the pages, folds and staples them, and mails the newsletter out. When the duties are extended to writing all the stories or, worse yet, to badgering the membership constantly for submissions, then the workload becomes too much. This is supposed to be the club's newsletter; however, the club is not supporting it. I suspect that there would be a great hue and cry from the membership should we cease publishing the Styrene Sheet after 37 years, but without articles, this will be the only recourse we have. The minutes section is full of details about people's projects. We have more members building more models than ever before, yet we have no one (save a few stalwarts—Mike, Mark Schynert, Bob Miller, Laramie Wright and Brad Chun) writing about their projects for the Styrene Sheet. This irrefutable fact makes your editor extremely angry, and the more he thinks about it, the angrier he gets. I have edited this newsletter for eight years. In the last 12 months, I have asked twice in print before. This is the final time I will ask. If you value the Styrene Sheet in even the slightest, contribute to it. Otherwise, you will indeed get back exactly what you put in. On a happier note... Several members, including your editor, Pastoria Aguirre, Mike Burton, Angelo Deogracias, Mike Braun, Jim Priete and Roy Sutherland braved horrific heat, horrific distances and horrific Mark Kay Cosmetics representatives to attend the IPMS/USA Nationals. The event was a lot of fun, with few glitches visible to the public (the main one being a speech from IPMS/USA president Chuck Davenport that was so incoherent you might have thought Chuckles had just awakened from a coma). The models on display were terrific, and no doubt Mike Burton will share his 800+ photos with the members at the meeting. Roy Sutherland won twice, Mike Braun won at least once, and your editor won for the first time. For the *Beaufighter* that took forever to build? No. For the weathered N1K1-Jb "George" with the scratchbuilt interior? No. Instead, he won second for "Slingsby Type 19: First and Final Flight," a diorama slightly wider than this column of text that was built over a weekend, in Small Composition Diorama, 1:51 and Smaller. Besides bringing up the need to reform the categories at the nationals to eliminate such garbage categories, it is a reminder that, no

A LITTLE HELP?

Tom Harrison has a wooden display case with sliding glass doors that's 42 inches high, 36 inches wide and nine inches deep, with five shelves. He needs to find a new home for this case with an owner who can come pick it up at Tom's home in Cupertino. It's free to the first person to ask for it; talk to Tom at the next meeting.

matter what you think of your models, bring them to contests. Don't be concerned about whether you win or not, and don't agonize over every perceived shortcoming, but put them out to share with your fellow modelers. You may be pleasantly surprised at the results of just participating. Speaking of participating, did you editor mention he needed articles for the newsletter?

CONTEST CALENDAR

August 20, 2000: **IPMS/Central Valley** hosts its **annual contest** in Fresno, California. For more information, call Nick Bruno at (559) 229-3675.

September 9, 2000: **IPMS/Reno High Rollers** hosts its annual contest. For more information, call Doug Summers at (775) 747-5931 or e-mail him at GHPLtd@aol.com.

September 23, 2000: **IPMS/Humboldt Bay** hosts its **annual contest** in Eureka, California. For more information, call Mitch Bartel at (707) 826-1380 or e-mail him at mitchy2@juno.com.

October 21, 2000 **IPMS/North Valley Dambusters** holds its **annual contest** in Redding, California. For more information, call Richard Carlson at (530) 357-4488 or e-mail BlackWatch25@aol.com

October 22, 2000: IPMS/Orange county hosts **The Region 8 Convention-OrangeCon 2000** in Buena Park, California. For more information, call (949) 631-7142 or e-mail ocipms@aol.com.

October 28, 2000: The American Scale Modeling Organizaton presents the **Central Valley Modeling Expo** at the Legion of Valor Museum in Fresno, California. For more information, Call Ernie Gee at (559) 438-1628 or e-mail him at elitemodels@aol.com.

November 11, 2000: The **Antelope Valley Group** hosts its **Fourth Annual Contest** at Antelope Valley College in Lancaster, California. For more information, call David Newman at (661) 256-6359 or e-mail him at dnewman@as.net.

November 18, 2000: **IPMS/Mt. Diablo** hosts its **annual contest** in Vallejo, California. For more information, call Chuck Speir at (707) 645-0231 or e-mail him at sjshark2@ix.netcom.com.

Yakovlev's trainer trend continues: Yak-11

By Mike Burton

With the experience of his successful World War II fighter designs to draw on, Aleksandr Yakovlev's Yak-11 trainer design of 1946 was probably seen as a sure fire bet when it was first rolled out.

Effectively an improved and refined version of the unsuccessful YAK-3UT, deliveries of the Moose (NATO code name) to Soviet Air Force started in 1947. The type saw front line service lasting into the early 1960s, with the Czech-built L-29 *Delphin* jets replacing them with some Warsaw Pact forces. Over 3800 examples were built by Yakovlev and 707 of two sub-variants by the Czechs, and 18 different air forces eventually put the Moose to work training pilots. A nose-wheel variant (Yak-11U, also known to the Czechs as the C-11U) was developed for jet pilot familiarization, although these apparently saw mass production only at the Czech factories.

Capable of being fitted with a single cowl-mounted machine gun and two underwing racks for low-weight bomb payloads, the Yak-11 Moose was used for combat training roles. The first U.S. kill of the Korean War was officially identified as a Yak-11, downed by 1st Lt. William T. Hudson in an F-82 *Twin Mustang*.

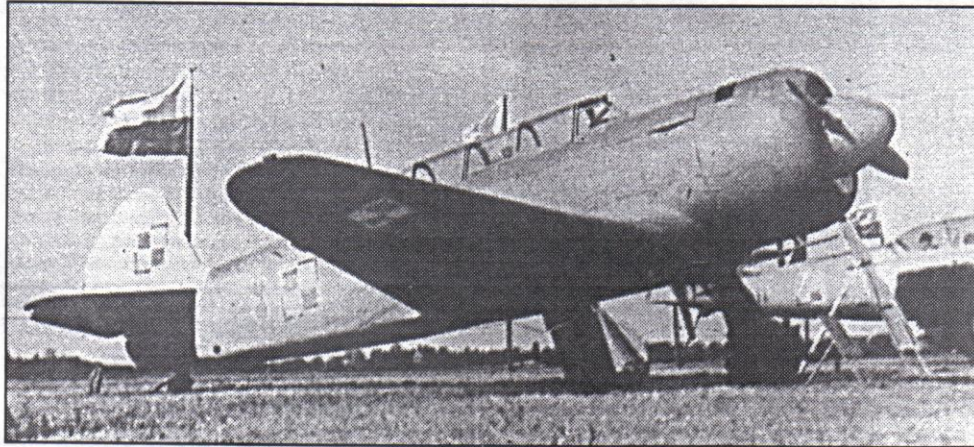
Reportedly a well-behaved, sturdy plane suited to its design mission, a few examples still fly today in private hands. One, Czech built and registered OK-KIE, dropped out of a ferry flight of seven other aircraft and made a wheels-up landing in Cyprus in 1964. It was purchased as an insurance write-off by a British citizen and was restored and re-registered in Great Britain as G-AYAK. This Moose was entered as race number 91 in the 1973 King's Cup Race. It later went on to entertain at air shows.

There's a Moose loose here in California. In June 2000 I saw one at Chino's Planes of Fame Museum.

For an airplane that at first glance resembles an early model North American *Texan/Harvard* or Vultee BT-13, the references are not abundant in English, nor are photographs. The

standard modeler's rule of thumb (the references, especially for the interior, were located immediately after I had completed my Yak-11) did not foil my project.

