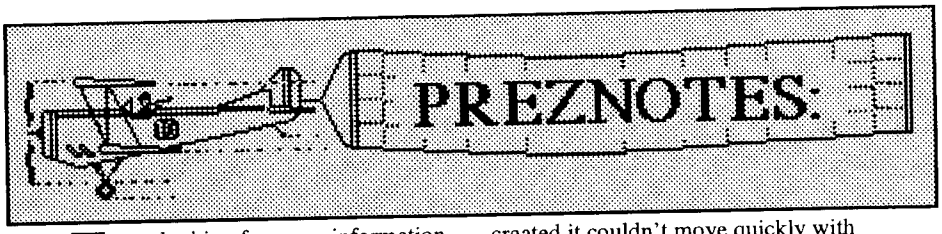
Seattle Chapter News

Seattle Chapter
IPMS-USA
June, 1998



I was looking for some information on a particular aircraft I am planning to model and I came across this editorial, written by Jim Schubert in 1970, for Vol 1, No 1 of the Seattle Chapter Quarterly, our newsletter of the time. I think it is still valid today and I am reprinting it nearly verbatim.

WHY? Jim Schubert When I was first requested to write a piece for this letter I was undecided about what to do. I could do an article on the "stock" conversions I've been building, but then who besides me is really interested in accurate , P-26's, Phantom II's, Boeing prototypes of the '30's or what's really wrong with the new Hasegawa SOC-3 Seagull (apart from the fact that it is actually an SOC-4)? No, I had to go deeper. What's it all about? Why do we build models - of anything? I'm sure the eighty or so members of our local group have eighty or so reasons. Basically all reasons boil down to the same essence - enjoyment. Enjoyment exists on many levels of appreciation. The greater the appreciation, the greater will be the enjoyment.. Appreciation, of anything, is enhanced by understanding. How many people who say "I hate classical music", really understand it? They don't actually hate it of course; they're uneasy with it because they don't understand it. Most of the 200 million U.S. citizens put us down as boys playing with "toys" - the same with the model railroaders, the radio control airplane/boat/car builders, stamp collectors and coin collectors. Don't let it bother you. Dig into your hobby or hobbies, wring them dry. Understand their background, origins, relevance to history, etc. Say you build static display models of planes. They will mean more to you end tee far more enjoyable if you understand why the real airplane existed; why it was built the way it was, how and why it was used, why it was painted a particular scheme, how all the bits and pieces worked, and how that all related to a justification of its cost at a particular time in history. Back to the Zeke for an example. It was built in great secrecy, by an emerging 20th Century power not quite out of its late blooming feudal period, to better the best the rest of the world then possessed or even had in the planning stage. It was all brilliant offense - light, fast, highly maneuverable, heavily armed, long ranged - and no defense. It didn't really need any defense because it was the best in the world at that time in history(late '30's and early '40's). But this still too rigid, near feudal society that had created it couldn't move quickly with changing circumstances, and by inaction and equivocation reduced the Zeke in the mid and late '40's to a pitiful image of its original self by continuing it in production long after it should have been superseded. The Western powers changed everything - the east didn't. The Zeke of the thirties, unarmored, with light spindly undercarriage designed for use off smooth well prepared surfaces, was forced to operate off rough coral strips against, by then, far more heavily armed and armored adversaries, and was found sadly wanting. The tables had been turned and the Zeke was to the Hellcat, Corsair, Mustang, and Spitfire as the I-15, I-16, P-26, P-36 etc. were to it in its heyday. Read Saburo Sakai's autobiography Samurai an appreciation of the Zeke, or read Pierre Closterman's The Big Show for an appreciation of his Tempest, Typhoon, and Spitfire. Find out why the Typhoon had that wry comment about putting out the fire stenciled on its cowling. Find out what a marvelously complex machinery its H-24 cylinder Napier Sabre engine was. Do you like the beautiful lines of the Macchi-Castoldi MC-72 seaplane racer? Dig in and study it and you'll come to like it even more. It's wild. Its V-24 cylinder Fiat engine was something to behold. Do you get my message? Understanding is the key to appreciation. Appreciation is enjoyment. Enjoyment is why we build models.

Thanks Jim. Words well written. An interesting article also written by Jim appeared in the same issue that had to do with making an accurate 1/72nd A6M5c Zero Sen utilizing the Hawk & Revell kits with bits from the Revell P-36, Aurora 747 and other items, with 4 references including Scale Modeler(!). Bill Osborn was right in his recent article about the good old days being today. I'll expand on this next month.

See you at the meeting
Terry

In This Issue:

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Public Disclaimers, Information, and Appeals for Help

This is the official publication of the Seattle Chapter, IPMS-USA. As such, it serves as the voice for our Chapter, and depends largely upon the generous contributions of our members for articles, comments, club news, and anything else involving plastic scale modeling and associated subjects. Our meetings are generally held each month, (see below for actual meeting dates), at the Washington National Guard Armory, off 15th Ave. NW, just to the west side of Queen Anne Hill in Seattle. See the back page for a map. Our meetings begin at 10:00 AM, and usually last for two to three hours. Our meetings are very informal, and are open to any interested plastic modeler, regardless of interests. Modelers are encouraged to bring their models to the meetings. Subscriptions to the newsletter are included with the Chapter dues. Dues are $12 a year, and may be paid to Norm Filer, our Treasurer. (See address above). We also highly recommend our members join and support IPMS-USA, the national organization. See the form below for further details. Any of the members listed above will gladly assist you with further information about the Chapter or Society.

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

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

UPCOMING MEETING DATES

The IPMS/Seattle 1998 meeting schedule is as follows. To avoid conflicts with previously scheduled IMPS events and National Guard activities at the Armory, please note that some of our meeting days fall on the third Saturday of the month, not the traditional second Saturday. We suggest that you keep this information in a readily accessable place. All meetings begin at 10:00 AM.

JUNE 13, 1998 (2nd Saturday)
JULY 18, 1998 (3rd Saturday)
AUGUST 15, 1998 (3rd Saturday)
SEPTEMBER 19, 1998 (3rd Saturday)

IPMS/USA NEW MEMBER APPLICATION

IPMS No.:_____ Name:_____
(leave blank) FIRST M. LAST

Address:_____

_____

City:_____ State:_____ Zip:_____

Signature (required by PO): _____

☐ Adult: **$19** ☐ Junior (17 years old or younger): **$9**
☐ Trade Member: **$19** ☐ *Canada & Mexico:* **$25** ☐ Other Foreign: **$28**
☐ Family (Adult dues + $5, one set magazines,# of membership cards required:__)
☐ If recommended by an IPMS member,
list his/her name and member number _____ (name) _____ (IPMS#)

IPMS/USA

P.O. Box: 6138
Warner Robins, GA 31095-6138

IPMS-Seattle Spring Show '98

The 1998 IPMS-Seattle Model Contest and Exhibition was held on March 14, at the National Guard Armory in Seattle. Entries as a whole were down slightly this year, though that was negated somewhat by the exceptional turnout of models on the Display Only table. It was by far the most interesting and impressive display of Display Only models I've yet seen, and gave everyone a chance to see some favorites from past shows. Among the contest categories, 1/35th armor and 1/48th aircraft seemed the healthiest genres. Helicopters and racing automobiles were also popular. There was a noticeable lessening of 1/72th aircraft, long a staple of our hobby. In 1/72 single jets, there was exactly that - a single jet!

As happens every year, a show like this doesn't appear by magic. There was a lot of hard work put in by organizers and judges. Special thanks go to Chapter President Terry Moore, Vice President Keith Laird, Treasurer Norm Filer, registration organisers Bill Johnson and Jill Moore, and hosts Robert Allen and Jacob Russell. Thanks also go to all of those hardy souls who hepled with the Friday setup and Saturday breakdown of the contest and vendors rooms. We don't want to leave out the names of anyone who helped, but we didn't keep a list! You know who you are - thank you!

The key people at any contest are the judges. Co-head judges Ted Holowchuck and Jim Schubert put together another crack crew. John Alcorn, Bill Johnson, Jeff Smith, Michael Tsoumpas and John Green were our Pentathlon judges. Judges included John Alcorn, Andrew Bertschi, Barry Bidwell, Kevin Brown, Brian Cahill, Stan Cozad, Steve Cozad, Norm Filer, John Frazier, John Greer, Scott Hall, Richard Hoard, Steve Holmes, Ted Holowchuck, Bill Johnson, Carl Kietske, Les Knerr, Keith Laird, Paul Ludwig, Frank Lyso, Neil Maker, Jack Matthews, Brent McCullough, Terry Moore, Gerry Nilles, Will Perry, Mark Peterson, Charlie Phillips, George Rogers, Jim Schubert, Jeff Smith, George Stray, Lee Thornhill, Steve Tontoni, Mike Tsoumpas, Scott Taylor, Don Tait, and Warwick Wright.

Thanks to all, and if I've left anyone out, I apologise. It wasn't intentional!

