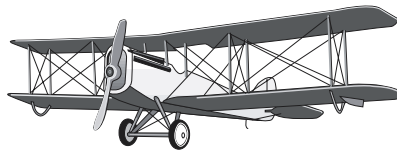


REPLICA

NOVEMBER
DECEMBER
2003

Newsletter of the National Association of Scale Aeromodelers [NASA]

PRESIDENT'S NOTES



MEMBERSHIP RENEWAL!!!

Check out your membership card and see if it isn't time to renew. The dues haven't changed this year and are still only \$15 per year. We hope that you think that your dues have been worth the newsletter and all of the other benefits you receive from NASA. So stop and sit down, write that check out and put it in the mail! Send to: Bonnie Rediske Secretary/Treasurer, 128 Darnley Dr., Moon Township, PA 15108.

NEW NASA LOGO



We've added a new logo similar to the one you probably have seen with the NASA Scale Road Show. The logos have the regular NASA logo in the middle with wings on both sides. Hope you enjoy the addition of this logo. It's not a replacement for the logo we've been using for the past 26 years but an additional option for NASA and the membership.

NASA ELECTIONS

It's that time of year again, to elect NASA officers for a 2 year term. Offices that are open for election include, President, Vice President, Secretary/Treasurer.

I've been running behind on my NASA responsibilities for the past couple of months due to a severe illness in my family. I should have gotten this out in the September-October issue of Replica. Please send all nominations to Bonnie Rediske at: 128 Darnley Dr., Moon Township, PA 15108 or to: rediskejb@aol.com. Nominations should be sent in no later than Jan. 15th 2004, so we can get this back on track.

NASA has a lot of good things going at this time and we have several plans for the next 2 years at least. Some of these include the Nationals, upgrades in systems, a centralized computerized scoring system and

sites. We hope you continue to enjoy the newsletter and especially the NASA website, where you will see further updates in the tech services, Nationals information as well as some new programs for encouraging scale modelers to compete.

THE SCALE ROAD SHOW AT TOLEDO

NASA will continue to improve this unique scale seminar series with NASA Webmaster Ed Clayman at the helm. If you are interested in attending and adding your expertise to the seminar please contact Ed Clayman at: wclayman@houston.rr.com

U.S.A. FAI SCALE TEAM

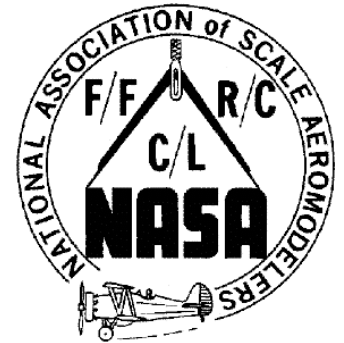
The team is going to Deblin, Poland next summer to represent the United States at the World Scale Championships. The dates are July 23rd-August 1st. Lloyd Roberts is serving as the Team Manager and is asking for any support possible from modelers, clubs, as well as corporate sponsors. Members who are interested in supporting the U.S.A. FAI Scale Team, please contact Lloyd at this address: 140 Porter St., Rockport, ME 04856 or at: lroberts@midcoast.com. All checks should be made out to the FAI Scale Team Managers Fund.

Also, if you and or your family are interested in traveling with the Scale Team also contact Lloyd as well as the AMA Competition Department. As soon as we have a price on the supporter package from AMA it will be published here and on the NASA website.

Deblin is about 100km north from the capitol of Poland.

FAI SCALE F4C - A MASTERS QUALIFIER

This year marks the first time that any contest which holds a Scale Masters Qualifier
continued on page 2...



NASA OFFICERS

PRESIDENT

STAN ALEXANDER

3709 Valley Ridge Dr.
Nashville, TN 37211-3831
F - 615-459-4421
onawing@mindspring.com

VICE PRESIDENT

DALE ARVIN

3428 Jeff-Charlestown
Jeffersonville, IN 47130
T - 812-284-0162
darwin8094@aol.com

SEC / TREASURER

BONNIE REDISKE

128 Darnley Dr.
Moon Township, PA 15108
T - 724-457-1730
RediskeJB@AOL.com

EDITOR - REPLICA

MARK LANTERMAN

5655 David Place
Fairfield, OH 45014
T - 513-829-4060
F - 513-829-4065
mark@airbornemedia.com

PRODUCTION EDITOR

E. ELLIS KASTER

3250 E.15th St.
Casper, WY 82609
307-265-6158
Ekaster@trib.com

President's Notes, continued from page 2...

and the FAI F4C class within that contest, the F4C will be considered a Qualifier for the Masters in Dayton this fall. So what this does is to give those who want to participate in the Team Selection? Another chance to compete in the F4C class and qualify for the Masters at the same time. It also gives you a chance to practice for the Team Selection and hopefully the World Championships in 2004. It appears to be a win/win for everyone. If a scale contest near you doesn't offer the F4C class, ask them to hold it! If they need technical help, please contact any NASA officer or myself.

We hope to increase the number of FAI classes in many of the Masters Qualifiers next year and the time to start planning that is now!

FAI SPORTING CODES

FAI sporting codes are up to date are available from either the FAI Website at FAI.org or the AMA Competition Department. It will take about 70 pages of paper to print it once you download it off the net, but that is the fastest way to obtain or view it.