Having gotten the 1:72 *Waku* vacuform kit originally as part of an "oh yeah, you WANT these?" grab bag auction lot, it struck me one afternoon that this little vacuform had more charm than first glance indicates. The sheet contains just one sheet of white vacuform parts, a clear vacuformed canopy,



A Polish Yak-11, showing the wing planform to good effect. The wing was little changed from the UT-1 through the Yakovlev fighters to the Yak-11.

and some color waterslide decals. One thin cardboard sheet combines what constituted "retail eye candy" in Poland and an exploded parts assembly instruction sheet and fairly adequate color plan decal guide for all four schemes. The instructions fall short in provid-

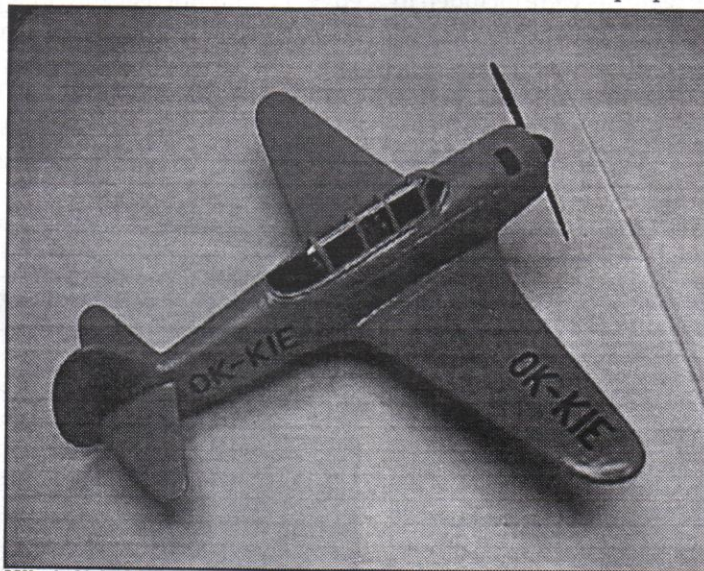
ing the overall color of each plane, and not being a tremendous linguist (I can barely manage coherent Californian English, let alone Polish) this did slow me down at two points during construction. Guesstimations, educated hunches and luck eventually paid off.

There are many ways to get vacuform kits started, but the need for too much preparation work often results in them

never leaving the carrier sheet. In this case, I was able to simply snap all the carrier from the parts by gentle insistent persuasion, with my bare hands after cutting the sheet into smaller, easier to handle sections, a good example of how "friendly" the kit really is—it literally bends to your will and all but begs to be built.

Lacking at the time the invaluable little Polish profile "Typy Broni i Uzbrojenia" # 76, which covers the Yak-11 with beautiful isometric line drawings of both the front and rear cockpits and a very nicely done cutaway large shaded illustration on the back. I had to

improvise. I simply went with a cockpit floor, two-part seats (pan and rear), instrument panels, and a divider/panel shroud, all of which were provided in the kit. After sanding them and dry fitting, I marked the best points on the cockpit floor to drill holes to install the fabricated sprue control columns. Now that I have the aforementioned profile, thanks to a great guy at the Hobbycon Summer 2000 event, I can



Mike's Yak-11, built from the *Waku* vacuform kit. Despite its success, the Yak-11 remains a little-modeled subject.

verify that the kit is pretty accurate in the cockpit area.

The fuselage is in two halves, requiring nothing special beyond being careful to balance your sanding to keep the edges matched up while getting a the rudder and vertical stabilizer into a proper airfoil shape. Where I had to employ my first WAG (wild-assed guess) as to whether to show what was at the back of the cockpit. The kit portrayed the area

behind the instructor's seat as open all the way to the fuselage bottom, with the floor not extending that far back. Well, having seen enough real warbirds, this seemed only somewhat likely. What was more likely

was that some sort of equipment would be here (radios, six packs, tool boxes...) I built and discarded a fictitious radio shelf and then an extended floor, then finally a settled on a simple instrument training "curtain." The curtain was merely a curved bulkhead made to fit the rear edge of opening. The basic idea was to make sure one could not peer into the gaping open area when canopy was affixed permanently.

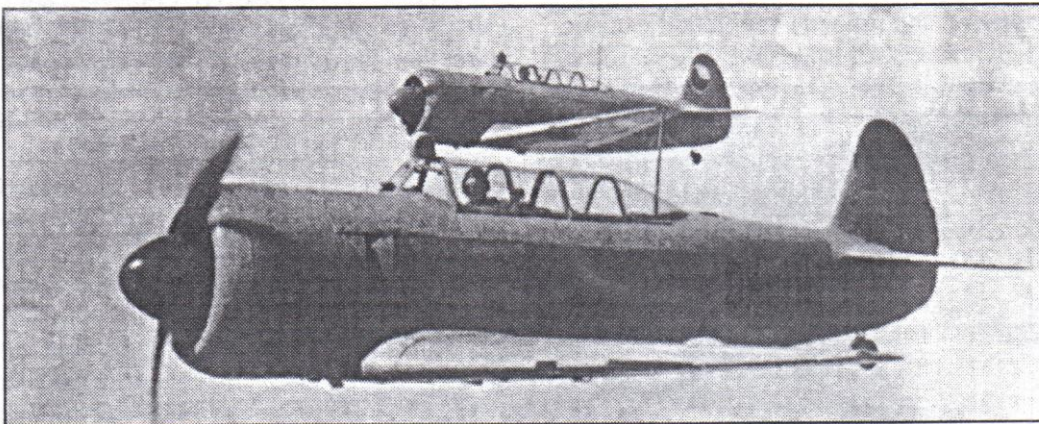
Since there was no way to determine what color to paint the interior, I went with a "scale black" in the Polly Scale range (FS 36081, or a very dark gray), with washes to make the seats, floor, shrouds stand out a bit. Tape seatbelts were included to liven up the large cockpit, and I was on to next stage. Profile #76 leaves open the idea of perhaps an interior green or a gray/black combination with leather brown seats for the interior, but there is no way that it can be confirmed.

Before closing up the fuselage, the radial engine fan ring cowling was sanded out and test fit against the diameter of the fuselage. You do not want to find a large difference of opinion too far down the road, and it is much easier to add shims to

thicken the fuselage or sand the fuselage nose a slight bit more. With only a little more sanding, the ring is done.

The wings come in three parts: a complete underside and left/right uppers. It takes some careful cutting with a sharp knife to open up the landing gear bays, especially if the doors are to be reused later. The one-piece lower wing has the required dihedral molded in, but sanding to achieve a thin

wing with sharp trailing edges was a worthwhile investment in time. After I was satisfied that my wings were thin enough, I proceeded to dry fit the parts to the fuselage. It is very easy with limited run injection and