Contest Winners

Category 1 - Junior: Aircraft

1st	Jamie Perez	Douglas F4D Skyray
2nd	Charles Kasalko	McDonnell Douglas F-4 Phantom

Category 2 - Junior: Armor

1st	Kevin Berry	T-34

Category 3 - Junior: Automotive

1st	Jamie Perez	1993 Chevrolet Camaro
2nd	Megan Cahill	Fire Engine

Category 4 - Junior: Space Fact/ Sci-Fi/ Fantasy

1st	Megan Cahill	Astronaut on Moon
2nd	Megan Cahill	Apollo Command Module
3rd	Megan Cahill	Jabba the Hut's Throne Room

Category 5 - Junior: Ships

no entries

Category 6 - Junior: Miscellaneous

no entries

Category 7 - Aircraft: 1/73 and Smaller

1st	Glenn Adams	Supermarine Spitfire Mk.IXe
2nd	Glenn Adams	Convair F-106 Delta Dart
3rd	Glenn Adams	BAC Lightning F.6

Category 8 - Aircraft: 1/72 Single Prop

1st	Peter Waddington	Supermarine Spitfire Mk.XIV
2nd	Ted Holowchuck	Morane-Saulnier D-3800
3rd	Bill Glinski	Supermarine Spitfire Mk.XVI
OOB	Ted Holowchuck	Morane-Saulnier D-3800

Category 9A - Aircraft: 1/48 Single Prop, Axis

1st	Jeff Smith	Junkers Ju 87D Stuka
2nd	Richard Hoard	Focke-Wulf Fw 190D-9
3rd	Jeff Smith	Junkers Ju 87B Stuka
OOB	Mike Franklin	Macchi C.202
HC	Mike Medrano	Focke-Wulf Fw 190D-9
HC	Jim Green	Macchi C.202

Category 9B - Aircraft: 1/48 Single Prop, Allied

1st	Les Knerr	North American P-51B Mustang
2nd	Les Knerr	North American P-51A Mustang
3rd	Mike Medrano	Republic P-47D Thunderbolt
HC	Les Knerr	North American A-36 Invader
HC	Tom Hoard	Douglas SBD-3 Dauntless

Category 10 - Aircraft: 1/72 Multi Prop

1st	Bill Glinski	Mistel
2nd	Jim Pritzl	Convair B-36
3rd	Kevin Callahan	Boeing B-29 Superfortress

Category 11A - Aircraft: 1/48 Multi Prop, Axis

1st	Richard Hoard	Heinkel He 219 Uhu
2nd	Terry Moore	Mitsubishi G4M1
3rd	Steve Cozad	Junkers Ju 188
OOB	Terry Moore	Mitsubishi G4M1
HC	Jay Mullins	Messerschmitt Me 410

Category 11B - Aircraft: 1/48 Multi Prop, Allied

1st	Terry Moore	Consolidated PBY-4 Catalina
2nd	Steve Tontoni	Bristol Beaufighter
3rd	Jay Mullins	Bristol Beaufighter

Category 12 - Aircraft: 1/32 and Larger Prop

1st	Martin Pritzl	1/24 Junkers Ju 87B Stuka
2nd	Shawn McEvoy	1/32 Bristol Beaufighter
3rd	Al Edwards	1/32 Vought F4U Corsair
OOB	Lane Harris	1/32 Junkers Ju 87 Stuka

Category 13 - Aircraft: 1/72 Single Jet

1st	Carl Kietzke	Grumman F9F-8 Cougar

Category 14 - Aircraft: 1/48 Single Jet

1st	Ian Anderson	Mikoyan-Gurevich MiG-15
2nd	Les Knerr	North American F-86F Sabre
3rd	Mark Anderson	General Dynamics F-16 Plus Falcon

Category 15 - Aircraft: 1/72 Multi Jet

1st	Jim Green	Tupolev Tu-22 Blinder
2nd	Tony Cortez	Fairchild A-10 Warthog
3rd	Larry Baldwin	Sukhoi Su-25 Frogfoot
OOB	Andrew Birkbeck	SEPECAT Jaguar GR.1
HC	Andrew Birkbeck	SEPECAT Jaguar GR.1

Category 16 - Aircraft: 1/48 Multi Jet

1st	Richard Hoard	Messerschmitt Me 262B-1a
2nd	Dennis Wilson	McDonnell Douglas F-15 Eagle
3rd	Ian Anderson	McDonnell Douglas F-4G Phantom
HC	John DeRosia	Lockheed S-3 Viking

Category 17 - Aircraft: 1/32 Jet

1st	Shawn McEvoy	Mikoyan-Gurevich MiG-29 Fulcrum
2nd	John DeRosia	Lockheed YF-22

Category 18 - Aircraft: Civil, Sport, Racing, Airships

1st	Kevin Callahan	Arado Ar 80
2nd	Stu Alvord	Caudron C.635 Simoun
3rd	Stu Alvord	Antonov An-14

Category 19 - Aircraft: Airliners

1st	Dave Holmes	TWA Lockheed L-1011
2nd	Stan Williams	Martin 130 China Clipper
3rd	Stan Williams	Boeing 314 Clipper
HC	Don MacBean	McDonnell Douglas MD-90
HC	Steve Tontoni	Ford Trimotor

Category 20A - Aircraft: Rotary Wing 1/72 to 1/47

1st	Bill Glinski	OH-6A Cayuse
2nd	Bill Glinski	HUS-1
3rd	Jim Schubert	Focke-Wulf Triebflugel
HC	Bill Glinski	Bell AH-1G

Category 20B - Aircraft: Rotary Wing 1/48 and Larger

1st	Ian Anderson	McDonnell Douglas AH-64D Longbow
2nd	Jim Smith	Bell Model 47
3rd	Jim Smith	Bell AH-1W Super Cobra
HC	John DeRosia	Bell Model 47 MASH Chopper

Category 21 - Aircraft: Biplanes, Vintage Types

1st	Jeff Smith	Gloster Gladiator
2nd	Stu Alvord	Sikorski Ilya Muromets

Category 22 - Aircraft: Miscellaneous (Vacuforms, Scratchbuilts)

1st	Jeff Smith	BAC Lightning F.2A
2nd	Jeff Smith	Grumman F3F-2
3rd	John Cate	Bristol Bombay
HC	Stu Alvord	1910 Handley Page V
HC	Tom Spencer	Regianne Re.2005

Category 23 - Automotive: Factory Stock

1st	Jim Pritzl	1934 Duesenberg
2nd	Jim Pritzl	1964 Mercury
3rd	Joe Spritzer	1957 Chevrolet
OOB	Joe Spritzer	1957 Chevrolet

Category 24 - Automotive: Street Rod Pre '49

1st	Glenn Ryder	1932 Ford Coupe
2nd	Glenn Ryder	1932 Ford Highboy

Category 25 - Automotive: Street Machine Post '49

1st	Joe Spitzer	1960 Chevrolet Corvette
2nd	Rick Eaker	1962 Ford Fairlane
3rd	John DeRosia	Chrysler Atlantic
OOB	John DeRosia	Chrysler Atlantic

Category 26 - Automotive: Customs

1st	Joe Spitzer	1949 Mercury
2nd	Dave Holmes	Mercohaulic
3rd	Wayde Leslie	Skull Car
OOB	Dave Holmes	Mercohaulic
HC	Steve Holmes	Meltiaic

Category 27 - Automotive: Truck, Fire, Rescue, etc.

1st	Steve Holmes	1950 Chevrolet Pickup
2nd	Rick Eaker	1961 Ford Police Car
3rd	Rick Eaker	1962 Ford Tow Truck
OOB	Carl Kietzke	Ford Crown Victoria - Maine Police

Category 28A - Automotive: Closed Course Racers, Open Wheel

1st	Terry Moore	Lotus Indy Turbine Car
2nd	Jim Schubert	Novi
3rd	Elbert Lim	McLaren MP4/7
OOB	Elbert Lim	Benetton B187

Category 28B - Automotive: Closed Course Racers, NASCAR

1st	Randy Klein	Kodak Chevrolet Monte Carlo
2nd	Randy Klein	Pennzoil Pontiac Grand Prix
3rd	Randy Klein	Petty Enterprises Plymouth
OOB	Randy Klein	Kodak Chevrolet Monte Carlo
HC	Mike Matthews	Citgo Ford

Category 28C - Automotive: Closed Course Racers, Sports GT

1st	Steve Holmes	Le Monstre
2nd	John DeRosia	Renault R5
3rd	Steve Tontoni	Mercedes Benz 300 SLR
OOB	John DeRosia	Renault R5

Category 29 - Automotive: Straight Line Racer

1st	Wayde Leslie	Vega Funny Car
2nd	Jim Pritzl	1963 Ford Galaxie
3rd	Dave Holmes	Bud King Top Fuel Dragster
OOB	Wayde Leslie	Fruit of the Loom Dragster
HC	Dave Holmes	Parts America Funny Car
HC	Wayde Leslie	McDonald's Funny Car
HC	Wayde Leslie	Moon Eyes Funny Car

Category 30 - Automotive: Motorcycles

1st	Andrew Birkbeck	Motoguzzi V10
OOB	Andrew Birkbeck	Motoguzzi V10

Category 31 - Diorama: Aircraft

1st	Allen Straub	Douglas A-20G
2nd	Brian Straub	Boeing B-17G

Category 32 - Diorama: Automotive

1st	Steve Holmes	Crab King/ Little Reowagon
2nd	Mizhael	Porsche 911

Category 33 - Diorama: Armor

1st	Chuck Zellmer	Two at Once
2nd	Chuck Zellmer	Mein Gott!
3rd	Paul Lindgren	Sherman M4A3
HC	Tony Cortez	Saddam Hussein (Kick Me)

Category 34 - Diorama: Space Fact/Sci-Fi/Fantasy

1st	Steve Holmes	Mars Rover

Category 35 - Diorama: Marine

no entries

Category 36 - Diorama: Figures

no entries

Category 37 - Diorama: Miscellaneous

1st	Elliot Smith	Hadrosaurs

Category 38A - 1/35 Armor: Closed Top Pre-1945, Allied

1st	Chuck Zellmer	M18 Hellcat
2nd	George Bacon	Stalin JSII
3rd	Jonathan Stetson	M4A1 Sherman

Category 38B - 1/35 Armor: Closed Top Pre-1945, Axis

1st	George Stray	Panzer III L
2nd	Dave Clark	Panzer Kampfwagen KV-1
3rd	Jonathan Stetson	Panther G
OOB	O.J. Hurst	Artillery Wagen
HC	Chuck Zellmer	Stug III G

Category 39 - 1/35 Armor: Closed Top AFV Post-1945

1st	Ted Holowchuck	M4A3E8 Sherman
2nd	George Bacon	Challenger Mk. III
3rd	John Frazier	M46 Patton
OOB	Jim Smith	M48A3 Patton
HC	Dave Clark	M113 Ambulance

Category 40 - 1/35 Armor: Open Top Haltracks Self Propelled Guns

1st	Jonathan Stetson	251-DW-IR Searchlight
2nd	George Stray	7/2 Halftrack
3rd	(name unavailable)	Sdkfz 222
OOB	Jim Smith	M-163 Vulcan
HC	Dave Clark	Flak 38 Bren

Category 41 - Armor: 1/36 and smaller

1st	Andy Whitfield	Sturmgeschutz IV

Category 42 - Armor: Soft Skinned

1st	George Stray	Kubelwagen
2nd	Chuck Zellmer	Kubelwagen
3rd	Eric Borai	US Army Jeep
OOB	George Stray	Kubelwagen

Category 43 - Armor: Towed Artillery and Missiles

1st	George Stray	37mm Cannon
2nd	Richard Hoard	V-2 (A4) Rocket
3rd	George Stray	88 mm Flak Gun
OOB	Richard Hoard	V-2 (A4) Rocket

