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**NEWS OF NORTHWEST CONTROL-LINE MODEL AVIATION**

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1073 Windemere Dr. NW, Salem, OR 97304

Editor: Mike Hazel

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ISSUE NUMBER 106

IN THIS ISSUE.....

- \* ROUND & ROUND, by John Thompson
- \* SCALE, by Orin Humphries
- \* CARRIER, by Joe Just
- \* RULES FOR NORTHWEST CL EVENTS
- \* COMPETITION RECORDS
- \* UPDATED CONTEST CALENDAR
- \* MORE GREAT STUFF!!!!!!!

CHECK THE NUMBER ON YOUR MAILING LABEL. IF THE LAST NUMBER MATCHES THIS ISSUE NUMBER (106), THEN YOUR SUBSCRIPTION EXPIRES. RENEW PROMPTLY TO ENSURE CONTINUOUS ISSUES.

# Cockpit Chatter



Notes from the  
editor's desk  
By Mike Hazel

There I was, busily and serenely thrashing about the workshop, deftly carving balsa, meticulously making metal chips, and dreaming about contest victories to come, when suddenly a voice went off in my head, "HEY STUPID, IT'S TIME TO DO A NEWSLETTER!!!"

With the contest season kicking off, it seemed like the thing to run a summary of NW rules. Save this issue for reference! John T. gives some background on the rules-making processes for our regional events. If you have input, let's hear it!

In the last issue I neglected to mention that you can get the Western Associated Modelers (WAM) contest schedule from Mike MacCarthy. Northern California isn't really that far for some of us Northwest folk. Write Mike at: Po Box 788, Glen Ellen, CA 95442. Ye Olde Editor hopes to make it down to at least one this year.

This is the last issue before the Regionals in Eugene. I encourage everyone to come and join this annual control line celebration. By the way, you can take care of your FLYING LINES renewal at the meet. Look for the FL "Subscription Station".

There's a voice going off in my head again, "HEY STUPID, GET BACK IN THE WORKSHOP!"

FLYING LINES  
EDITOR MIKE HAZEL

MARCH 18, 93

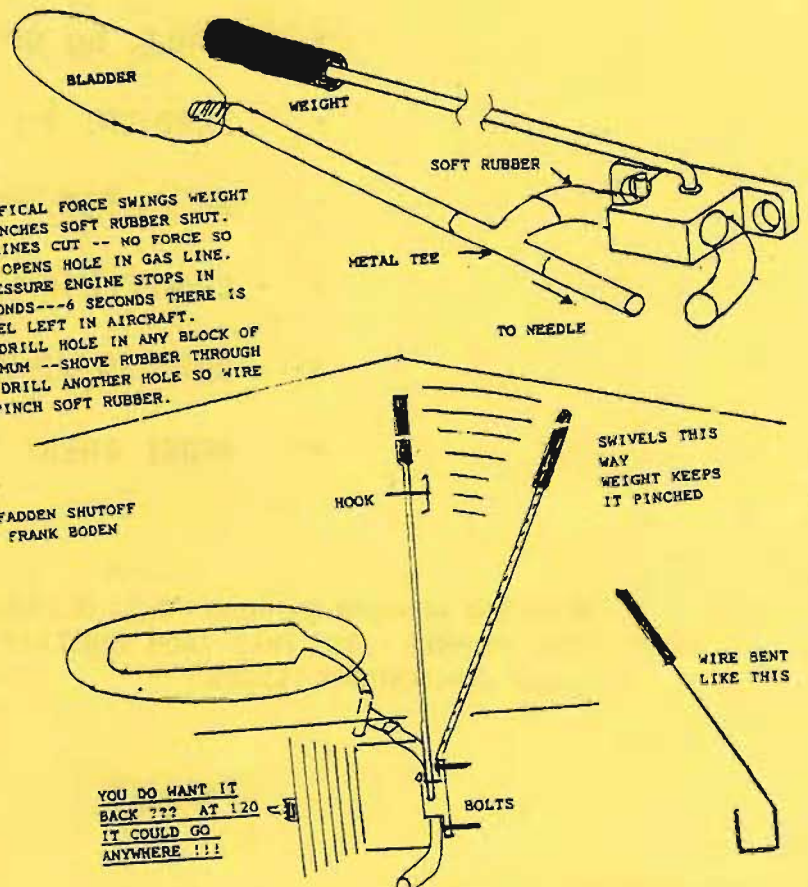
THE AMA IS STUDYING THE COMBAT FLYAWAY SITUATION. WE HAVE TO GET THE KNOWLEDGE OUT OR AS THE MACA HEAD CHUCK CLINE SAYS THE AMA WILL CHANGE COMBAT AS WE KNOW IT TO SOMETHING ELSE WHICH WE WILL NOT LIKE.

I AM ENCLOSING A DIAGRAM OF THE MCFADDEN SHUTOFF WHICH YOU MUST PRINT. WHY? I AM SURE THAT MOST COMBAT MEN DO NOT UNDERSTAND HOW A SHUTOFF WORKS. THIS WILL SHOW THEM AGAIN THAT IT IS AN EASILY MADE MECHANISM THAT CAN SAVE COMBAT. I CAN SEE WE HAVE TO GET THIS OUT TO AS MANY BULLETINS AS POSSIBLE.

FRANK BODEN CANADA

CENTRIFICAL FORCE SWINGS WEIGHT AND PINCHES SOFT RUBBER SHUT. WHEN LINES CUT -- NO FORCE SO PINCH OPENS HOLE IN GAS LINE. NO PRESSURE ENGINE STOPS IN 1 SECONDS---6 SECONDS THERE IS NO FUEL LEFT IN AIRCRAFT. JUST DRILL HOLE IN ANY BLOCK OF ALUMINUM --SHOVE RUBBER THROUGH THEN DRILL ANOTHER HOLE SO WIRE CAN PINCH SOFT RUBBER.

MCFADDEN SHUTOFF  
BY FRANK BODEN





# Northwest Competition Records

Record performances established between Northwest CL modelers in sanctioned competition

Although we haven't had any heavy contest action yet, it seemed appropriate to run our competition records section for review, what with some big meets coming up. We have a correction in this listing. Marty Higgs now has the Goodyear prelim record, with a performance done at the Tri-Cities Nats in '89. The documentation recently surfaced. (this was a record set during the short absence of FLYING LINES).