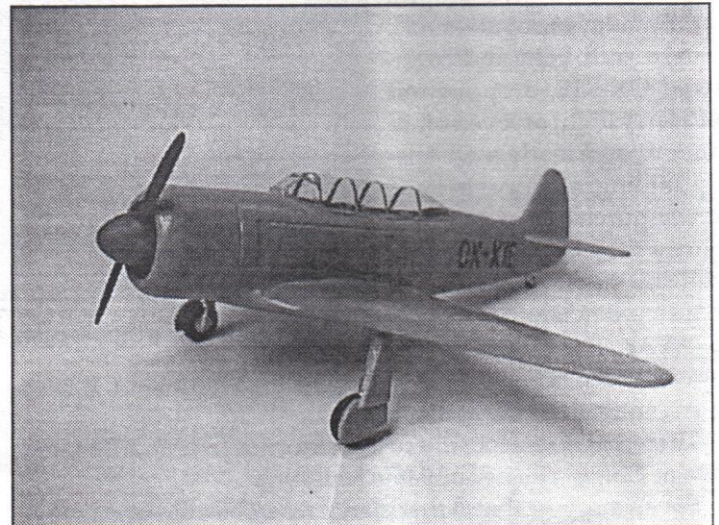
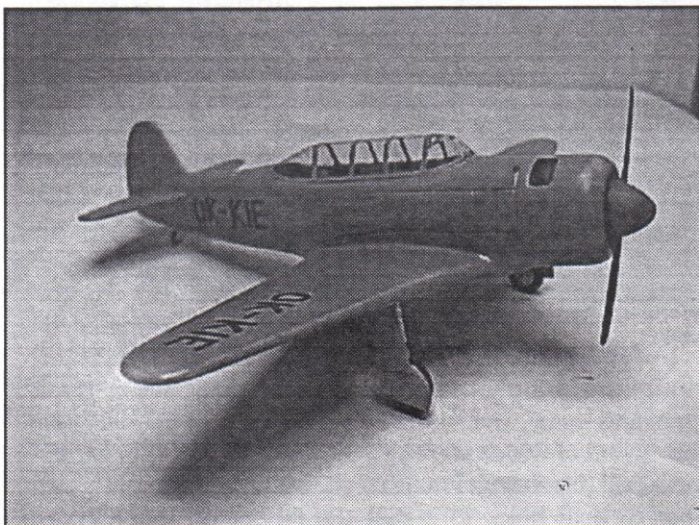


Two Czech-built C-11s fly in formation. The Yak-11's aerodynamics are good enough that one unlimited racer, "Mr. Awesome," was built from the trainer.

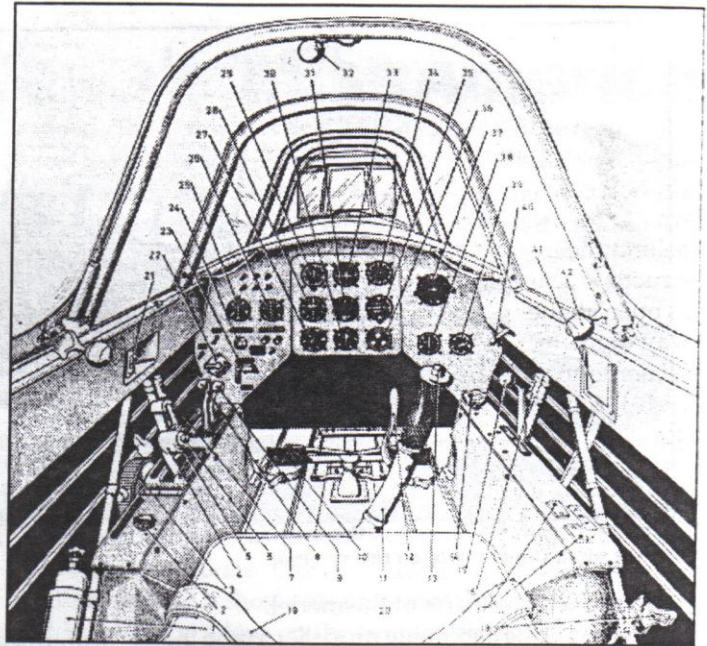
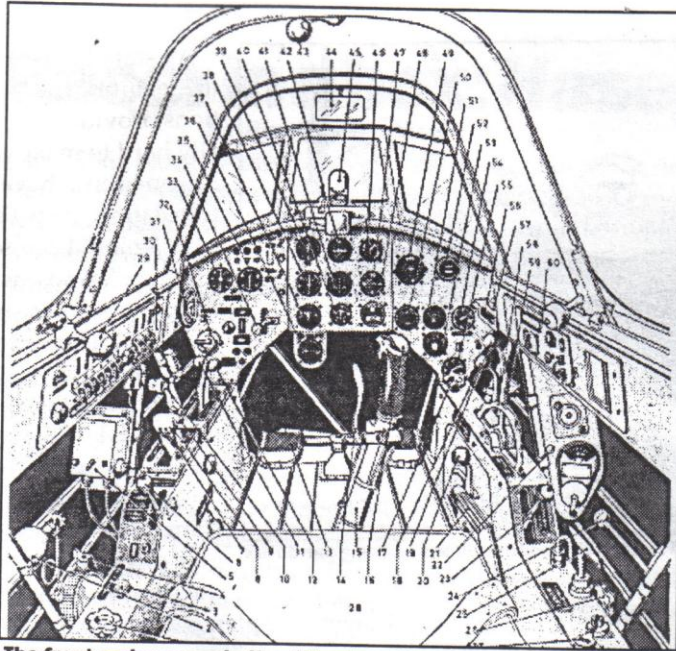
most vacuform kits, to match all the edges and not have it all fit, since there are no guide pins. Dry fitting, taping and gluing parts in place helps me check to avoid problems like this.

Removing the wing from the fuselage after getting both upper wings glued to the lower wing, I worked the wing joints into shape. When this was done, I was confident that the very thin outer ring that fits atop the radial fan ring to achieve the cowling shape could be tackled. Someone else might glue this on now and cut out the center disc, the sand out the inner edge. I could not feel sure of ensuring the concentricity and circularity of this ring, so I carefully and slowly cut out the inner disc in a series of pieces, ending up with this skinny, curved ring, which actually fit with terrific accuracy.

This helped buoy my spirits, but fitting the glued wing assembly to the fuselage brought me back down to earth. What I thought was a balanced left/right wing root area left gaps that showed it was not so balanced! It was not a huge discrepancy, and when I was done gluing and filling the wing



Two more views of Mike's Yak-11. This particular airframe crashed on Cyprus and was reborn in full Soviet green and gray markings under the British registration "G-AYAK."



The front and rear cockpits of the Yak-11. Mike's quick fix to eliminating the empty spot in the back cockpit was the addition of a blind flying hood. The completeness of the cockpit shows why the Yak-11 was able to serve for so long into the jet age.

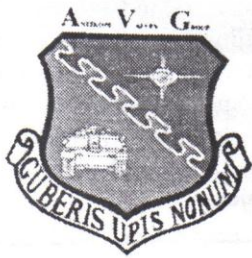
roots into fuselage it was invisible unless you saw the model naked and unpainted.

The horizontal tailplanes are each made up of two parts, and it took some work to get their thicknesses in balance when sanding them out. I'm not a fan of pure butt joints in areas such as this, so I sanded the mating face on the tailplanes flat, then drilled a pair of holes in fuselage and tailplanes to accommodate stretched sprue mounting pins. These made the assembly more mechanically sound.

Next I had a try at cutting the one very thinly-molded clear vacuform canopy. This emphasized how useful the practice of including more than one canopy, as more and more vacuform manufacturers do, really is. I spent a good deal of

time struggling cut it accurately, fearing that one severe misstep here would leave me with a need to somehow replace this canopy, and not having another Yak-11 handy, it was not a problem I wanted to have. Because the canopy is so thin, it is very clear, but the cost is that it is nearly impossible to sand or cut the edges evenly, especially if you try to do it in several passes. A close enough fit was achieved with watch crystal cement, followed by Krystal Kleer as a "body filler" to create a frame on the bottom edges. To seal all of this, I brushed on a coat of Future floor polish.