Category 44 - Armor: Conversions and Scratchbuilt

1st	Peter Waddington	Runway Controller's Truck

Category 45 - Ships: Engine Powered

1st	Bill Cianci	HMS Rodney
2nd(T)	C.P. Kwan	IJN Yamashiro
2nd(T)	Ted Holowchuck	U-Boat Type IXC
3rd	C.P. Kwan	IJN Akagi
HC	Don Hinton	USS Keokuk

Category 46 - Ships: Sail

1st	Bill Willis	Chebec
OOB	Bill Willis	Chebec

Category 47 - Ships: Miscellaneous

1st	John DeRosia	Forgotten Sub
2nd	Rosent Merritt	Missouri

Category 48 - Single Figure: Smaller Than 54mm

no entries

Category 49 - Single Figure: 54mm and 1/35

1st	Chuck Zellmer	Wermacht Officer

Category 50 - Single Figure: Larger Than 54mm

1st	Steve Cozad	Ugrian Standard Bearer
2nd	Steve Cozad	Roman Standard Bearer
3rd	Steve Cozad	Ashigaru Infantry
OOB	Steve Cozad	Ugrian Standard Bearer
HC	Steve Cozad	British Rifleman
HC	Steve Cozad	Goth Cavalry
HC	Chuck Zellmer	Fallschirm Jager

Category 51 - Space Fact

1st	John Valadez	North American X-15
2nd	John DeRosier	Rockwell Space Shuttle on Crawler
3rd	John DeRosier	Boeing 747 w/ Rockwell Space Shuttle

Category 52 - Sci-Fi: Vehicles

1st	Anthony Froh	USS Ticonderoga
2nd	Anthony Froh	Panther III H3
3rd	Anthony Froh	Arkagon
HC	John DeRosia	Astronaut and MMV

Category 53 - Sci-Fi: Single Creatures

1st	Les Knerr	Predator
2nd	Les Knerr	Ghost in the Shell
3rd	Chuck Zellmer	Cathy

Category 54 - Space/ Sci-Fi/ Fantasy Miscelleneous

1st	Tony Cortez	T-Rex "Bones"
2nd	Tony Cortez	Triceratops
3rd	Jim Smith	T-Rex and Raptors

Category 55 - Other Classes: Miscellaneous

1st	Peter Waddington	Control Tower
2nd	Karl Kietzke	Scorpion Tank

Category 56 - Other Classes: Collections

1st	Ralph Braun	French Air Force 1940
2nd	Steve Holmes	Modelfy Collection

Category 57 - Flights of Fancy

1st	Terry Moore	Tour Sub

Category 58 - Pentathalon

1st	Jim Schubert
2nd	Les Knerr
3rd	Ted Holowchuck
4th	Terry Moore
5th	Steve Holmes

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Colors and Markings of the Nakajima Ki-43 Hayabusa

By Mark T.Wlodarczyk

This essay is part of a larger work on the Japanese Nakajima Ki-43 "Oscar" fighter airplane, recently published in Polish by AJ Press as book AJML48 in the "Monografie Lotnicze" book series. An English translation will hopefully follow soon. The "Oscar" was the Imperial Japanese Army's main fighter during the Pacific War and a significant aircraft in military aviation history. Regretfully, outside of Japan, it has not yet generated the interest amongst writers and publishers it deserves. I hope this "sneak preview" will please fellow aviation enthusiasts and modelers. Although the essay deals with the "Oscar" only, it can also provide some guidance on the issue of painting and markings of most other Japanese Army aircraft of the period.

Preface

During the operational history of the Ki-43 there was a very wide range of colors and tones, as well as painting schemes and techniques used. There was at the time no official color reference system in Japan that would today help to recreate these colors. There are only but a few surviving aircraft or parts of aircraft. Therefore establishing any color is only possible in the sense of well qualified guesses and logical assumptions, based on descriptions, written regulations, analysis of the few remnants and careful study of, for the most part, b/w photographs. The fact that even the existing Army Air Force painting regulations were seldom carried out to the letter doesn't make the task easier.

Although the most recent western and Japanese sources, as well as opinions of a number of experts on the subject, have been consulted in the making of this text, all the colors given are to be understood as only typical representations of a much wider variety. It may be wise for the modeler and for the historian to bear in mind that painting of the aircraft was not one of the prime concerns in combat circumstances, which may have had an effect on the memory of the participants.

All studies of Japanese subjects are weighted with additional problems connected with cultural and linguistic differences between Japan and the western (i.e. non-Japanese) world. Much of the older Anglo-American writings on Japanese aviation contain errors and uncertainties caused by gigantic translation difficulties. Many color notions common to us lack the exact equivalents in Japanese, and vice versa. Furthermore, there are problems within Japanese itself in transforming the spoken language to the written one, and in correctly understanding the written language of the '40s. It's worth mentioning that in Japan today some traditional color names are being abandoned and replaced by words borrowed from English, mainly for practical reasons. In this context it is easy to grasp the difficulties in avoiding mistakes and errors, also in Japanese sources, for reasons other than the lack of sufficient references. It is my hope that the information in this text is appropriate within reasonable limits. I also hope that further research and discussion in this field will extend our knowledge.

The colors are given with references to the Federal Standard FS595B. The first number in the codes, depicting gloss value, is omitted and replaced with a star (*).

Exterior painting

The wide range of colors and the seemingly pragmatic way of applying them are some of the characteristic features of the Japanese Army Air Force (JAAF) aircraft. Contrary to the Navy Air Force (JNAF), the Army didn't attach too much importance to protective painting and, for a long time, the responsibility for camouflage lay with the commanders in the field. There are two phases in the painting development of the Hayabusa: the first without camouflage or with a field-applied one and the second with a factory painted one.

All the prototypes and all the production Ki-43 Models I and II left the assembly lines in natural metal finish. The only factory painting was the Hinomaru on top and bottom wing surfaces (late in the production of Model II also on fuselage sides), black anti-glare panel on top of the fuselage from the cowling front to the end of the canopy in open position and a few small information stencils. The fabric-covered control surfaces were from the start coated with a light greenish-grey paint (FS*6314).

The first production Ki-43s were put into action right after delivery, first over Malaya, later in other areas of the fighting. Soon a need for camouflage for aircraft operating from front airstrips exposed to constant enemy attacks was evident. It may be mentioned that camouflage was up to this point not used on JAAF fighters but the Allied opposition, in spite of the early defeats, proved to be much more aggressive than the previously encountered Soviet and Chinese. In the first months of the war field-applied two-tone segmented camouflage was employed, with a wavy division between colors. The colors were brown (FS*0059) and olive green (FS*4088) or dark green (FS*4094). Sometimes three-color camouflage was used, adding a light green (probably like FS*4172). Also the use of two shades of green has been reported. These schemes were the same as used earlier on JAAF bombers and reconnaissance aircraft. It was painted in a reasonably accurate fashion on all the upper and side surfaces of the aircraft, sometimes also on the spinners.

There is no evidence of any standard schemes for the color patterns, such as those in the RAF. The few existing photos showing topsides of the wings can therefore only serve as examples of the variety. It is known, however, that JAAF recommended for the schemes to be different from the ones observed on enemy aircraft. Soon a more uniform, one-color, dark-green, olive-green or brown camouflage started to appear more frequently, although the multi-colored schemes continued to be in use for a long time. From the spring of 1942 the painting schemes also started to vary a great deal, from thorough covering of all the upper and side surfaces to sparse, irregular blotches or streaks on the top sides with the bare metal shining through. The camouflage was painted all around the cowlings and around wing and horizontal stabilizer leading edges, as well as on landing gear covers. The black anti-glare panels were most often not overpainted and the undersurfaces were left in natural metal.

Painting techniques varied with local conditions and time available, from spraying to hand painting using wide brushes. The paints applied in such a way looked for the most part semi-matte or matte. The lack of preparatory painting and the humid, tropical climate caused rapid weathering and peel-off effects. Many photographs showing aircraft wearing seemingly blotchy or hastily applied camouflage are really illustrations of deteriorated paintwork. The choice of painting scheme depended on the taste of the local commander or even ground personnel and on paint availability, including use of captured Allied paints, rather than on any JAAF recommendations. Most of the Sentais probably did strive for a uniform look

for their aircraft, there is however plenty of evidence for the contrary under stressed combat conditions.

Field camouflage was used only on aircraft in front line service. Therefore all the Mod.I and II based in Japan or elsewhere far from the front retained the bare metal finish. There is also rich evidence of unpainted machines used by the front-line units throughout the war.

The use of factory camouflage applied before delivery to the JAAF began with the Ki-43 Mod.III [1] . All the undersurfaces were painted in light greenish-grey (FS*6357), all the upper and side surfaces in dark brown-green or brown-olive (FS*0118 and FS*4088 may serve as typical). According to some sources the black antiglare panel was no longer applied. In the factory scheme the dark upper color was still painted around the cowlings but not around leading edges or on the landing gear covers any more. The paints were glossy when applied although not as shiny as some modern synthetic paints. The high amount of cellulose, climatic conditions and lack of proper care in combat environment all contributed to rapid fading and weathering. The surfaces remained unprimed with the resulting poor adherence of the paintwork.

The dark blue shade attributed to the Ki-43 of the 20th Sentai, as well as Mitsubishi Ki-51 of the 49th Independent Chutai deserve a special note. The fact that both units were based on Tainan (Taiwan) late in the war, with the resultant frequent over-water missions, is sometimes used as an argument for the credibility of that color. Apart from the questionable logic of such reasoning, there is no reliable information whatever of the use of blue, factory or field-wise, as top color in any other circumstances. Although attractive to modelers, we believe the shade was rather an effect of weathering and chalking-out of dark-green paint containing blue pigment.

Propellers, spinners, undercarriage, information signs

Both propeller faces and spinners of the Ki-43-I were left in an unpainted, polished bare metal finish. Rear sides of the prop blades were black. Some sources state that the spinners were coated with red-brown primer from very early on but it is more likely that the dark color was part of the field camouflage. A red or brown 50mm wide warning stripe was painted on each prop face 50mm from the end. There was also a small black factory stencil near the root of the blades. From the Model II on, the spinners as well as both sides of the blades were red-brown (FS*0109 or FS*0111). The warning stripe and the factory stencil became yellow. On the late production Model IIs the warning stripe was in turn divided into three equal small stripes yellow-white-yellow. Finally on the Mod.III the entire tips of the blades were yellow, this time on both sides. Although fairly well documented, these phases in propeller painting cannot be used to distinguish between the different models.