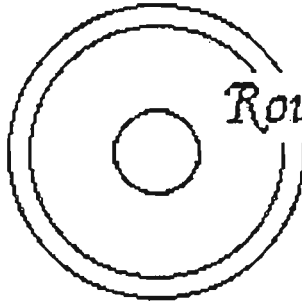
A review of the NW records procedure would be in order. All record performances must be done at a sanctioned contest that has been publicized, and is open to all entrants holding AMA or MAAC membership. The performance must be accomplished during the course of regular competition. Only Northwest region modelers are eligible for this recognition, but the performance need not be done in the Northwest. Suitable documentation may be necessary for verification. All applicable AMA or NW rules must be followed, any variations by clubs may disqualify the performance. For racing events, the score is listed rounded to the nearest full second. Also, all racing records must be completed during a race where there is direct competition for a minimum of 50% of the laps for that race.

1/2 A SPEED .....	83.13.....	Bruce Duncan .....	5-24-92 .....	Eugene, OR
A SPEED.....	151.07 .....	Chuck Schuette .....	5-24-92 .....	Eugene, OR
B SPEED.....	138.41 .....	Ron Salo .....	10-25-92 .....	Richmond, BC
D SPEED.....	172.34 .....	Loren Howard .....	5-24-92.....	Eugene, OR
JET SPEED .....	167.40 .....	Jerry Thomas .....	10-11-92 .....	El Monte, CA
FORMULA 40 .....	147.85 .....	Marty Higgs .....	10-25-92 .....	Richmond, BC
21 SPORT SPEED .....	139.91 .....	Chuck Schuette .....	8-9-92 .....	Coquitlam, BC
FAI SPEED .....	179.75 .....	Chris Sackett .....	9-22-91 .....	Coquitlam, BC
1/2 A PROTO SPEED .....	84.04 .....	Jeff Cleaver .....	5-24-92 .....	Eugene, OR
21 PROTO SPEED .....	---	---	---	---

MOUSE RACE I- 50 LAP.....	2:43 .....	Joe Rice .....	10-3-92 .....	Richland, WA
MOUSE RACE I- 100 LAP .....	5:59 .....	Joe Rice .....	5-23-92.....	Eugene, OR
MOUSE RACE II- 75 LAP .....	3:40 .....	Dave Green .....	5-24-86.....	Eugene, OR
MOUSE RACE II- 200 LAP .....	10:04 .....	Hazel / Thompson .....	9-19-87 .....	Kent, WA
AMA SCALE RACE - 70 LAP .....	3:25 .....	Marty Higgs .....	7-20-89 .....	Richland, WA
AMA SCALE RACE - 140 LAP .....	9:02 .....	Clarence Bull .....	5-24-86 .....	Eugene, OR
NW GOODYEAR - 70 LAP .....	4:29 .....	Joe Rice .....	10-3-92 .....	Richland, WA
NW GOODYEAR - 140 LAP .....	10:33 .....	Joe Rice .....	10-3-92 .....	Richland, WA
SLOW RAT RACE - 70 LAP.....	3:14 .....	Hazel / Thompson .....	5-23-92 .....	Eugene, OR
SLOW RAT RACE - 140 LAP .....	6:38 .....	Hazel / Thompson .....	10-17-92 .....	Eugene, OR
AMA RAT RACE - 70 LAP .....	2:40 .....	Dick Salter .....	7-22-86 .....	Richmond, BC
AMA RAT RACE - 140 LAP .....	5:46 .....	Dick Salter .....	7-22-86 .....	Richmond, BC
FAI TEAM RACE - 100 LAP .....	3:36 .....	Knoppi / McCollum .....	6-84 .....	Shanghai, China
FAI TEAM RACE - 200 LAP .....	7:40 .....	Knoppi / McCollum .....	6-84 .....	Shanghai, China
NW SPORT RACE - 70 LAP .....	4:00 .....	Bruce Duncan .....	5-12-87 .....	Richmond, BC
NW SPORT RACE - 140 LAP .....	8:50 .....	Mel Lyne .....	7-11-92.....	Burnaby, BC
NW SUPER SPORT - 70 LAP .....	3:14 .....	Dave Green .....	4-13-86.....	Portland, OR
NW SUPER SPORT - 140 LAP .....	7:03 .....	Dave Green .....	3-8-87 .....	Portland, OR
FLYING CLOWN RACE (15 MINUTE) 244 laps .....		Joe Rice .....	5-2-92 .....	Richland, WA

CLASS I CARRIER .....	318.30 .....	Roy Beers .....	9-13-86 .....	Kent, WA
CLASS II CARRIER .....	330.25 .....	Orin Humphries .....	9-19-87 .....	Kent, WA
PROFILE CARRIER .....	240.11 .....	Bob Parker .....	9-17-88 .....	Kent, WA
.15 CARRIER .....	195.72 .....	John Hall .....	10-25-92 .....	Richmond, BC

AMA ENDURANCE .....	18:37 .....	Wesley Mullens .....	8-15-87 .....	Kent, WA
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## Round and Round

The Control-Line  
modeler at large

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By John Thompson

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# The Northwest rulebook

The Pacific Northwest has been fortunate that for the past 15 years or so there have been several strong regional control-line competition events with a good level of participation — in some cases a stronger level of competition than the AMA rulebook events. Examples are Northwest Sport Race, Northwest Super Sport Race, Fox .35 Combat, and, more recently, Northwest Goodyear and .15 Carrier.

One of the keys to that good level of participation in the longstanding regional events has been the stable rules. In most cases these rules were developed by one club or another, used in a few contests on a trial basis, and then cast in stone as Northwest rules.

For newcomers to competition in the region, and for others with a historical bent, it may be helpful to review the process used to stamp these rules in stone and to make changes when necessary.

Elsewhere in this issue you'll find a listing of the rules themselves. The rules for Northwest Sport Race, Northwest Super Sport Race and Fox .35 Combat have gone through the formal rules-making process described below; the Northwest Goodyear and .15 Carrier rules have been developed as provisional rules and have not gone through the voting process described here, though they are approaching a standard status. Anyway, on to the history and process:

The stability of Northwest rules became reality in the late 1970s with the creation of the *Flying Lines* newsletter, which became the unofficial keeper of all manner of miscellaneous competition data. There were standings, records, schedules, contest results and aircraft data. Rules were a natural outgrowth.