The final step is to apply a thick superglue bead to both ensure the canopy join and seal the Krystal Kleer filler, which is water soluble. I didn't want the filler to dissolve during wet



Antelope Valley Group/IPMS

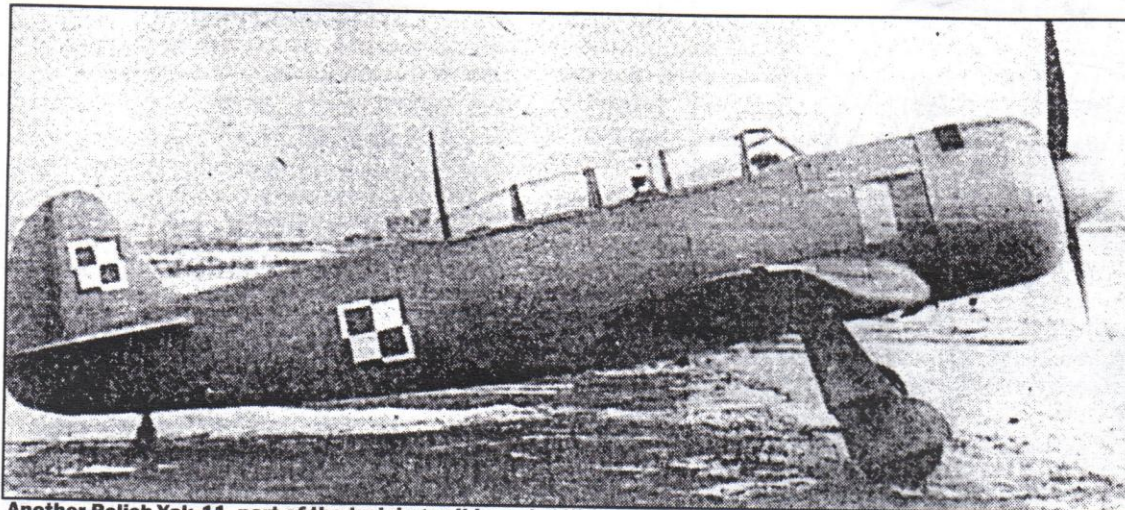
Plastic Model Club is pleased to announce

Our Fourth Annual Contest Saturday, November 11, 2000

Antelope Valley College, 3041 W. Ave K, Lancaster, California

Special Awards For: **Best Korean War Model**
Best X-Plane

For more information, contact: David Newman, (661) 256-6359 or dnewman@as.net



Another Polish Yak-11, part of the training unit based at Warsaw in 1957. Note the manner in which the gear doors stack when the plane is on the ground.

As stated early on, the painting instructions provided are really hard to make out if you don't have a translation from Polish. "Kolor" I can figure out; "jasnoszary" or "platowca" are not so easy. The references I had at the time did not help. The instructions left the faint impression that "jasnoszary" might be some sort of silvery gray or aluminum lacquer finish, or maybe

sanding of other parts of the model.

Not requiring a spinning propeller, I used the kit vacuformed prop, sanded into shape, and used it as the meat in a sandwich between the backing plate and spinner cap. It took a lot of work to match the thicknesses, diameters and alignment of these parts. The thickness of the backing plate was not sufficient, so I had to scratchbuild a new one.

This exercise gives you all the skills needed to fabricate the landing gear. The vacuform sheet includes two parts for each gear, with the tire/wheel/gear leg on a half shell. You can sand them into mating parts and get them to look as if they are matched pairs.

My gear legs did not match in diameter, so I ended up increasing one of them by wrapping it with lead foil.

Setting the gear in place was a simple task. Thin gear doors left from the early step of carefully cutting out the wheel bays can now be installed after you cut them apart to stack them in the "compressed oleo" position. They will fit otherwise, but they will look all wrong compared to real Yak-11s. A very close look at the kit instructions will help with this arrangement.

There is a non-retractable tailwheel on the Moose, and the kit gives you a two-part molding. You can use it, too, although you may end up sanding your fingertips raw.

medium grey. Pictures showing the planes depicted in the kit did nothing to dispel the confusion, since some looked like medium gray and others looked silver. So, I made WAG #2. The first pass of silver lacquer paint did not look particularly

good, but it made a fine primer coat when sanded. The FS36270 (flat neutral gray) acrylic that I decided matched the references was my final selection. A semi-gloss to glossy finish was required for the outside, and after applying the OK-KIE (the risen-from-dead King's Cup racer) registration decals provided by kit, a gloss coat of Future was applied. I left the wheel bays in the flat color, and then had only to paint a flat red (insignia red FS31136) propeller spinner cap with two flat

black blades with no yellow tips to finish my finish.

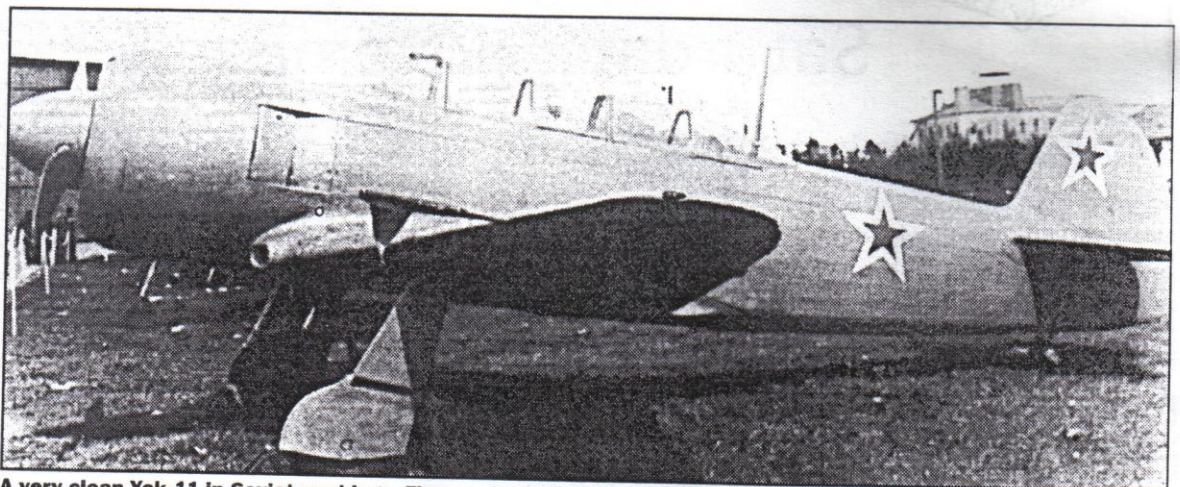
Perhaps my account leaves you wondering why anyone would take this kit on. If so, my apologies, because this really went together with a fair amount of ease, and if I'd had the one Polish profile book when this mood hit me to build *Waku's* Moose, it would have been even easier.

Yak-11 References

Polish Profile Typy Broni i Uzbrojenia #76, *Samolot szkolno-treningowy Jak-11 (C-11)*, by Zbigniew Luranc

Encyclopedia of Russian Aircraft, by Bill Gunston

Russian Aircraft Since 1940, by Jean Alexander



A very clean Yak-11 in Soviet markings. The small intake at the wing root is one of the few details *Waku* missed.

