

FLYING LINES

1411 BRYANT AVENUE
COTTAGE GROVE, OREGON 97424

EDITOR: JOHN THOMPSON
PUBLISHER: MIKE HAZEL

August '79 NEWS OF NORTHWEST CONTROL LINE MODEL AVIATION Number 4

NATS HIGHLIGHTS

FL's unofficial count of Northwest competitors at the 1979 National Model Airplane Championships, better known as the NATS, indicates there were four of us representing the region in control-line competition. Unless we missed somebody, the Northwest contingent was Howard Rush of Kirkland, Wash., Phil Granderson of Seattle, Wash., John Thompson of Cottage Grove, Ore., and Mike Hazel of Eugene, Ore.

Unlike last year, when Granderson captured the AMA combat championship, nobody from these parts wound up on top of the heap at the '79 Nats.

The top performance was that of Granderson, who took fourth place in FAI combat for his third year in a row. He was the only one of three NW combaters to place in any combat event at the Lincoln, Neb., contest.

Rush made it to the third round in AMA combat, but had to eliminate Phil in the second round to do it. Howard lost to crafty strategist John Jo, who flew a stone-age Voodoo, in the third round. John gave a cute wiggle and drew Howard's exotic foamy to terra firma, then hung on to get enough air time to make up for a cut by Howard. Rush also flew FAI combat.

Granderson progressed to the third round in slow combat before getting bumped, as did John Thompson. Rush, wearing a natty pin-striped suit (by the way, Howard, it's a bit baggy and a little loud for formal affairs, don't you think?) used a "secret mystery" device" in his slow combat plane. True to the name of the event, Howard became the first person ever to fly slow combat at 42 miles per hour. Words can not describe Howard's plane (nor his outfit). FL editors hope to obtain a photo of the craft and pilot for a future edition.

FL editor John Thompson provided comic relief in AMA combat, boring a hole in the Nebraska sod after only 21 seconds of combat. His opponent won by amassing an astonishing 52 seconds of air time.

In the more civilized events, Hazel missed trophies by narrow margins in both rat race and Formula 40 speed.

Mike made a last-minute appearance on the speed circle after a day of frustration to put in a single official Formula 40 flight, turning in a speed of 149.50 mph in the maiden flight of a new plane. The speed was .19 of a mile per hour behind fifth place -- where the trophies stopped.

In rat race, with Thompson pitting, Hazel turned a combined two-heat time that was only two seconds away from making the 10-plane finals. He did establish a new Northwest single-heat time of 2:35.55. Thompson flew Scale Race (Goodyear) but just didn't have the speed to qualify for a final.

Non-northwesterners, but people familiar to competitors at the NW Regional Championships, did have some success. Tim Gillott captured FAI team race and was second in Rat Race and fourth in Goodyear. Fred and Joyce Margarido, the M&M team, won A speed.

A personal comment from the FL editor: It takes a trip to the Nats to really understand what kind of a model airplane contest it is. It is the biggest in the world, and the competition is the best there is anywhere. If you haven't been to a Nats, start scraping your pennies together and go in 1980. You won't regret it.

Here are the unofficial* Nats winners, as available at press time:

RAT RACE: (Open) Ron Esman, Houston, Tex., 4:49.73. SCALE RACE: (O) Bill Lee, Missouri City, Tex., 5:46.3; (Senior) Doug Harris, Bethany, Okla., 5:49.72 (Junior) Glenn Fultz, Cincinnati, Ohio, 6:38.81. FAI TEAM RACE: (JSO) Tim Gillott, Salinas, Calif., 8:05.12. MOUSE RACE (Class II -- unofficial event): (O) Les Pardue, 6:15.6; (S) Tony Smedlay, 9:35.4; (J) Marc Robe, 5:33.7. FAI SPEED: (O) Akeshi Kusumoto, Fushimi-Ku, Japan, 137.74 mph. A SPEED: (O) Margarido Team, Fremont, Calif., 173.01; (S) Dimmie Perkins, Houston, Tex., 146.05; (J) David Hooke, Mountainhome, Penn., 103.64. FORMULA 40 SPEED: (O) Glenn Lee, Batavia, Ill., 166.99; (S) William Hughes, Bolingbrook, Ill., 144.93 (J) Glenn Fultz, Cincinnati, Ohio, 138.99. B SPEED: (O) Carl Layman, Houston, Tex., 196.43; (S) Quay Barber, North Olmsted, Ohio, 125.04. C SPEED: (S) Dimmie Perkins, Houston, Tex., 168.47; (J) Glenn Fultz, Cincinnati, Ohio, 148.46. D SPEED: (O) Glenn Lee, Batavia, Ill., 201.49 **. B PROTO SPEED: (O) Wisniewski Team, Bellflower, Calif., 134.53; (J) Quay Barber, North Olmsted, Ohio, 115.93. 1/2 A PROFILE PROTO SPEED: (O) Al Stegens, Cleveland, Ohio, 97.31; (S) Joe Kirn, Anaheim, Calif., 83.53; (J) Quay Barber, North Olmsted, Ohio, 88.07. 1/2 A SPEED: (O) Dub Jett, Dallas, Tex., 124.78; (S) Mary Kirn, Anaheim,

