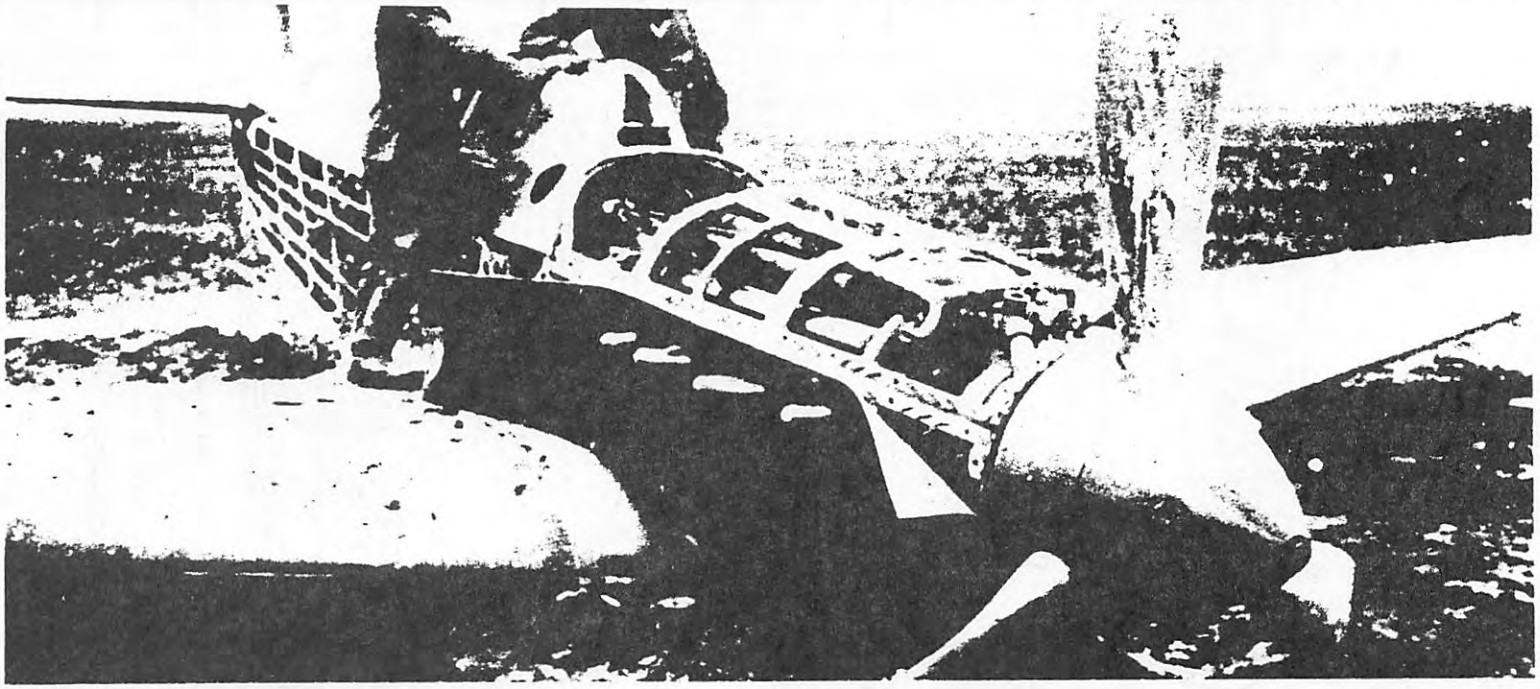
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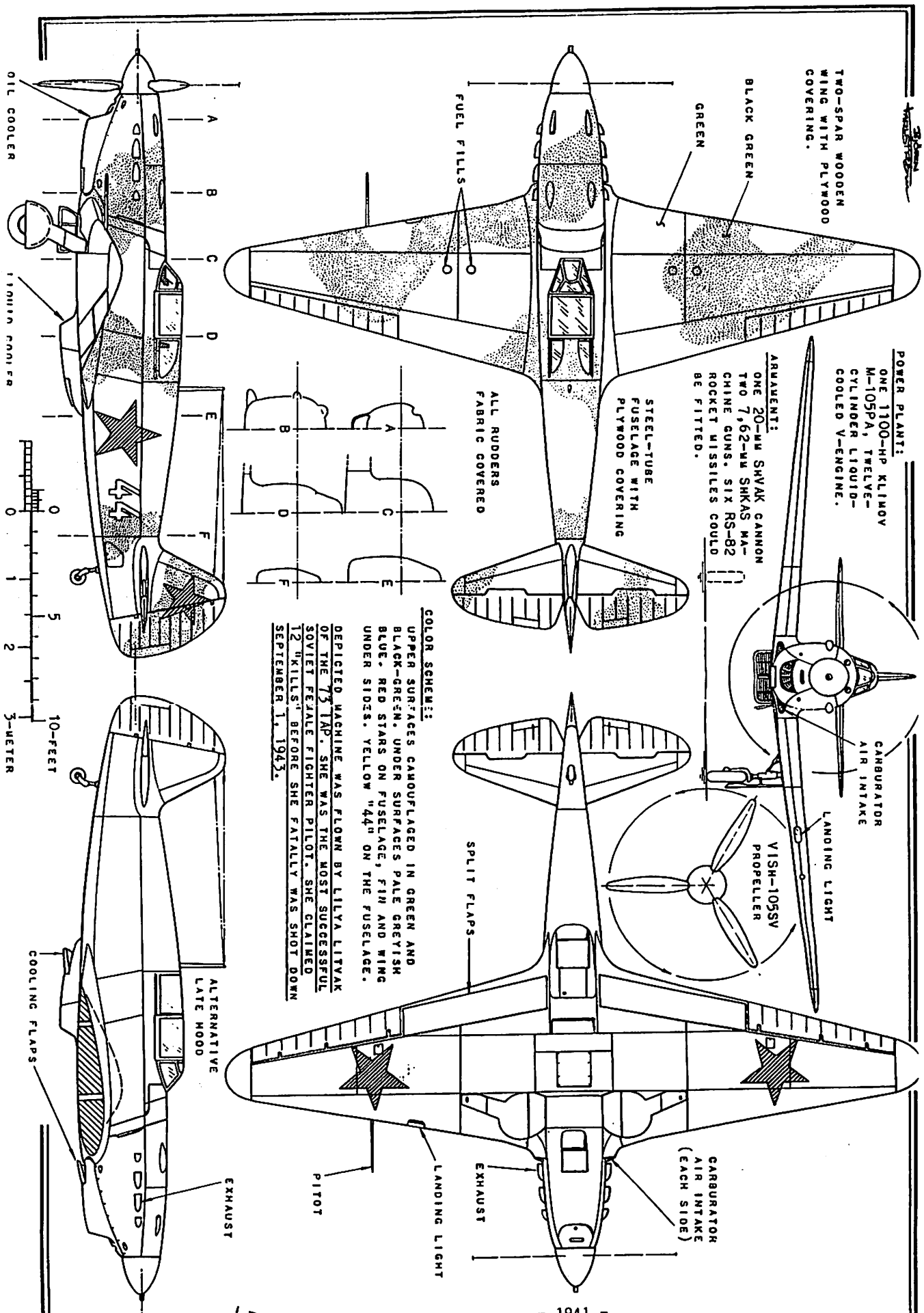
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R. A. BROWN RM 700 C
ARGO-TECH CORPORATION
23555 Euclid Avenue Cleveland, Ohio 44117



SOVIET YAK 1 FIGHTER



- 1941 -

Yakovlev Yak-1

800—BK

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CROSSWINDS QUARTERLY

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EDITORIAL COMMENT:

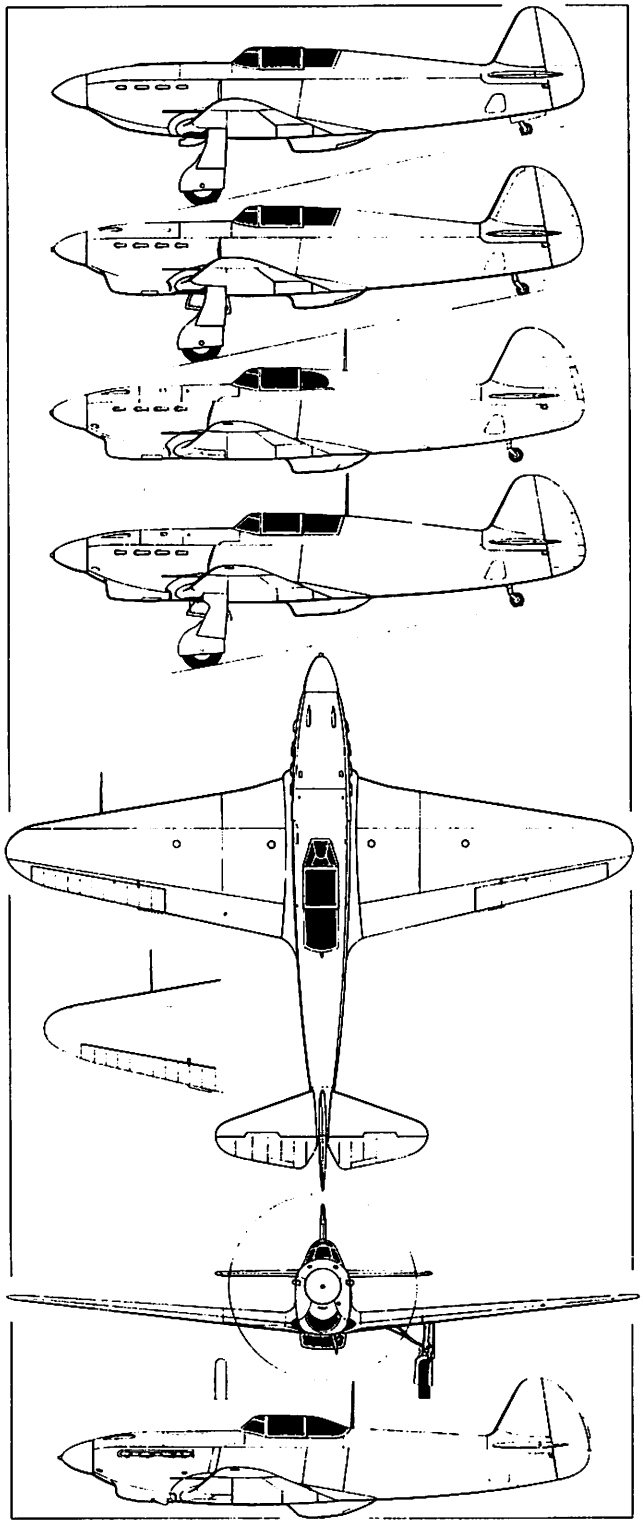
In case you're not aware of it, there are new and exciting things happening in our hobby. First, Bill Harding, a professional videographer, has made the finest quality video ever about the Flying Aces Club. Beautifully panoramic, intelligently narrated, and set to lively music, the video specifically details the 1992 FAC NATS and is available at $24.95 postage included from Harding Productions, 4782 Unity Line Road, New Waterford, Ohio 44445. If you do not get one, you will miss a real gem.

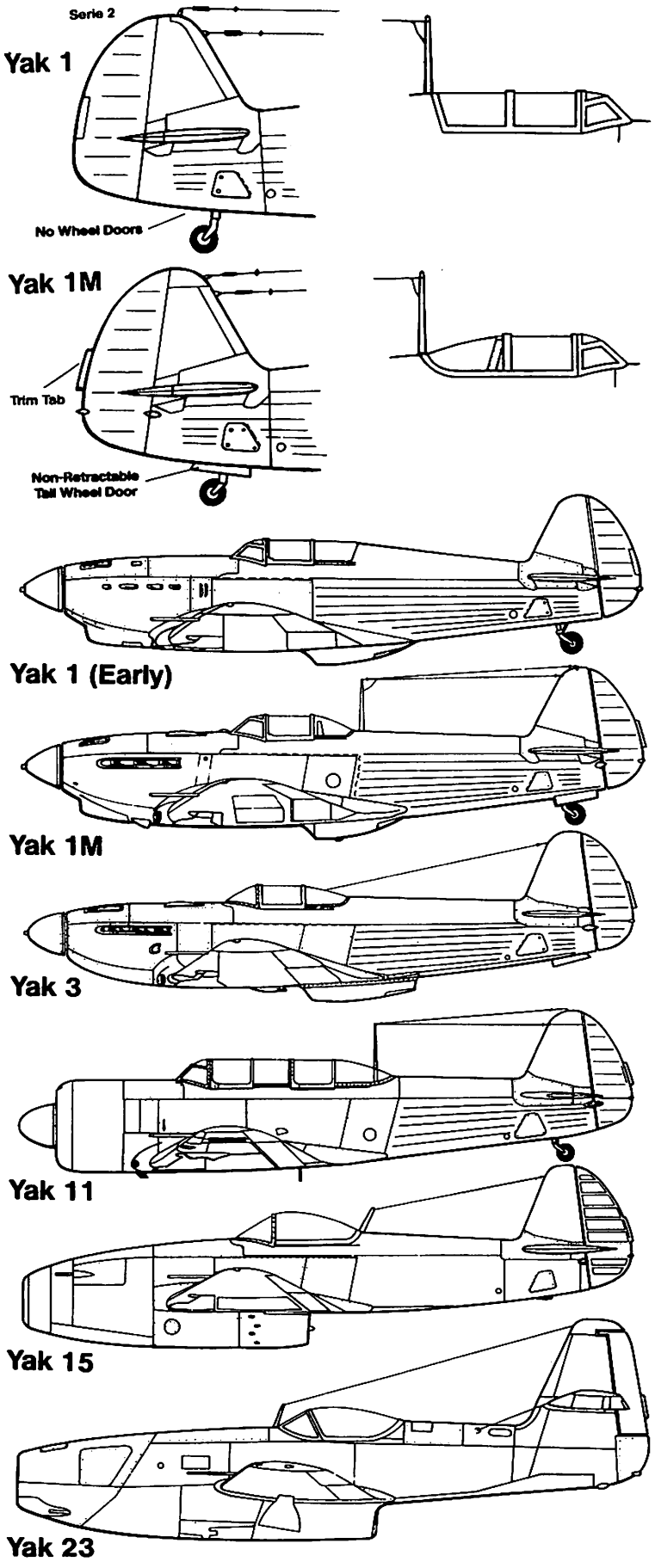
Harding was actively building models over 20 years ago, but got "side tracked" by raising his family and developing his business. A year or so ago, he, with his family raised and his TV production company a success, got "the itch" to return to modeling and decided to use his professional talents and resources to make first class videos to show today's free flight activity.