The following process developed: When a new set of rules was proposed, or a modification of an existing set of rules, the proposal was printed in

*Flying Lines*, asking for the input of fliers; a ballot followed in a later issue, and eventually the agreed-upon rules were published for general distribution.

Thus were refined the original Northwest Sport Race Rules (originally written in 1976), and later the split NWSR/NWSS classes that now exist. Fox .35 Combat came later.

During the two-year period that *Flying Lines* publication was suspended, the rules process was transferred to the winter newsletter received by all Northwest Sport Race Drizzle Circuit participants; the current NWSS engine rule was adopted during this time.

Three things are significant: 1) Each set of rules was generally agreed upon by a formal process; 2) The rules were published and distributed widely, and generally understood to be official; 3) There is a central repository for the rules, from which any flier can inquire and receive a copy of the current rules.

There were also two ancillary benefits of the formal rules process: *Flying Lines*, which maintains standings and records, was able to use these rules as a guideline for qualification. Events that used the official rules qualify for listing in the standings and records; those that don't follow the rules don't count in the standings and records published here.

It was partly coincidence and partly design that the central repository for those rules became the household and computer of your Round & Round columnist. In the beginning of the process I was the *Flying Lines* editor, and as such conducted the balloting and coordinated and edited proposals, etc. Secondly, I was — and remain — a member of the AMA's Control-Line Contest Board and thus was able to maintain a national perspective in development of the rules.

This is not to say that I was the author of all of these rules; many others have been involved. My role has been as a coordinator of the process.

With *Flying Lines* once again a well-established publication, it's logical to continue the rules process that we've used for several years. There is, in fact, some unfinished business that should be conducted in the coming months.

Here's a rundown of the status of the various Northwest Rules, most of which are published in this issue of *Flying Lines*:

**Northwest Sport Race:** These rules were last revised for 1985 and appear to be generally accepted. No changes are under consideration.

**Northwest Super Sport Race:** Last revised for 1990; no significant changes are under consideration, but some streamlining and clarification of the engine rules is being studied.

**Northwest Fox .35 Combat:** Last revised for 1990; no changes are under consideration.

**Northwest Goodyear Racing:** The current rules have been in use since 1991, though they were slightly edited and reformatted for the 1993 Northwest Regionals. They have not been through the

formal vote but have been under development for several years and seem to have been generally accepted. If there emerges any divergence of opinion on these rules, a formal process could be conducted through the newsletter.

**Northwest .15 Carrier:** These rules have been undergoing informal development for several years now and seem to be approaching a consensus. I propose that after the 1993 Regionals, these rules be submitted to a vote through the *FL* process.

**Flying Clown Race:** This event has existed long enough that it's time to get a formal set of rules in the file. I'd like to receive a set of rules for this event, which I'll run through the *FL* validation process and enter in the rules files.

Comments on any of these rules should be directed to the Round & Round columnist. I'll continue to coordinate dialog on rules and the formal rules adoption process. No collaborative process ever pleases every participant, but since 1979 we've been able to achieve compromise results that have been successful on the flying field.

To get involved in the process, write John Thompson at 295 W. 38th Ave., Eugene, OR

## HOOK NOOK

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### Navy Carrier Notes

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By Joe Just

I begin this month's article somewhat reluctantly, but modeling and carrier in particular can often get somewhat difficult. First, let me state that I have the highest regard for Bill Darkow and his efforts to promote our hobby. In fact, Bill has been an overnite guest in my home. I also have enjoyed the friendship that has developed between myself and John Hall. Both of these modelers are genuine assets to our hobby, as well as being fine gentlemen outside the circle. However, I now find myself on a bit of "the outs" with them in regard to their efforts to enter and compete in carrier with autogyros. Over a year ago, John first talked to me about the fact that the Japanese had developed an autogyro for carrier use, and it in fact did make takeoffs and arrested landings on an aircraft carrier. So far so good, that documentation is needed for any airplane to be eligible for admittance to the model carrier event. However, in bringing this up with some of the top carrier fliers from all across the nation in the last year by phone and in person at the last two AMA Nats, I find that all these highly respected fliers agree with me, in that while the autogyro is indeed a great control line project, and a craft that can be a lot of fun to fly and watch, it is not eligible for carrier competition. In every case, these comments and opinions are not made because of any competitive threat that any autogyro could provide, but because the overall feeling is that AMA Carrier event was intended as an event for airplanes, not copters, autogyros, or other odd specimens of aircraft that might have been flown from a carrier, or were designed to.

The rules state that a Profile airplane must have a wing that has at least 300 square inches, and while the rotor is indeed "acting" as a wing, it is not a wing. Some scientific folks may of course object with this outlook, but the fact remains that all the officers of the Navy Carrier Society and the head of the Navy Carrier advisory board for the carrier flying rules feel as I do, the plane is not eligible for competition. We will have a two day carrier contest in early May and the big carrier event of the year, the "Desert Carrier Bash" in October. Bill and John will more than likely be at both contests. It may of course, cause some bad feelings when as event director in May, and C.D. in October when I will tell them both that they can fly, but they will not receive official scores in competition with the autogyros. I have already told Bill this, and it of course will be his choice to enter a protest and to take it to the highest AMA court. The entry of these craft will of course be out of my hands at any other contest. And the decision made there may differ with mine. In closing, I really do hope that a final solution about autogyros will come from Bill and John's effort, and I hope that all of us can and will live with any future ruling. I also thoroughly hope either or both of these men will allow me to try flying their craft, I hear it's a real blast.

# NORTHWEST CL CONTEST CALENDAR

THE FOLLOWING LISTING IS A SUMMARY OF ALL AMA AND MAAC SANCTIONED CONTESTS IN THE NW REGION AS OF 4-26-93 FOR FURTHER DETAILS REGARDING ANY OF THESE MEETS, CONTACT THE INDIVIDUAL INDICATED. CLUBS AND CONTEST DIRECTORS ARE ENCOURAGED TO CONTACT FLYING LINES AS EARLY AS POSSIBLE WITH THEIR SCHEDULING PLANS.