The undercarriage legs and other small exterior parts were normally not painted, though it is possible they received a coat of light grey with the introduction of the painting of the rest of the undersurfaces.

In comparison with many other JAAF aircraft, the Ki-43 carried surprisingly few information and warning stencils. A small black factory serial number was painted on the rear of the port fuselage side under the stabilizer, usually repeated on the landing gear covers. A small, probably red jacking point sign was sometimes painted low just in front of it, on both fuselage sides. Also the covers of the wing fuel tanks were red. Black walkways were usually painted near the root of both wings, sometimes on the port side only.

The position lights, located on the wing tips, were colored red on the port side and greenish-blue or green on the starboard. The clear tail light was inserted into the upper part of the vertical stabilizer.

National insignia and other ID markings

The Japanese national insignia Hinomaru (Hi-no-maru = "the sign of the sun") was used in both air services from the early '20s in the six standard positions: on lower and upper sides of both wings and on both sides of the fuselage. In the JNAF this remained unchanged throughout the war. In the JAAF however, the fuselage Hinomaru was abandoned around 1937-38 and only the four wing insignias were carried. The reason for this change is not known but it occurred at the time when the hostilities with China escalated to a full scale war and it has been suggested may have been an attempt to visually distinguish JAAF aircraft from those of the Navy in combat zones, for one reason or another. In any case, the use of all six positions was reinstated around February 1942 but until the end of the war Army aircraft without fuselage Hinomaru were fairly frequent. The color of the Hinomaru used in aviation, as well as in other contexts, was simply bright red, such as FS*1086. In time, when exposed to the elements, it changed in hue and deteriorated, losing in intensity and becoming rusty-pinkish brown in tone (FS*1328), at least on the upper and side surfaces.

Thus in the beginning only four wing Hinomaru were painted on the Ki-43. It had a diameter of 1.1 - 1.2m, and its center was located 1.5m from the wingtips. In some cases the insignia on the wing undersides were painted much closer to the fuselage (2.5m from wingtips). The center was located midway on the wing chord, ailerons included.

Factory-applied Hinomaru appeared on the fuselage some time during the production of Mod.II. Its center was located 3.6m from the rear of the aircraft (i.e. 4/10 of the length), roughly in the middle of the vertical section, and had a diameter of 0.7m. The wing Hinomaru from Mod.II onwards changed to 1.4m in diameter, its center located 2.1m from the wing tips (the wing span being shorter than on Mod.I!). In other words the distance between the wing tip and the outer edge of the Hinomaru was equal to the diameter of the Hinomaru itself, a rather frequent rule on many JAAF aircraft. These positions and sizes of the Hinomaru remained unchanged after the introduction of factory camouflage.

Whenever field camouflage was applied the factory painted Hinomaru was retained, its finish sustaining less deterioration than the surroundings. Sometimes a small unpainted ring was left around the insignia creating a halo effect. Also, from the early spring of 1942, many aircraft received field painted Hinomaru on the fuselage. Its size and location varied depending on the Sentai or even Chutai but it was generally smaller than the later factory scheme.

In July 1943 the Joint Air HQ (Koku Hombu) issued a directive setting the rules of painting of all military aircraft, aiming at making uniform the appearance of aircraft of both air services and giving official status to some painting and marking procedures already established at lower levels in the field. The directives included the painting of yellow friend-or-foe identification strips (ID strips) on wing leading edges, from wing root to half the length of each wing, measured from the aircraft center. FS*3538 may be considered typical although different shades, from pale- to orange-yellow were probably quite frequent. Field-applied ID strips were common from the summer of 1942 [2]. Another directive was the white outline to all upper and fuselage Hinomaru. Its width was to be 75mm and it was to be added to the diameter of the Hinomaru, regardless of its size. Not unlike many other air arms, but in some contrast to the more rigorous JNAF, this recommendation was executed rather casually by the JAAF, sometimes depending on the aircraft type. On the Ki-43 factory or field painted outlines to fuselage Hinomaru were fairly common but there is little evidence of

their having been applied to the wings as a rule. With the introduction of factory camouflage on Mod.III the white outlines were officially abandoned, but many aircraft seem to have received them.

From mid-1942 on, the aircraft of first line units based in Japan usually received a wide white band painted around the wings and fuselage beneath the Hinomaru, the so called "Home Defense Bandage", for patriotic as well as ground-recognition reasons. It was normally 0.2m wider than the Hinomaru. It was used rather consistently, particularly in the late period of the war [3] , but new Army aircraft delivered in 1945 no longer received the "bandages".

Late in the '30s narrow white bands around the aft fuselage, right in front of the stabilizer, started to appear as another distinctive marking of JAAF aircraft. The name of "combat stripe" has become common in many sources, as distinguishing first line service aircraft from trainers, transports, prototypes and others. It is difficult to find any convincing proof of such a purpose for the stripe in Japanese references but it can be observed that its introduction coincided with the abandonment of fuselage Hinomaru and that after its reinstatement the use of the white stripe was gradually phased out. Some sources suggest the fuselage stripes were actually IFF markings and the appearance varied with the combat zone, New Guinea based aircraft sporting red stripes with white outlines instead. Eventually, the stripe was very common on the Ki-43, particularly in the early years.

The presentation inscriptions (Hokoku or Aikoku inscriptions), used on aircraft funded with private or corporate finance, were not as common with the JAAF as with its Naval rival. They were painted in small, black, 50mm high characters (on a small yellow stripe in case of camouflaged aircraft) on both sides of the rear fuselage. They consisted of the Japanese kanji Ho-Koku Dai or Ai-Koku Dai, the donation number and, in brackets, the name of the funder. The Ki-43s of the puppet Manchukuo (Manchurian) AF are worth special note. They were marked with national insignia on the wings only, of the same size and shape as the Hinomaru but in the Manchurian colors, and with huge patriotic inscriptions along the fuselage sides that were unique for each aircraft.

Interiors

Most interior surfaces of the Ki-43, including wheel wells or inside the flaps, were covered with clear protective lacquer. Sometimes, but not always, some blue or blue-green pigment was added to the lacquer, simply as a control measure, thus creating a characteristic metallic effect caused by the natural metal shining through. This painting procedure is referred to as aodake or aodake iro. Late in the production this type of protective painting was all but dispensed with.

The cockpit interior, including the instrument board and seat, were additionally coated with some interior color, such as green-olive (FS*4255) or grey-green (FS*4226). Also the use of khaki-brown (FS*3448) and black instrument panels are mentioned, especially on later models. The fuselage areas under the canopy were black. Other instruments and subassemblies in the cockpit were pre-painted black or dark-green. The knobs of the landing gear and emergency levers were probably red, throttle and pitch control yellow, the control column black or dark-green, but there is no evidence of systematic color coding of controls. It can be assumed that from 1944 on, apart from the instrument board and some elementary anti-glare painting, all protective coating was less cared for and the cockpits were largely unpainted.

Unit markings

Practically throughout the war, the basic unit of the JAAF was the Sentai (= group, often inadequately referred to as a regiment). It was divided into three, very seldom four, Chutai (squadron), which in turn consisted of three to four Shotai (flight) of usually three aircraft each. There were also some aircraft of the Sentai Headquarters (Sentai Hombu) and, in normal conditions, some reserve aircraft, normally up to one-third of the regular strength. The only official name given to a Sentai was its consecutive number. Similar numbers were given also to field- training or temporary units, independent Chutais, etc., and it possessed no other significance or coding. Some of the Sentais took up unofficial names based on local tradition or special achievements.

Flight schools often carried the names of their home-fields. Each unit decided upon a symbol to be carried as a recognition on the vertical stabilizers or, more seldom, on the rear fuselage. Thus evolved a very colorful system of unit heraldry, unlike any other air force of the war and deserving a book of its own. The symbols were for the most part based on the unit number expressed in Arabic numerals, but sometimes also kanji or even roman numbers, and transformed into graphic figures of various forms, from simple to very intricate, almost riddle-like designs. Sometimes old Japanese heraldry or local geography was used instead of numerals and, in the case of unit names, stylized kana or kanji. Those symbols did not always remain unchanged during a unit's service history, there are examples of up to five different designs for the same unit over four years' time.

Late in the war many new temporary, irregular or special attack (suicide) units were formed, often receiving new, colorful markings. These are to be seen more as morale-boosters, rather than particular unit markings. However, many simple, almost unmarked aircraft were not unusual.

Command & tactical markings

The most used form of distinction between the Chutais was the painting of the Sentai symbol in different colors. The popular coding system was: white for the 1st Chutai, red for the 2nd, yellow for the 3rd, green for the 4th (if there was one) and blue for Sentai Hombu. Some Sentai used a different order of colors, some didn't use color coding at all. Very often spinners and, rarely, cowling fronts were painted in the Chutai colors and sometimes this replaced the color coding of the tail marks. Another system, used primarily in the early years, was the use of additional stripes on the tail or aft of the cockpit in Chutai colors. The number of stripes could denote the Shotai. The markings of the Ki-43 equipped 1st Sentai serve as an example of this fully developed system, the combinations of stripes in different numbers, positions and colors reaching down to individual aircraft of each Shotai. The use of such complicated markings was largely abandoned after 1942, remaining in practice only with the flying schools.

The aircraft of the commanders of various sub-units were marked with additional, broader, straight or oblique bands in different colors painted around the rear of the fuselage, aft of the cockpit or on the wings. At the top of this system was the aircraft of the Sentai commander, who sometimes used the blue HQ color or all the Chutai colors at once. Also this system became much simpler or was abandoned late in the war.

Individual aircraft numbers, usually in Arabic numerals, were quite common on JAAF aircraft, painted mostly on the rudder, often repeated on gear covers and under the cowlings. The numbers were often simply repetitions of the last two or three numerals of the serial number, not consecutive within the units and, although sometimes large in size, lacked any tactical or Chutai-denoting purpose. During the China conflict many units used hiragana characters, arranged in a way possibly denoting sequence, instead of Arabic numbers. The habit seems to have been abandoned later and there is no evidence of it in connection with the Ki-43.

Individual markings

The JAAF was not as unselfish in relation to individual victories as the JNAF, yet personal "kill" marks were quite rare on Army aircraft and in the case of the Ki-43 almost non-existent. In the very few exceptions simple circles or stars were painted on the port side of the fuselage or on the rudder. More frequent were individual pilot markings such as small initials, patriotic messages and even dedications to fiancees, painted in one or more kanji. Certainly, almost all personal markings were reserved for commanders or other distinguished pilots, as the majority of the airmen were not assigned personal aircraft.