Calif., 103.29; (J) Mike Clem, Dallas, Tex., 86.34. JET SPEED: (O) C.W. Davis, Dallas, Tex., 204 mph. SLOW COMBAT: (O) Marvin Denny, Wichita, Kans.; (S) Tom Fluker, Gainesville, Tex.; (J) Glenn Fultz, Cincinnati, Ohio. FAI COMBAT: (O) Dick Stubblefield, Houston, Tex.; (S) Tom Fluker, Gainesville, Fla.; (J) Christopher Thomas, Fort Worth, Tex. AMA COMBAT: (O) George Cleveland, Kenner, La.; (S) Tom Fluker, Gainesville, Tex.; (J) Gregory Strombeck, Rockford, Ill. STUNT: (O) Bob Gieseke ***; (S) David Fitzgerald, San Mateo, Calif., 473.75 points; (J) Andrew Harrisiadis, Pompton Plains, N.J., 429. NAVY CARRIER I: (O) Peter Mazur, Aurora, Ill, 357.1 points; (S) Louis Matustik, St. Louis, Mo., 214.98. NAVY CARRIER II: Peter Mazur, Aurora, Ill., 254.42. (O); (S) Louis Matustik, St. Louis, Mo., 201.08.

*Some results may not be included because they were not available as of noon Saturday, Aug. 4, when FL delegation left the Nats.

**Record performance.

***Details of stunt finals not available as of noon Saturday.

BOEING MANAGEMENT ASSOCIATION CONTEST CL RESULTS, July 21-22, 1979

FAI COMBAT	AMA COMBAT	SCALE RACE (GOODYEAR)
1. Buzz Wilson	1. Gary Stevens	1. Dave Green
2. Howard Rush	2. Norm McFadden	2. Gary Stevens
3. Gary Stevens	3. Ron Scoones	3. Buzz Wilson

NORTHWEST SPORT RACE	SLOW COMBAT (J-S)
1. Gary Stevens	1. Jeff Young
2. Jim Cameron	2. Tom Webb
3. Bill Varner	

PRECISION AEROBATICS Beginner-Intermediate	Advanced-Expert
1. Dave Green	1. Gary McClellan
2. Jim McClellan	2. Don Shultz
3. Max Thue	3. Rick Railston

TELL FL ADVERTISERS
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PROFILE CARRIER Scholarship	Open
1. Sean Bartel	1. Marty Phillips
2. Shawn Parker	2. Dick Salter
	3. Sean Bartel

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BMA CONTEST CARRIER DETAILS

Bill Skelton, the Northwest's National Carrier Advisory Committee member, provided the following details of the carrier competition at the Boeing contest:

The BMA profile carrier event this year had seven entrants, One of the junior entrants did not have a profile ship ready and wanted to enter another ship that did not qualify. I would suggest that the rules be read thoroughly before discussing with the event director how a plane that does not meet the requirements for profile carrier could be flown in the event.