MAY 1 & 2, RICHLAND, WASHINGTON

SPRING TUNE-UP

EVENTS: NW SUPEH SPORT RACE, CLASS I MOUSE RACE, NW FLYING CLOWN RACE, NW GOODYEAR, OLD TIME STUNT, CLASS I CARRIER, CLASS II CARRIER, .15 CARRIER, PROFILE CARRIER, 1/2 A SPEED, 1/2 A PROFILE PROTO SPEED, A SPEED, B SPEED, D SPEED, JET SPEED, FAI SPEED, .21 SPORT SPEED, FORMULA 40 SPEED.  
SITE: COLUMBIA POINT MARINA PARK.  
CONTACT: PAUL RICE, RT 3, BOX 8642, RICHLAND, WA 99352 (509) 627-3142  
SPONSOR: COLUMBIA BASIN Balsa BASHERS

MAY 9, KENT, WASHINGTON

EVENTS: FORMULA 40 SPEED, 21 SPORT SPEED, 21 PROTO SPEED.  
SITE: BOEING SPACE CENTER. CONTACT: TOM KNOPPI, 19007 120TH AVE SE, RENTON WA 98058 (206) 228-9502

MAY 28 & 29 & 30, EUGENE, OREGON

NORTHWEST REGIONALS 1993

EVENTS: PRECISION AEROBATICS (4 PAMPA CLASSES), OLD TIME STUNT, NOSTALGIA STUNT, DIVE BOMB & STRAFING, AMA FAST COMBAT, SLOW COMBAT, 1/2 A COMBAT, FOX 35 COMBAT, PROFILE CARRIER, .15 CARRIER, CLASS I CARRIER, CLASS II CARRIER, CLASS I MOUSE RACE, CLASS II MOUSE RACE, RAT RACE, SLOW RAT RACE, SCALE RACE, NW GOODYEAR, NW SPORT RACE, NW SUPER SPORT RACE, AMA PRECISION SCALE, PROFILE SCALE, AMA SPORT SCALE, 1/2 A SPEED, 1/2 A PROFILE PROTO SPEED, A SPEED, B SPEED, D SPEED, JET SPEED, FAI SPEED, .21 SPORT SPEED, FORMULA 40 SPEED. (UNOFFICIAL EVENT: 21 PROTO SPEED) SITE: EUGENE AIRPORT.  
CONTACT: JOHN THOMPSON, 295 W. 38TH AVE., EUGENE, OR 97405 (503) 465-1088  
SPONSOR: EUGENE PROPSPINNERS

JUNE 12 & 13, KENT, WASHINGTON

STUNT-A-THON

EVENTS: PRECISION AEROBATICS (PAMPA CLASSES), OLD TIME STUNT, NOSTALGIA STUNT. SITE: BOEING SPACE CENTER (EAST PARKING LOT). CONTACT: DAVE GARDNER, 17210 109TH PL SE, RENTON, WA 98055 (206) 226-9667, SPONSOR: SEATTLE SKY-RAIDERS.

JUNE 19, RICHLAND, WASHINGTON

EVENTS: SPORT COMBAT, OLD TIME STUNT  
SITE: HANFORD SCHOOL. CONTACT: PAUL RICE, RT 3, BOX 8642, RICHLAND, WA 99352 (509) 627-3142  
SPONSOR: COLUMBIA BASIN Balsa Basher

JUNE 26 & 27, COQUITLAM, B.C.

V.G.M.C. INTERNATS

EVENTS: CLASS I MOUSE RACE, NW GOODYEAR, .15 CARRIER, PROFILE CARRIER, CLASS I CARRIER, CLASS II CARRIER, 1/2 A SPEED, 1/2 A PROFILE PROTO SPEED, A SPEED, B SPEED, D SPEED, JET SPEED, FAI SPEED, FORMULA 40 SPEED, .21 SPORT SPEED, 21 PROTO SPEED.  
SITE: COQUITLAM PARK. CONTACT: BRUCE DUNCAN, PO BOX 58037, STN L., VANCOUVER B.C. CANADA V6P 6C5 (604) 855-7295  
SPONSOR: VANCOUVER GAS MODEL CLUB

JUNE 26 & 27, SNOHOMISH, WASH.

BLADDER GRABBER 1993

EVENT: AMA FAST COMBAT  
SITE: HARVEY FIELD  
CONTACT: DAN RUTHERFORD, 4705 237TH PL SE, BOTHELL, WA 98021 (206) 481-5760, FAX (206) 487-1735

JULY 10, BURNABY, BRITISH COLUMBIA

EVENTS: PRECISION AEROBATICS, OLD TIME STUNT, JUNIOR STUNT, P.A.C. NOVACLONE STUNT, P.A.C. NOVACLONE BALLOON BUST & BOMB DROP, .15 SPORT RACE, NW SPORT RACE. SITE: BURNABY LAKE SPORTS COMPLEX. CONTACT: CHRIS COX (604) 596-7635 SPONSOR: PACIFIC AEROMODELERS CLUB.

JULY 17-25, LAWRENCEVILLE, ILLINOIS

1993 AMA NATIONALS

AUGUST 6 & 7, COQUITLAM, B.C.

NORTHWEST SPEED CHAMPIONSHIPS

EVENTS: 1/2 A SPEED, 1/2 A PROFILE PROTO SPEED, A SPEED, B SPEED, D SPEED, JET SPEED, FAI SPEED, FORMULA 40 SPEED, .21 SPORT SPEED, .21 PROTO SPEED.  
SITE: COQUITLAM PARK. CONTACT: CHRIS SACKETT, PO BOX 82294, BURNABY, B.C. CANADA V5C 5P7 (604) 299-4500  
SPONSOR: BC ACES

SEPTEMBER 11 & 12, KENT, WASH.