In the spring of 1992, Bill and his camera crews spent considerable time at my home interviewing me and recording information on tools, materials, and techniques in my workshop. Harding also came to CFFS indoor meet at Normandy High School on March 29, 1992 and spent hours recording the day's activity. From that trip, he made a beautiful little "practice" tape which lasts only a couple of minutes, but demonstrates wonderfully what happened at Normandy High and what can happen when a professional like Harding is involved. The piece is without narration and is set to music which synchronizes elegantly with the rhythms and motions of the models in flight. Using slow motion at times to vary the rhythm and dissolving between scenes, Harding's little "practice" tape is delightful even to non-modelers.

Harding and the crew also came to my home on May 12, 1992 and spent the evening recording an interview with CFFS member "Lad" Plachy and AMA Hall of Fame inductee (1992) Charles L. Tracy, the former Aviation Editor of the old Cleveland Press Newspaper. Plachy is 80 years old and has been modeling since about the age of 10. Tracy is 76 and also began making model airplanes in his childhood. Both men have actively participated in modeling and full sized aviation events since the 1920s. Harding recorded them at length. They will inspire you. Be sure to see for yourself when Harding makes the tape available. I took notes during the taping and will present a more detailed accounting of it to you in the next issue of Crosswinds.

The side profiles immediately below (from top to bottom) depict the first prototype Yak-1, the second prototype, the production Yak-1 with curved rearview panels, the production Yak-1 with alternative rearview panels and early-type mainleg fairing plates (plan and head-on views being applicable to this model) and the Yak-1M. Wingtip inset is applicable to late production Yak-1s and Yak-1Ms, the revised exhaust stubs, redesigned oil cooler intake and radiator bath, and the cut-down rear fuselage with all-round vision canopy being among prominent features of the last model





Another new development is a little company called "Air Ace Models." I created "Air Ace" in response to the kind words of Earl VanGorder in the April, 1992 issue of Flying Models Magazine. In that issue, VanGorder enthusiastically told his readers of my discoveries regarding marking pens as a method of coloring Japanese tissue, printing line work, etc.

VanGorder knew that I had completed the P-36 for the Flying Aces Newsletter and that I had made a peanut scale plan and booklet on the P-36 which I had shared with him. In telling his readers about this, VanGorder asked not only for pictures of the P-36, but also if I had "done anything else" using the technique. I told him that I had built a P-51D, a Hellcat, and a couple of other things and VanGorder cheerfully reported this to his readers. He also said information on these subjects (the P-36, P-51D and F6F) was available. I then received a "flood" of orders for all three subjects, but had only the P-36 ready. Then came an embarrassing delay of nearly two months while I struggled to produce monographs on the P-51D and F6F in addition to meeting the demands of my busy law practice, large family, etc. A few people got ruffled feathers, but I managed to get the orders filled by mid-June.

In creating the monographs for the P-36, P-51D and F6F, it occurred to me that they are a neat, easily stored, way of presenting peanut scale models without the bulk of a kit. Each monograph includes several pages of text describing in depth the marker and transfer techniques which I have developed. A brand new, full size peanut scale plan with full size printwood pattern, etc. is enclosed. Each model is based upon an accurate scale drawing which is also enclosed for the purchaser's reference, but the structural design is held to a functional minimum to keep the model as light as possible for best performance. To use the marker techniques, a sheet of full sized highly detailed panel parts is also enclosed so that a modeler can "print" paneling details on Japanese tissue which is then applied to the model using new techniques described in detail.

At this point, monographs are available for the P-36, P-51 and F6F. Each monograph includes coloring and marking suggestions for several schemes. These are available at a cost of $7.50 each, postage included and your orders are welcome. Please send them to Air Ace Models, 700 Leader Building, Cleveland, Ohio 44114.

The work needed to produce an Air Ace monograph is even more than that needed to produce an issue of "Crosswinds" and, because of this, "Crosswinds" is, once again, far from the publishing schedule bravely announced in the last issue. Rest assured the "other issues" of "Crosswinds" will be produced as quickly as time permits. Linda and I are expecting the birth of our 3rd (my 8th) child shortly and I have added that "project" to my collection of things to do when I am not either sleeping or trying to make a living. Your patience and understanding are very much appreciated.

Dennis

YAKOVLEV-YAK 1

To inform you of the history of the Yak-1, I am presenting the following text from the excellent YAK FIGHTER, Aircraft No. 78 monograph from Squadron/Signal Publications. This monograph as with all efforts from Squadron/Signal, is excellent and if you do not have a copy of it, I suggest you contact Squadron/Signal Publications, Inc. at 1115 Crowley Drive, Carrollton, Texas 75011-5010. The plan for this issue is based upon a scale drawing by Bjorn Karlstrom which maybe obtained from Scale-Tech (formerly known as Repla-Tech International, P.O. Box 461000, Cole Branch, Los Angeles, Calif. 90046-1000). Scale-Tech has hundreds of high quality aircraft drawings available and if you do not have it, I urge you to at least send for their latest catalog. Regarding the Yak-1 specifically:

Yak 1 (I-26)

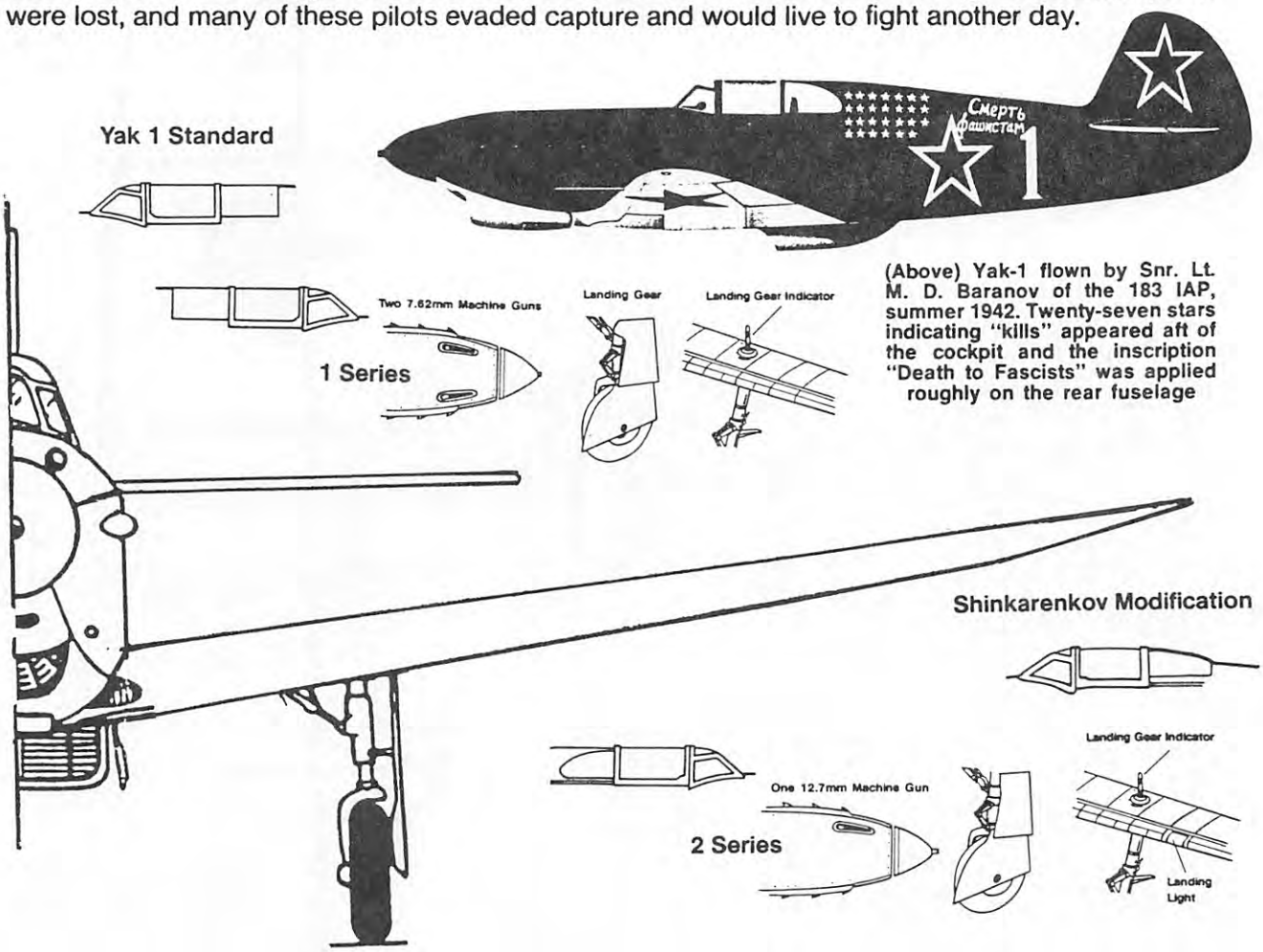
The first pre-production series of I-26 fighters left *GAZ* 115 at Moscow in November of 1940 and were assigned to a special evaluation unit to prove the type under field conditions. The pre-production I-26 was armed with a single 20MM *Shpital'ny-Vladimirov (ShVAK)* cannon with 120 rounds mounted between the engine cylinder banks firing through the propeller hub, and a pair of 7.62MM *Shpital'ny Komaritsky (ShKAS)* machine guns with 375 rounds in the upper nose decking. The ShKAS machine guns had been developed by the team of Shpital'ny and Komaritsky in 1930 with a muzzle velocity of 2,705 ft/sec and an 1,800 rpm rate of fire. The 20MM Cannon mounted in the Klimov engine received the designation M-105 P (P-*Pushka* - cannon). The weapon weighed 99.23lbs with an 800 rpm rate of fire. The four fuel tanks in the wings were provided with a measure of protection from small caliber bullets by a sheeting of four layers of tough cord fabric impregnated with phenol-formaldehyde resin, and inert combustion gases could be fed into the tanks as fire suppressants. Optional armament consisted of six RS-82 unguided missiles or FAB 50 bombs mounted on underwing racks. The only protection afforded the pilot was was a small 8MM thick armor plate to guard the head and shoulders. The canopy had no provision for emergency jettisoning and could only be locked in a fully open or fully closed position. The first Yakovlev fighters with a jettisonable canopy would not reach front-line units until early 1943, prior to this pilots often flew with the canopy open allowing a quicker and safer bail out. The spartan cockpit of the Yak 1 lacked equipment that by British or German standards was essential, but included the following instruments: PBP-1 gunsight, a single channel RSI-3 radio, a KI-10 compass and an astronomical AWR clock. During the early stages of the Great Patriotic War Russian fighters seldom carried radio equipment.

Evaluation of the new fighter by the Air Force under combat conditions quickly turned into a disaster for the young designer, who believed that the teething problems had been eliminated. Complaints from the evaluation pilots came in a seemingly endless stream: insufficient rate of armament fire (the Spanish Civil War had found that two 7.62MM guns were ineffective), engine performance and rate of climb were far from sufficient, the pneumatically operated flaps and undercarriage proved to be unreliable, the excessive vibration of the Klimov M-105 P engine produced fuel and oil connection failures, in some cases the fighter even caught fire in the air resulting in the loss of the aircraft ... and on and on.