A PASSING:

Bert Baker has passed away. Bert designed the (now) Yellow Aircraft P-47 and Zero, the BT-13 fiberglass kit too. He was one of the movers and shakers in the Scale Masters movement and served as a judge in many cases. We also lost Bob McDaniel in the past month. We have lost one of Dave Platt's close partners, Joe Hancock. Some of you may remember him at scale contests with Dave many years ago. He designed the Waco now offered by Pica. Our condolences to all these families and their friends. Thanks to Frank Tiano for this update.

TOP GUN INVITATIONAL 2004

Top Gun will be held on April 27th-May 2nd this coming year. There is a lot going on that week in Lakeland, FL. I won't try to list it all here but if you are interested in going down for the week, I would suggest checking out the website at: www.franktiano.com For reservations contact: Cindy Burkey at 954-587-8491 or e-mail at: cnburkey@attbi.com. Look for more about Top Gun in the next issue of Replica.

2004 SCALE NATIONAL CHAMPIONSHIPS

This year's Scale Nationals will be held on June 25th-27th. There will be the usual AMA Scale classes as well as a few unofficial events both in C/L scale as well as Free Flight Scale for all modelers. Also, on Friday night after static judging is over, we will hold the RC Indoor Fun Fly at the Horizon Center again! We will include scale in this also and look forward to seeing some new and different models in that venue.

Look for more information on the Scale National Championships in Replica, Model Aviation, as well as our website at: <http://www.scaleaero.com/nasa.htm> you can also contact the Nationals Event Directors for more information or if you are interested in volunteering for the Nationals.

RC Scale Event Director
Ed Terry
900 County Rd.
Logan Al 35098
256-747-1217
cpiforensics@juno.com

CL Scale Event Director
Mike Welshans
976 Pearson
Ferndale, Mi 48220
248-545-7601
Mbwelshans@aol.com

Unofficial Events Including Free Flight and Indoor RC

Stan Alexander
3709 Valley Ridge Dr.
Nashville, TN 37211-3831
615-834-1879 (evenings)
onawing@mindspring.com

CORRECTION:

On page 6 of the September-October issue of Replica we have a correction.

Dave Platt has stated that: "Taking the chord half-way out on the wing gives you average chord, but not the Mean Aerodynamic Chord, which is what is needed for C.G. calculations. Mean Aerodynamic Chord (MAC) occurs at the point along the wing where the area inside the line is equal to the area outside the line. On any tapered wing this will be closer to the root than the tip. The correct method of determining MAC and CG position is described in my Black Art videotape *Scratch This, volume 3.*"



NEED SCALE DOCUMENTATION?

On Antiques, Military, Civilian, Helicopters or Sailplanes?
I have the world's largest aircraft documentation collection.

- 8,000 different full color photo studies 1899-2001
- 35,000 3-view line drawings
- Year 2002 Catalog 256 pages

Only \$8.00 PPD (Includes air postage)

Canada, Mexico, Alaska, Hawaii, Puerto Rico \$10.00*
All other countries \$18.00*

Bob's AIRCRAFT DOCUMENTATION
(Formerly Scale Model Research)
3114 Yukon Avenue • Costa Mesa, CA 92626
<http://www.bobsairdoc.com> (714) 979-8058

Scale Military Aircraft Plans

Plans shipped ROLLED

Curtiss SBC-4 "Helldiver" 68" Wingspan

1930's US Navy Biplane Dive Bomber

Plans \$65 Parts Available

Grumman OV1-B "Mohawk"

Vietnam US Army Twin Engine Observation Aircraft

Easy to build ALL FOAM Construction

Plans 56" Wingspan \$25, 65" \$35 77" \$40

Fairey "Firefly" Mk4-5 49" Wingspan

British WW II and Korea 2 seat Carrier Fighter

Plans \$25 Parts Available (80" avail. soon!)

Heinkel He111 "Blitz Bomber" 89" Wingspan

WWII German Twin Engine Bomber

Plans \$65 Parts Available

Heinkel He219 "Uhu" 91" Wingspan

WWII German Twin Engine Night Fighter

Plans \$65 Parts Available

Vultee P-66 "Vanguard" 77" Wingspan

1941 US Army Air Corps Fighter

Plans \$45

Westland "Wyvern" 75" Wingspan

1950's British Turbo-Prop "Strike" Aircraft

Plans \$55 Parts Available

More information on the web at www.vanvan.us

e-mail questions to vance@e-z.net

Vance Mosher

SEND CHECK WITH ORDER TO:

Vanguard Vancouver

4700 NE 58th Street

Vancouver WA 98661-2131

PAINT REALISM IN SCALE MODELS

The first thing you see when you look at any scale model is the **COLOR**. Color is a major identifier of "what kind of an airplane is it?" If you see the wrong color, it is almost impossible for you to ever really think of the model as "scale", no matter how good the rest of it is. Even full size aircraft look strange when they are painted in an unusual color. You may have to see a pink P-40, or a yellow Focke-Wulf to understand that. A camouflaged Pitts' Special would look strange, too. Still, the B-24 with the polka dots on it looks just fine, possibly because the B-24 is so strange looking to begin with.