RAIDER ROUND-UP

EVENTS: PRECISION AEROBATICS (PAMPA CLASSES), NOSTALGIA STUNT, OLD TIME STUNT, NW SPORT RACE, NW SUPER SPORT RACE, NW FLYING CLOWN RACE, BALLOON BUST, RECORD RATIO SPEED, PROFILE CARRIER, .15 CARRIER, CLASS I & II CARRIER COMBINED, PROFILE SCALE, SPORT SCALE. SITE: BOEING SPACE CENTER.  
CONTACT: DAVE GARDNER, 17210 109TH PL SE, RENTON, WA 98055 (206) 226-9667, OR, JOE DILL, 22533 152ND AVE SE, KENT, WA 98042 (206) 631-2367 SPONSOR: SEATTLE SKYRAIDERS.

OCTOBER 2 & 3, RICHLAND, WASH.

DESERT CARRIER BASH

EVENTS: ALL CARRIER CLASSES, PLUS RACING & OLD TIME STUNT (DETAILS TO BE ANNOUNCED). SITE: HORN RAPIDS ATHLETIC COMPLEX. CONTACT: PAUL RICE. RT 3, BOX 8642, RICHLAND, WA 99352 (509) 627-3142  
SPONSOR: COLUMBIA BASIN Balsa BASHERS

OCTOBER 16 & 17, EUGENE, OREGON

REALLY RACING & FALL FOLLIES

EVENTS: CLASS I MOUSE RACE, CLASS II MOUSE RACE, SCALE RACE, NW GOODYEAR RAT RACE, SLOW RAT RACE, NW SPORT RACE, NW SUPER SPORT RACE, FLYING CLOWN RACE, PRECISION AEROBATICS (PAMPA CLASSES), OLD TIME STUNT. SITE: EUGENE AIRPORT, CONTACT: MIKE HAZEL, 1073 WINDEMERE DRIVE NW, SALEM, OR 97304 (503) 364-8593  
SPONSOR: EUGENE PROPSPINNERS



## The Flying Flea Market

Classified advertisements — FREE for FL subscribers

FOR SALE: FOX COMBAT SPECIAL MK VI, NEW IN BOX \$95.00  
RON MCBURNETT 503-363-7180

WANTED: STERLING NAVION KIT  
JOHN THOMPSON, 295 W. 38TH AVE  
EUGENE, OR 97405

FOR SALE: IRVINE .15 STANDARD, NEW IN BOX, \$110.00, DYNA-JET, EARLY VINTAGE NON-REDHEAD VERSION, EXCELLENT CONDITION \$165, TIGER-JET, NEW \$125, MIKE HAZEL 1073 WINDEMERE DRIVE NW, SALEM OREGON 97304

FOR SALE: CLASS "B" PINK LADY SPEED PLANE RTF, INCLUDES TWO COMPLETE K&B 4.9 ENGINES WITH EXTRA PARTS, PIPES, PLUS PROPS, TAKE-OFF DOLLY, FLYING WIRE AND HANDLE, ALL FOR \$425.00  
"THE MOVE" FORMULA 40 SPEED PLANE, WITH K&B 6.5, RTF \$150.00  
GREG BEERS, 312 W. HAWTHORNE ST. BATTLEGROUND, WA 98064

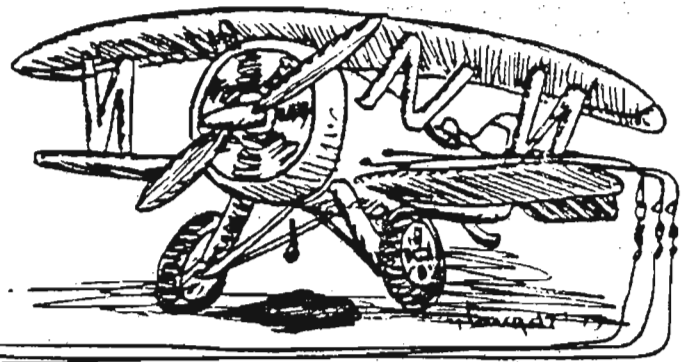
WANTED: LOOKING FOR FOLLOWING KITS: GUILLOWS REACTOR, KENHI WILDCAT, PANTHER AND COUGAR, 1ST VERSION VECO THUNDERBIRD, JETCO SABRE STUNT, A.J. AIRCRAFT FIRECAT, STERLING NAVION. WILL TRADE OR PURCHASE FOR THE ABOVE KITS. BRUCE DUNCAN, PO BOX 58037, STN L, VANCOUVER, BC V6P 6C5. PHONE 604-855-7295, FAX 604-855-7285

FOR SALE: NEW DESIGN GLASS PROPS FOR CLASS B, AND CLASS D SPEED. ALSO NEW REV-UP 7 X 5-1/2, SUITABLE FOR NEW 21 PROTO EVENT, PLUS GOODYEAR. WRITE FOR NEW LIST. MIKE HAZEL, 1073 WINDEMERE DRIVE NW, SALEM, OREGON 97304 PHONE (503) 364-8593, NO CALLS AFTER 9 PM, PLEASE!!!!!!!!!!!!

CONTROL LINE

SCALE

by orin humphries



## SCALE CORNER

by Orin Humphries

One of the last things you do to make a scale project believable is the paint job. I have always been conservative as bloody lessons await forays into the untried. This month we're talking

### PAINT AND FINISHES

Humper's Cardinal Rule No. 1: If the project counts try something new to you on a scrap or a sport model first. There are bloody lessons to be had from everything we try in this hobby. Don't re-invent the wheel on this rule, friends.

Humper's Cardinal Rule No. 2: Use only model products on models. These are in the model stores because 95% of them have withstood the test of field trials and are approved by modelers like you and me. Don't go to the hardware store, car store, etc. There are car and full size plane finishes available at other outlets, true. A friend way back tried a car paint and it went on great, was fuel proof, and everything was roses. Until three years later it started to look like a dry lake bed. There was no plasticizer in the car paint as cars don't flex as much as very small aircraft. The environment in which a product is tried and developed has its own parameters, and there are no guarantees the product will function satisfactorily in another set of parameters. Some modelers have used car and large aircraft paints successfully. I let them go look for the bloody lessons. I've had enough, and certainly not my last ones.