Profile carrier planes must have three lines exiting from the wing tip with throttle line between elevator lines, and all landings made at low speed. As usual, Marty Phillips took first with his Condor-ST .35 combo, that hadn't been flown since the '78 Regionals in Eugene. Bob Parker and son Shawn were there after just moving back from Idaho and didn't have a schedule of the meets so I told him about the Aeroliners' meet (Aug. 26) and about Flying Lines, so you should be hearing from him. As usual, I turned in my poor performance because I couldn't get anything but a super lean run out of my engine, and as I was also directing the event, I didn't have time to play with it. It looks like if you are going to compete you should compete, and officiate if you are going to officiate. You can not do the two and do either one well at the same time.

Here are the results. Sean Bartel is listed twice because he entered both the scholarship and open contests.

<u>PROFILE CARRIER (JSO)</u>	<u>Bonus</u>	<u>High</u>	<u>Low</u>	<u>Landing</u>	<u>Score</u>	<u>Place</u>
Marty Phillips (Condor-ST .35)	0	73.44	20.78	100	208.78	1
Dick Salter (Original-ST .35)	0	60.79	15.87	0	99.09	2
Sean Bartel (G&S Skyraider-ST .35)	10	71.97	44.98	0	97.03	3
Bill Skelton (G&S Bearcat-ST .35)	10	attempt			0	
<u>PROFILE CARRIER (Junior-Senior)</u>						
Sean Bartel (G&S Skyraider-ST .35)	10	73.44	54.03	0	97.03	1
Shawn Parker (Own Guardian-ST .35)	10	52.61	0	0	62.61	2

ONE MAN'S JUNK IS ANOTHER MAN'S TREASURE

Why not unload that gull-winged Nobler, that Wen-Mac .049, that bargain supply of 9-6 pusher props? They may be useless to you but they may be just what somebody else is looking for. FLYING LINES offers classified advertising space at \$1 for five lines.

Also available are quarter-page ads for \$3 per issue and half-page ads for \$5 per issue. FLYING LINES is read by control-line modelers all over the Northwest (and some who aren't in the Northwest).

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UPDATED NORTHWEST CONTROL-LINE RECORDS

FLYING LINES began compiling Northwest control-line competition records with the 1979 Northwest Regional Control-Line Championships. Records can be set by any Northwest resident, provided the performance is set at an AMA-sanctioned contest. The record performances need not be in the Northwest, but they must be proven by some sort of documentation (date, location, contest director's name).

Here is the latest slate of records. If you know of any other record performances since the Regionals, submit them to FL for recognition. FL editors hope to begin providing certificates to record holders in the near future.

1/2A MOUSE, CLASS I	50-lap: --	100-lap: --
1/2A MOUSE, CLASS II	75-lap: --	200-lap: --
	70-lap: 3:27 (John Thompson)	140-lap: 6:30 (Thompson)
GOODYEAR	80-lap: 3:57 (John Thompson)	160-lap: 7:31 (Thompson)
AMA SLOW RAT	70-lap: --	140-lap: 9:06 (Richard Simpson)
AMA RAT RACE	70-lap: 2:35.55 (Mike Hazel)	140-lap: 5:21 (Hazel)
FAI TEAM RACE	100-lap: --	200-lap: --
NW SPORT RACE	70-lap: 4:25 (Mike Hazel)	140-lap: 9:45 (Hazel)
1/2A SPEED:	76.57 (Jeff Bell)	JET SPEED 165.83 (Mike Hazel)
A SPEED:	125.82 (Mike Hazel)	FAI SPEED 88.05 (Scott Newkirk)
B SPEED:	142.47 (Mike Hazel)	1/2A PROTO: 71.97 (Jeff Bell)
C SPEED:	--	B PROTO: --
D SPEED:	--	FORMULA 40: 149.50 (Mike Hazel)
PROFILE CARRIER:	208.78 (Marty Phillips)	
CLASS I CARRIER:	268.98 (Terry Miller)	
CLASS II CARRIER:	319.65 (Orin Humphries)	

New records listed this edition include:

Goodyear 80-lap heat, turned by John Thompson at the U.S. Nats.

AMA rat race 70-lap heat, turned by Mike Hazel at the Nats.

Formula 40 speed, turned by Hazel at the Nats.

Profile carrier, turned by Marty Phillips at the Boeing contest.

As of press time FL had not received the times set in races at the Boeing contest.