Nevertheless, you have to get the color right if you want your models to look realistic. There is more to that than "yellow means Cub and blue means Navy". There are a lot of blues and yellows, and most of them are the wrong ones. Color is a combination of hue, intensity, depth and gloss. Plastic blue is not Navy blue, even if it is exactly the same hue (color value). It is too shiny and it has too much depth (transparency).

Here are the reasons that a model's color may still scream "toy" at you, instead of "small, but realistic" even though you exactly matched the original paint chip. Color characteristics must be "scaled down" just like the rest of the airplane. The intensity, or the brightness, of the color and the depth, or transparency of the color, should be diminished. The gloss, or shininess of the color, must be reduced in a similar fashion. You want your model to be perceived as a "real" airplane that happens to look small just because it is some distance away, and scaling color characteristics is necessary to achieve the illusion of distance.

You can easily test these "scaling down", or distance effects, for yourself. Get a large piece of colored cardboard, or something with a solid color on it, that you can cut a small piece from. Cut off a piece about 4" square and keep it with you. Set the large piece outside where there is good light, and where you can walk away from it and still see it well. If you have a 1/6 scale model, and you want to have it look right at 10 feet, you would have looked at the original airplane from about 60 feet away. So, the cardboard piece would have to be about 60 ft away to get the "scale" effect. Walk away about 90'. Hold the small piece up at arm's length (about 3', so add 30, to the original 60,) and look at it alongside the large piece, which is 90' away. You will see a distinct difference between your perceptions of the color and gloss of the nearby and distant pieces. The large piece which is farther away will seem to be a duller color and have less shine. That really isn't true, of course, but you will see it that way. The color and gloss have been "scaled down" as a result of being 90 ft. away. (You won't see any rivets, either)

This effect gives us much of our faculty of "depth perception". When you start looking for it, you will see it in all kinds of photographs and paintings that give the impression of distance. "Scaled down color" is an important ingredient in our quest for scale realism, much of which is the illusion of distance. If we ignore this part of our everyday sensibilities in producing our model's color, we condemn our model to the "toy" status, even to our own eyes. We have all had this happen to us.

The "scale rule book" rule that requires that you match your model to a color sample is not a help in this regard, as it tells you to match the color exactly. If you don't plan to enter any

scale contests, you can forget the color chip and use this effect to make your models look more realistic. If you do enter contests, have the judge look at the color chip 90 ft. away. The rules don't specify the viewing distance for the color chip. This doesn't have to be a joke. You can paint a large "chip" to demonstrate this effect to the judges.

Here is the way to achieve "authentic looking scale color" on your models. This need not apply only to scale models. Even sport models look much more realistic and much less like toys if you do these things to them. You might even want to test them on a "Sportster". I'll bet you that if you do, you can convince at least half your friends that your "Super Sportster", or any normal looking everyday sport airplane, is a scale model of some sort. That may not be fair to them, but it is fun.

Tone down paints. The general rule is to use a very light gray-brown color to tone down all paints, even black and white. The smaller the scale, the duller and more toned-down the color should be. Even 1/5 is a small scale, compared to the real one.

Dull the shine. Nothing looks shiny at a distance. If you want your airplane to look like a real one at a distance, use "satin" or "flat" clear Varathane for a top coat. Just apply a light coat right out of their spray can. Use the "flat" on the small airplanes and the "satin" on the larger ones. Varathane is also fuel proof, which allows you to use different paints.

Lighten dark colors and darken light colors. Don't use real black. Don't use real white. This bears repeating. If you mix or spray from a gun, tone the colors down. I recommend that you keep a standard formula of "gray-brown" that is about 20 white mixed with 1 tan and 1 black. Use it by mixing a little of it in every color you spray. Just mix in more of it to paint small models.

Tone down garish decals. Never leave decals shiny, either. Dull the colors with a coat of your gray-brown or dirty thinner from cleaning paint brushes. Make sure the thinner doesn't eat decals, first. Rubbing alcohol is usually safe and works well. Be sure to "satin" coat the decals along with the airplane afterwards so that the gloss is the same on both. You want decals to "blend in" completely so that they look painted on and naturally weathered. White insignias were always dirty.

Weathering is also a component of color and the perception of realism. All materials weather, especially paints. This is not a slam-bang process. Weather with subtlety. This cannot be overemphasized! Real weathering is not done with black paint; it is done with sunshine, wear and tear, dirt and smog, and maybe a few birds. You cannot weather your model with black paint, either. Most weathering is a lightening and dulling of color, from the effects of paint fading in the sunshine. The rest of weathering is an accumulation of dirt or a shift in the color of the paint as the more vulnerable pigments are destroyed by sunshine. Dirt is not black. It is usually a gray-brown (surprise!). Oil stains aren't black either; they are whatever color the dirt is that sticks to them. Exhaust stains aren't black. They are light gray (lead oxide is white) with a little yellow or brown tinge. The only place where there is black weathering is where an aluminum panel is rubbing on something. Aluminum oxide is black. Airplane mechanics fix things like that as soon as possible.