Cardinal Rule No. 3: Don't mix brands. There are products that simply aren't compatible with other brands or types. One guy in Seattle had this system of different brand finishing products all worked out for his full pattern stunter. Another equally competent stunt pilot living in Spokane at the time took that man's description of the technique down word for word and tried it, to disastrous results. Something important was apparently unrecognized and the difference made the system not work for the second man. It could have been the drying time between two critical coats, or the film thickness, or the difference in humidity and the temperatures of the two gents' painting areas. We'll never know. It worked for one but not the other. Bloody lessons. They await every modeler at every stage of his career. That's why I have these Rules.

You want to know the best way to get rid of a good modeling friend? I picked up some Pactra Aerogloss paint as contest booty ten years ago and gave it to my buddy. Oh, boy! Talk about a strained relationship. The latest owner of the product line at that time had completely changed the formulation and there was nothing suitable about the product for our uses since then. Try it today? Yeah, watch me.

I use Sig dope and K&B epoxy, on different projects, of course. I don't work for them, but I have found the greatest product performance, greatest dollar value, and best satisfaction with them. With one exception: Sig's Skybrite paint line is not nitro proof at the low levels (25%+) that we use in Carrier Event.



Sig puts out two marvelous paint products that I will leave this hobby over if they ever stop. One is low shrink clear dope, called Lite Coat. That should be your first and perhaps some of the subsequent coats, depending on the nature of your project. I cannot build and paint my slab winged Profile Carrier birds (using C-grain balsa ONLY) without Lite Coat clear. They also put out Retarder which may be used to GREAT advantage with dope or epoxy finishes. Lets talk about that separately.

Retarder slows the drying time a bit, allowing the finish to flow out. I once used it for thinner (without any other thinner) on one Profile model with a brushed on Sig dope finish. It looked like it had been sprayed because the brush lines had enough time to flow out evenly just before the surface film formed. You have to be extremely cautious what you try with epoxy finishes as product compatibility is one SERIOUS problem there. To my great surprise and glee, Sig Retarder is compatible with K&B epoxy. Check this out: I sprayed the epoxy on my T-34C. I'd do the wing first and then the fuselage, but I'd always get orange peel on the wing when I did the fuse. By successively increasing the ratio of retarder to thinner, I finally found the mix that would virtually eliminate the orange peel between the two areas. It was above 75% Retarder to thinner and may vary with your room conditions.

The ratios of paint parts and thinner is critical, with epoxy paints. The humidity in my basement workshop was around 75%, and when I used less than the ratio of thinner stated on the label my paint job got a condition called "fisheye". Normally, oils or silicones cause fish eye, and eliminating those as the possible cause took enough time to keep my out of the Canadian Nationals that year. With not enough thinner, the paint film formed too soon, trapping moisture underneath in the film. Yes, I had a water trap in my spray system, but the moisture involved was in the air between the spray gun and the plane. It became entrained by the spraying. Water, also, causes fisheye. Avoid tack rags for dusting before spraying on a coat as they usually have silicones in them.

Painting with epoxy is not to be undertaken lightly. For one thing, the State of California had found, using the Ames test, that epoxy is a carcinogen: causes cancer. Don't get it on your skin or breathe the dust when you sand it. I wear latex gloves when handling it. The solvents in the paint are themselves really bad news chemicals, such as ketones. A fan in the window is simply not enough. You MUST use a respirator having a charcoal filter as well as a dust filter. The charcoal part must be replaced the minute you first put it on and smell strong solvent odor with your first breath. If you don't replace it then or earlier it is pointless to wear it. The fumes you get in the first few breaths are the same amount as you'd get without it. Yes, replacing them costs a bit. Compared to what? A few people who get frequent exposure to epoxy related chemicals develop a sensitivity to them that prohibits their further use for them. Epoxy is a man made chemical so our bodies never evolved/were-endowed-with a means of dealing with amounts that make it into our systems. What gets into you is there for the rest of your life and accumulating. Painting with epoxy is not to be undertaken lightly. By the way, K&B's epoxy filler coat product does not contain lead, John E. Brodbeck, Jr., the company's president, tells me.

Still, with intelligent precautions, epoxy paint will deliver a really fuel proof finish. My RA-26, known in the Northwest, has a dope finish and it shows fuel drop spots badly, late in its life. This doesn't look like weathering. My T-34C is unblemished by fuel, having an epoxy finish, though it has not had nearly the exposure the RA-26 has. But then, the way dope weathers matches full size aircraft finishes. That helps you. You must do virtually all the weathering if you put on an epoxy finish. Trade-offs, friends.

Next time I will deal with ways of simulating panel lines, rivets, fasteners, etc. Black lines of chart pack tape or of India ink for panel lines don't look realistic or professional.

Orin Humphries, 19805 48th Ave. W., #A101, Lynnwood WA 98036, 206-776-5517

# RULES FOR NORTHWEST .15 CARRIER

(Provisional)

**1. PURPOSE:** It is the intent that this event will provide an entry level Navy Carrier competition using a simple airplane.

**2. AIRPLANES:** Any model is allowed; it is not required to be a model of a full-scale aircraft. Working functions are strictly limited to throttle, hook and elevator; no working flaps, ailerons, rudder, etc. The tail "wheel" may be a non-moving hook.

**3. ENGINES** are limited to .15 displacement. Muffler pressure is allowed. Mufflers are recommended but not mandatory.

**4. LINES,** as measured from the center of the handle's grip to the center line of the aircraft, must be between 52 feet and 52 feet, 6 inches, with a diameter of .012 inch or larger.

**5. All AMA general rules, control-line rules and Navy Carrier rules shall apply unless specifically addressed above.**

For information, contact: Orin Humphries, 19805 48th Ave. W., #A101, Lynnwood, WA 98036

oh/jmt/4/16/93

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CONTEST RESULTS: March 20, Richland, Washington.....

FLYING CLOWN RACE (7 entries)

1)	Bill Fisher	218 laps
2)	John Hall	165 laps
3)	Todd Ryan	125 laps
4)	Joe Rice	129 laps (heat)

NW SPORT RACE (6 entries)

1)	Bill Fisher	9:53
2)	Joe Rice	11:26
3)	Todd Ryan	13:09
4)	Kevin Magnuson	6:13 (heat)

CONTEST RESULTS: April 10, Richland, Washington.....

NW SPORT RACE (4 entries)

1)	Todd Ryan	4:54 (heat)
2)	Joe Rice	5:36 "
3)	Bill Fisher	5:42 "

NW SUPER SPORT RACE

Event cancelled due to high winds.