In the JAAF there are also examples of Sentai or Chutai commanders flying personalized aircraft with their own tail symbols that differed from the ones used regularly by the unit and the existence of such Ki-43s cannot be excluded.

Notes

[1] The Mod.III, as well as the Mod.IIb, was manufactured entirely by Tachikawa, while some Mod.IIa were made by the Rikugun factory. This didn't seem to have affected painting procedures.

[2] In the JNAF the yellow ID bands first appeared in Dec.42.

[3] It's interesting to note that in the same period the JNAF, also involved in the defense of Japan, was dispensing with the white outlines and painting out the existing ones for low-visibility reasons!

Many Thanks to James F. Lansdale for research pieces & comments and to Gavin Johns and Douglas Carrick for editorial assistance.

An Injected 1/72 General Dynamics RB-57F

by Phil Brandt, Austin Scale Modelers Society

Manufacturer: MACH 2 (France)

If it had happened today, I would have thought I had been beamed to Area 51 at Groom Lake. However, in 1968 most folks, including yours truly, had only a few clues about the "Ranch" and "Dreamland". No....this was a sparkling clear Fall afternoon at Rhein-Main Air Base, Germany, and I was out on the MAC ramp, waiting to start a European trash-hauling mission in one of our TDY Dover C-124C "all-weather interceptors". The grotesquely proportioned silver bird (no, not Shakey!!), its wingtips almost touching the tarmac, slowly moved out of a large, nondescript hangar across the runway from our area and waddled down a Rhein-Main Airbase taxiway. Surrounded by so many flashing lights that I thought the sky cops were having a convention, the airplane was like no other this thirty year-old nav and modeler had ever seen. The pilot started his takeoff at midfield and seemed to be airborne instantly, maintaining what seemed like a forty-five degree climb angle until the huge wings were out of sight. Although my TS clearance and "need-to-know" weren't even close to that needed to be privy to his flight plan, I guess I don't need to mention that the border with then East Germany was a short hop from Rhein-Main!

That first sighting of General Dynamic's clandestine mutation of the sleek Martin B-57 [itself a mutation of the original English Electric Canberra – ED] inspired a long term modeling interest in the type that can now be enhanced with the welcome release of Mach 2's 1/72 injected kit. Having already experimented with the beautifully molded DB vac/ resin conversion kit for the 1/72 Testors/Italeri kit and even having taken a wild fling years ago with the crude ID Models 1/48 vacuform "shape", I would rate this latest release as overall good to very good. With judicious detailing and use of parts from a spare Testors/Italeri B-57 kit, it can be made into a show stopper.

Mach 2's molding quality is what serious modelers have come to expect from European limited run kits. That is, slightly on the rough side, with so-so fit, lots of appendages from the molding process and a certain crudeness of detail in the small parts. The engraving is slightly heavier than "delicate", and the surface finish has the "glass-beaded" effect so characteristic of the limited run molds. Since this is a natural aluminum bird, it's gonna take some primer-surfacer and sanding with 600 or finer paper to properly prepare for the metallic finish.

Not to worry about cleaning up the flash and muted details of many of the small parts, since it appears that Mach 2 has appropriated Testors parts as masters! From a well-molded Testors B-57 kit you can use: the cockpit tub, seats, instrument panels, control yokes, landing gear doors, struts and wheels, nose gear well, canopy-raising assembly, antennas and pitot tubes and last, but not least, the windscreen and canopy which are easily superior to the cloudy (beading, again) Mach 2 effort. I would have included the Testors main gear wells, but Mach 2 apparently incorporated those as part of their new wing molding!

Lots of dry fitting will be necessary, and the trailing edges of the wings are definitely more blunt than the real thing. You may want to judiciously decrease the taper by sanding down the outside trailing surface, keeping in mind that this process will make rescribing mandatory. Then there are the large nacelles shrouding the TF33 fan sections; ID, DB and Mach 2 all seem to have varying degrees of difficulty in producing the correct profile. ID's gross representation is completely off the realism scale; DB and Mach 2 are much closer to the mark, but their nacelles are still not quite "fat" enough in midsection (although their box art profile is correct!). I don't just toss this criticism out lightly; I've personally viewed and photographed the RB-57F at the Pima County Air & Space Museum, and have the 1/72 line drawing foldout from the excellent Aerophile article in 1980. I haven't decided if it's worth puttying and sanding the Mach 2 nacelles to obtain a more correct profile, but it's

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A Nakajima Ki-43-II-Ko Hayabusa of the 1st Chutai of the 25th Sentai, China 1943

McDonnell-Douglas Customer Survey

Please note: The following survey is a joke. It isn't real. That may seem pretty obvious, but in a world full of *Jerry Springer Shows*, it's best to make things absolutely clear. This isn't meant to offend anyone, or get IPMS Seattle sued by Boeing. It also isn't meant to poke fun at one of the world's great Aerospace firms, which no longer exists under its own name...

Rumor has it that this was actually posted very briefly on the McDonnell-Douglas website by an employee who obviously has a sense of humor. The company, of course, does not - and made the web department take it down immediately.

Thank you for purchasing a McDonnell-Douglas military aircraft. In order to protect your new investment, please take a few moments to fill out the warranty registration card below. Answering the survey questions is not required, but the information will help us to develop new products that best meet your needs and desires.

1. [_] Mr. [_] Mrs. [_] Ms. [_] Miss [_] Lt. [_] Gen. [_] Comrade [_] Classified [_] Other
First Name: .....
Initial: .....
Last Name: .....
Password: ..... (max 8 char)
Code Name: .....
Latitude-Longitude-Altitude: ....

2. Which model aircraft did you purchase?
[_] F-14 Tomcat
[_] F-15 Eagle
[_] F-18 Hornet
[_] AV-8 Harrier
[_] Classified

3. Date of purchase (Year/Month/Day):
19..... / ..... / .....

4. Serial Number: .....

5. Please check where this product was purchased:
[_] Received as gift / aid package
[_] Catalog showroom
[_] Independent arms broker
[_] Mail order
[_] Discount store
[_] Government surplus
[_] Classified

6. Please check how you became aware of the McDonnell-Douglas product you have just purchased:
[_] Heard loud noise, looked up
[_] Store display
[_] Espionage
[_] Recommended by friend / relative / ally
[_] Political lobbying by manufacturer
[_] Was attacked by one

7. Please check the three (3) factors that most influenced your decision to purchase this McDonnell Douglas product:
[_] Style / appearance
[_] Speed / maneuverability
[_] Price / value
[_] Comfort / convenience
[_] Kickback / bribe
[_] Recommended by salesperson
[_] McDonnell Douglas reputation
[_] Advanced Weapons Systems
[_] Backroom politics
[_] Negative experience opposing one in combat

8. Please check the location(s) where this product will be used:
[_] North America
[_] Central / South America
[_] Aircraft carrier
[_] Europe
[_] Middle East
[_] Africa
[_] Asia / Far East
[_] Misc. Third World countries
[_] Classified

9. Please check the products that you currently own or intend to purchase in the near future:
[_] Color TV
[_] VCR
[_] ICBM
[_] Killer Satellite
[_] CD Player
[_] Air-to-Air Missiles
[_] Space Shuttle
[_] Home Computer
[_] Nuclear Weapon

10. How would you describe yourself or your organization? (Check all that apply:)
[_] Communist / Socialist
[_] Terrorist
[_] Crazed
[_] Neutral
[_] Democratic
[_] Dictatorship
[_] Corrupt
[_] Primitive / Tribal

11. How did you pay for your McDonnell Douglas product?
[_] Deficit spending
[_] Cash
[_] Suitcases of cocaine
[_] Oil revenues
[_] Personal check
[_] Credit card
[_] Ransom money
[_] Traveler's check

12. Your occupation:
[_] Homemaker
[_] Sales / marketing
[_] Revolutionary
[_] Clerical
[_] Mercenary
[_] Tyrant
[_] Middle management
[_] Eccentric billionaire
[_] Defense Minister / General
[_] Retired
[_] Student

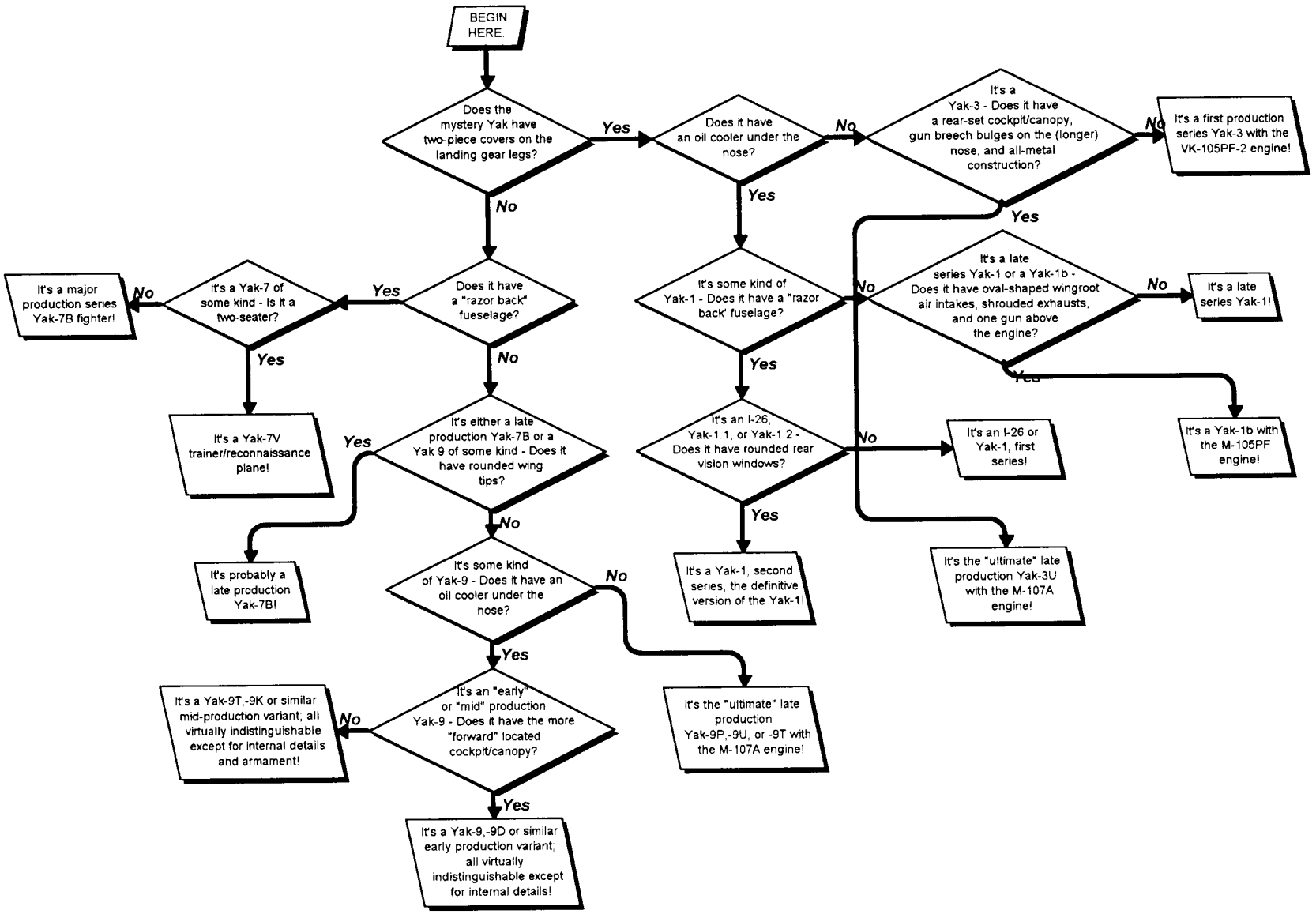
13. To help us understand our customers' lifestyles, please indicate the interests and activities in which you and your spouse enjoy participating on a regular basis:
[_] Golf
[_] Boating / sailing
[_] Sabotage
[_] Running / jogging
[_] Propaganda / disinformation
[_] Destabilization / overthrow
[_] Default on loans
[_] Gardening
[_] Crafts
[_] Black market / smuggling
[_] Collectibles / collections
[_] Watching sports on TV
[_] Wines
[_] Interrogation / torture
[_] Household pets
[_] Crushing rebellions
[_] Espionage / reconnaissance
[_] Fashion clothing
[_] Border disputes
[_] Mutually Assured Destruction