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PARTICIPATION ENCOURAGING IN PROPSPINNERS' SUMMER MEET
Goodyear making a comeback?

The Eugene Propspinners' Annual Summer Meet, traditionally a small, informal contest, drew a larger entry than usual this year and the participation was encouraging, especially in the racing events.

At a time when two or three Northwest Goodyear planes is a good entry, there were no fewer than seven entered at the Aug. 12 contest in Eugene, Ore. Four of the entries were newcomers to the event. There also were four entries in rat race, including one newcomer. Six turned out for fast combat (twice last year's entry) and four for slow combat.

All the Goodyear entrants talked of a need for more opportunities to fly the event, and the need was pointed up by the day's races. Goodyear was, to describe it mildly, a comedy of errors, almost all of which could be attributed to lack of experience or practice. There were missed pit stops, failures to start, burned plugs, line snags and (yes, even this!) a line tangle. Somehow, all the planes escaped without damage.

Pilots agreed that go-fast racing requires practice, and it appears the upcoming contests may bring out more Goodyear planes than have been seen around these parts in the past couple of years. It was interesting to note that all the new Goodyear entries were from the ranks of Northwest Sport Racers, an indication that NWSR may be starting to serve that "step-up" function that has been talked about.

Tom Knoppi, a team race flier from Seattle, Wash., emerged at the top of the heap in Goodyear, winning a ragged final with a time of 10:29. Mike Hazel turned the fastest preliminary heat of the day, 3:52. (Knoppi indicated that he and Gary Stevens are working on an FAI team race project. They would be the first active TR team in the Northwest in some years.)

By contrast, rat race went off smoothly. Hazel and Norm McFadden had a rip-roaring race going until both ran into trouble on their last pit stops and spent about a minute each on the ground. Hazel wound up winning with a 6:25, only two seconds ahead of McFadden. The other two entrants had smooth pitting but lost on their air speed.

Gary Stevens breezed to a win in slow combat, using an O.S. .35- powered plane with a wheel on it (fugitive from some forgotten sport race.) John Thompson won fast combat with a Devastator (Gene Pape design) powered by ST G/21 .35.

Here are the results.

GOODYEAR	HEAT	FINAL	ENGINE	PLANE
1. Tom Knoppi	4:16	10:29	Rossi	Ole Tiger
2. Mike Hazel	3:52	10:53	Cox	Rickey Rat
3. Norm McFadden	4:41	141 laps	ST G/15	Jenny
Dave Green	9:19	--	Cox	Rickey Rat
Gary Stevens	75 laps	--	Rossi	Plumb Crazy
John Thompson	50 laps	--	Cox	Midget Mustang
Jim Cameron	35 laps	--	Cox	Rickey Rat

RAT RACE

1. Mike Hazel	6:25	K&B 40S	Shark
2. Norm McFadden	6:27	O.S. .40	Tungberg Original
3. John Thompson	6:46	K&B Torp.	Cro-Magnon Rat
Gary Stevens	7:14	K&B Torp.	Hooptee Mk II

SLOW COMBAT

1. Gary Stevens
2. Rich Schaper

3. Bill Varner
John Thompson

FAST COMBAT

1. John Thompson
2. Norm McFadden

3. Gene Pape
Varner, Stevens, Schaper

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Julia M. Reifel

WHERE THE ACTION IS

Follow the smell of Nitromethane to these contests in the Pacific Northwest, as of Aug. 15:

- AUG. 26.....PORTLAND, Ore. -- Aeroliners annual Control Line Classic. Northwest Sport Race (JS)(O), profile carrier (JSO), carrier Class I-II (JSO), precision aerobatics (PAMPA beginner, intermediate, advanced), AMA combat.(JSO). Raffle drawing for engine, spray unit and knife set. Entry fee \$4 first event, \$2 each additional event. Site: Delta Park. Dave Gardner, contest director, 17870 Shasta Trail, Tualatin, Ore., 97062.
- SEATTLE, Wash. -- Seattle Skyraiders contest. Novice stunt, slow combat. Site: Carkeek Park. (Note: Information supplied does not indicate whether this is an AMA-sanctioned contest.)
- SEPT. 8.....(tentative)SEATTLE, Wash. -- Seattle Skyraiders John Wayne Cancer Fund CL Endurance Event. Skyraiders will attempt to keep at least one plane airborne from 9 a.m. to 3 p.m., seeking maximum laps. (Note: No indication whether this is AMA-sanctioned).
- SEPT. 15.....SUNNYSIDE, Wash. -- Invitational Control Line Fun Fly sponsored by Control Line Association of Sunnyside (CLASS). Fun fly is part of local "Sunshine Days" festival. Stunt, slow combat, balbon bust on relaxed basis. No prizes for events, but all entrants eligible for drawing for \$200 worth of merchandise. No entry fee. 11 a.m. - 5 p.m., Sunnyside High School football field.
- SEPT. 16.....EUGENE, Ore. -- RatBash '79, sponsored by Eugene Propspinners. AMA rat race (JSO), AMA slow rat race (JSO), AMA mouse race Class I (JS) (O), AMA mouse race Class II (JSO), Formula 40 speed (JSO), Northwest Sport Race (standard) (expert). Registration starts 9 a.m., contest at 10 a.m. \$4 for 1 event, \$8 for 2 events, \$10 for 3 or more events (juniors half price). Contest Director: Mike Hazel, 1319 Aspen St., Eugene, Ore. (503) 726-1185. Site: Mahlon Sweet Airport.
- SEPT. 22.....(tentative) ASTORIA, Ore. -- ClamBash '79, sponsored by North Coast Control-Line Aeromodelers' Society (CLAMS). Precision aerobatics (PAMPA classes), AMA combat, 1/2A combat, Northwest Sport Race. Raffle. Contact Dave Green, contest director, 200 W. Franklin Ave., Astoria, Ore., 97103 (503) 325-7005.
- OCT. 6-7.....REDMOND, Wash. -- Bladder Grabber for fast combat, etc. Saturday: Slow combat, precision aerobatics (two PAMPA classes), Northwest Sport Race. Sunday: AMA combat. Prizes for AMA combat include Phase-Linear stereo equipment valued at \$1,500 and a \$1,000 pool table. Site: Marymoor Park.
- DECEMBER ??..EUGENE, Ore. -- Northwest Sport Race Drizzle Circuit kicks off. The DC appears "go" at press time, with five contests around the region probable. Each will have sport race as the main event, with other events secondary. Contact John Thompson c/o FLYING LINES.
- RATS!!!.....If you're flying "rats" or anything else at your contest and you didn't see it listed here, get off your pan and send us the info. FLYING LINES will include your flyer, as well as a listing in the calendar. Send 75 copies of the flyer. Help out afterwards by sending us your contest results.

MISCELLANEOUS NEWS TIDBITS

The annual "Bladder Grabber" fast combat contest is the combat showcase in this region, and this year's prizes will make your Combat Specials drool. Combateer Gary Stevens reports the BG fast combat prizes are: 1st Prize-- Phase-Linear 200 amplifier, 4000 pre-amp, and Phase III speaker system. 2nd Prize -- a \$1,000 pool table. 3rd Prize -- Phase-Linear pre-amplifier.

The Sunnyside, Wash., CLASS club has for three years been holding a control-line contest as part of its mid-september community festival. This year the contest will be reduced to the informal level as the club is inviting CL fliers from all over to fly stunt, slow combat and balbon bust all day long, then participate in a raffle for \$200 worth of modeling goodies -- at no fee. Next year, an AMA contest is the club's goal.

CL is alive and well in Seattle, where the Skyraiders' club has been holding informal activities at Carkeek Park all summer long. FL has received Skyraiders' newsletters and will report on their activities in an upcoming issue.