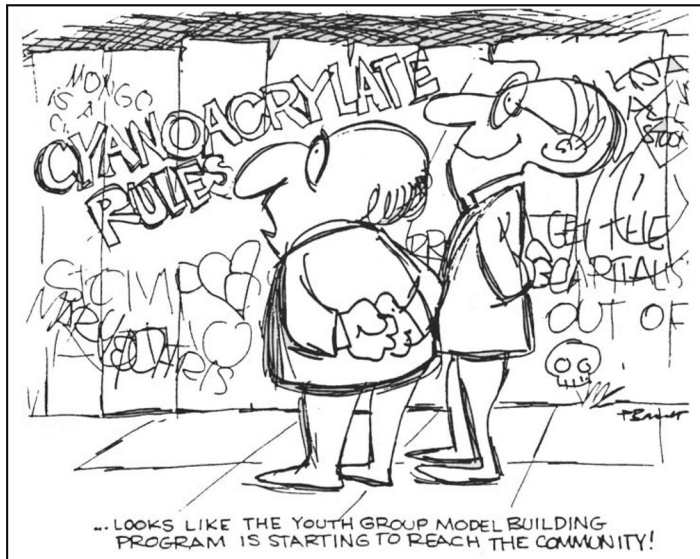
The easiest way to weather stain (as opposed to the signs of hard use) any model is to mix about a quart of drugstore alcohol with about a half-cup of your gray-brown paint and

continued on page 3...

Paint Realism in Scale Models, continued from page 3...

then to put your airplane out in the neighbor's driveway (with the canopy masked) and brush or spray the whole quart wetly over your airplane (after you satin coat it). Make sure it gets wet enough to run off and to collect in puddles in the seams. Hold it up by the nose and splash the bottom first. Then set it on the wheels and start at the top and work downward. Re-do the really dirty places, like the oil filler hatch, with a slightly thicker mixture. Mix a little red (or green or purple, depending on the octane rating) in it and let a streak of this run down from the gas caps. Let it all dry and then scuff the wing-walk area and a few edges and corners gently so the primer shows through. Don't overdo it. You'll end up with an airplane that looks as if it has been sitting out in the rain for a year or so. In California, of course, it will look as if it has been sitting out in the smog for a week. It will look more realistic anywhere.

Vance Mosher



Happy Holidays
from all of the staff at NASA.

JACKSCREW LINEAR SERVOS

7 pounds thrust, push or pull.
1 3/4" travel, more on special order.
Works on 9 volt transistor battery.
For landing gear, flaps, other scale options.
Free brochure and drawings.