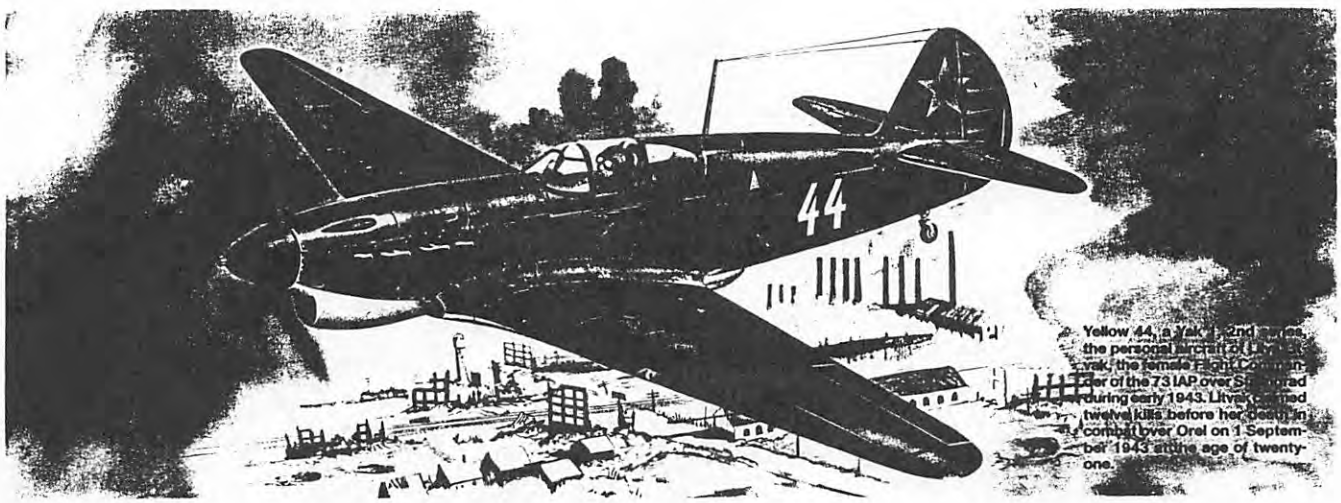
Test pilots lost all confidence in the new design, but the hard learned lessons of the Russo-Finnish war of the previous year and the pressure to modernize the Red Air Force, all but forced Yakovlev's Design Bureau to put the new fighter into large scale production well before the I-26 had been fully tested. However, since the Red Air Force was in such desperate need of modern fighters, the risk of putting a virtually untested aircraft into production was considered warranted if it offered a reasonable possibility of reducing the time of getting a modern fighter to front line fighter regiments. By December of 1940 sixty-four aircraft had been delivered, with Yakovlev succeeding in improving his fighter without a serious slow down in production. Unfortunately, these changes resulted in an increase in gross weight to 6,217lb making the aircraft somewhat underpowered, with maximum speed being reduced to 335 mph and range to 435 miles. The new fighter now failed to meet Red Air Force specifications, but most of its most serious shortcomings had been eliminated and the I-26 was drafted into operational duty with the Soviet Air Force. Along with two other modern fighters, the LaGG 1 and MiG 1, the Red Air Force had begun to get its modern fighters.

Yak 1 (I-26) (cont.)

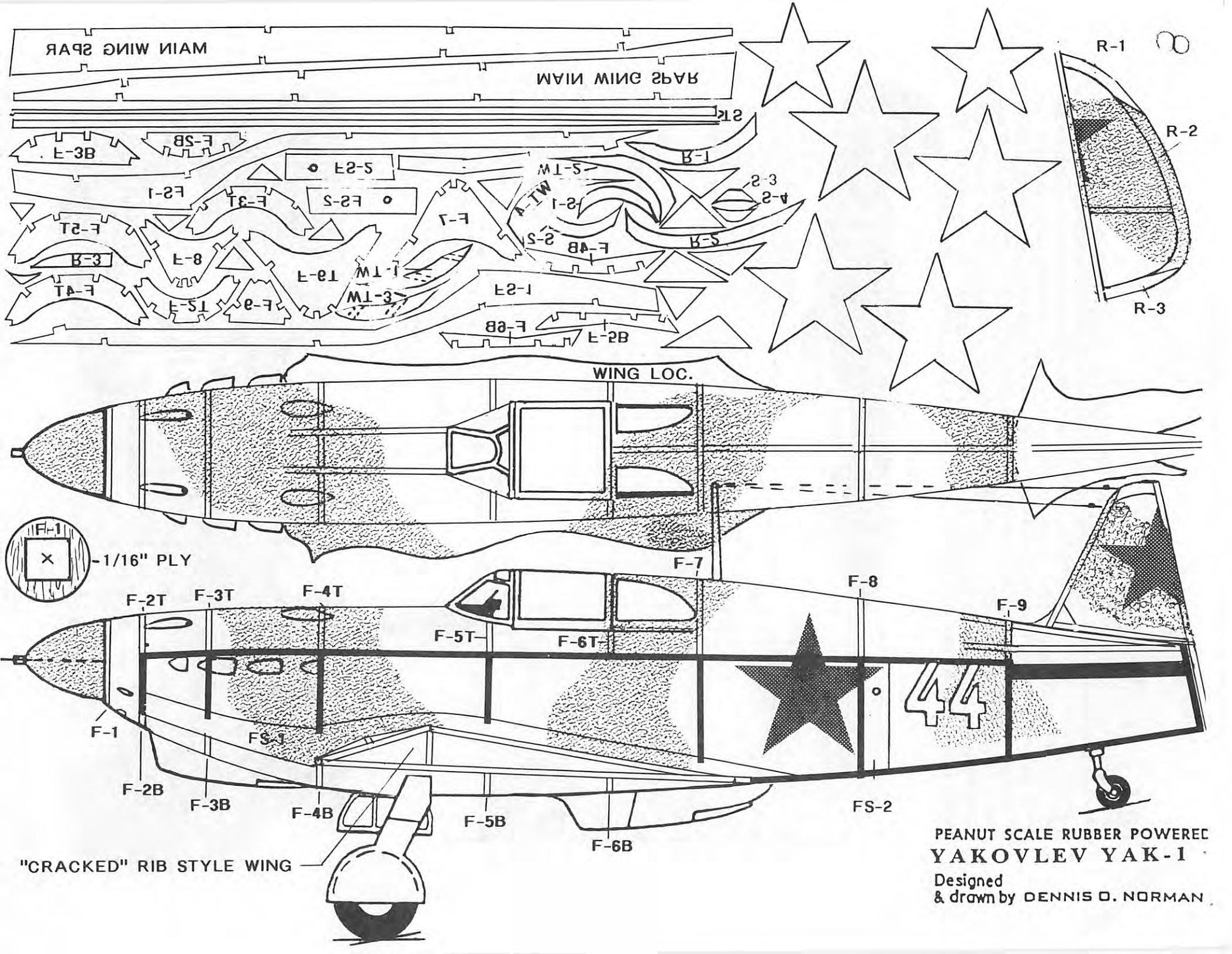
When German armed forces smashed into Russia on 22 June 1941, 2,829 new Types, including 399 I-26s had been delivered, however, only a single fighter unit had been equipped with the type, 11. Fighter Regiment at Kubinka Airfield in the critical Western Military District. The German attack took the Soviet Air Force by almost total surprise, catching many units exchanging obsolete aircraft for newer more modern aircraft and often in the middle of training, with the fatal result that both pilots and ground crew were seldom adequately trained. Many aircraft were shot up while sitting lined up on the ground. The loss of Russian aircraft during the first few weeks of the war was staggering, thousands of aircraft were lost on the ground. However, while the losses of aircraft were huge few trained pilots were lost, and many of these pilots evaded capture and would live to fight another day.



(Above) Yak-1 flown by Snr. Lt. M. D. Baranov of the 183 IAP, summer 1942. Twenty-seven stars indicating "kills" appeared aft of the cockpit and the inscription "Death to Fascists" was applied roughly on the rear fuselage



Yellow 44, a Yak-1 2nd series, the personal aircraft of Lt. Lilya Litvyak, the female Flight Commander of the 73 IAP over Stalingrad during early 1943. Litvyak claimed twelve kills before her death in combat over Orel on 1 September 1943 at the age of twenty-one.


MAIN WING SPAR
R-1
R-2
R-3
WING LOC.
F-1
-1/16" PLY
F-2T
F-3T
F-4T
F-5T
F-6T
F-7
F-8
F-9
F-1
F-2B
F-3B
F-4B
F-5B
F-6B
FS-1
FS-2
44
"CRACKED" RIB STYLE WING
PEANUT SCALE RUBBER POWERED
YAKOVLEV YAK-1
Designed
& drawn by DENNIS O. NORMAN

GENESIS

In anticipation of my 50th birthday, I started writing a book for my children a year ago. It tells not only of me, but also of my ancestors and close relatives. Here is an excerpt for you:

I was approaching my 4th birthday when my father returned home from the Navy in early 1946. Mom had pictures of him in our apartment and, on one occasion, he made a "cardboard" record which he sent to us from somewhere in the Pacific so I could hear his voice on our family phonograph. He wrote frequently and mom read most of his letters to me. I was aware of him even though I had no specific recollection of him.

When he came home I saw my father as a lean giant. He was much taller than my mom and towered over me. I remember trying to relate to him. I asked him if I could call him "Mearl?" After all, that is what mom called him. He told me that I could not. I should call him "dad."

"Dad" quickly became a shadowy figure. There was a job to be found, money to be saved, transportation to be acquired, and a host of other things that demanded his time.

Our apartment at the Norton Homes faced Barberton High School's huge athletic practice field which stretched out from us a hundred yards or more. At its far side there was a chain link fence which marked the border of the city dump. The field had lots of clover and attracted little butterflies which I chased with my Uncle Mike Pavick who taught me how to catch the butterflies using my shirt as a net. Dad was about to show me new uses for the field.

One afternoon dad came home with a couple of sticks wrapped in crinkly yellow paper and a ball of thin white string. Puzzled, I watched as he quickly assembled my first kite. It was diamond shaped. Dad took me across to the field to show me how it worked.

There was a mild breeze and dad drifted easily with it for some distance, stopped, turned, unraveled a bit of the white string, and then began running towards me as fast as he could. Immediately the kite shot up behind him. From where I stood, it looked as though it sprang out of him as it soared into the blue gray sky.

When dad reached me, he stopped, turned, and gasped as the gold diamond spun wildly and crashed to the grass. "Oh," he laughed, "we forgot the tail!"

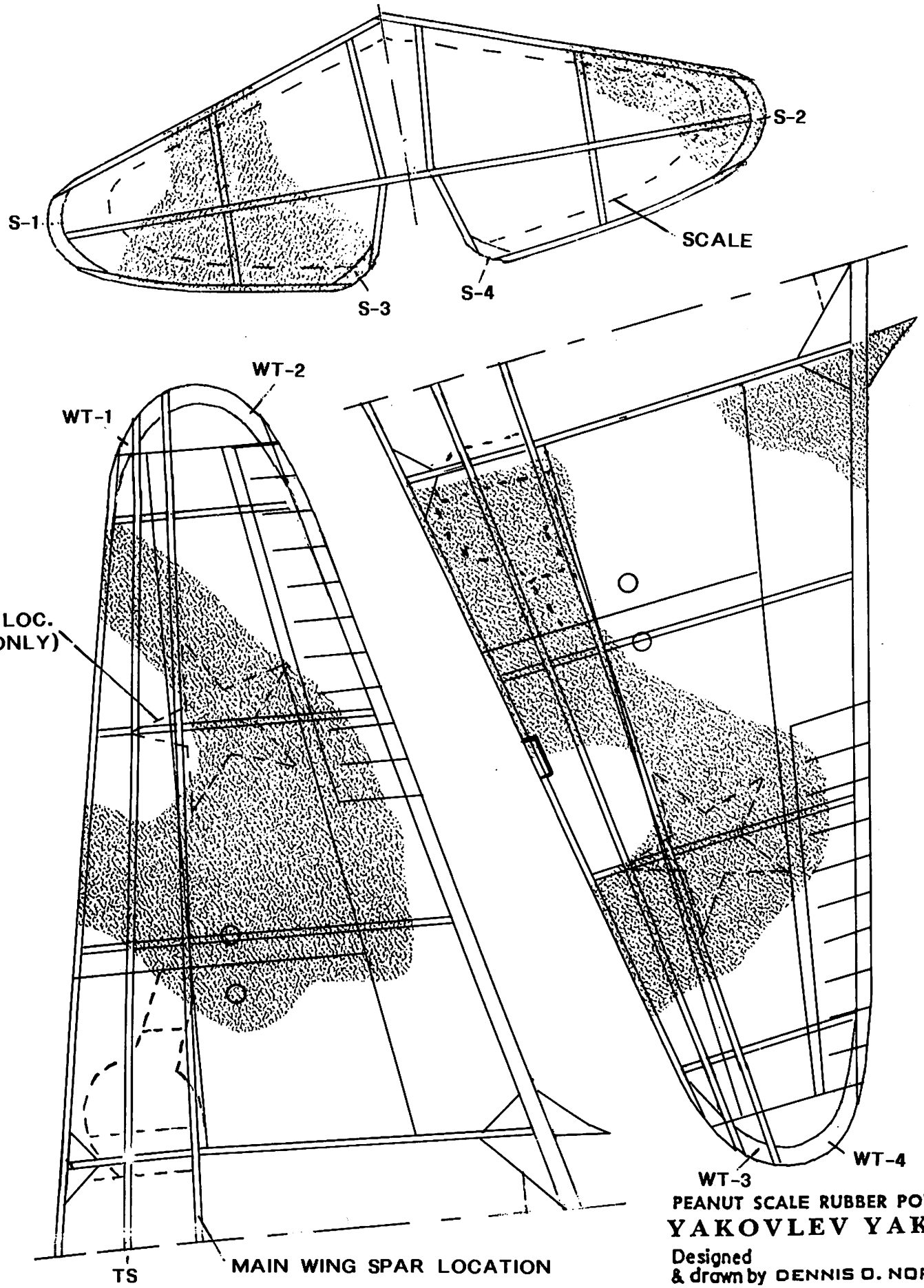
What was "the tail?" What did it have to do with a kite? Dad explained that a kite's "tail" weighted it and kept it right side up as it flew. "Well," I asked, "where do you get a 'tail' for a kite?"