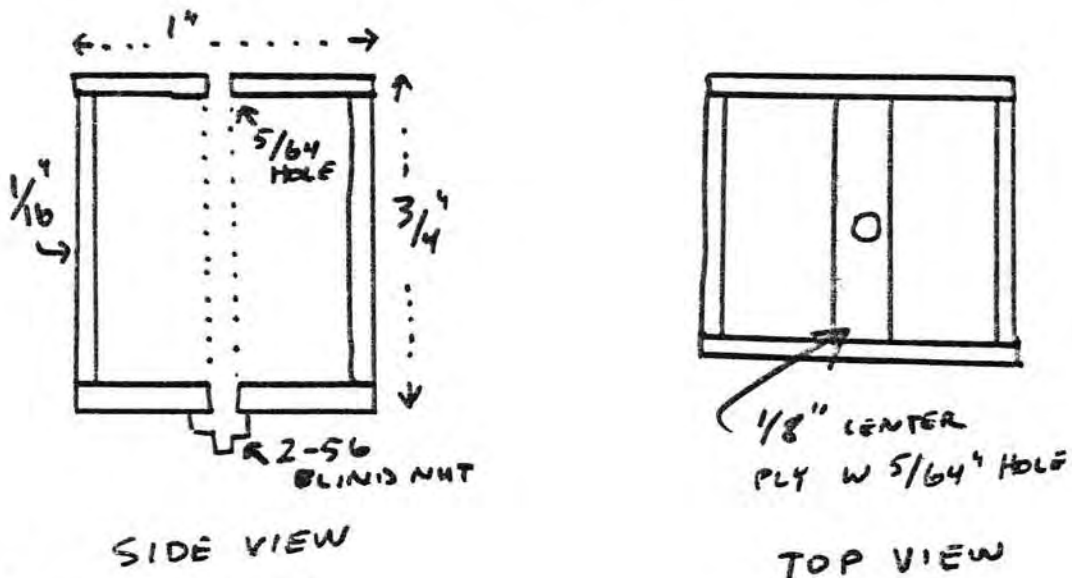
SCHAPER ON STUNT
by Rich Schaper

I'll open this issue's column with a review of the high point flyer at this year's Northwest Regional Control Line Championships. Rick Railston is a new face to the stunt fraternity of the Northwest, Rick's home is Yakima, Washington. He looks very serious about his flying.

Although this was Rick's first contest to compete in, he easily won advanced stunt with a 454 being his best score. This was one point more than the expert winner. Rick's dedication to practice really paid off here. His stunter is the new version of the M&P Stiletto and is superbly finished. Power is an O.S. Max 40 FSR. Rick says no modifications were made except for changing the carburetor for a Bob Hunt suction venturi and needle valve.

A Rev-Up 12-6 propellor was used for thrust with power to spare. Fox Superfuel was supplied by a Randy's 5 1/3-ounce uniflow fuel tank on muffler pressure. The muffler also was supplied by Bob Hunt, as was Rick's flying handle. These items are top-notch and readily available to anyone. The weight came out to 50 ounces, which is about average for a kit-type of stunt ship.

There are 585 square inches of wing area, with wing loading of 12.3 ounces per square foot. The design by Les McDonald can be a winner for you and would be a good choice when moving into advanced stunt.



"Adjustable Tip Weight Box"

Building adjustable features in stunt ships is not new. Tip weight, leadout guides, nose weight, and rudder adjustment are the most common.

The tip weight box can be constructed out of scrap 1/16" plywood. A one-inch square by 7/8" high box will hold about two ounces of lead weight.

Start by cutting a one-inch square for the bottom and top. The four sides are 3/4" high. Five-minute epoxy is used for assembly. Now cut a 1/8" piece of ply to fit in the center. The hold-down screw (2-56 x 1" will pass through this center piece after you drill a 5/64" hole in the center. Be careful here as there isn't much material left after the hold is drilled.

Epoxy a 2-56 blind nut to the bottom. The top can now be drilled in the center with a 5/64" drill. A square hole is cut in the bottom of the outboard wing tip. Epoxy the box in place. The wing tip is finished by gluing a scrap piece of balsa to the lid of the box. Sand to match the wing tip. The extra time required to build this tip weight box will make it easier to trim out that next stunt ship. --Rich Schaper, P.O. Box 608, Kelso, WA 98626

MORE NEWS TIDBITS (and the editor's two bits)

We at FL observe unhappily that there are a couple of contest conflicts showing up on the competition calendar. Such conflicts can undermine the success of both contests. This is an argument for obtaining AMA sanctions and making sure the region's contest coordinator is involved in keeping the dates straight. Homer Smith, our district vice president, can help in these matters and put interested persons in touch with the coordinator. Homer can be contacted at 1417 NW 191st St., Seattle, WA 98177.