JANACO RESEARCH CO.
11323 Cotillion Drive, Dallas, TX 75228
flyingjack@juno.com

NASA'S OFFICIAL MAGAZINE

NOVEMBER 2003 ISSUE 208
SERVING RADIO CONTROL MODEL AIRCRAFT ENTHUSIASTS EVERYWHERE

Hangar 9's

Cessna 182

TWO-STROKE ENGINE REBUILD PART II

THE ALL NEW EVOLUTION RIC ENGINES

The B-24 HOOKEM COW'S Final Mission

Down Home R/C Piranha! COMBAT

EVO .40 ETPS

EVO .46 EVO .61

www.rcreport.com
USA \$3.00 Canada \$5.00

7447079458

E-Mail For your Free
2003 Catalog

AIRTRONICS [®] **NEW!**
RD8000
info@airtronics.net



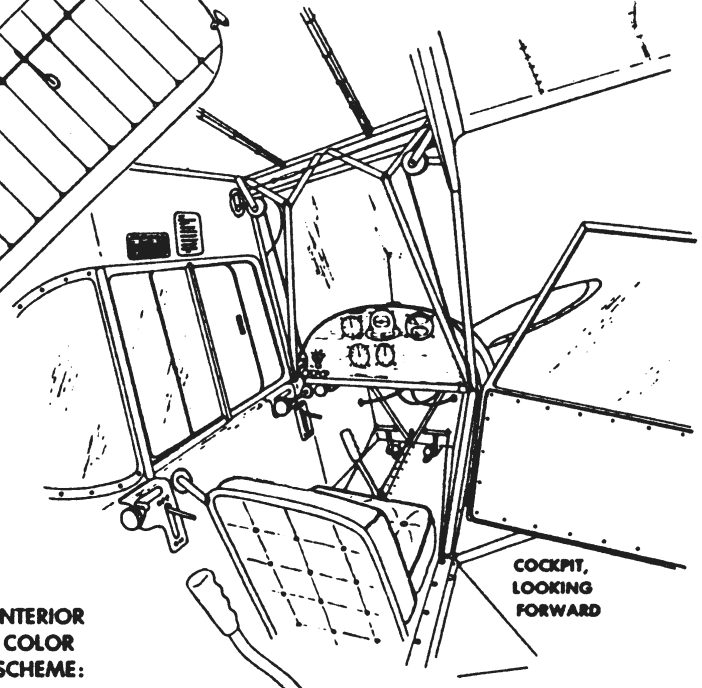
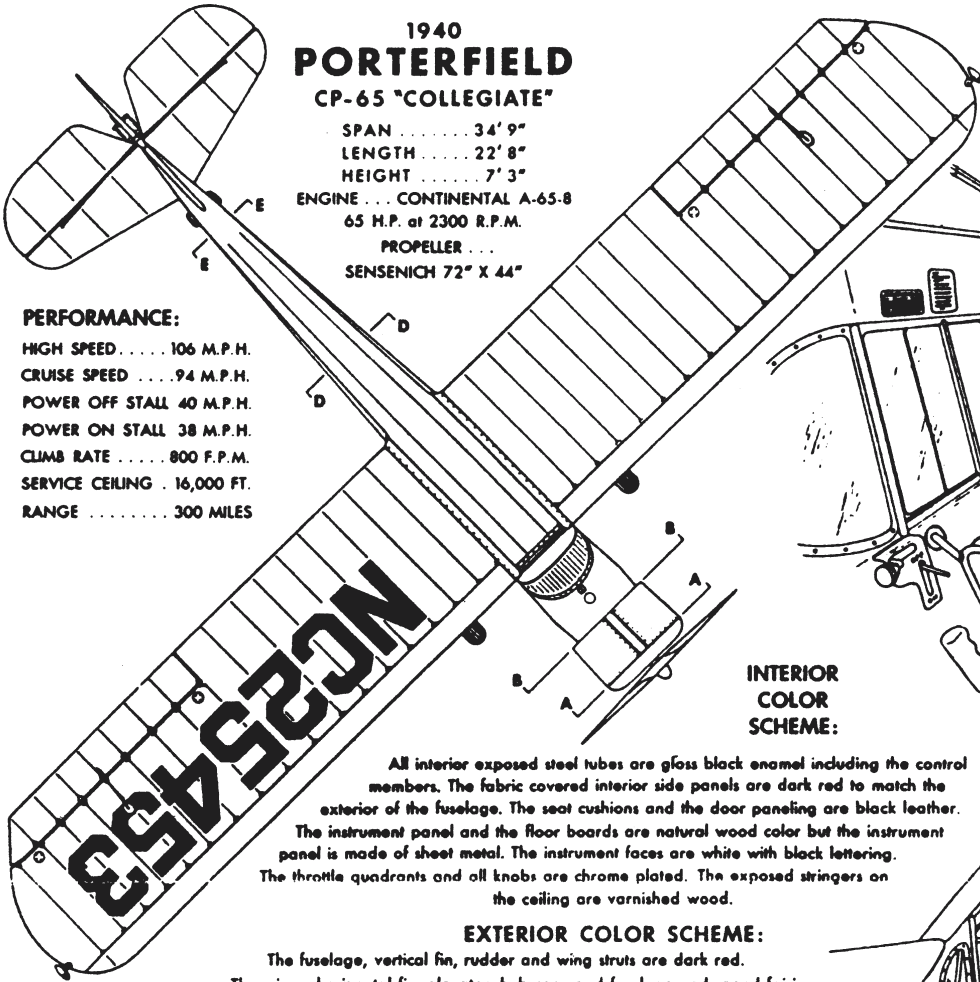
www.airtronics.net
1185 Stanford Court, Anaheim, CA 92805 (714)-978-1895

1940
PORTERFIELD
CP-65 "COLLEGIATE"

SPAN 34' 9"
LENGTH 22' 8"
HEIGHT 7' 3"
ENGINE . . . CONTINENTAL A-65-8
65 H.P. at 2300 R.P.M.
PROPELLER . . .
SENSENICH 72" X 44"

PERFORMANCE:

HIGH SPEED 106 M.P.H.
CRUISE SPEED 94 M.P.H.
POWER OFF STALL 40 M.P.H.
POWER ON STALL 38 M.P.H.
CLIMB RATE 800 F.P.M.
SERVICE CEILING . 16,000 FT.
RANGE 300 MILES