"I'll show you," he said and we ran back across the street to our apartment where dad found a bit of old linen which he tore

CHARTPAK KEY: DARK GREEN..EMERALD GREEN (P21)
BLACK GREEN...COOL GREY #10 (P190)
LIGHT BLUE...ICE BLUE (P105)

COLOR SCHEME:
DARK GREEN/BLACK GREEN UPPER
LIGHT BLUE UNDER

10



PEANUT SCALE RUBBER POWERED

YAKOVLEV YAK-1

Designed
& drawn by DENNIS O. NORMAN

into thin strips. He tied the strips into a chain and he tied the chain to the long pointed end of the kite.

"There," he said, "that should do it!" Then it was back to the field.

At the field, dad repeated the ritual of the string and the run. Again the tiny kite erupted behind him, but instead of spinning, it soared purposefully with its long, dainty, "tail" holding it steady as it climbed.

The kite's string was rolled on a small cardboard tube. Dad put a finger into each end of the tube and let is spin wildly as the kite unreeled its tether. It rose swiftly and soon was a couple hundred feet above us. At that point, dad stopped, tied the string to the tube and handed it to me so that I could feel the kite's pull. It delighted me, but the novelty soon wore off. The kite simply danced and tugged on the string. The best part had been the launching. The soaring climb. The exhilaration as the kite rose. Yes, "launching" was definitely the best part.

A few days later, dad drew a plan for a small, simple, non-scale, rubber powered model for me. He asked what color I wanted and I told him yellow. The kite was yellow. Yellow was my favorite color. It was bright, cheerful, and it looked great in the sky.

Soon the little model was built and covered with yellow Japanese tissue. Dad added a wooden propeller with a wire hook to which strands of brown rubber were attached. Then it was time to go back to the field. We stood for what seemed like forever while dad wound the little propeller several hundred times. When he finished he turned toward the light breeze and told me to watch.

Again, there was a splash of color and a purposeful soar like that of the kite, but the little airplane had no leash. Unlike the kite, the little airplane turned, danced, banked, and pirouetted freely on the warm air. It was dynamic, unpredictable and constantly exciting.

Dad and I shouted and laughed as the little model flew on and on covering what seemed a vast distance. When it reached the fence at the edge of the field, the yellow bird was still 15 or 20 feet in the air and sailed easily over the fence to land some distance beyond.

We ran after it. Dad made it to, and over, the fence long before my little legs got me there. It was great! It was the moment of our bonding. Whatever has happened since, I have taken the passion and joy of that moment with me. It has been a wellspring of challenge, inspiration, and joy. It has also been a refuge and a source of fulfillment, peace, and love.

To parents,children,
and special moments.

Dennis

Yaks of the NORMANDIE—NIEMAN Fighter Regiment (Part 1)

By: Bruce Fraites
Art: D.Y. Louie

The recent release of the 1/48th scale vacu-form kit of the Yak-3 by BY-PLANES (Pamela Veal Ltd.) had me searching for markings, and in the process I came across the article on "The Normandie Nieman Fighter Regiment" by Chris Coleman in IPMS Quarterly 7/1. This reminded me of some French magazines I had acquired some years ago, called *ICARE, REVUE de L'AVIATION FRANCAISE.* The result was a vast number of photos of Yaks, on which the drawings in this article are based.

The Normandie-Nieman Fighter Regiment began life as G/C 3 "Normandie" of the Armee de L'Air at Rayak, Lebanon, in the fall of 1942. The group trained there in September and October, and in November flew to Teheran, where they switched from American C-47's to Russian ones for the long trip to Ivanovo, their first Russian base.

The Group continued training at Ivanovo on Yak fighters until March 22, 1942, when under their new commander, Commandant Jean Tulasne, they left for the front, where they were to serve as part of the Russian 303rd F.R. The first victory came on April 5, an FW-190 shared by pilots Prezioski and Durand, and was followed very shortly by the first losses, on April 13, when Derville, Poznanski, and Bizien were shot down and taken prisoner by the Germans.

On July 2, the eight-day Battle of Orel began, with the Normandie pilots in the thick of it. During this time, they lost Commandant Tulasne, who was replaced by Commandant Pierre Pouyade, and won their first Soviet decorations. By Oct. 11, the Group had scored 50 victories, and by the time it left for winter quarters at Toula on Nov. 6, the total was 72. However, by this time only six of the original pilots were left.

In May, 1944, the Group left Toula for its second campaign, this time in the Doubrovka area. On June 5 (one day before the Allies landed in their homeland) the Group lost one of its leading aces, Lt. Marcel Lefevre, who had scored 11 victories in his short career.

By July, the Normandie Group had followed the Russian armies through Lithuania and into Poland, and was taking part in the massive battles along the Niemen River. In recognition of their actions at this time, Stalin on July 31 decreed that the Group should add "Niemen" to its name, and this is the name under which it is remembered.

Winter quarters for the Normandie-Niemen this year were in Moscow, and here on Nov. 21 Gen. Charles DeGaulle arrived to decorate the French pilots. A new Commandant, Louis Delfino, took over on Dec. 12, and on Jan. 14 the Normandie-Niemen Group left for its third and last campaign, which carried it through Germany to Heilgenblau, where the pilots held their victory celebration on May 9.

On June 1, Stalin made a present of their 40 Yak-3's to the pilots of the Normandie-Niemen, and on the Twentieth of June these aircraft were landed at Le Bourget Airfield outside Paris and turned over to the new French Air Force. Many of the pilots remained in the new air arm, but the Normandie-Neimen Fighter Regiment had passed out of existence, after flying 5,240 missions and receiving credit for 273 German planes shot down.

Aircraft

At the time they returned to France, G/C 3 was flying Yak-3 aircraft, having re-equipped with this mark in the summer of 1944. They had first flown Yak-1's, turning them in for Yak-9's in July, 1943. Initial training at Ivanovo was on Yak-7 two-seaters, but no pictures of these aircraft are available. Apparently the Group was equipped with the Yak-1M for its first campaign, since most of the photos show the cut-down rear fuselage introduced on that type.

Notes on Markings

Quite a bit has been written about the Normandie-Niemen markings, but since the planes involved were Russian, a lot has necessarily been guesswork. *Icare's* series contradicts a number of points that have previously been accepted.

For instance, the lightning bolt on the fuselage was not solely the insignia of the First, or "Rouen" Squadron, since photos show a number of Yaks with high numbers carrying it. It was apparently adopted by the Normandie-Niemen pilots from the Russian 303rd Fighter Regiment with which they flew.

Also, some sources show French tail stripes and the Cross of Lorraine on the fins. None of the photos in the *Icare* series shows these markings prior to the return to France in June, 1945, and I believe they were added at that time; this is confirmed by a statement in Green's *Famous Fighters.*

There are many nose-only photos showing the shark-mouth markings, and these are all on Yak-1 variants, so I believe this marking was probably used only in the 1943 campaigns. Late in 1943, the tri-color spinner appears, and some photos show this on planes with the French roundels on the sides. In 1944 and 1945, the spinner was the only definite Normandie-Niemen marking, since a lightning bolt might denote a Russian aircraft.

A final note on the "shark-mouth" aircraft: Many appear to have a white spinner, and the noses have a peculiar mottled effect, as if the winter white camouflage had been hastily removed.—

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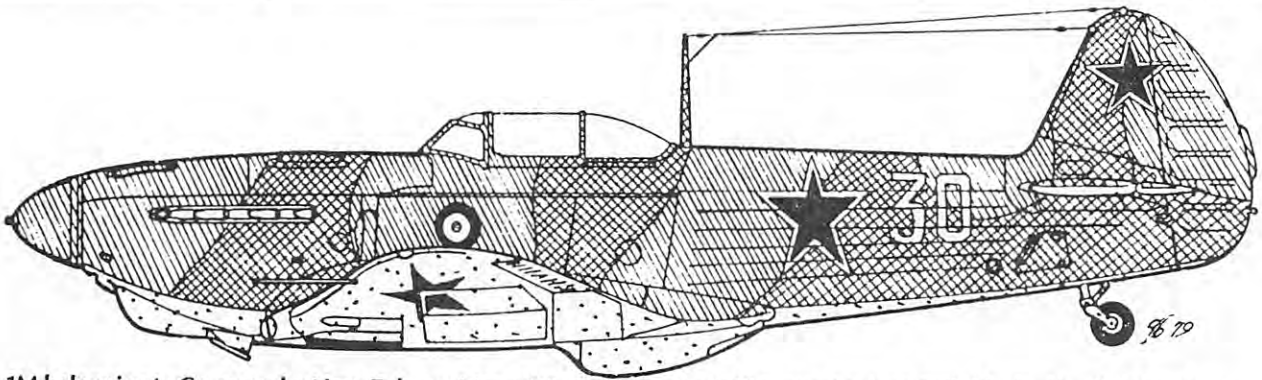
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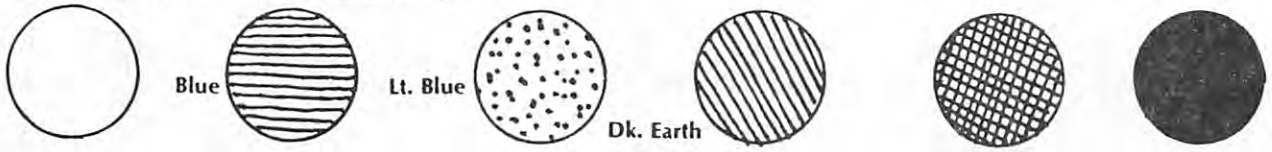
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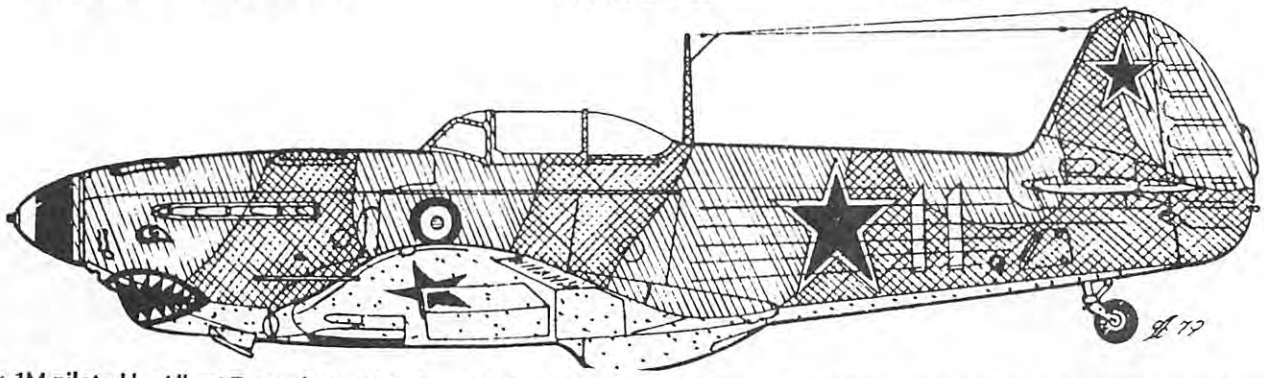
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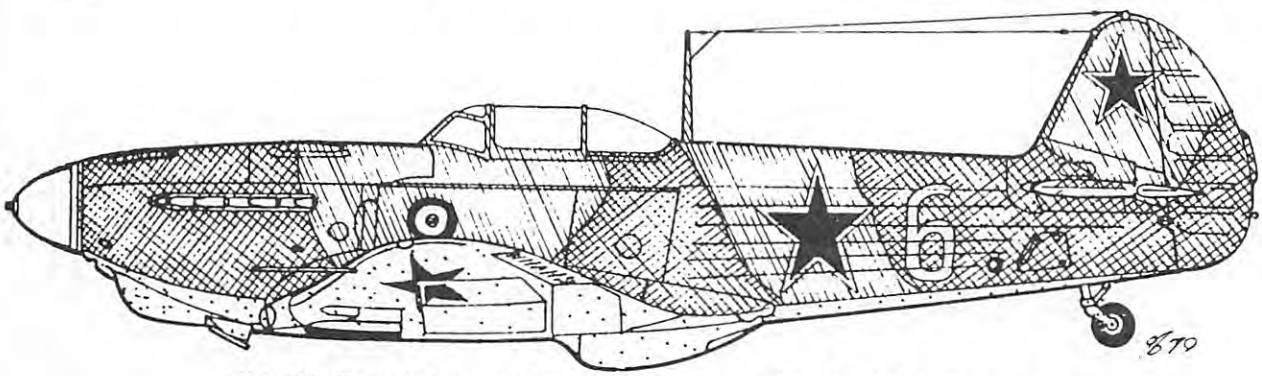


Yak-1M belonging to Commandant Jean Tulasne, May, 1943. "30" (may be "50" as number is partially blocked in photo) and surrounds to stars may be yellow. No stars on wing tops.