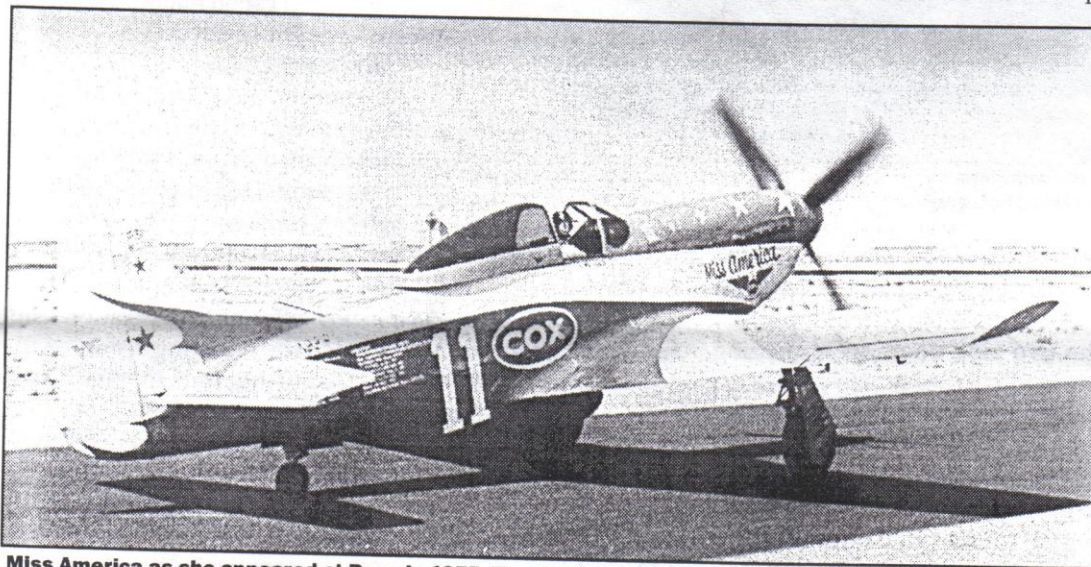
Racer in a box: Hasegawa's 'Miss America'

By Bradley D. Chun

In 1966, North American P-51-D-30NA, USAAF Serial Number 44-74536, was purchased from the U.S. government by Howie Keefe and was given a special paint scheme and peacetime mission. This P-51D *Mustang* would become "Miss America." For over thirty years, Miss America has raced and appeared at air shows.

Miss America has a wingspan of 32 feet, clipped for racing by five feet compared to a stock P-51. The plane is powered by a modified racing Packard-built Rolls-Royce V-1650-7 Merlin engine that produces 3,000 horsepower in racing trim, compared to 1,490 horsepower in stock form.

Miss America is a five-time Unlimited Class National Air Racing Champion and has been racing since 1969. The plane also holds the Los Angeles to Washington, D.C. speed record, completing the distance of 2289 miles in six hours, twenty one minutes, at an average air speed of 412 mph.



Miss America as she appeared at Reno in 1975. The Hasegawa kit lets you depict a far more recent scheme.

Brent Hisey won the Unlimited Bronze Division National Championship in 1996, the Unlimited Silver Division in 1998 and 1999 while flying Miss America.

I was shocked to see this kit on the shelf of my local hobby shop. I had just heard the week before that Hasegawa was planning on releasing this kit. On the boxtop is a color profile of Miss America as she appeared during the 1997 racing season. The kit differs from the usual Hasegawa *Mustang* kit by including a set of Miss America addendum instructions to the P-51K *Mustang* instructions, the decals, and a pair of small bags which contains the new metal wing tips, antenna, and the uncuffed propeller blades.

The clear sprue is untouched from the original P-51D/K releases that most every 1:48 aircraft modeler is familiar with. I don't think I need to go into much detail about this sprue except that I did find some scratches on the canopies. A dip in Future or a little polishing will resolve this minor problem.

The decal sheet contains all of the decals that are required to mark Miss America. The white areas on Miss America are provided as decals, but they appear a bit translucent to me. I think I'll use the decals as templates and paint the white areas

instead. The lettering is finely printed and can be read with a bit of magnification. The Rolls Royce and Phillips 66 decals are especially nice. Hasegawa has provided the red and blue scalloped areas at the tail end of the air racer as decals to assist modelers who are not yet up to the ability of masking complicated shapes. The star decals are printed with the carrier film between them so there is no guessing as to their spacing. I could find no problems with registration.

The addendum instructions provide the modeler with the modifications that are required to convert the base P-51K *Mustang* kit into Miss America, the air racer. The addendum instructions show where to remove the stock wing tips, to remove the .50-caliber wing guns, the new antenna placement, propeller blade replacement, and decal, paint, and marking instructions. One odd thing: in the marking and painting section, it shows the placement of only three propeller blades and not four on the spinner diagram.

I won't go into detail about the four sprues of injection molded parts that are from the original P-51D/K release as many of you probably have this kit in your collection or have already built it. I will be relegating the underwing stores to the parts box as I can use the three tube rocket launchers and fuel tanks on future *Mustang* projects. As with most of the Hasegawa kits in my possession, there was no flash or short shot parts to be found.

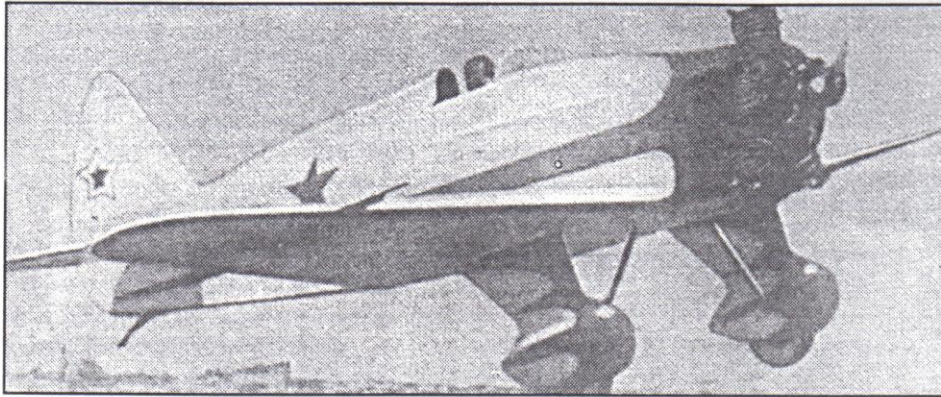
The white metal wingtips, propeller blades and antenna are what make this kit a "special" version. The two wingtips appear to be accurately reproduced and are molded nicely. There are no mold part lines and the only detail on the wingtips is the outer edge detail of the ailerons. These wingtips should pose no problems while making the modifications to the wing. The additional antenna is accurately scaled down also. The four Aeroproducts propeller blades are also molded in metal. These compare favorably in shape with the Aeroproducts propeller blades that are included in the Tamiya 1:48 F-51D *Mustang* kit. All of these metal parts are nicely molded and will require no or very minimal clean up.

It appears that the Hasegawa Miss America kit is to be built as it appeared during the 1997 racing season. I'm pretty sure that the horizontal stabilizers are supposed to be clipped also, even though the instructions do not show this. I am not an expert in the area of air racers and will leave its accuracy to the likes of SVSM resident air racing expert and fiberglass wingtip manufacturer Mike Meek. One can hope that this kit will sell successfully and other manufacturers will take notice and release other 1:48 air racers.

Building a Yakovlev UT-1 from Neomega's resin

Continued from page 1

provided in resin. Unfortunately, the kit has its share of problems, chief among them the instructions, which are in Cyrillic and provide nothing more than a three-view of the assembled model. The wheels are supplied as resin parts that are supposed to be inserted into rubber tires, but doing this is impossible without wrecking the wheels, thanks to the thinness and brittleness of the resin. Also, the technique used to locate the wheel pants—a stub on the lower wing, rather than a recess or an unmarked flat area—means that building a VT-1 or a unspatted version is out unless the modeler wants to do



A not-so-nice shot of a UT-1 in the markings Chris chose for his model. The heavy bracing on the wheel pants is very clear in this photograph.

some conversion work. The packaging also left something to be desired; one of the engine cylinder shields on the fuselage was snapped off and an engine cylinder was broken in the bag when I opened the kit. The two side doors were missing altogether.

Construction of this little plane was much less straightforward than I thought it would be. The rudder suffered from warp, and in trying to correct this warp using hot water, I discovered just how brittle the resin was. The upper rudder snapped off, forcing me to glue it back and sand the seam down. This brittleness would come back to haunt me later.