## RULES FOR NORTHWEST SPORT RACE

- 1. Purpose:** It is the intent that that this event will provide the novice competitor a beginning racing event, racing with other competitors using similar equipment which is readily obtainable and operates in a basic fashion.
- 2.** All pertinent rules from AMA unified racing rules shall apply, in regard to safety and conduct of races, except as follows.
- 3. Engine:** The only allowed engine shall be the Fox stunt .35, which shall be a stock, unmodified engine operated on suction feed. ("Stock" is defined as absolutely unmodified except for needle valves and spray bars.) No exhaust extensions are allowed except bona fide mufflers that do not increase engine performance.
  - 4.1. Aircraft:** The model shall be built from, or an exact duplication of, a commercially manufactured kit. In the case of obscure or rare kits, some documentation, such as a set of plans, may be required by the contest director for confirmation of the airplane's kit status. Kits need not be in current production or distribution to qualify.
  - 4.2.** Models must be of profile fuselage type, and must conform to the general profile definition. The model must have a minimum fuselage length of 24" when measured from the propeller thrust washer face to the leading edge of the movable elevator surface.
  - 4.3.** The minimum wing area shall be 300 square inches. The wing must have a minimum thickness of 1 inch when measured at any point along the span, with the exception of the last two inches before each wingtip.
  - 4.4.** All models must have a canopy, horizontal stabilizer, elevator and vertical fin. Models must have a fixed landing gear with a minimum of one wheel, 2 inches in diameter or larger.
  - 4.5. Modifications:** Major changes to the kit design such as clipped wings, shortened fuselage, partial omission of the tail assembly, etc., are prohibited. Reinforcement of the nose and engine mount areas is permitted. Landing gear location and construction are entirely optional from what may be included in the kit, except as specified in section 4.4.
- 5. Fuel tank:** The fuel tank shall be fully external and forward of the wing leading edge, and located on the outboard side of the fuselage. The tank may not be designed so as to cowl the engine. All tank vents are limited to a maximum size of 1/8-inch outside diameter. The tank may not be pressurized, but the vents may be directed forward into the airstream.
- 6. Prohibited equipment:** Equipment and devices standard to full-race aircraft are prohibited. These include fuel shutoff, pressure refuelers, fast-fill systems, "hot glove" electrical contact systems, and centrifugal carburetor switches.
- 7. Pull test:** The plane and entire control system shall undergo a pull test of 35 pounds.
- 8. Lines** shall be of a minimum .018-inch diameter, and lines shall be of the stranded type, with a length of 60 feet measured from the handle grip to the fuselage, plus or minus 6 inches.
- 9. Races:** Preliminary heats shall be of 70 laps duration, with one pit stop minimum required. Feature races shall be of 140 laps with two pit stops minimum. All races shall be flown with at least two entrants, and not more than four entrants. At contestants where entrants fly preliminary heats to determine finalists, at least three entries shall proceed to the final races. The decision on the number of final entries shall be made by the event director and made in advance before the start of any preliminary heats.
- 10.** It is assumed that the usual sportsmanship of Northwest modelers will prevail in this event. The event director may disqualify any entrant that is not in keeping with the spirit or intent of this racing event.

## RULES FOR NORTHWEST SUPER SPORT RACE

**1. Purpose:** It is the intent that this event will serve as an intermediate racing class between Northwest Sport Race and the AMA racing events.

**2. All pertinent rules from the AMA control-line racing unified rules section shall apply in regard to safety and the conduct of races, except as follows.**

**3. Engine:**

**3.1** The "engine" is defined as the complete unit, ready to run, needing only prop, fuel and starting voltage, except that the glow plug, venturi and/or restrictor and spraybar and needle valve, gaskets, bolts, drive washer, front washer, prop nut, shims, piston ring(s) (if used), and ball bearings (if used) need not be considered part of the production unit. These parts are not subject to the rules regarding quantity or source.

**3.2.** No tuned pipes or exhaust extensions are allowed except bona fide mufflers which do not increase engine performance. Engines shall operate on suction feed. No variable or in-flight adjusting carburetors are allowed; however, any other modification of the intake is permissible except as noted below.

**3.3.** Two types of engines will be allowed:

**3.3.1.** Engines of .36 c.i.d. maximum with single bypass intake port. These engines shall not be restricted in regard to venturi dimension. There is also no restriction regarding engine rework, except that all major components shall be produced by the original manufacturer. No material or part may be added.

**3.3.2 (a).** Engines of maximum total nominal displacement of 0.4020 cubic inches (6.6 cc). Engines must be production units assembled from factory available production parts. Engines and parts, with the exception of the venturi-spraybar assembly, must have been produced in quantities greater than 500, and all must be available through normal retail outlets in the U.S.A. Parts substitution shall be limited to catalog listed parts produced in quantities greater than 500 units for the engine being altered and available commercially to anyone from the manufacturer of the engine. Engines may only be modified by removing parts or material from parts. No material or part may be added.

**3.3.2 (b).** The engine must be of the front-intake, single-bypass configuration. All air for the combustion process must come through the crankshaft. Altering nominal subport induction, timed holes in the case and the sleeve, or other techniques to circumvent the requirement that all air come through the specified venturi opening, are prohibited.

**3.3.2 (c).** No ABC or AAC piston/sleeve configurations are allowed.

**3.3.2 (d).** Each engine shall be equipped with a venturi and spraybar meeting the following restrictions: The venturi shall have an inside circular bore of not more than 0.315 inch. The venturi will maintain this diameter for at least 0.25 inch above and below the spraybar centerline. The spraybar assembly will be located precisely through the centerline of the venturi bore and shall have a circular cross section of diameter not less than 0.155 inch for the portion in the throat of the venturi. Exception: R/C carburetors may be used with the opening fixed in one position.

**3.3.2 (e).** The complete engine/venturi/spraybar system shall weigh less than 10.5 ounces (excluding muffler).

**4. Aircraft:** The model shall conform to the AMA slow rat specifications:

"Models must be of profile fuselage type, and must conform to the general profile definition. The model must have a minimum fuselage length of 24" when measured from the propeller thrust washer face to the leading edge of the movable elevator surface.