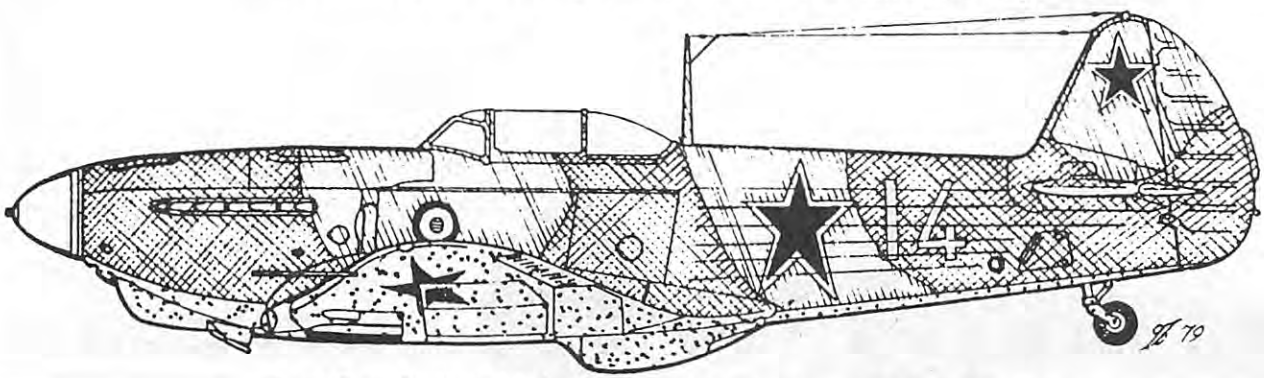




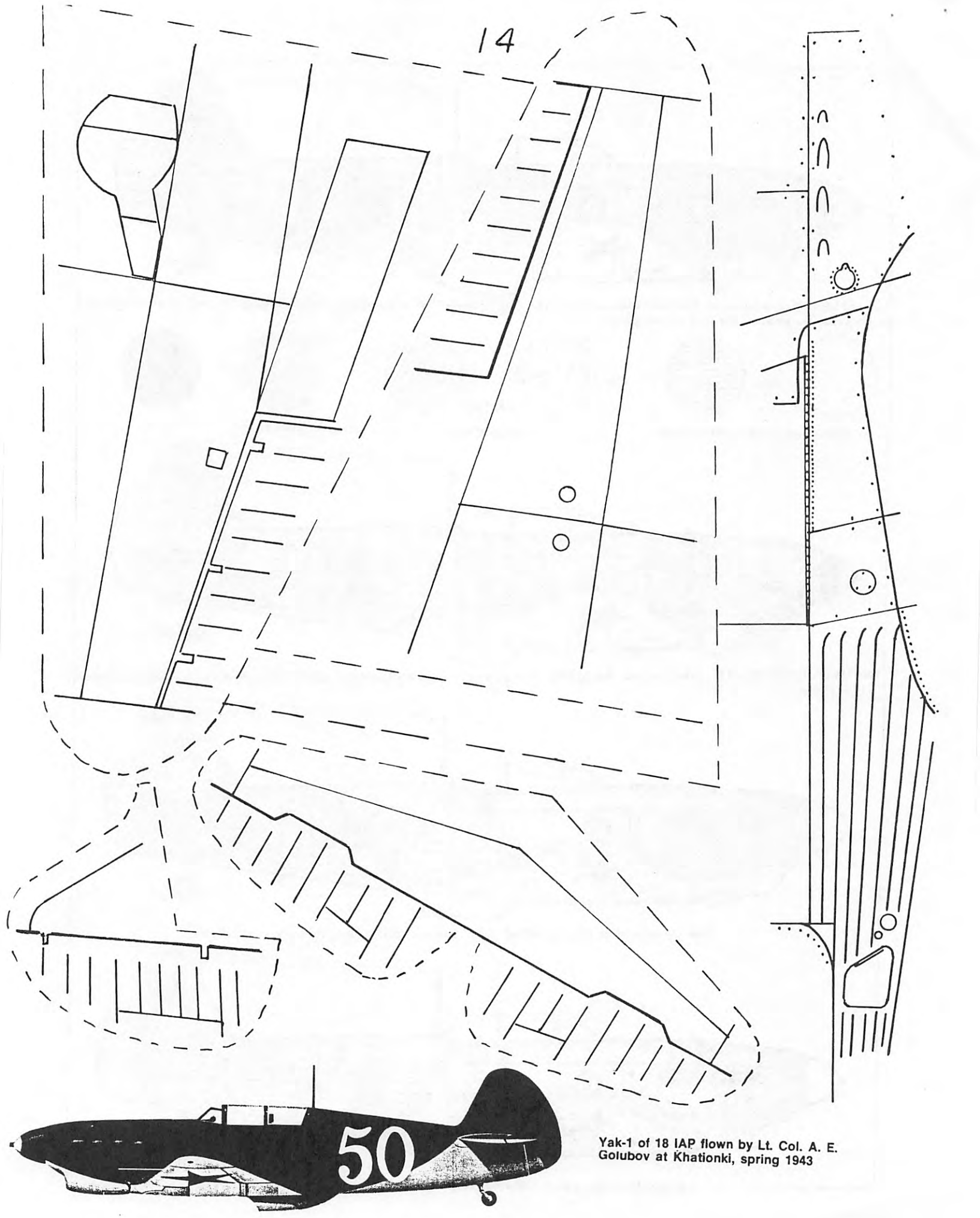
Yak-1M piloted by Albert Durand, Mosalsk, April, 1943. This particular aircraft is illustrated in PROFILE #185 but with all yellow spinner "11" is white.



Yak-1M piloted by Marcel Albert, 1943. Spinner and "6" in either white or yellows.

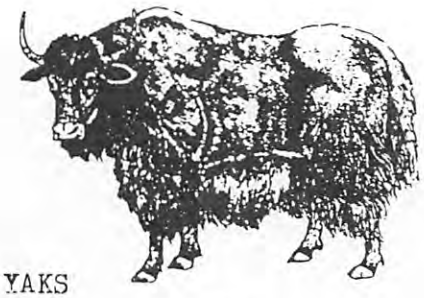


Yak-1M flown by Marcel Lefevre, 1943. "14" and spinner in either white or yellow.



Yak-1 of 18 IAP flown by Lt. Col. A. E. Golubov at Khationki, spring 1943

CROSSWINDS No. 83



yak

Business Editor
Russ Brown
Blue Fox Base
4909 N. Sedgewick
Lyndhurst, OH 44124

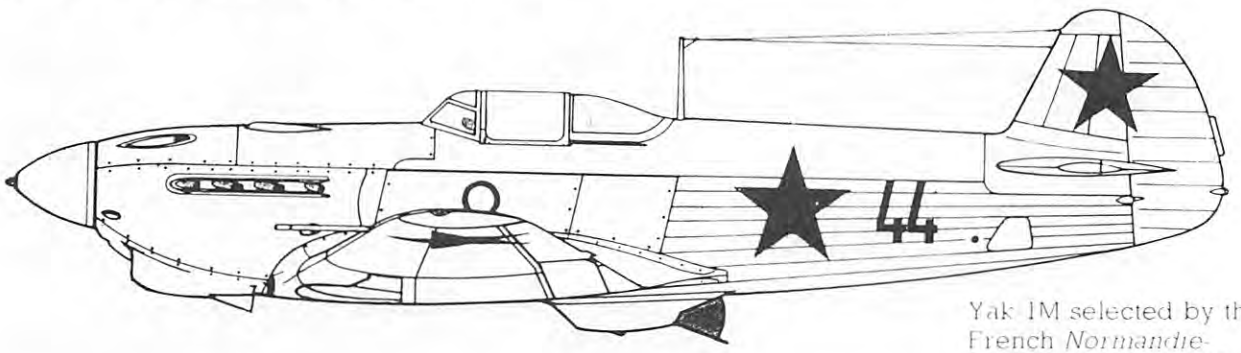
FLAT HATTIN' ON ALBINO YAKS

Please check your mailing lable for issue expiration number 83 or lower for $ 10 contributions.

A fresh blast of winter white covers the Eastern Central Sector just-in-time for this yackety yak on seasonal decour for Yak-1's. The timely whitecut of our steppes is now a great excuse for the foil editor to pitch for contrasty over all winter white trims. Our more philosophical readers will understand this excuse to delay another week.

Dennis' prototype Peanut size Yak-1 entered combat in FAC Eastern Central Sector in Summer decour of mixed black and green camouflage. Forty five (45) seconds of well trimmed first flight time was both impressive, and a indication that this tapered wing terror can wander up and away enough to hide in tall green growth around L.C.C.C. As the Fox likes white birds at hen house rest, Winter white opaque finish is favored for contrast in flying season. Plain white tissue is lighter than a dusting of paint, but is not as visible in or out of air. Russky pilot Ivanna Smirnoff's red eye conditioner may be applied at fliers option to stretch out skin wrinkles.

Russian Southern Front winter markings add bright red outer wing top panels to aid in finding downed aircraft in snow. But so far, no photos of Yak's, or even Il-2 Strumoviks with red on white wing tops have passed this way. Red tips on winter white have been photographed on Bell snakes (P-39), Rats (Polikarpov I-16 Rata of CROSSWINDS 62) and Mig-3's. An offering of vodka lube with your scale package may compensate for soviet subterfuge on lack of photos of Yak's in Southern front trim. Later version Yak-1M's with cut down rear decks and bubble canopies appeared in overall white top winter markings. Undersides remain in standard light blue with uneged red stars on wing bottoms only. As white temporal paint wears off, green and black-green panels and edges show through. Weathering of the matt white paint will be an excuse to apply panel art skinning that Dennis Norman adds to plans. A bad case of rivets will not show on fresh whitewash or while flying overhead, but will be looked for by scale judges if in plan detail. Color art for Yak-1's is in Soviet Air Force Fighters part 2, by Wm. Green and Gordon Swanborough and in YAK FIGHTER in action # 78 from Squadron/Signal Publications. S.A.F.F. Pt.2 above shows the Yak-1 in winter white with a red spinner and black 85 and two red stars on fuselage and tail. A Polikarpov I-16 is shown with red spinner and red 41 plus stars. A photo of Yak-1 no. 85 is shown at the top of page 9 in Yak Fighter in action. The shade of the no. 85 grey matches the spinner and stars, so it could be a red 85 ? just as well. More on albino Yaks follows.



Yak 1M selected by the French *Normandie-Niemen* wing in 1943, shown in winter colouring. This was the machine of Sub-Lt Marcel Albert.

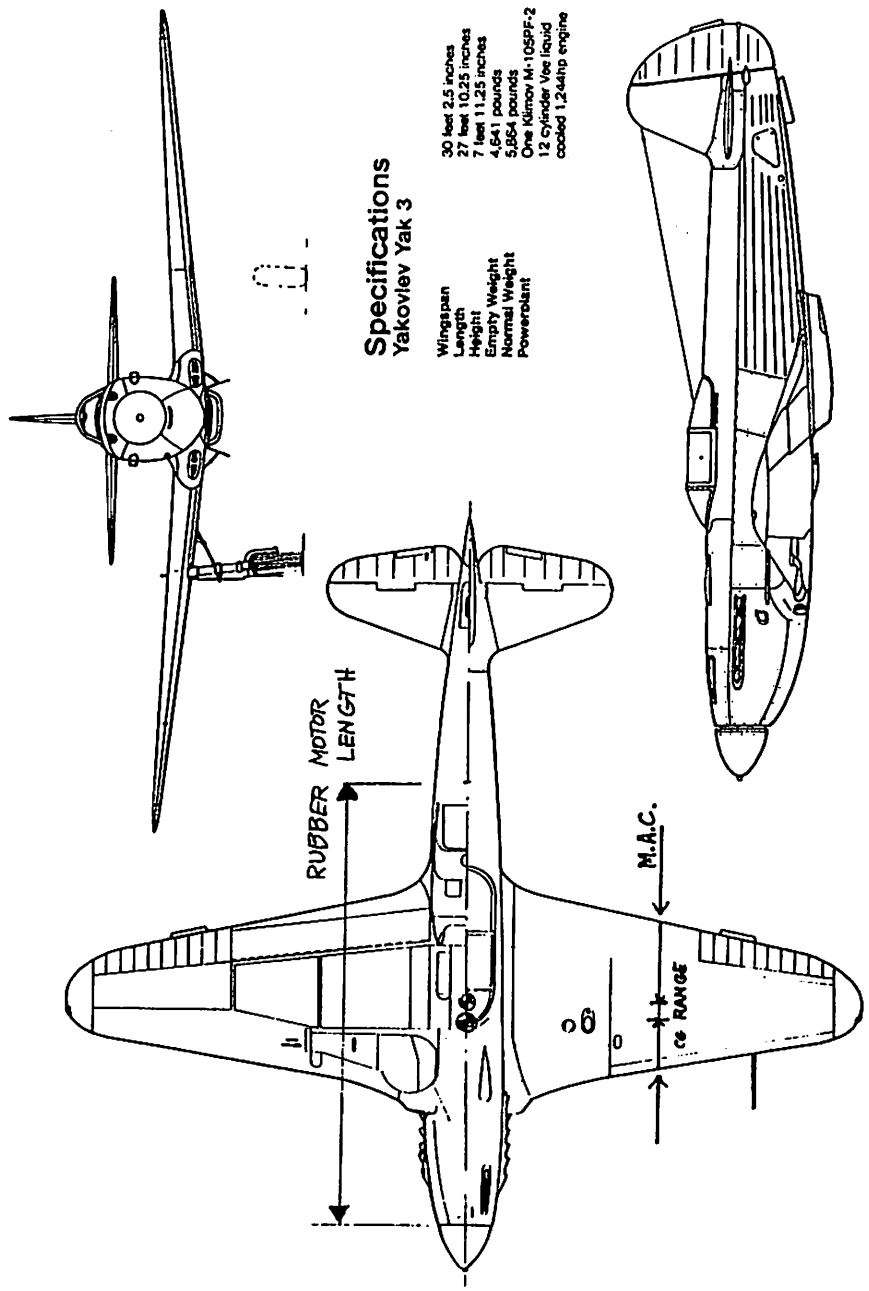
Great Noses Dept.