The cockpit sidewalls, control panel and floorboards were painted in a dark gray color close to FS 36175. I added black to the instruments and followed them with drops of Future floor polish to simulate the shine of the instruments' lenses. The instrument panel fit surprisingly well into the fuselage, leaving nary a seam between it and the cockpit rails. The sidewalls feature a map case, radio and throttle handle, but lack the prominent ribbing detail of the exterior. I added a length of styrene strip to this location to simulate the ribbing, then painted the sidewalls and picked out the details with a fine brush.

The seat was painted next, in a lighter gray shade with olive drab belts and silver buckles. The seat itself had an odd texture to it, but one that

was impossible to remedy without ruining the seat belt detail. I prefer to think the seat was simply roughly cast. A bigger problem was that the seat was slightly too large for the cockpit when the sidewalls were installed. I sanded the edges carefully, then lodged the seat in place—no glue was required!

The fuselage itself had a mold-part seam running across the top of the fuselage; unfortunately, this line crossed two prominent fuel filler caps atop the nose. These were sanded away and replaced with spare brass "caps" that began life as photo-etched brass trim wheels. A few other small pinholes had to be corrected to make the fuselage ready for the addition of the wing, which was beautifully molded. I superglued the wing in place, but as I was adjusting the alignment, the brittle resin struck again and the entire left wing ended up coming off in my hand! Luckily, the break was clean and I soon had the lower part of the wing joint cleaned up.

The top joint would not have been bad except for the raised detail on the walkway at the left wing root. This had to be eradicated in order to clean up the joint and took a lot of elbow grease to completely remove.

The horizontal tails were molded with locating pins, but these position the stabilizers slightly too far aft. I sanded the joints and attached the stabilizers in the correct position using superglue, then carefully sanded the resulting seams.

Next came the wheel pants. One of the pants snapped in half as I was cutting it from the carrier sprue; again, it was a clean break and was quickly repaired. The pants didn't quite fit the stubs at the bottom of the wings, and considerable clean up was required to eliminate the seam between the wing and the wheel pants.

Once this was concluded, I was ready to paint this simple little aircraft. I masked the cockpit and sprayed three coats of Halfords white primer, a British automotive spray carried surreptitiously across the Atlantic by a certain British acquaintance of mine. Once this was completed, I gave the model a coat of water-based Varathane, thinned with water



A similarly painted UT-1 to the one pictured above. The five-cylinder M-11 engine's cylinders got plenty of cooling air in their uncowed positions on the nose.

and windshield washer fluid and sprayed through my airbrush. This provided a nice gloss for decalling and provided a perfectly smooth surface for the masking of the trim, the next step in finishing the model.

I masked the rather involved Osoaviakhim trim with Tamiya masking tape and airbrushed a coat of *Testors Model Master* insignia red. There were a few small areas that needed touch up when the masking was removed, but the most notable of these was the rudder, which again broke. After sanding the seam flat for a second time, I masked the rest of the airplane and let fly with the *Halfords*. About the time that this was done, one of the horizontal tails broke, and I went through this exercise yet again.

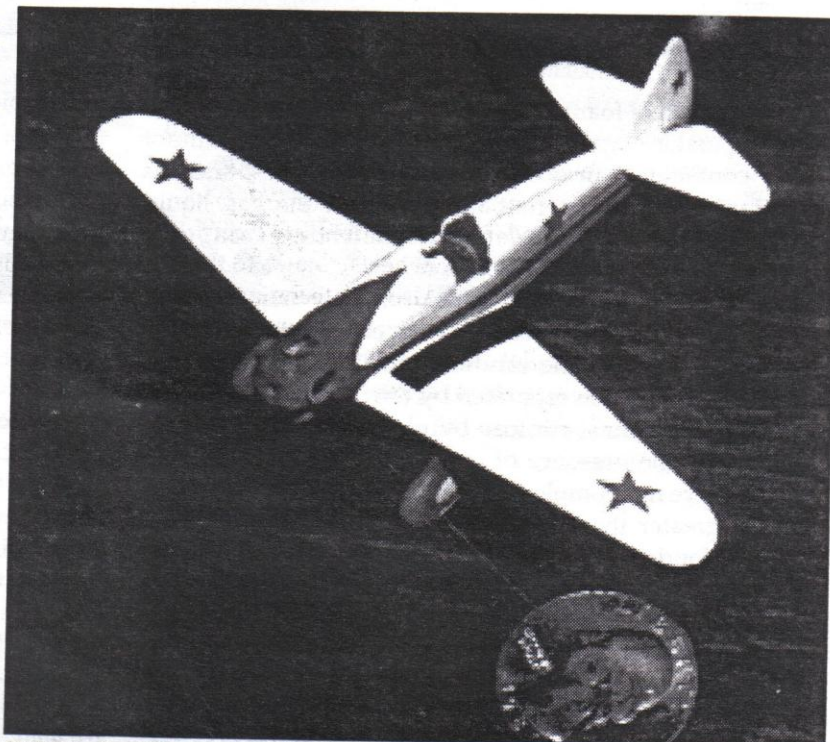
After this ordeal was concluded, I shot another coat of Varathane and started to look for decals. The kit decals, printed by *Travers*, are simply too large for the model; instead, I swiped a set of stars from the *Wings 72* kit and applied them in eight positions. The walkway was replaced by a bit of black trim film, which I first airbrushed with *Testors* dullcoat.

The engine cylinders came next. They were each painted grimy black and drybrushed with silver, followed by a mixture of brown, dark gray and silver on the exhausts. I had some trouble fitting them into the holes in the nose, but some careful sanding of the cylinders' bases allowed me to slip them easily into place.

The control column came next, followed by the pre-painted tailskid.

The model was given a wash with dark gray watercolor paint, which popped out the control surfaces and panel lines. The propeller was airbrushed with *Testors* aluminum buffing metallizer and placed into place.

Next came the tail struts and rigging. The kit provides copper wire for the braces on the wheel spats, but I chose to substitute stiff steel wire. I drilled small holes to accept the wire and glued the ends into the holes; a similar approach was taken on the tail. It was imperative that these holes are in



Chris' model, before the addition of the engine and propeller. The quarter is there to indicate the model's small size, not to serve as capitalist propaganda, comrade.

precisely the right location; any deviance in alignment would have turned this detail into a real detriment. Two small struts were fashioned from plastic strip and were installed under the tail in alignment with the bracing wires.

The cockpit entry doors were made from styrene strip and were given a bit of a curve by stressing them over a paintbrush handle. Once they were painted and detailed with opening handles, they were glued in place on the side of the cockpit.

The wingtip lights were picked out using *Tamiya* clear red and clear green, adding a bit more color to this colorful plane.