Thank you for taking the time to fill out this questionnaire. Your answers will be used in market studies that will help McDonnell Douglas serve you better in the future - as well as allowing you to receive mailings and special offers from other companies, governments, extremist groups, and mysterious consortia.

Comments or suggestions about our fighter planes? Please write to:

McDONNELL DOUGLAS CORPORATION
Marketing Department
Military Aerospace Division
P.O. Box 800, St. Louis, MO

NAME THAT YAK! (by Terry Clements)



1/48 Tamiya Heinkel He 219 Uhu (Owl)

By Larry Randel, Oregon Historical Modelers Society

This plane was at the top of every want list in the old *Military Model Preview* but until late last year the only way to build it was by vacuform. Tamiya finally listened and produced this spindly two-engined German night fighter in injection molded plastic for the quarter scale modeler. At a $45 MSRP it seemed worth the money to buy.

Brief History

Although not the most heavily produced night fighter of the Luftwaffe, this plane seems to have achieved a quite fearsome mystique by shooting down 5 British bombers on the first operational sortie of the type. Other than that, political infighting and material shortages limited the production of the type for the remainder of the war.

First Impressions

First impression is surprise at the fact such a large model could be stuffed inside the medium to small size box. Upon opening the box you find a densely packed set of sprues all separately wrapped in the standard we have now come to expect from Tamiya. The box art isn't the most colorful seen to date but it does elicit a feeling of grace in spite of the graceless looks of the He 219. Initial inspection of the model and test fitting of the main pieces leaves no doubt this model will require some major shelf space. The most impressive innovation is the metal cockpit tub and nose wheel roof which is molded to fit the nose and weight the nose down. More on this later.

Instructions

The instructions are up to the usual well done and easy to follow format that Tamiya usually provides. Most parts are called out by name and the illustrations are very clear and easy to read. There are only a few options available to the modeler during construction and these are called out quite clearly. The only failing of the instructions is to not specify clearly which option fits with the possible color schemes. Paint references are keyed to Tamiya colors but a cross reference by name and some by RLM # is provided.

Construction

Construction begins with the cockpit. I followed the suggestions in *Scale Aircraft Modelling* magazine for correcting the angle of the pilot's headrest. In that same magazine were some nice color drawings of the cockpit which I found highly useful for painting. As for the instruments, I painted the panels black and dry brushed silver on them to highlight the instruments. I then picked out some yellow and red spots with a fine brush as per the drawings. That metal piece took paint with no sealer needed. More companies should consider this option for tricycle-geared craft. It worked well. The fit of the cockpit and wheel well in the front fuselage is so good, no glue was needed. Even so, I used some super glue just to be safe.

One of the few options given is whether to install the "Schrage Musak" cannons in the mid fuselage. The cannons are detailed and the cover is designed to be removable but much more bay detail would need to be added for this to be a viable option. As for the cannons themselves, I have since learned that most He 219s did not use them because of the weight penalty. I had already decided to use them before I found this fact out. A lot of reviews have claimed problems in this area getting the bay cover to stay glued during construction. I firmly liquid glued the cover and the cannons to one half of the fuselage from the inside and then when joining the other half, at least I had half of it firmly attached. I never had any problem with the other half.

Once the fuselage is together, then the work on the wings begins. I joined the landing gear pieces before painting the details and then had no trouble fitting them into the gear bays. The main wheel wells could benefit some by having some of the rear bay covered by a scratch built bulkhead. I didn't do that and I can't tell much difference. Some putty is needed for shape in the points at the rear of each engine nacelle. The engine faces and props can be completed after painting.

Another "A" for engineering goes to Tamiya for their use of log-like plastic braces that go through the fuselage and into the wing roots. The joint here ends up fitting very well and very strong. The twin tails and tail empennage went on very cleanly as well. The rest of the detail parts were saved until after painting the main body.

Painting

I chose the NG 1 scheme that called for black underside with light grey RLM 76 mottled with dark grey RLM 75. I used Aeromaster enamels for the greys and Testors Model Master for the flat black. Per the suggestion of a fellow Internet reviewer, I painted the dark grey RLM 75 across the top of the model first. He had evidence this was the order used on the original aircraft since there are pictures of planes painted with a dark grey overall as they came off the production line. I then air brushed the RLM 76 light grey in loops and lines leaving randomly shaped small islands of the darker color loosely wrapped by wispy light grey. I was quite pleased with the effect. This stands as quite a contrast to my Ju 88G-6 done with the exact opposite method with exactly the same colors. (For the Ju 88 I painted the light grey first then added small random shapes with the dark grey).

The end effect on the Heinkel was quite pleasing and after looking at as many night fighter photos as I could find lately, apparently more realistic. The end effect has the texture and look of a dark rain cloud that although is quite dark in places, has lots of swirling and wispy highlights. I masked the upper color and painted the black on the bottom two-thirds of the model. I did get a little black overspray in the upper color but it kind of adds to the over-all mottled effect. To avoid this, you might want to mast the entire top coat with paper or paper towel.

Decals

Kit decals went on well. Any silvering was probably my fault for not glossing the model enough before application. In other reviews, accuracy of the various markings in the kit have been called into question. There aren't all that many markings to apply being rather basic in this area. For my purposes I was happy with the result. After all, Germany in 1944 and 1945 was in relative chaos so who is to know exactly what was going on with real precision. The kit decals represent a typical He-219 of the period. Close enough for me.

Final Assembly

After painting and decaling the He 219 there were several final finish parts to apply. I'll mention them first, but my suggestion is to apply the forward four radar antennae and one rear antenna as the very last step. I was very pleased the main mounts were incorporated into building up the nose area rather as the after thoughts that some models make them to be (i.e. Monovell Bf 110G). The antennae went well using super glue as did most of the other miscellaneous antennae and probes.

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Tamiya Heinkel He 219

(continued from Page 12)

I used True Detail Fast Frames for the canopy rail and they worked flawlessly. I chose to button up the hatch and not utilize the open canopy option. They usually break off eventually and just allow dust down into the cockpit. Since I did use the "Schrage Musak" cannons I should have fashioned a upward looking sight for the pilot but I didn't so far. Who's to say it wasn't recently removed for repair and no replacement was available? Alright, so I'm lazy. Maybe someday I'll pry open the weak bonds of Krystal Klear glue and put such a sight in place.

Summary

When complete, I now have another German night fighter of WW2 to join my Ju 88G-6 and my Bf 110G with the four radar antennas sprouting out the nose to snag every finger that ever comes nearby. Barring that sad trick of mother nature, this is a quite nice model to build. While I don't anticipate the need to buy another, I know this model by itself is one of the most unique and interesting looking on my shelf. If you are into German planes in 1/48 there is no doubt you probably have already got this beast. If you are not into German night fighters, perhaps this will be the monster that gets you hooked.

Ratings Grid

All the items are on a 1-10 scale with 1 being worst and 10 being best:

MSRP= $45.00

Packaging - 9
Comments: Nearly perfect—maybe too densely packed.

Instructions - 8
Comments: Could have provided more historical details. Paint only referenced by Tamiya colors

Detail Quality - 8
Comments: Outstanding except for maybe more detail in wheel wells

Apparent Accuracy - 8
Comments: Yes it looks very much like a He 219.

Molding Quality (Sinks or Mold Marks) - 10
Comments: None in any noticeable areas.

Fit and Engineering - 9
Comments: Great ideas in metal nose plug and wing root braces. Fit of nacelles needed work.

Decals - 7
Comments: Quality was good but lowered marks for questionable accuracy.

Overall Appeal - 9
Comments: Very nicely done model

Average Score - 8.5

Authors Note: These ratings are all IMHO and may seem quite harsh in places. Since no model I know is perfect, these represent probably close to the highest marks I would give a model. As I do more reviews, maybe this pattern will be more apparent.