A relatively ignored area of WWII aviation history (in this country at least) is the Soviet Air Force activities. The Russians themselves have themselves to pretty much blame as so much of their history is propaganda that western writers have thrown up their hands in frustration at getting any factual data. Most glimpses of men and aircraft we get comes from German opponents which is, indeed, interesting but hardly a balanced view either. In light of this the new Squadron Signal booklet "Yak Fighter" is a real gem for modelers/history buffs. Up until this time the only soviet fighter planes out were 1) an Earl Stahl Mig 3 (great flyer but only moderately accurate in outline), 2) A Mig 3 plane in FM by Larry Kruse which was pretty good, 3) A Walt Musciano Controline Yak 3, 4) A Maxecuters Rubber powered Yak 3 based on the Musciano plans. The outline was fairly accurate but markings and bulkhead outlines were suspect, 5) A Dave Deils kit of the La-5 & 7 which is pretty good.

In examing the photos, it becomes immediately apparent that the Musciano/Maxecuter plans were close but the fuselage shape really missed. In one photo of a fuselage carcass stripped of the fabric covering, especially, the aircraft shows its slab-sided-box fuselage-model aircraft-style fuselage. Not only that, but the bottom was flat as a board too with a simple curved turtle deck aft of the cockpit on all marks. That photo started to get the juices flowing and the center foldout happily showed some color schemes beyond the olive drab-black that so many carried. The Yak as a model was beginning to show some promise but the two negatives at final glance were the highly tapered wing tips and the short appearing nose. However, in looking at that nose again, a pleasant surprise was in store for rubber scale pilots. If we take the Mean Aerodynamic Chord (M.A.C.) and place the CG 30% aft of it, we see there is a fairly good distance to the nose block. Taking that same distance aft of the CG for a motor peg, we've used just about the available length of that nice box fuselage. The nose was hiding from us in that fin-like wing! That leaves only the tapered wing tips which should be safely handled with generous and equal washout built into both. With a mottled gray-dark gray or gray-gray green paint job, a white lightning bolt and the red and white stars, the Yak would make a great looking contender, too.

As a footnote, the final Yak series were considered the match of the Mustang (excluding the P-51's tremendous range) and better than anything the Germans could put up the latter half of the war.

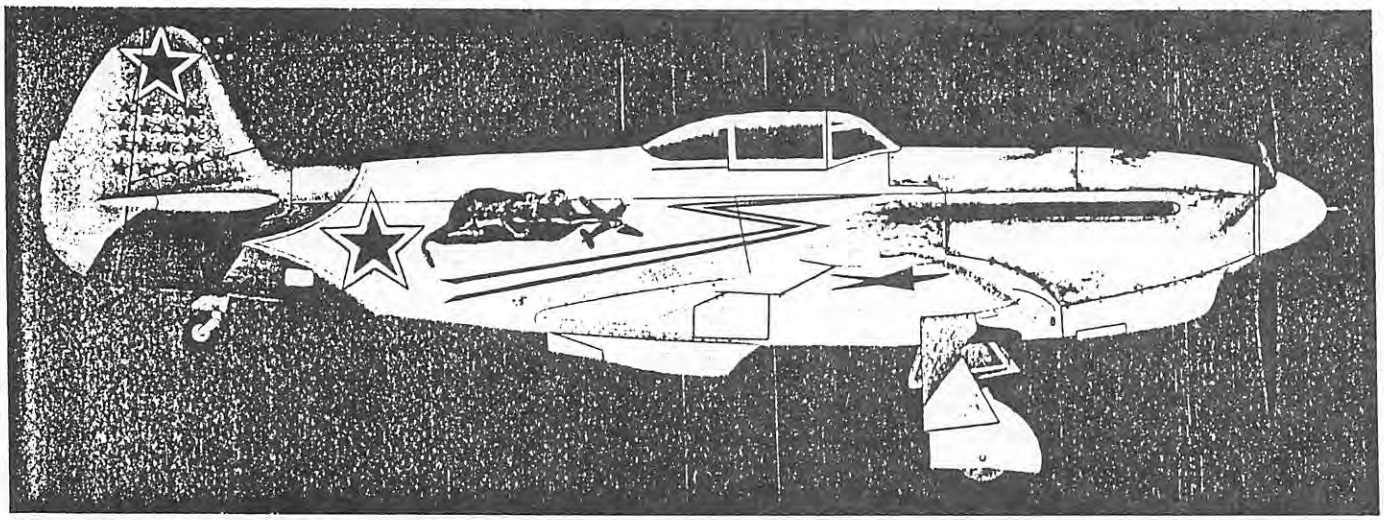
In Korea, the Yak 9 and P-51 met and the telling factor became pilot experience, not the machine, they were that close. Post war, civilian Yak 9's were entered in Hungarian air races! Shades of Reno in September.



Courtesy Scale Staffel Nov. '87, Tom Arnold.

BITTEN BY A BLUE TAIL YAK

Sightings of bright blue tail Yak's are rare west of Tibet or Minesota 'Nes Paw? Babe, the Ox was blue all over unless shedding a winter coat canard style. On the Eastern Front, A Yak-1M with a bright blue tail was seen frequently and admired much. Soviet No. 2 Defense Squadron hero and Ace V.P. Pokrovski's Yak-1M got command personal markings that were the cat's meow. The pricey pages of a **Koku-Fan** show a bright blue vertical tail. with a big white and red edged red star at top, and 17 red star kill marks. A bold red edge lightning Zap stripe and a lion snatching a green Bf Me 109G decorate the fuselage. Zap turkey stripes in wide white form were also put on French flown Normandie-Nieman Fighter Regiment Yak-3's. See CROSSWINDS No. 42 (43 from Russ Brown). We hope to add a Dave Smith plan Yak-3 to this, but may well run cut of space. The Kraut Stork Issue No. 82 was so stuffed for example, we had to reduce text to 1/2 squint type to get it all in on a limit of 28 sides. That, and having to print drawing pages on legal length paper and trim to 11 inch size to hold edge lines drawn too close to ends made for an expensive pain. Didn't even have room to dis-claim the Dennis Norman suggestion of a free issue. Issue renewal numbers on pre printed address labels are still in effect, thank you, as the Quarterly issues stretch out. This Issue again has lines too close to ends, but will be printed on 11 inch paper. Readers are encouraged to yell at us 'till we get it right. Printer Larry Mzik will do the best he can while holding size. Now show us your Yak!



<Yak-1M 2 Gv.IAP VVS SF Cap.V.P.Pokrovski Wintter 1942~43>

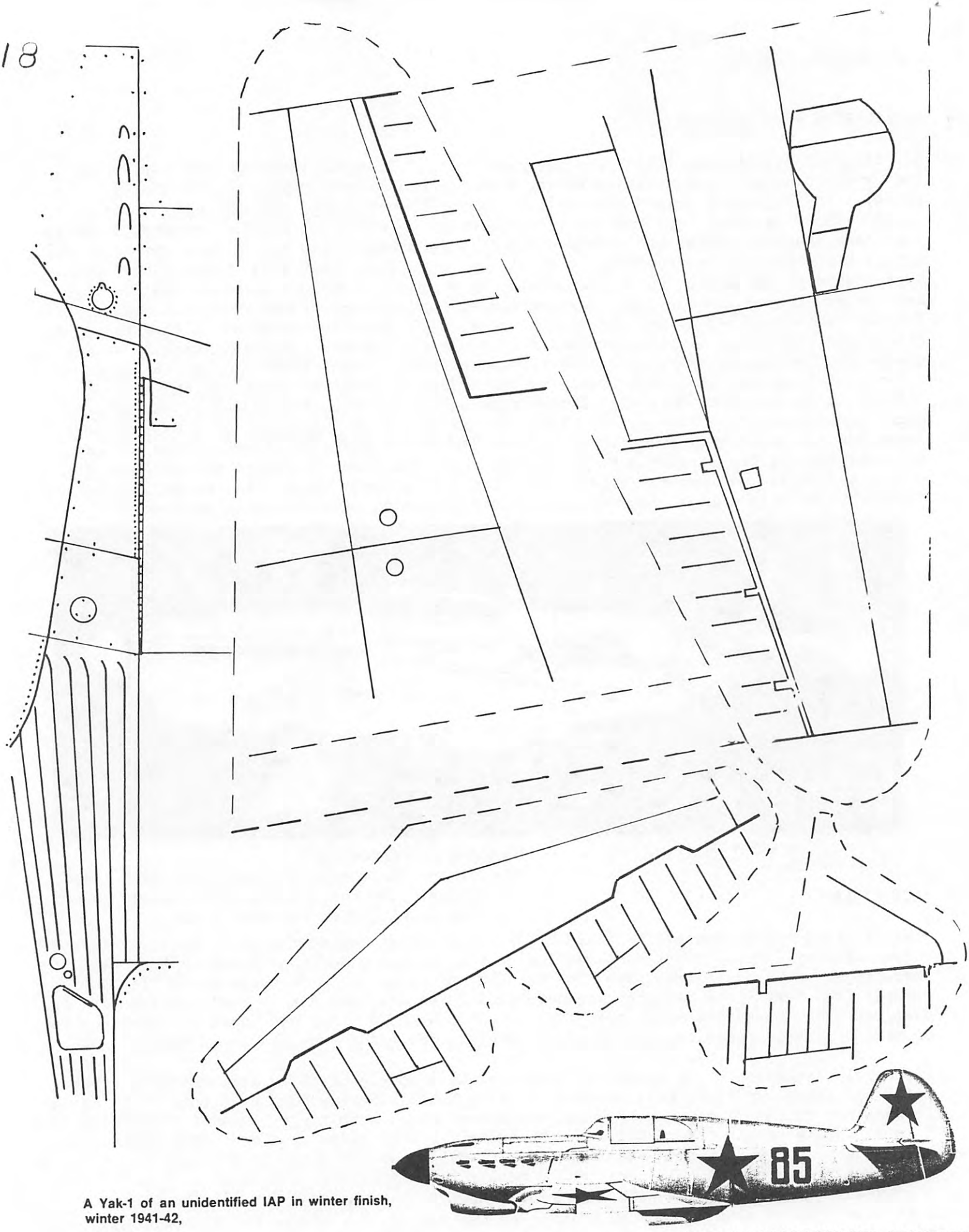
Yakovlev Yak-1M

Top- Winter white with red stars and edge lines. Bright blue tail, brown lion , green Me 109G.
Bot.- Light blue with red wing stars.

CACTUS YAKS

News of Yak-3 combat success is filed by Cactus Squadron Kanone counts to GHQ. The Federal Bureau of Pony Express rider bent needles on the Cactus Squadron mail bush with a pack of aero project data overflowing the Blue Fox Base archives and a XW request for flight test records from Yaka Flats designer Ace Dave Smith. Yak Ace Dave kindly reciprocated with full disclosure of the secret crash test file for CROSSWINDS 83 use, and added an offer too good to pass of drawing services for future CROSSWINDS. Straight from the Yak's mouth:

A general discussion of my trials in trimming the 3 models of YAK-3 aircraft that I have built and flown. My first Yak-3 was built using Lubomir Koutny plan at a span of 18 inches. It came out fairly light, I believe it was around 20-25 gram range. I had a large home brew 8 inch 3-blade prop on the front end with quite a bit of blade area and pitch cranked into the blade. I powered it with two loops of 1/8" FAI about 24" long. It was very sensitive to power and the torque at full power would really rack it around in a steep left hand turn. I actually had to launch it with the right wing low to compensate for all the torque. (We know this is really propwash beating on the rudder, but torque is the traditional way of saying propwash, without a whole lot of propwash.) Continued next page.



A Yak-1 of an unidentified IAP in winter finish, winter 1941-42,

PEANUT SCALE RUBBER POWERED

YAKOVLEV YAK-1

It flew great under power, but I could never get it to glide as I didn't know how to braid rubber. I had considerable dihedral in the wing tips at about the bottom edge of the canopy. I also had quite a bit of washout in each wing tip. I think this is really necessary for an airplane that has a wing plan form with extreme taper and very narrow tips. I refer to this plan form as almost triangular.

I also built the Yak-3 peanut plan from CROSSWINDS 42 by Orange Bug. It was very light at about 8.5 grams, with a complete paint job with insignias and all the detail. I used a North Pacific 6" prop and an 18" loop of 3/32" FAI for power. It flew pretty much like my first Yak-3 but would really grab for the Ozone climbing almost straight up in a steep left hand bank. It was good for about 1 minuteer flights with no thermal help, and I won a few contests with it. I had a little more wash out in the right wing than in the left to control the torque at full power. It flew left in power and right in the glide. My third Yak-3 was a 2X enlargement of the peanut plan by Dave Pishnery. It came out quite heavy at about 48 grams without rubber. I got it to fly reasonably well but it was never a great flyer and has since been retired to Hangar Queen. My theory on building aircraft with narrow wing tips follows:

1. Keep them light as possible so they can be flown slowly.
2. Build in plenty of dihedral as mentioned above. This is needed due to narrow tips. Put in some washout in each tip, more in the right to compensate for torque.