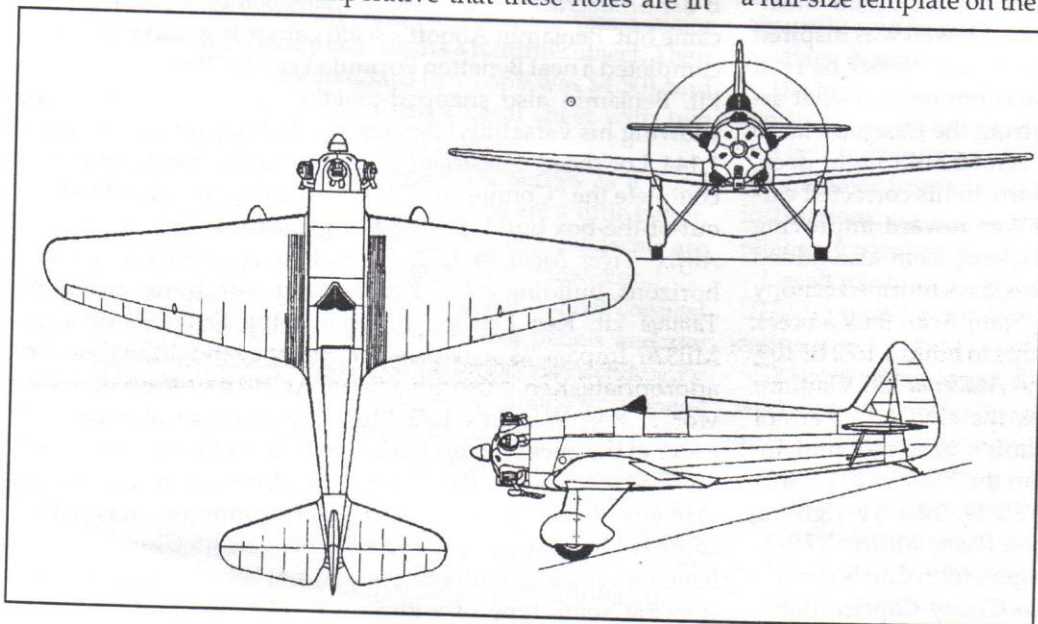
I dispensed with the resin wheel centers and superglued the tires into the wheel pants. They project far enough to give the model the proper stance.

The final detail was the frameless windscreen, which is not provided in the kit. A sheet of clear plastic is provided, as is a full-size template on the instructions. I cut the plastic sheet

to size according to the template, then bent the plastic using a pair of flat-nosed pliers more often employed for photo-etched brass. The results were surprisingly good. This new windscreen was attached with white glue. My UT-1 was now ready for flight!

This kit is a nice replica of an important plane, but the brittle resin and the useless instructions make it suitable only for advanced modelers.

My thanks to Mike Burton for providing the *Wings 72* kit and references and Robin Powell for importing the paint used in this project.



FROM THE PRESIDENT

Composition of foam: by definition, foam is a non-equilibrium dispersion of gas bubbles in a relatively small volume of liquid containing surface-active macromolecules, such as surfactants. These preferentially adsorb at the gas/liquid interfaces and are responsible both for the tendency of a liquid to foam and the stability of the resulting dispersion. The physical properties of bulk foams ultimately arise from the physical chemistry of bubble interfaces and the collective structure formed by the random packing of gas bubbles. Large gas bubbles are separated by thin liquid films, which are stabilized against rupture by physical-chemical effects arising from the presence of adsorbed surfactants or other surface-active macromolecules. If the volume fraction of the liquid is greater than five percent, the bubbles are nearly spherical; for drier foams, the bubbles are more nearly polyhedral as set by the competition between surface tension and interfacial forces. Both wet and dry foam are disordered. Even if you were able to make ordered foam, the evolution process discussed would quickly introduce disorder. Also note that the structure does not depend on either the chemical composition or average bubble size. The only parameter that dramatically affects bubble shape is liquid content (bubbles are nearly polyhedral for dry foams and nearly spherical for wet foams). This beautiful property means that we can focus on the idealized random geometrical structure common to all foams, rather than worry about details of chemistry and preparation that may vary from sample to sample...

This stuff does make great reading, doesn't it? No? Think you could do better? Yes? Then do it! Remember guys, it's nice

JULY MINUTES

The July meeting was depleted somewhat by the Nationals and various family events. There were plenty of people, but not a lot of models. Nevertheless, a crew of replacement officers—including fill-in president Rich Pedro and Brad Chun, who took these minutes—stepped in and made the meeting work. After a round of introductions by the members, it was time for model talk. Bert McDowell was inspired by an article on building a better *Essex*-class carrier he read years ago; now, Bert's revisiting—and improving—that article, and he's building a new *Essex* from the *Hasegawa* kit to go along with it. Bert has added a scratchbuilt flight deck, hangar deck and numerous brass parts to his corrected carrier. A *Tekniks* cockpit went a long way toward improving Tom Trankle's 1:48 *Tamiya* F4F-4 *Wildcat*. Tom also added *Kendall Model Company* control surfaces, a vacuformed canopy and *AeroMaster* decals to his model. Sami Arim took a break from his intricately detailed 1:700 ships to build a 1:72 Bf 109, built straight from the box using the *Academy* kit. Vladimir Yakubov is staking out territory as the club's 1:72 armor overlord. This time around, Vladimir's armored unit included a JS-2 Model 1943, a T-35 from the *Modelcraft* kit, a T-34, and most impressive of all a TS-14 infantry fighting vehicle, based around the chassis of a *Planet Models* BTR-70 with a scratchbuilt turret and 85mm gun. John Carr's modifications have led to an accurate 1:24 Chevy Caprice police

to just pick up the newsletter and read the "what's hot" subject of the month, but did you ever think about who put aside their time to give you those nice articles? I'm not just talking about Chris Bucholtz spending his weekends in an edit, copy and staple-fest either. (But we still love you for it Chris!) I'm talking about the people who said, "this would be great for the newsletter." It doesn't have to be a full-blown, multi-month article either. Every model, contest, event, and trip has a story. Did you ever wonder why when I go up on stage folks yell "where's the bridge?", or when Rich Pedro goes up on stage they yell, "It's not a cop!" You may never know because we never wrote about it and we won't know the answers to similar questions because you may have never thought about sharing them with other people. We all go to the meeting listen to the usual spiels about blah, blah, blah, and take what we want from that. If you are like me you may get distracted while you were waiting to hear about so-and-so model or subject. That's information lost, because you probably missed whose subject it was as well. Short subjects or reviews make good reading because most of the time they are well, short and to the point. The more the editor gets the better, and the more the editor gets the bigger the newsletter gets and finally the more you get to read. See where this is going?

I ask everyone in the club to make a commitment to write a short blurb for Chris, please. Otherwise, no more articles, contest dates, announcements, and we all get to read next time is my full10-page epic on the chemical composition of bubbles in high temperature. Blub, blub, blub, POP!

cruiser. Richard Hubbard's 1:72 Piper PA-18 *Super Cub* went together all right, except for some fit problems around the windows. Jim Lund did some heavy lifting to get his two big Boeings to the meeting. Jim showed off his KC-97, built from the new *Academy* kit, side by side with a *Rareplanes* vacuformed B-377 *Stratocruiser* he built many years before the *Academy* kit came out. Benjamin Abbott's scale garage is getting full; he's completed a neat Benetton Formula 1 car, built from the *Heller* kit. Benjamin also snapped-together a model submarine, showing his versatility! Benjamin's dad Bill is working on a 1:144 Lockheed *Constellation* as a family project, and will complete the "Connie" in TWA markings. In contrast to that out-of-the-box build, Bill's adding a scratchbuilt interior to *Airfix'* *Tiger Moth* in 1:72. Larry Roberts is stretching his horizons, building a 1:35 Kenttenkrad with trailer from the *Tamiya* kit. Ken Durling has made the *Frem's* Aermacchi MB326 Impala as a two-seater, cutting and filling where appropriate. Ken's also got a *Revell* Ar 240 nightfighter in the works. Ron Wergin's 1:72 Mustangs were in alphabetical order at this meeting; his P-51A came from the *Italeri* kit, and his P-51B from the *Revell* kit. Ron also built a 1:48 *Revell* Dassault *Rafale*, which looked great despite (or maybe because) of its gray naval paint scheme. Eric McClure's workbench is crawling with critters, and not because Eric is experiencing some type of withdrawal. He's painted up some

"Razi" rats from the game "Critter Commandos" in Wehrmacht uniforms and some dinosaurs and lizard riders from white metal figures, with a few details scratchbuilt to add some personality. Eric's also putting together a collection of 1:72 armor, including a BTR-152K, an Austin armored car from the Russian Revolution that features homemade rivet detail and pastel weathering, and a Ford Model T patrol car with a replacement Lewis gun. The last two models are white metal

Soviet pilot-maker: AGA's Yakovlev UT-2

By Chris Bucholtz

Before the UT-1 came the UT-2, in an odd of Soviet nomenclature. While the UT-1 served as an advance fighter trainer, the UT-2 was the basic trainer, and in that role the 7,243 UT-2s built trained over 100,000 pilots, putting it in a class with the famous AT-6 *Texan*.