1/48 P-43 Lancer Review

By Jim Maas, courtesy RMS

I just got the Classic Airframes Seversky P-43 (the transition between the P-35 and P-47). Surface detail is much improved over earlier releases. Plastic includes left and right fuselage halves (including cowling), one-piece bottom wing, left and right top wings, tail planes and landing gear doors and gear and tailplanes, plus a prop hub and three separate blades which have been on steroids. Resin includes a fantastic one-piece undercarriage well (no complaints ala the He 112 about not boxing in the gear well!) , cockpit walls and seat, and (!) a P&W engine crankcase and individual cylinders. The vacuform canopy (spare provided) includes the rear windows and 'solid' portion surrounding them; think of the way Mauve handled the P-40M canopy. The simple decal sheet carries markings for an early 1941 aircraft of the 1st PG, and an anonymous Chinese Air Force machine (wing and fuselage roundels and rudder stripes). My example had an unwanted bump on the center portion of the resin gear well piece. It took a while before I realized why the resin piece wasn't sitting down snug into the inside of the lower wing. A quick sand-off solved the problem. A photo (pix of P-43's are really rare) shows that the inner gear doors only open during gear extension, and then close up again. Also, the kit needs a lip, under the engine, inside the cowling at the bottom, not as pronounced as the one inside the P-47 cowling, but similar. Since the P-47 used this setup to direct air flow to the supercharger, I suspected this lip might be present on the supercharged P-43.

The only photo I could find of the cowling face (and it does show the lip) is in the old Aero Pictorials #3, *RAAF and RNZAF in the Pacific*, which came out in the late Sixties. Two other suggestions: the "39 1P" designator codes on the USAAC aircraft should probably be carried in black - as a single line of characters, on the upper port wing, and in smaller characters forward of the word "ARMY" on the lower port wing. I also suspect that some of the aftermarket interior detail stuff available for the Hobbycraft P-35 might come in handy for this kit. Overall, though, this is a good kit. I'll change the USAAC designators to show a similar aircraft which displayed big red crosses over the insignia during the Louisiana Maneuvers in 1941.

Panzer Truppen
The Complete Guide to the Creation & Combat Employment of Germany's Tank Force 1933-1942 (Volume one) 1943-1945 (Volume two)
by Thomas l. Jentz

Reviewed by Trevor Ware, IPMS Queensland, Australia

The title is a big ask for any publication but Thomas L. Jentz delivers an extremely factual account of the service career of the Panzer Truppen. Jentz's books are based on war time documents, such as reports and dispatches from the front line units, to official orders, inter-office memos and manufacturer's records. No post war recollections or expert opinion is used in the telling of the accounts. All the facts are presented in order with no suppositions made on grey areas between the topics.

In his introduction the author lays down the ground rules of his research and makes no apologies for the tedious nature of the text. In fact he discourages anyone picking up these volumes for a light read. He also reminds us that some of the reproduced documents have been written by their original authors, in order to justify new ideas or request new tactics, etc. As such, a lot included is not of the normal day to day type of information, not to say that there isn't any of that as well. I made the mistake of starting with the second volume; I found it easier to understand the layout of the text after reading the first volume.

This is a difficult read; a lot of the text is background for the big picture, which is tedious to get through. There are not many photographs, but they are of excellent quality and value. The books are expensive ($100+ [*Australian* dollars – ED] per volume) but I would still recommend them highly to anyone interested in the history of this dynamic fighting force. Published by Schiffer Military History

A 1/48 F-94C Conversion

By Phil Brandt
Austin Scale Modelers Society

Although the sleek F-94C Starfire was the definitive version of Lockheed's all-weather fighter series of the middle Fifties, no high quality quarter scale kits exist. Revell has reissued its 1/56, box scale kit of the Fifties, complete with raised insignia outlines and one-inch rivets. Lindberg's "1/48" version has the early, blunt -C model radome and is equally crude by today's injected standards. Hobbycraft, to its credit, has taken on the F-94A and B, issuing two decent, engraved kits both of which, however, exhibit the relative lack of detail and annoying discrepancies that modelers have come to expect of that firm's releases. But, the Hobbycraft -B model, when combined with portions of the Revell F-94C, photo etching from Reheat and Airwaves, and moderate—you may think heavy!—scratch building, can be converted to an accurate representation of the beautiful -C model "aerochine".

The most difficult portion of the conversion is the grafting of the front (windscreen forward) portion of the Revell fuselage to the windscreen aft portion of the Hobbycraft -B model. The quite different Revell -C intakes are grafted and faired with putty onto the roots of the Hobbycraft intakes after the appropriate forward intake fairings inherited from the P-80 are removed. Splitter plates are fabricated from thin sheet. The Revell -C tail transition fairing, that is, the complex sheet metal area on top of the afterburner section, into which the drag chute housing, stabilizers and vertical fin mount, is grafted onto the far aft portion of the Hobbycraft fuselage. Since the -C model used the larger, more powerful J-48 engine, it was necessary to "fatten" the diameter of the Hobbycraft afterburner section, from the aft wing fairing to the exhaust outlet. This was effected by gluing many .040" thick Evergreen strips lengthwise along the fuselage all the way back to the afterburner outlet, followed by rough fairing of the strips forward to blend gently with the original fuselage cross section. Then, multiple layers of lacquer putty—I use 3M Blue Acrylic for sanding ease—and ample drying time for shrinkage between layers before wet sanding. Now that the fuselage is fatter, you'll need a larger afterburner can to match. Check the spares box for an appropriate Century Series or equivalent can; I used one from the Monogram F-8. The-C's aft fuselage spine is scratch built with half-round plastic tubing kitbashed with the canopy transition piece from the Revell kit. Since the Revell forward fuselage is on the small side, it was built up with thin sheet on the flat portions just forward of the intakes, and the radome, rocket door and nose gear area were thickened and accurized with lacquer putty layers. The small airscoop on top of the fuselage, just behind the radome, was scratch built. The cockpit tub is from the Hobbycraft kit. The instrument panel, consoles and radar set were scratch built, using Reheat generic photoetched instruments and switch panels. True Details T-33 seats were used because they're very close to those of the F-94C, and because they've got nicely molded seat belt assemblies.

Reheat F-94A/B photoetch was used for the canopy ledge and canopy interior, including the radio direction finder mount. Additional canopy details were scratch built, using photos. The stabilizers and vertical fin were cut from .060" plastic sheet; the leading and trailing edges were roughed out and then progressively shaped by finer and finer hand sanding.

The Hobbycraft wings work well—the F-94C used new, thinner wings, but I made a command decision to use the -B wings, under the "close-enough-for-government- work" theory—with some judicious bending of the bottom portion to provide the industrial strength dihedral of the real thing. Use the Hobbycraft main gear and nose gear wells as is, but modify the shape of the main gear door cutouts to match the new -C gear doors. The ventral speedbrakes were cut out and detailed with photoetch from the Airwaves F-94A/B sheet. Form the speedbrake wells by cementing thin plastic sheet on the inside of the wing, over the openings; the well depth may not be to scale, but will not be easily noticed.

The wing-mounted rocket pods were kitbashed with Hasegawa 1/48 weapons kit rocket pods. The fun part is fairing the pods into the wings—I cut slots—and, again, lots of layers of lacquer putty, roughing in and wet sanding.

The wing tanks for the -B version must be lengthened approximately 1/4". I detailed the tanks with photoetch filler caps from the Reheat F-94A/B detail sheet.

Since the -C main landing gear struts differ significantly from the -B, I kitbashed the Hobbycraft disc brake hubs with axles with P-51main gear struts from the old Hawk (now Testors) kit. I Dremelled a small slot in each hub to receive the end of the P-51 strut—note that the scissor links face aft—minus the P-51 axle. The upper portion of the strut is trimmed to the appropriate length and thinned to mate in the gear hole of the Hobbycraft well. Retraction links were created from plastic rod. The Hobbycraft nose gear mounts "as is" into its well. The -C model outer and inner main landing gear doors are unique to the type and were scratch built from plastic sheet. I laminated interior panels to all gear doors—the inner gear doors were posed down to increase the "busy" factor—for added detail, and I scratch built hydraulic inner door cylinders from plastic rod. The -B main wheels were used, but the nose wheel must be smaller and much thinner than the Hobbycraft version. Again, you'll have to go to the spares box ; I stumbled on two old Japanese UPC F-104 main wheels from a now-derelict 1965 project; the hub ribs even matched! I sanded off the un-ribbed side of each wheel and cemented the remaining ribbed sides together.

The bird was completely rescribed—the Bare Metal scribing tool is, IMHO, superior for this. Gray lacquer primer was applied overall—this is required because I found that the acetone in Alclad etches bare plastic to an unacceptable degree—and the model was wet sanded with 1000 grit paper. Four shades of Alclad aluminum paint, thinned 40% with acetone, were airbrushed. For further variance in paneling shades, I used Microscale aluminum and stainless steel decal film.

Although clad overall in natural aluminum panels, many F-94Cs were colorfully marked; among the brightest were the chrome yellow-trimmed birds from the 27th FIS at Griffiss AFB, NY. To obtain the squadron insignia and yellow aircrew placards, I had the Emhar 1/72 F-94C (late) decal sheet enlarged 150% and color copied onto Walthers clear decal paper. When applied, I backed the squadron insignia and placards with white decal film. Yellow Microscale decal film, underlayed with white film, also served for the wing tank and rocket door trim. The black edging on the rocket doors was achieved by an underlying third layer of slightly larger black film. Black anti-icing wing/ stabilizer leading edge panels and red, "No Step" stripes were all from Microscale stripe sheets. Black stars came from a 1/72 RA-5C Superscale sheet. The anti-glare panel in front of the windscreen and the rocket pod paint were formed from clear decal sheet, pre-painted in green drab enamel, and the inner wing tank surfaces were masked and then airbrushed with green drab enamel. The canopy ledges were painted insignia red per the color pix in the Aerofax reference. The most difficult markings to find were the 1/16" black checks on the rudder which were applied over chrome yellow enamel. I finally found self-adhesive ones fr[illegible] an architectural supply house. National insignia, USAF and ID codes came from generic Superscale sheets, and stenciling is from various 1/48 jet fighter sheets, ie. F-111 and

F-94C Conversion

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F-4! Two coats of Future sealed all markings. The entire project has lasted over three years, but that's because the project was on the back burner for much of the time. I would estimate that the project could be completed in a few weeks of concentrated effort. Or, you could plunk down serious bucks for the Collect-Aire resin version which, I have been informed, is on the way. If true, as a veteran builder of Collect-Aire kits, I can with some authority state that you'll be out at least $100 and will still need to exert moderate effort to produce a competitive model!