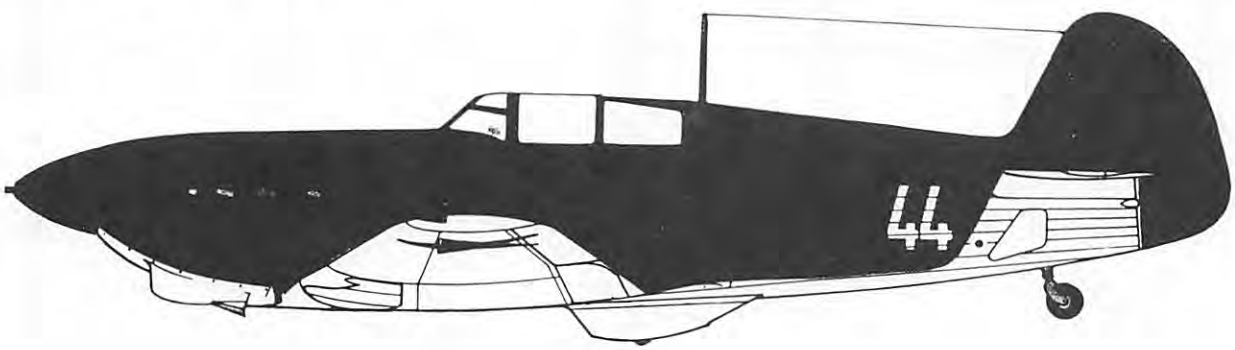
The Yak series of aircraft are quite interesting and unusual. Hope this helps you some Russ with the XW on the Yak-1 that Dennis Norman is putting out. Again thanks for all the nifty stuff you sent. Go break a Gumband !!!!

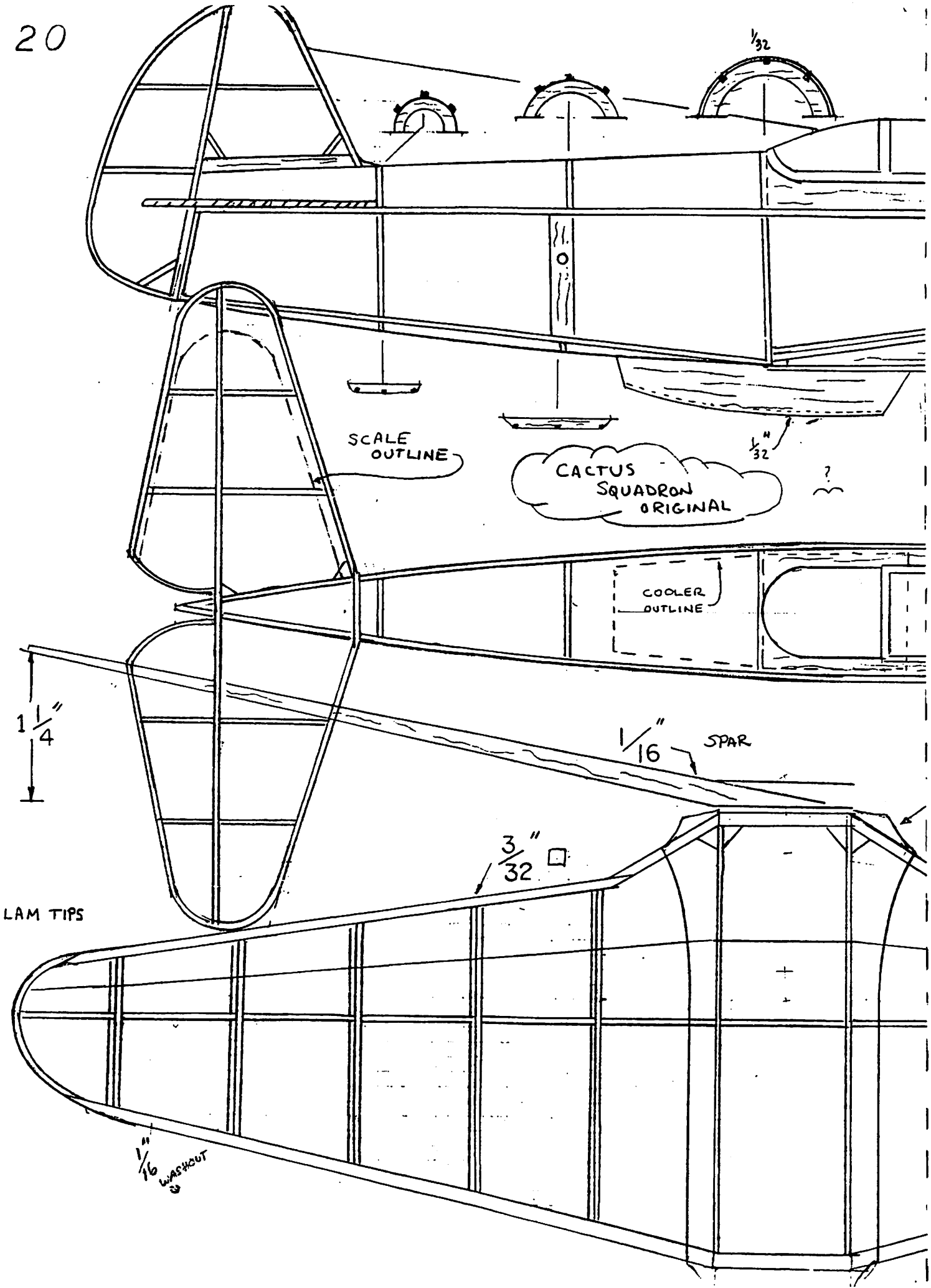
SHTICKS UND TIZZUE UBER ALLES DAVE

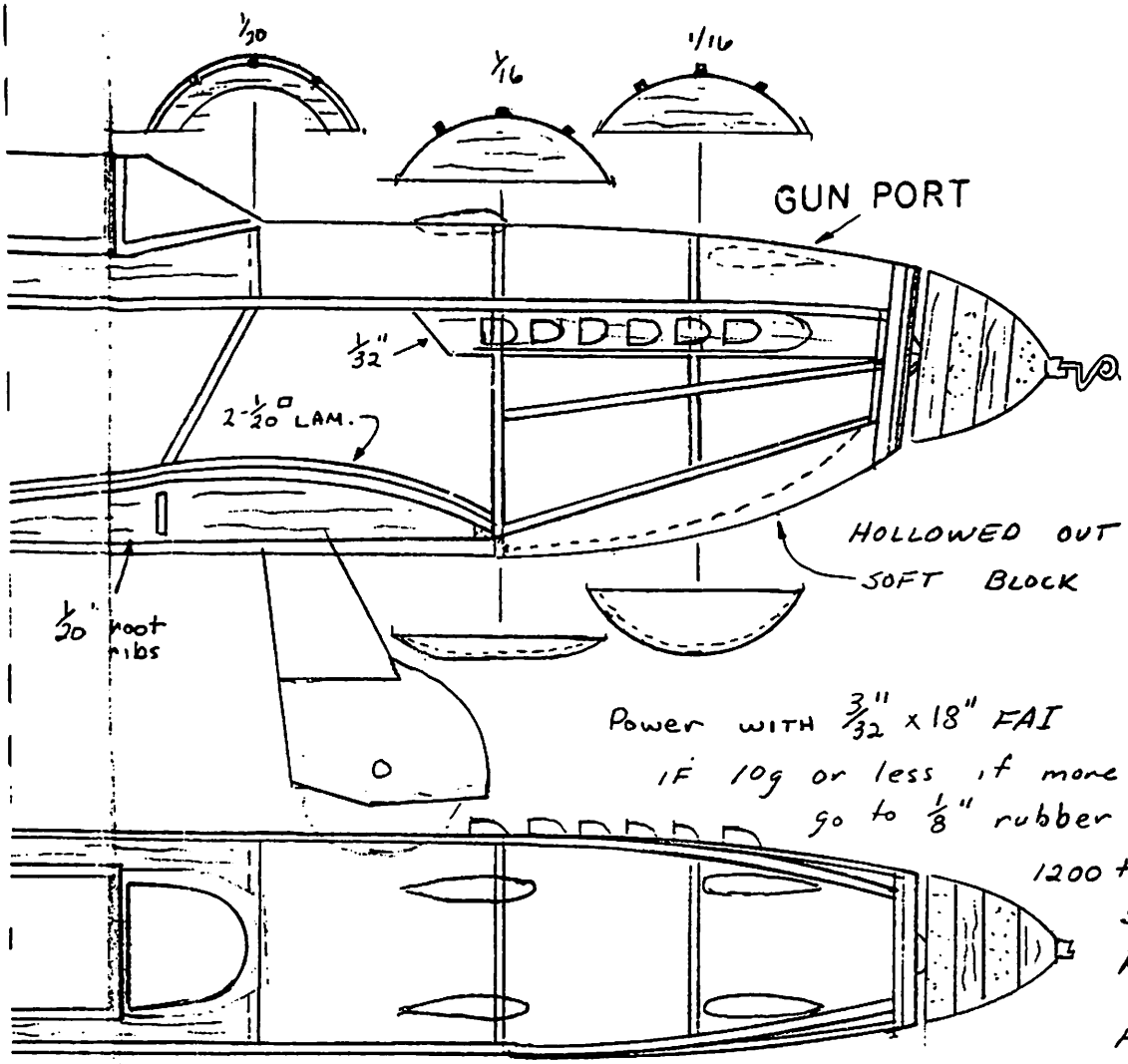
Yaks continue to evolve on the basic plan form. Air Racing enthusiasts at Reno and at the Cleveland annual Symposium are pleased with Bob Yancey's hot rod P&W R-2800 radial powered Yak 11, and other Yak's in action. Even the transition to jet power fit the Yak basic frame. The A. S. Yakovlev design team mounted Junkers Jumo 004 jet engines under the nose of a Yak-3 configuration as the Yak 15 in 1946. The chin mount jet makes a very attractive candidate for prop nose rubber power action, or as a scale shape for jetex scale flying. The YAK FIGHTER IN ACTION 78 has color and plan views. Also for longer nose Yak 23. (Ugh!)

Saturday, July 17 1993 at AMA Field, Muncie, Indiana is the place to be for the first Jetex Rally. Roger Wathen Sr. at 3242 N. DeQuincy St. Ind'pls In. 46218, Phone 1-317/ 547-5963 invites all hot li'l rocket power fanciers to attend the big flying and how to get it done symposium. Subscriptions to the Newsletter Psssst off are $ 9 in USA, $10 for Canada, and $ 12 overseas. $14 in a brown envelope. I like that color Roger!
Take notes or put the Symposium on video tape Roger. CFFS has a contest at L.C.C.C. 7/18.

The next CFFS meeting is Sunday April 25 at 7:30 P.M. at G-8 Jim Hyka's home. Jim is at 16225 Parkgrove, Cleveland, OH 44110 Phone 216/ 481-6525. FF enthusiasts are invited.




1/32
SCALE OUTLINE
1/32"
CACTUS SQUADRON ORIGINAL
?
COOLER OUTLINE
1 1/4"
1/16" SPAR
3/32"
LAM TIPS
1/16" WASHOUT



YAKOVLEV YAK-3

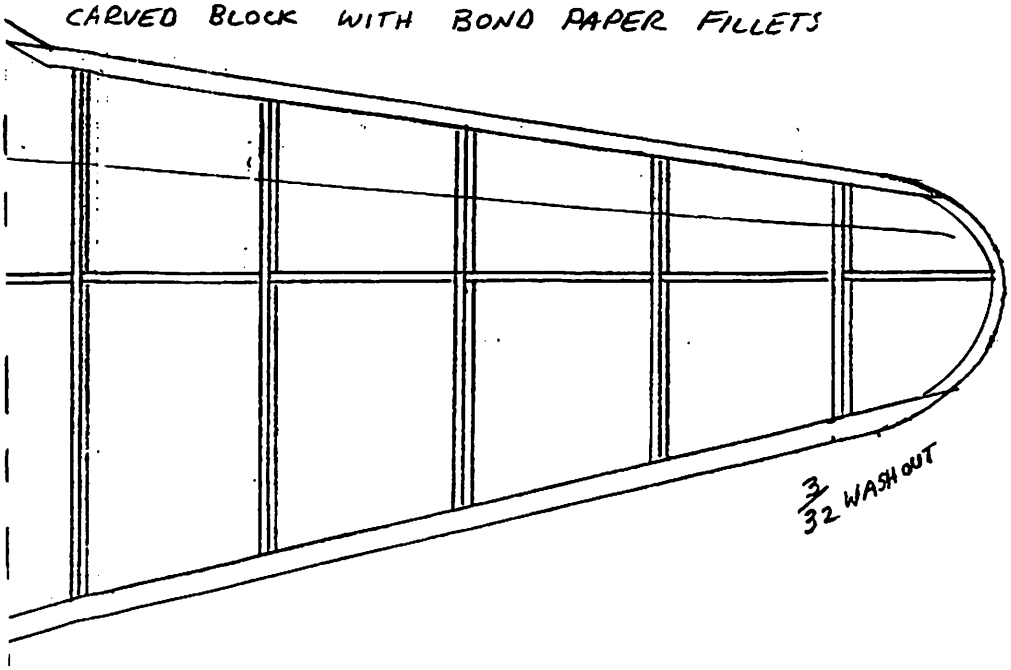
By

Dave Smith

FLY left - RIGHT pattern. Use washout on right wing to control torque under power

Built LIGHT AND Trimmed right this little CZARIST CSKY CSTREAKER SHOULD BE GOOD FOR 50sec FLIGHT.