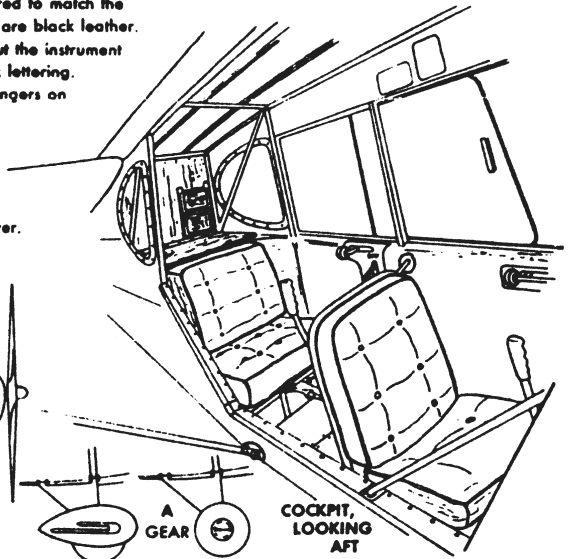
COCKPIT,
LOOKING
FORWARD

**INTERIOR
COLOR
SCHEME:**

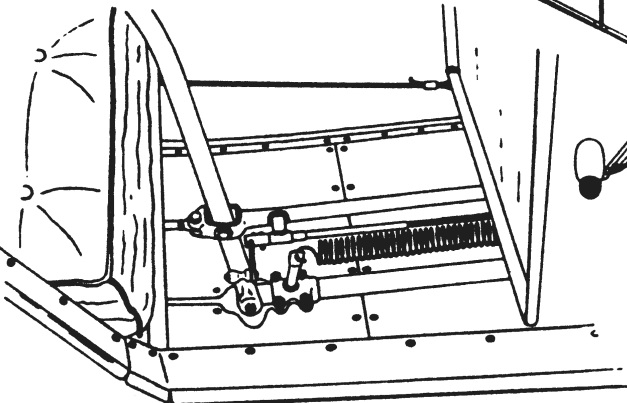
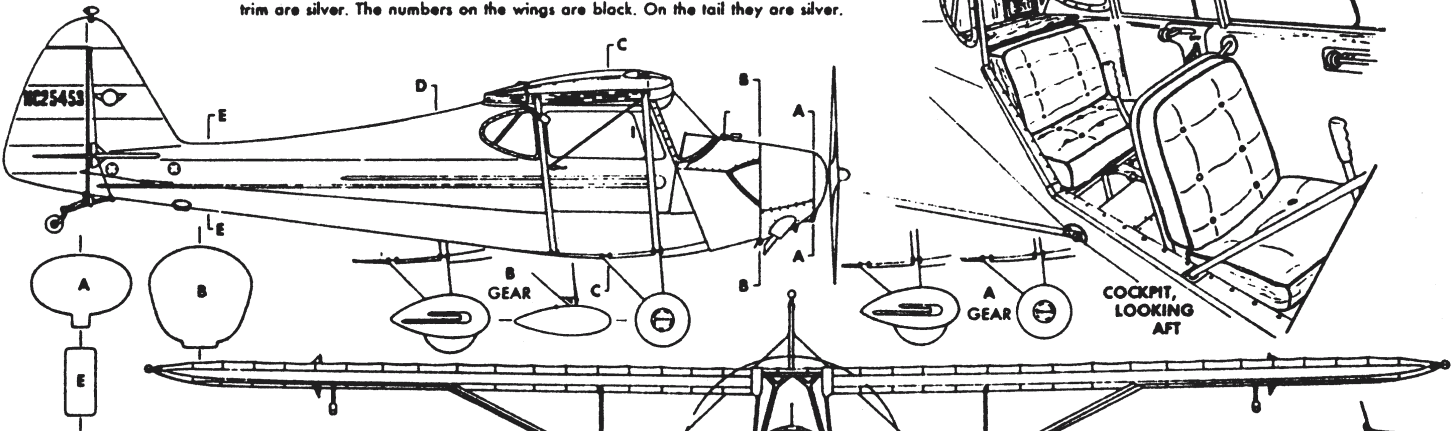
All interior exposed steel tubes are gloss black enamel including the control members. The fabric covered interior side panels are dark red to match the exterior of the fuselage. The seat cushions and the door paneling are black leather. The instrument panel and the floor boards are natural wood color but the instrument panel is made of sheet metal. The instrument faces are white with black lettering. The throttle quadrants and all knobs are chrome plated. The exposed stringers on the ceiling are varnished wood.

EXTERIOR COLOR SCHEME:

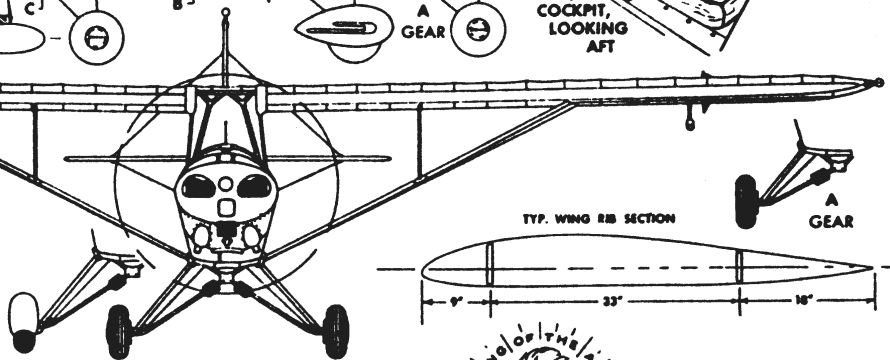
The fuselage, vertical fin, rudder and wing struts are dark red. The wings, horizontal fin, elevator, hub caps and fuselage and speed fairing trim are silver. The numbers on the wings are black. On the tail they are silver.



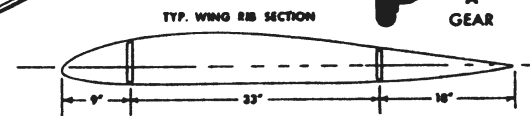
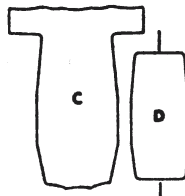
COCKPIT,
LOOKING
AFT



REAR COCKPIT FLOOR SHOWING TRIM ADJUSTMENT MECHANISM



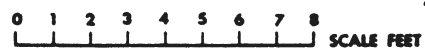
LANDING GEAR IN FLYING POSITION



TYP. WING RIB SECTION



VERTICAL FIN DECAL



Don Pratt
2/20/68

1/8TH AIR FORCE FLY-IN

PHOENIX, AZ. OCTOBER 18 & 19, 2003

For many years now I have been traveling the IMAA, and Fun Scale circuit from Texas to California, and that includes the states of Colorado, New Mexico, Arizona, and Nevada. But as it turns out, one of my favorite events is held right up the road from us in Phoenix. A group of people called the 1/8th Air Force hosts a fun scale event twice every year. Usually in March, and then again in October. The 1/8th Air Force organization has been in existence for 27 years, and has hosted 54 such events. They consist of about 50 local people, and about an equal number of out-of-towner's for support. These guys are not afraid of hard work. They have no home field, and their meeting place is usually someone's garage.