"The minimum wing area shall be 300 square inches. The wing must have a minimum thickness of one inch when measured at any point along the span, with the exception of the last two inches before each wing tip.

"All models must have a canopy, horizontal stabilizer, elevator and vertical fin ... Models must have a fixed landing gear with a minimum of one wheel."

**5. Fuel tank:** The fuel tank shall be fully external and forward of the wing leading edge, and located on the outboard side of the fuselage. The tank may not be designed so as to cowl the engine. The tank may not be pressurized, but the vents may be directed forward into the airstream.

**6. Pull test:** The plane and entire control system shall undergo pull test of 35 pounds.

**7. Lines:** The minimum diameter of lines shall be .018". Lines shall be of the stranded type, with a length of 60 feet measured from the handle grip to the fuselage, plus or minus 6" tolerance.

**8. Races:** Preliminary heats shall be of 70 laps duration, with one pit stop minimum required. The final or feature race(s) shall be of 140 laps duration, with three pit stops minimum required. All races shall be flown with at least two entrants, and not more than three entrants. At contests where entrants fly preliminary heats to determine finalists, at least three entries shall proceed to the final race(s). The decision on the number of finalist entrants shall be made by the event director and be made before the start of any preliminary heats.

## RULES FOR NORTHWEST FOX .35 COMBAT

1. **PURPOSE:** It is the intent that this event will provide a form of combat that is slower, more relaxed, and less destructive to equipment than all-out AMA combat events.
2. All rules for AMA (fast) combat shall apply except as follows:
3. **ENGINES:** The only engine allowed shall be the Fox stunt .35, which shall be a stock, unmodified engine. ("Stock" is defined as absolutely unmodified except for needle valve and spray bar assembly.) No exhaust extensions are allowed except bona fine mufflers which do not increase engine performance.
4. **AIRPLANES:** Each contestant is limited to two airplanes total for the contest. If a contestant has only one airplane of his own and destroys it, he may borrow a second airplane. No third airplane shall be allowed.
5. **ADVANCEMENT:** If a contestant has destroyed all his airplanes, he cannot advance any further in the contest. If a contestant who would otherwise advance has run out of airplanes, the last contestant he defeated shall advance in his place.
6. **MATCH PROCEDURE:** Flying of matches shall be exactly the same as in AMA combat except that contestants shall be allowed to start their engines in the 30 seconds immediately preceding the command to launch. Engines may be running at the launch. Matches are 5 minutes from the launch command.
7. **SCORING:** Per AMA Combat.

For information, contact: John Thompson, 295 W. 38th Ave., Eugene, OR 97405

jmt/10-1-90

## 1993 RULES FOR NORTHWEST GOODYEAR RACING

(Provislonal)

**1. Purpose:** It is the intent that this event will provide a form of Scale Racing similar to the AMA Scale Racing (Goodyear) class but without the expense and high speeds required in that class.

**2.** All rules for AMA Scale Racing shall apply except as follows:

**3. ENGINES:** The following list of .15-size engines are those permitted in this event. The engine used shall be a standard production unit; no prototypes or "factory specials" are allowed.

**Fox:** Any version.

**K&B:** Any version.

**Cox:** Any version.

**Conquest:** Any version from K&B, Cox or RJL

**O.S.:** Any version.

**Supertigre:** Any front-intake version

**Enya:** Any version.

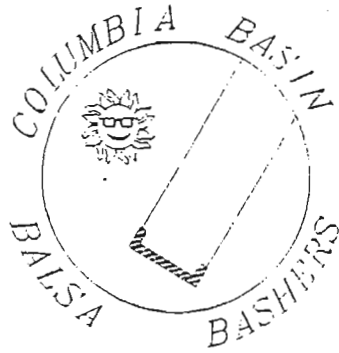
Engine reworking is permitted, providing that all major engine components are from the original manufacturer. (No hybrids or scratch-built major engine components permitted.)

**4.** Lines shall be 60 feet long, plus or minus 6 inches. Lines shall be .014" single strand lines (per AMA rulebook) or .015 multistranded.

**5.** Pull test will be 25 pounds.

FOR INFORMATION contact Mike Hazel, 1073 Windemere Dr. N.W., Salem, OR 97304.

mwh/jmt 3-27-93



COLUMBIA BASIN BALSA BASHERS PRESENT...

MAY BALSA BASH III

MAY 1st & 2nd 1993

COLUMBIA POINT MARINA PARK

Richland, Wa

- Events included will be:
- |               |   |                                 |       |                    |
|---------------|---|---------------------------------|-------|--------------------|
| MAY 1st       | { | CL I Mouse                      | (JSO) | 8:30 am            |
|               |   | N.W. Goodyear                   | (JSO) | 10:00 am           |
|               |   | N.W. Flying Clown               | (JSO) | 11:30 am           |
|               |   | N.W. Super Sport                | (JSO) | 2:00 pm            |
| MAY 1st & 2nd | { | Carrier Class I & II (combined) |       |                    |
|               |   | Carrier Class .15               |       |                    |
|               |   | Carrier Profile Class           |       |                    |
| MAY 2nd       | { | Old Time Style Stunt (JSO)      |       | 9:00 am to 4:00 pm |
|               |   | All classes of Speed (JSO)      |       | 9:00 am to 4:00 pm |

Carrier deck open for competition  
from 9:00 to 12:30 saturday and  
9:00 to 4:00 sunday.  
Deck open for practice  
saturday 12:30 to 5:00.  
Speed circle open for practice  
saturday 3:00 pm to 6:00 pm.

Approximately \$800 in merchandice to be given out!  
Trophies to Third Place

CD: Paul Rice (509) 627-3142

Sponsor: Columbia Basin Balsa Bashers

Entry fees: \$3.00 per event except Carrier @ \$5.00/plane/event  
(50% paybeck on Carrier fees)

Come fly the friendly skies!

# FLYING LINES

1073 Windemere Dr. NW

Salem, OR 97304

APR 28  
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1993



FLYING LINES is produced by a dedicated staff of volunteers interested in keeping lines of communication open between Northwest region control line modelers. FLYING LINES is independent of any organization, and depends upon the financial support of its base of subscribers.

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