OK IVAN LETS BE OFF TO KNOCK ONE OF THESE NIFTY GUN BUSES OUT!



1993 FLYING CALENDAR

March 13 SATURDAY — Cleveland Indoor Contest at Cleveland State Univ. Intramural Sports Center Dome E. 24th St & Chester Ave. 8:00 AM to 5:00 PM. 37ft. peak ceiling.
8:30 AM- 12:30 PM : EZB, Intermediate Stick, and Novice Penny Plane.
11:00 to 3:00PM : Mini Stick.
12:30 to 5:00 PM : No. Cal Profile FAC, Hi-Wing & Parasol Peanut FAC.
Low, Mid, and Bipelane FAC Peanut: No canards, pushers, or odd types. Bring scale data, FAC points.
WWI Peanut Bi ane Dogfight Mass Launch FAC.
Seven gram Bostonian
Jetco R.O.G. Stick/ CFFS rules.
WW II No. Cal Profile Combat at 5:00 PM. One Mass Launch.
Contest Director Mike Zand, 7055 Seven Hills Blvd., Seven Hills OH 44134 Phone 216/524-3480. Bring your own tables and chairs and tennis shoes.

SATURDAY 3/20 — MAXECUTERS at Patuxent NAS Lexington Pk. Md. C. Powell 301/872-4105 by 3/13.
MARCH 20-21 — N.Y. Metro Sq'dn Ind. at Floyd Bennet Brooklyn. Don Ross 201/568-5272
APRIL 17-18 — N.Y. Metro Indoor as above.
SATURDAY 3/17 — Erie MAA annual banquet.
SUNDAY 3/18 — ERIE Snowbird Indoor at McComb Fieldhouse, Edinboro, Pa.
FAC Scale, FAC Peanut, Hi-Wing Peanut, 7 gm Bostonian, Blatter 40, A-6, WW I Peanut Dogfight, No. Cal 5 gm, No. Cal under 5 gm, Golden Age Scale.
CD Vic Didelot 4410 Lorna Ln. Erie Pa 16506 Phone 814/ 838-3263.

APRIL 17-18 — Miami,Fl 5th State Meet at MacDill AFB. Doc Martin 2180 Tigertail,Miami,33133
SUNDAY 4/25 — CFFS Club meeting 7:30P.M. at Jim Hyka's 16225 Parkgrove Cleve. 481-6525.
APRIL 25 — Cactus Sq'dn FAC at Phoenix, AZ CD Dave Smith 1041 E. Rawhide Gilbert AZ85234

APR 30-5/2 — Air Racing History Symposium 9th annual at Cleveland,OH W.150th & I-71 Holliday Inn. $30 advance or $35 at door. Herm Schaub 216/234-2301.

SUNDAY 5/16 — Erie FAC at Prangmore, Pa. Ross May 6725 Alan Lane, Fairview, Pa.15415
FAC Scale, FAC Peanut, Hi-Wing Peanut, Embryo, Golden Age Scale, FAC O.T. Rubber, Jumbo Scale, Pioneer Scale, WW II Combat, Greve/Thompson Races, Comet Kit/Plan Scale, FAC Power Scale, HLG, Golden Age Military Scale.

JUNE 3-6 — NFFS/ USIC AMA Indoor Nat's at Johnson City, Tn. Tom Iacobellis
JUNE 12 SAT. — Erie FAC at Prangmore Aerodrome, Millfair Rd, Erie Pa.
SATURDAY 6/19 — CFFS FAC at LCCC, Elyria, Oh. Jim Hyka CD 216/481-6525 10 AM- 5 P.M.
FAC Peanut, Hi-wing & Parasol Peanut, Comet & Golden Age Kit /Plan Scale, FAC Rubber Scale, WW II Peanut M.L., WW II FAC Combat, Embryo Endurance (JS)(O) WW I Biplane Dogfight M.L., WW I Monoplane, All Ohio Funk & Waco FAC, FAC Power Scale for CO_2 or Electric, Old Timer Replica FF CO_2 or Ele. Precision. Choice of plans to all fliers.

JUNE 25-27 — Annual Waco Fly-in at Wynkoop Field, Mt. Vernon, Oh.

JULY 3-4 — Probable date of Taylorcraft Fly-in at Barber Field, Alliance, OH.

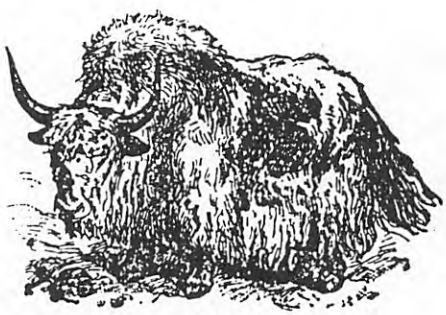
JULY 10-11 — Bud 500 Indy car race at Cleveland Burke Airport with CFFS ushers.
JULY 9-10 — FAC GHQ & WNYFF FAC CONTEST AT GENESEO NY
JULY 17 — Jetex Rally at Muncie, IN. Rog. Wathen 317/547-5963

SUNDAY 7/18 — CFFS FAC at LCCC 10 AM-5 PM. Gordon Roberts CD. 216/749-4817.
FAC Peanut, Hi-wing & Parasol Peanut, O.T.Dime & Hi-Flier Kit Scale, No. Cal Profile Scale, FAC Rubber Scale, All Ohio Funk & Waco FAC, FAC Power Scale for CO_2 & Electric, Embryo (JS)(O), HLG (J)(SO), WW I Peanut Biplane, WW II Peanut, WW II No. Cal, & Pastachio Scale.

1993 FLYING CALENDAR

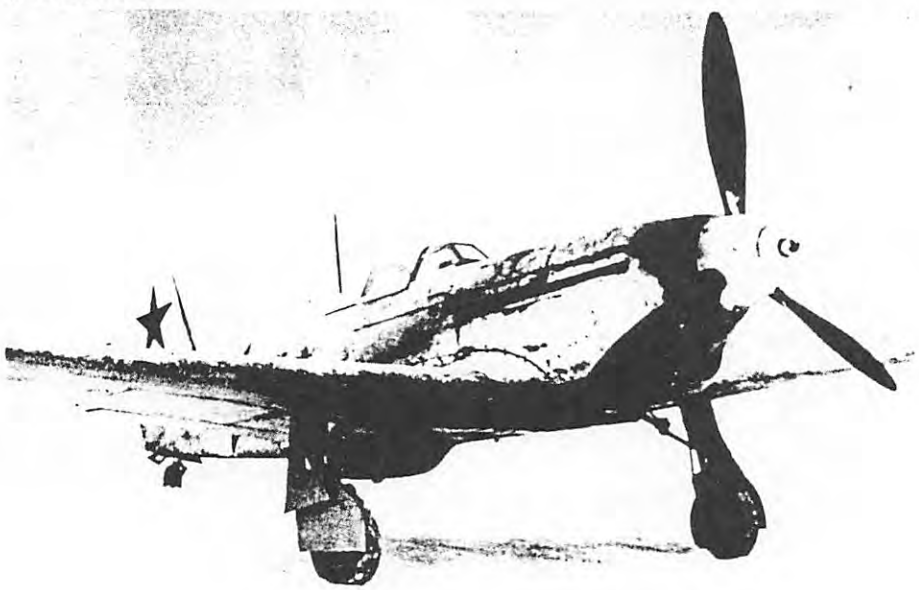
JULY 23-29	Dayton, Ohio International Air Show.
JULY 23-25	Funk Aircraft Owners Assoc. Annual Fly-in at Coffeyville, Kansas. Preserved examples of the best and safest of light planes.
/29-8/4	EAA Annual Fly-in at Oshkosh, Wisconsin.
SUN. 8/1	CFFS FAC Contest at L.C.C.C.
SAT 8/7	Erie MAA FAC CONTEST & Picinc at Prangmore Field, Erie, Pa.
9/4, 9/5	Muncie, In. Free Flight Nat's and FAC Bash.
	Saturday Sept 4th
	WW II, FAC Scale, Embryo Endurance, Golden Age Military, Pioneer Scale, High Wing Peanut Scale, and FAC Old Timer Rubber.
	Sunday Sept 5th
	WW I Biplane Dogfight, Greve/Thompson Races, FAC Power Scale, Jumbo Scale,
	FAC Peanut Scale, Golden Age Scale, FAC Old Timer Rubber, No. Cal. Scale.
SUN 9/12	CFFS FALL FAC Contest at L.C.C.C.
SUN 9/26	ERIE Fall FAC GHQ at Prangmore Field, Erie, Pa.

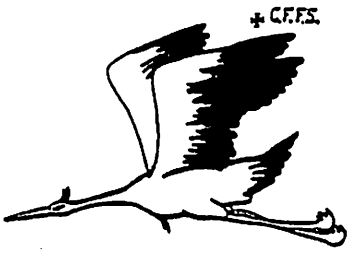
YACK ou **YAK** (*i-ak'* [*y* asp.]) n. m. Espèce de buffle à queue de cheval : *les yaks vivent dans les montagnes de l'Asie centrale.*



Yack.

(Below Right) A winter camouflaged Yak 1M in its element! Simple to maintain even under the most arduous of conditions, these fighters were ideally suited for the Eastern Front conditions. The original factory paint appears where the White has been being worn off. (Andrzej Morgala)







CFFS 1993 Contest schedule at Lorain County Community College 10 AM-5 PM, Elyria, Ohio. R. I-90, Exit 148 S. to Abbe Rd. Rt. on 301 S. to L.C.C.C. and look around upwind. More events and Kanones at a low entry fee. All fliers pick a plan prize. AMA card required.

SAT. June 19 events: CD Jim Hyka 16225 Parkgrove, Cleveland, OH 44110, 216/481-6525.

1. FAC Peanut Scale.
2. Hi Wing & Parasol Peanut Scale.
3. Comet & Golden Age Kit Scale.
4. FAC Rubber Scale.
5. WW II Peanut Combat Mass L.
6. WW II FAC Combat Mass Launch.
7. Embryo Endurance (JS)(O). Rise Off Card Table.
8. WW I Biplane Dogfight M.L.
9. WW I Monoplane
10. All Ohio Funk & Waco FAC.
11. FAC Power Scale CO_2 or Electric
12. O. Timer Replica CO_2 or Electric Precision.

SUN. July 18 events: CD Gordon Roberts 5539 Hilltop Oval, Parma, OH. 44134 216/749-4817.

1. FAC Peanut Scale.
2. Hi Wing & Parasol Peanut Sc.
3. Old Timer 10 Cent & Hi Flier Sc.
4. No. Cal 16" Profile Scale FAC.
5. FAC Rubber Scale.
6. All Ohio Funk & Waco FAC.
7. FAC Power CO_2 & Electric Scale.
8. Embryo Endurance (JS)(O). R.O.T.
9. Hand Launch Glider (J)(SO).
10. WW I Peanut Dogfight Mass Launch.
11. WW II **Peanut Combat Mass Launch.**
12. WW II No. Cal Profile Combat, One Mass Launch.
13. Pistachio Scale.

SUN. Aug. 1 events: CD Russ Brown 1909 N. Sedgewick, Lyndhurst, OH 44124. 216/382-4821.

1. FAC Peanut Scale.
2. Hi Wing & Parasol Peanut Sc.
3. Comet & Golden Age Kit Scale.
4. FAC Rubber Scale.
5. FAC Power Scale CO_2 & Electric.
6. Old Timer Replica "" & "" Prec.
7. Embryo Endurance (JS)(O).
8. All Ohio Funk & Waco FAC.
9. WW I Biplane Dogfight, Mass Launch.
10. Greve Race, Inline Engines, Mass Launch FAC.
11. Thompson Trophy Radial Power Racers Mass Launch.
12. WW II FAC Combat Mass Launch.
13. WW I Peanut Biplane Dogfight.
14. WW I Monoplane.
15. Pistachio Scale.

SUN. Sept. 12 Fall FAC. CD Russ Brown.

1. FAC Peanut Scale.
2. Hi Wing & Parasol Peanut Scale.
3. Old Timer 10 Cent & Hi Flier Kit Sc.
4. Comet & Golden Age Kit Scale.
5. No. Cal. 16 " Profile Scale.
6. FAC Rubber Scale
7. Embryo Endurance (JS)(O).
8. Greve Inline Racers Mass Launch.
9. Thompson Radial Racers Mass Launch.
10. WW II FAC Combat Mass Launch.
11. WW I Biplane FAC Dogfight Mass Launch.
12. WW I Monoplane
13. All Ohio Funk & Waco FAC.
14. FAC Power Scale CO_2 & Electric.
15. Pistachio Scale.