What they do is approach other clubs, and coordinate, and/or contract them, to use their field to hold their 1/8th Air Force Scale event. And what a great event it turns out to be. They will rotate the event using three different high quality flying fields in the Phoenix area. The event this Fall was held at Superstition Air Park, which is located on the East side of Phoenix. It is the home field for the Arizona Model Aviators (AMA). The other two locations are at the Arizona Model Pilots Society (AMPS) field, which is West of the I-17 interstate, and the Sun Valley Fliers (SVF) field, over by Cave Creek. All three of these sites have long paved runways, and ample shade produced by big Ramadas. You really need to experience these facilities to appreciate them.

And so, it was time to gather up Chuck and Jerri Brooks, along with my wife Rose, and make our Fall journey up to Apache Junction where Superstition Air Park is located. A very scenic location at the base of the Superstition Mountains, where to my understanding, the Lost Dutchman's Mine, still remains lost. Chuck carried his Stinson L-5, and Gee Bee Y ARF, and I carried my newly finished 30% scale Gee Bee model Z. We drove up Friday, and took a motel for two nights.

Saturday morning started out a little blustery, but it laid down by midmorning, and we both got in some serious flying for the next two days. Chuck did his usual masterful job of flying both of his planes, and I did the best that I could with my Gee Bee. Our planes were



My Gee Bee Z fully fueled, and waiting for the frequency to clear. It placed 2nd in Civilian. It was built from a Jack Devine Models kit, is 30% scale, spans 85", is powered by a Briston 3.2, and weighs 24 pounds.



This Ziroli B-25 is powered by two YS-91's, and was piloted by our good friend Curtis Kitteringham from California. Curtis was again the recipient of the prestigious Smack-Ass award.



Just a sample of the marvelous aircraft seen at the 1/8th Air Force. This Jenny spans 12.5 feet, and is powered by a G-62.



This highly detailed Beech Bonanza won first place in the Civilian class, and was flown by the very capable Ray Hoffman of Phoenix



Ron Marshall's award winning Alexander Bullet from the Golden Age

tweaked, and we experienced no problems in flying just as often as we wanted to. As you can expect at a 1/8th Air Force Scale gathering, the numbers and types of model aircraft were very impressive. There were 88 registered pilots by Sunday, and a mind boggling 125 aircraft to gawk at. It's always a big pleasure for me to chat with the other pilots at these things, it's a real learning experience. Chuck and I just flew, socialized, took pictures, and relaxed in the shade of their big airy ramadas.

Come Sunday afternoon, it was raffle time and pilot awards time.

Lucky Chucky won a beautiful Balsa USA Taube, and I won zippo. Naww, these guys are generous, everyone wins something. Some glue, some hardware, some paint. Pilots never go home empty handed.

Awards: To my understanding, awards are made on flight performance, or how scale like the models are flown, and appear in the air.

Civilian Class

1st place

Ray Hoffman flying a Beech Bonanza.

2nd place

Jim Lynch flying his Gee Bee model Z.

3rd place

Chuck Brooks flying his L-5.

Military class

1st place

Bob Geiser flying a Fokker Triplane.