The UT-2 was made using 1930s technology. It had a metal frame, with wooden formers and stringers and a pressed plywood and fabric outer skin. Metal was used for some areas, like the tail and wing leading edges, but the UT-2 still had materials more in common with the planes of World War I than World War II. An M-11 engine pushed the plane to a whopping speed of 110 mph; it could climb to one kilometer in only eight minutes!

Despite these none-too-spectacular performance numbers, the UT-2 was a useful trainer, not providing many surprises to the students in its charge.

In fact, as its life wore on, its main shortcoming was that it was too simple, causing problems for students graduating into the hotter new Soviet fighters. Still, it served long enough to acquire the NATO identification name "Mink."

AGA is a Polish company, and since Poland was a major operator of the UT-2, the plane seems a natural subject. Their kit is inexpensive by any standard (my copy was \$4.50), and includes one sprue of parts, a small decal sheet with two Polish schemes, and a sheet of clear acetate.

Unlike in real life, the Neomega UT-2 serves as a good trainer for the AGA UT-2. The instructions are a little better, showing an exploded view of the model, and the decals are actually usable, if not in perfect registration. However...

There is no cockpit detail except for two almost comical seats, two blank thumbnail-shaped control panels and the most basic of control columns. A little work here would go a long way, since the plane has a pair of square cockpit openings which would show off a lack of detail only too well. The fuselage halves look roughly-molded but capture the somewhat rustic construction well, with the access doors accurately portrayed in their closed position. The main problem with the fuselage halves is the rudder; it should be much more rounded than the kit portrays it. The decal and painting guide

kits from *Riveresco*. Thang Le built *Monogram's* P-40B straight from the box and added *Cutting Edge* decals for turn the plane into an A.V.G. "Flying Tigers" *Tomahawk*. Cliff Kranz dug out a 25-year old model of a Peterbilt tow truck, featuring scratch-built details and operating booms and winches. Ben Pada added a nearly completely scratchbuilt suspension to his 1:25 '36 Plymouth, which he built as a dirt-track racer. Thanks to Brad Chun for his help in obtaining this month's minutes.

has it right; use this as a reference.

The two filler caps on the nose are split down the center seam; use photoetched doo-dads to replace them, because they will never survive the seam removal process. The venturi tubes are nice, but it'll take some care to remove the flash from them. I'll cut the flash off these tiny parts before removing them from the sprues.

Flash is a problem all over this model, and nowhere is it worse than on the wings. The lower wing is a real mess; it's hard to tell where the short-shot ends and the flash begins.

The upper wing halves need some cleanup internally before they'll fit on the lower wing; test-fitting revealed some mighty big gaps at the wing root. The best bet might be to attach the upper wings to the fuselage and then stick on the lower wing. In any case, it'll be no picnic.

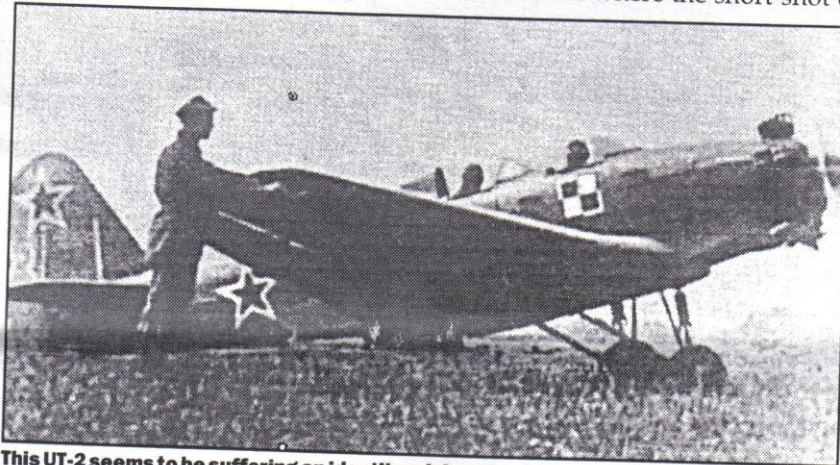
The engine and nose are a one-piece affair, and they are really rough. The cylinders have no detail, and the

backs are hollow! Replacement by cylinders from a resin engine is almost a must; they're out where anyone can see them, so they might as well look good. The exhaust horn below the engine also looks a little heavy. The propeller is absurdly undersized, sticking out about a foot beyond the fuselage diameter! No wonder the UT-2 was so slow!

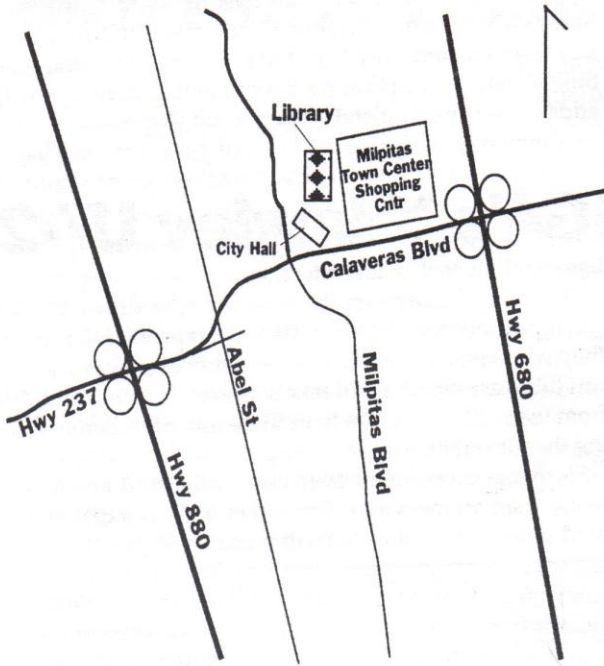
The horizontal tail and bracing is effective enough, and the landing gear, including one-piece struts and wheels, is simple but gets the point across. The windscreens must be made by the modeler from the acetate sheet, using a template on the instructions; the use of flat-nosed pliers should make this a relatively painless task.

Decals are for a green and gray UT-2Z and a camouflaged UT-2Z-1 based near Warsaw. Both are postwar Polish machines.

This is a rather rough model; newcomers to the hobby are warned to steer clear lest they be put off modeling for a long time! I'm contemplating purchasing a second UT-1 and making cast copies of the propeller, nose and engine cylinders from that kit to bring this one up to snuff. Still, it's nice to have at least a starting point for this historic aircraft, perhaps the most important and most forgotten trainer of WWII. It would look very interesting parked on a table next to the UT-1.



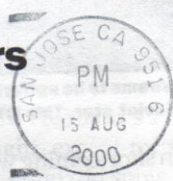
This UT-2 seems to be suffering an identity crisis, wearing both the Polish checkerboard and the Soviet star. This UT-2M is part of a postwar Soviet school for Pole pilots.



Next meeting:
7:30 p.m.,
Friday,
August 18
at the Milpitas
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For more information, call the
editor at (408) 723-3995
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