References and materials:

Aerofax Minigraph 14, *Lockheed F-94 Starfire*, Francillon and Keaveney

Lockheed F-94 Starfire—A Photo Chronicle, Isham and McLaren

F-80 In Action, Squadron Signal Publications

Airwaves F-94A Photoetch Detail Set, AC48-41

Reheat F-94A/B Photoetch Detail Set, RH057

True Details F-80/T-33 Ejection Seats, #46018

RB-57F Canberra Kit Review

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plain that some alteration has to take place there, because the intake lip halves, when joined, form an ever-so-slight ellipse, instead of the required circle (the fan itself is a separate part). The fan bypass outlets have not been refined by Mach 2, and are blunt plastic edges which, in the real thing, would scale out to about six inches! These outlets will need to be Dremeled to a finer edge, with thin plastic dividers added for realism.

The wing anhedral "break" outboard of each engine and the distinctive tip droop have been correctly captured, and the wing/fuselage joint doesn't seem too bad except that the slots in the fuselage will need to be carefully enlarged to accept the wing mounting tongues (hey, c'mon, we're not talking Tamiya here!). The underwing joint out at the fiberglass wingtip is fairly rough, though, and will need filling. The characteristic airflow spoiler tabs on the stabilizer help the overall appearance at a distance, but are way too thick. So...unless you're a photoetch freak with really good eyes and the hands of a neurosurgeon, I'd pass on this one. It's going to be tough enough just airbrushing the slight particulate trails that always seem to emanate behind these tabs on any aircraft where they're used.

As far as cockpit detailing, you're on your own. Tandem seating arrangements, ala F-94/T-33, always look much better, in my opinion, with the canopy up, and the B-57 is no exception. The Testors seats aren't bad, but I'd use the True Details Escapac seats which have excellent detail, including the harness, molded in. For console instrumentation, you might consider one of the aftermarket photoetch sets, or even some filched 1/72 decals. And, you could also add some defroster ducting to up the "busy factor."

Decal-wise, Mach 2 apparently subscribes to the late, unlamented ESCI "flat finish" concept...even though this is essentially a glossy, albeit natural metal, aircraft! Included are fairly good national insignia, tail number (13502), large "USAFs", ejection seat warnings, rescue placards, and some red circles for maintenance locations. For the borders of the extensive "No Step" areas of the huge wing, I'd head for the appropriate Microscale black strip decal sheets.

Instructions are rudimentary, with minimum text and color information.

Testors chose unwisely, I feel, in not producing a follow-on F model after its initial B-57 releases; it would have been a modelling slam dunk. Mach 2 is to be congratulated for picking up this tempting business case and producing this most interesting variant of one of the world's most prolific aircraft designs.

References:

"Martin/General Dynamics RB-57F", *Aerophile*, Vol 2, No. 3, 1980. Easily the best, most detailed summation (Aerophile magazine was a class act—after all, Jay Miller was editor!) of the long wing project. Outstanding pix and drawings, including a large foldout section. This long-defunct publication can sometimes still be found at vendors tables.

B-57 Canberra in Action, Squadron/Signal Number 77.

The Martin B-57, The Schiffer Military Library.

IPMS Seattle Spring Show Contest Results

continued from Page 5

Best of Show

Best Junior:
Kevin Berry — T-34

Best Aircraft:
Richard Hoard — Heinkel He 219

Best Armor:
George Stray — Panzer III

Best Automobile:
Joe Spitzer — 1949 Mercury

Best Ship:
Bill Cianci — HMS Rodney

Best Diorama:
Chuck Zellmer — Two at Once

Best Figure:
Steve Cozad — Ugrian Standard Bearer

Best Space, etc.:
Tony Cortez — T-Rex "Bones"

Best of Show Contestants' Choice:
Martin Pritzl — Junkers Ju 87B Stuka

Best of Show Judges' Choice:
Steve Cozad — Ugrian Standard Bearer

Thanks to everyone who entered!

A Simple Way for Neater Cockpit Enclosure and Other Striping Needs

By Ned Shaw

When painting up the model, put several coats of each color on seperate surplus decal sheets. Include a sheet for each coat of paint, gloss and flat. When ready to finish the canopy, using a steel straight-edge and a very sharp hobby blade or razor blade, cut strips of the appropriate width from the sheet, and apply as you would any decal. The result is a "frame" of the right finish, without any tricky masking. Other uses for the right finish decal are as very subtle inspection panels, window frames, or (when used with decals or dry transfers,) markings. With the latter you are working with a flat surface until actually putting it on the model. Instead of "silvering," the panel matches the finish.

Web Sites of the Month

This month's web sites are mainly sites devoted providing information on a particular aircraft type. In three cases, the same aircraft! I promised last month that I would follow up on the web site for the Brewster Buffalo, and I always try to keep my promises. The other sites are given with a particular theme in mind, which should be obvious. I'd also be remiss in not mentioning a site that provided a major article for this month's newsletter, and revealed some excellent information on an often overlooked subject.

Japanese Aviation
home4.swipnet.se/~w-40883/avcont.htm
Mark T. Wlodarczyk's page includes information on Japanese military information, and links to dozens of other sites that feature Japanese aircraft (including one site with wonderful computer-generated graphics of a Twin Dinah, and a Shinden canard fighter on floats – maybe next time!). Mark graciously gave permission to reprint the English translation of the chapter on Ki-43 markings from his AJ Press book on the famed Japanese Army fighter. The book has so far been published only in Polish; buy it anyway!

Annals of the Brewster Buffalo
www.concentric.net/~Danford/buff.htm
The Brewster Buffalo Association is an organization dedicated to the memory of one of most controversial fighters of World War Two. The Buffalo is often called the worst fighter of the war; I beg to differ. Certainly the Buffalo fared remarkably badly in the hands of American, British, Australian, and Dutch pilots when facing the Zero in the early days of the Pacific War, but it was used very successfully by the Finns against the Soviets. The F2A may not have been a very good aircraft (later versions were underpowered, and it was well past its sell-by date when called upon to face the Japanese) but no absolute dog of an aircraft could have done what the Finnish B-239s did. Really bad aircraft are the ones who have a basic flaw that prevents them from being of any use whatsoever. Could the Buffalo possibly have been worse than the Me 210, Breda 65, or Blackburn Roc? This site contains some fascinating information on the Buffalo in American (Navy, Marines, *and* USAAF), British, Finnish, and Dutch service, along with kit reviews, and updates on books and other materials.

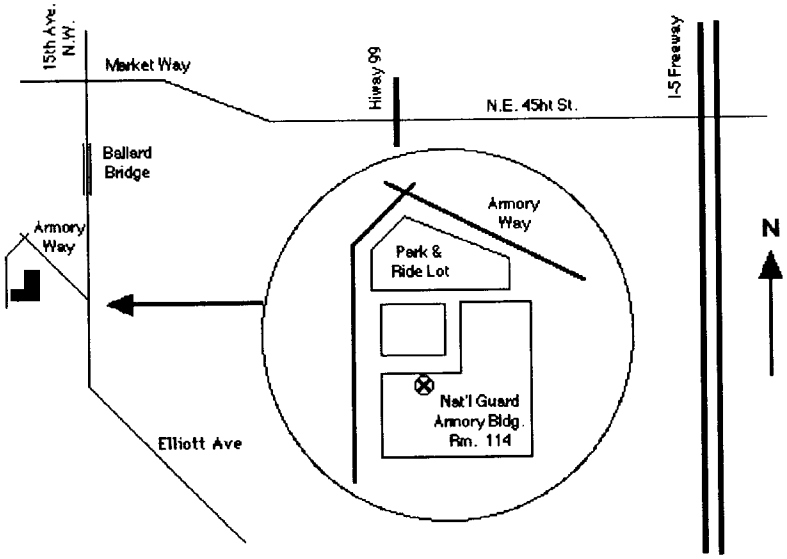
The English Electric Lightning
www.lightning.org.uk/
The recent Airfix release of two state-of-the-art 1/48th scale English Electric Lightning kits gives me the opportunity to publicize a few of my favorite web sites. Reference material on one of the most beloved aircraft in the history of British aviation is not lacking, but is sometimes hard to come by in the USA. The next three sites should help alleviate that problem. This site gives full information on all RAF Lightning Squadrons, anecdotes from pilots and ground crew, and gives a history of every Lightning ever built. There are also some excellent full color picture galleries (two at the moment, soon to be four) with lots of ideas for interesting color schemes. The Lightning served for 28 years, and wore an amazing amount of different color schemes. Check out the experimental blue scheme used on XM173!

Vertical Reality
homepages.enterprise.net/garry/Light.html
Think I'm kidding when I say that the Lightning is beloved in Britain? The intro to Garry Larkin's *Vertical Reality* page simply states "Welcome to the picture pages dedicated to the greatest ever aircraft built." The grammar may be awkward, but the sentiment is clear. *Vertical Reality* (great name, BTW) contains loads of good color images of Lightnings, both in RAF service and museums. Larkin also maintains sites on several other aviation related topics. His color photos of Tiger Meet aircraft are worth a visit.

Thunder & Lightnings
www.totavia.com/jetman/
Damien Burke's *Thunder and Lightnings* is an incredible site devoted to post-war British military aircraft. There's enough material on the Lightning (including a full, and very opinionated, history) to make it one of the best sites on that aircraft, but there's more. Nine other British military aircraft of the '50s and '60s get the same treatment, from the Vulcan and Victor to the Swift and Scimitar. The section on the BAC TSR.2 should be required reading for anyone wondering about the intersection of politics and technology. There is a "hate mail" section from irate Phantom phreaks who wrote to complain about Burke pointing out (accurately, IMHO), that as an air-to-air combat fighter, the Lightning could fly rings around the F-4. Beautifully laid out, and authoritative, this site gets 10 stars out of 10. Best of all are the profiles by Rick Kent; download them and use them as wallpaper on your PC. I have a TSR.2 on mine right now.

Meeting Reminder:

Saturday, June 13, 1998
at 10:00am



National Guard Armory
Room 114
1601 West Armory Way
Seattle

Directions: From North or Southbound 1-5, take the N.E. 45th St. exit. Drive West on 45th, crossing under Highway 99 (or Aurora Ave North) toward N.W. Market St. in the Ballard district. Continue West on Market St. toward 15th Ave. N.W. Turn left (south) onto 15th Ave. N.W. and drive across the Ballard Bridge until you reach Armory Way (just as you see the Animal Shelter). Watch for signs. You should park in the Metro Park & Ride Lot.

If coming from South Seattle, take Highway 99 onto the Alaska Way viaduct to Western Ave. Follow Western Ave. north to Elliott Ave. until it turns into 15th Ave N.W., then to the Armory Way turnoff.