2nd place

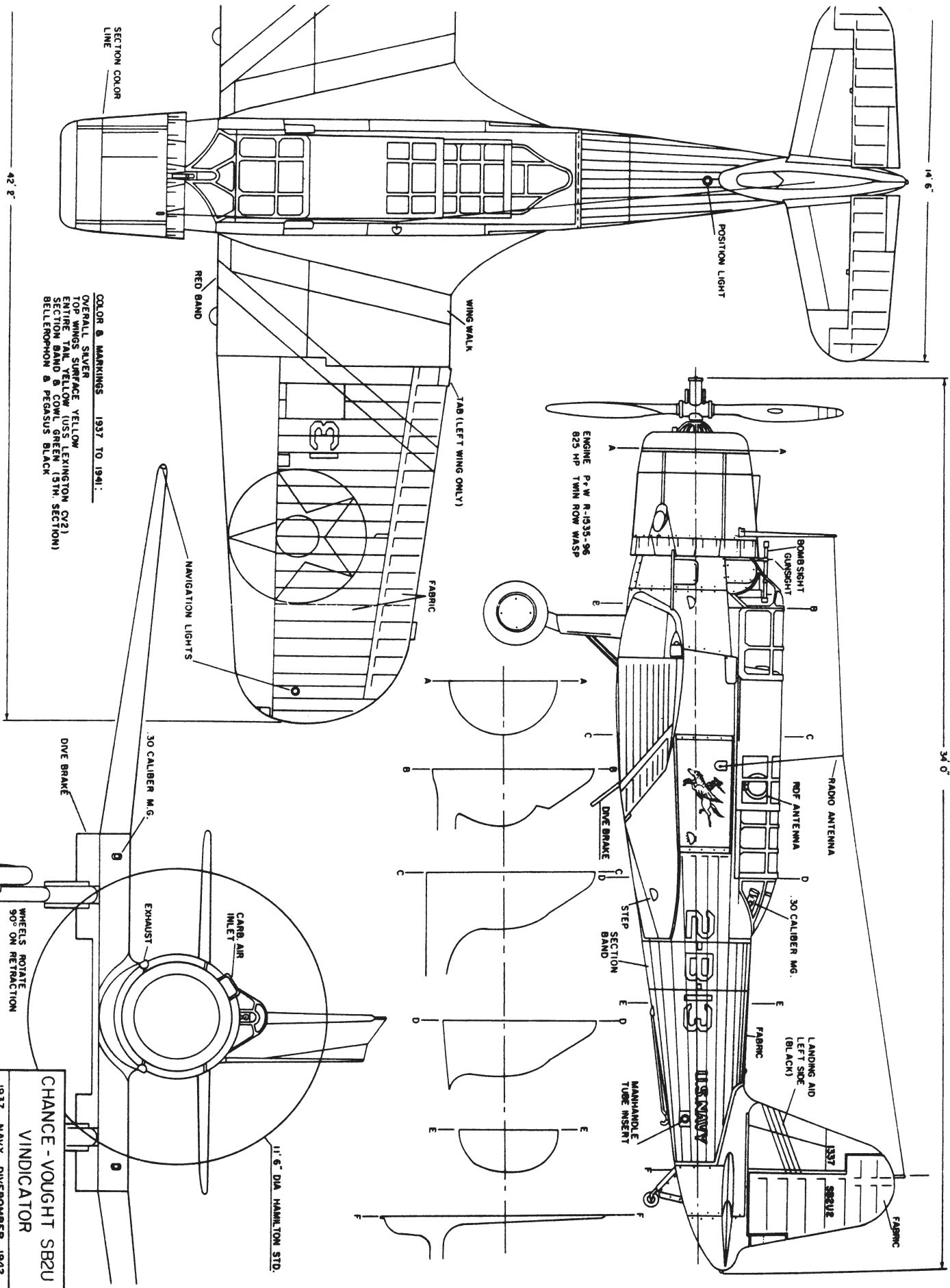
Gary Hunter flying a SE5A.

3rd place

Nick Rivaldo flying his B-24.

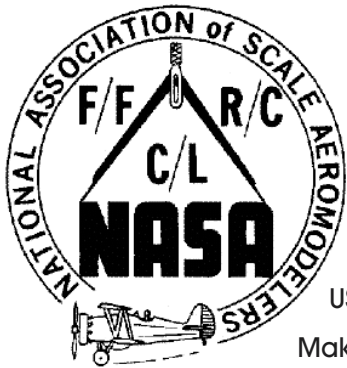
Awards were also made for Pilot's Choice, People's Choice, Commander's Choice, Smack-Ass, etc. These guys give away a lot of hardware, and in addition, you won't find more gracious host's anywhere. Think about taking a ride up to Phoenix next spring, you won't be disappointed.

Jim Lynch



COLOR & MARKINGS 1937 TO 1941:
 OVERALL SURFACE TO FINISHES
 ENTIRE SURFACE YELLOW
 ENTIRE TAIL YELLOW (USSA EXTINGUISH C/2)
 SECTION BAND & COWL GREEN (13TH SECTION)
 BELLEROPHON & PEGASUS BLACK

CHANCE - VOUGHT SB2U
 VINDICATOR
 1937 NAVY DIVEBOMBER 1942
 H.C. FARRELL ENDCOTT, NY
 INKED W.J. UNDERWOOD



In This Issue:

- **Renew Your Membership!** • **Two 3-views**
- **Latest in Scale News** • **Paint Realism in Scale Models.**

Join NASA Today! Complete the following application (please print) and mail it to Bonnie Rediske, 128 Darnley Drive, Moon Township, PA 15108. Membership dues are \$15.00 USA, \$17.00 Canada, and \$22.00 everywhere else.

Make checks or money orders payable to: **National Association of Scale Aeromodelers.**

Name: _____ New Renewal Address Change

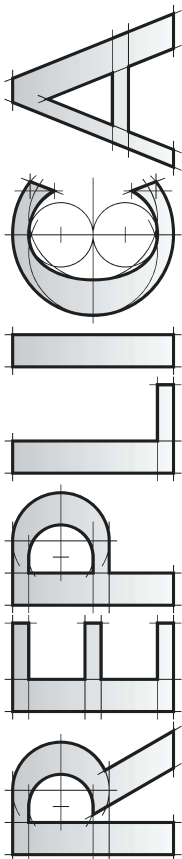
Address: _____ AMA # _____ NASA # _____

City: _____ Tel: _____-_____-____ E-mail: _____

State: _____ Zip: _____ Country: _____

Area of Interest: Free Flight Control Line Radio Control Giant Sailplane Electric

CHECK HERE if you do NOT want your name and address included in a directory to be distributed to NASA members.
NASA will not sell this directory to anyone.



PRODUCTION EDITOR

E. Ellis Kaster
3250 E. 15th St.
Casper, WY 82609

**RENEW YOUR NASA
MEMBERSHIP TODAY!**

PRSR STD
U S POSTAGE
PAID
CASPER, WY
PERMIT NO.107