Model Aviation magazine is running a monthly survey asking readers what they liked best about the magazine. We urge CE fliers to express their preferences and send the surveys in to MA. Let's keep our status in AMA's magazine!

CUTS & KILLS by Buzz Wilson

In this column I will attempt to have something of interest for both the beginner as well as the experienced flier. In the first few articles I will concentrate on information for those of you who may be thinking about getting into combat or perhaps have just gotten started.

I began flying combat back in the late 50's when there was only one class of combat and the best combination was a Flite Streak with a Fox Combat Special (not the Combat Special of today). Today, we have three classes, FAI, slow and fast.

When I got back into combat four years ago there was a noticeable change in not only the equipment and rules but also in my ability (or inability as the case may be to some of you reading this column) to fly. Thus I feel in writing a column for those of you who may be thinking of getting started or who have just started is worth spending some time on if it keeps you from making some of the mistakes that I did and who knows, maybe you will even go to a contest and fly combat.

To be competitive at combat -- and notice I did not say a winner, but competitive -- requires more of the flier, his equipment and probably his wallet than any other control line event. Someone once said what it takes to be a winner is money and that is most applicable to any competition, and especially combat.

For those of you just getting started in combat, get yourself a good engine. There are those who feel that there are two good combat engines available -- Fox and Supertigres. I feel there is only one and that is a Fox. An engine that breaks needs parts and since World Engines favors RC equipment over control-line, and Italy is a lot farther away than Arkansas, get yourself a Fox Combat special.

Now that you have your new Fox, the next thing to do is to spend some time breaking it in. Before you mount the engine, look it over and make sure all the screws are tightened, needle valve is properly aligned, etc. If you are going to run your new combat special on a fast combat plane remove the stock needle valve assembly and get yourself an Austin-Craft universal needle valve assembly. This will save you a lot of trouble when it comes time to run the engine. The next thing I usually do to an engine is to assign a number to it. Since I have more than one engine a number allows me to keep track of the performance. (Another technique is to fly over gravel and periodically stuff an engine. Thus, you can keep track by individual dings and scratches.

Some people will bench break-in engines. Using a drill, others will use a lapping compound. However, I prefer to put the engine on an airplane, preferably a slow with 5% nitro and a 9x6 prop and go flying. After a quart of fuel the engine should feel loose and start with ease. Keep in mind that you want to use a fuel with oil in it and keep the needle setting rich.

One note of caution about the Fox, pull the backplate off and check to see that the connecting rod has a brass bushing and oil hole; if it does not then the engine has been around the hobby shop for a while and probably has the old-style crankshaft, which is going to cause you trouble.

Building tips: I once read an article that expounded on how the model airplane builder was one of the original recyclers. I have found that Blue Diamond not only provides good almonds, but their can has several benefits. I have taken one can along with the closing snap top and used it to store pen bladders. Other uses for the can are mixing paints, cleaning brushes, storing parts -- the obvious uses a can has. The plastic tops work well for mixing epoxy. And while on that subject, I have found that soft wire coat hangers, when cut to length, make excellent epoxy stirrers.

--Buzz Wilson, 5714 152nd SW, Edmonds, WA 98020

FLYING LINES NEEDS YOU!

Yes, YOU!

FLYING LINES is a communications network among Pacific Northwest control line model aviators. Response to the first few issues has been gratifying in terms of subscriptions, contributions of material and positive comments.

However, the effort can't stop now. In order to keep publishing regularly FL needs to keep getting new subscribers.

Here's how you can help: Tell your modeling buddies about FL. If every subscriber sells one new subscription, FL will be assured of indefinite life. FL can be a valuable asset to new modelers who want to know where the action is and how to do it.

Don't forget to remind your friends about the columns by top Northwest modelers: "Schaper on Stunt" by Rich Schaper, "Hook Nook" (carrier) by Orin Humphries, "Pylon Poop" (speed) by Mike Hazel, "Cuts and Kills" (combat) by Buzz Wilson, "Sunday Flier" by Chris Genna and "Racing Roundup" by Mike Hazel.

Subscriptions: \$5 for 12 issues. Send to FLYING LINES, address on Page 1.



RAT BASH 79

SEPT 16

CL RACINGEUGENE, ORE

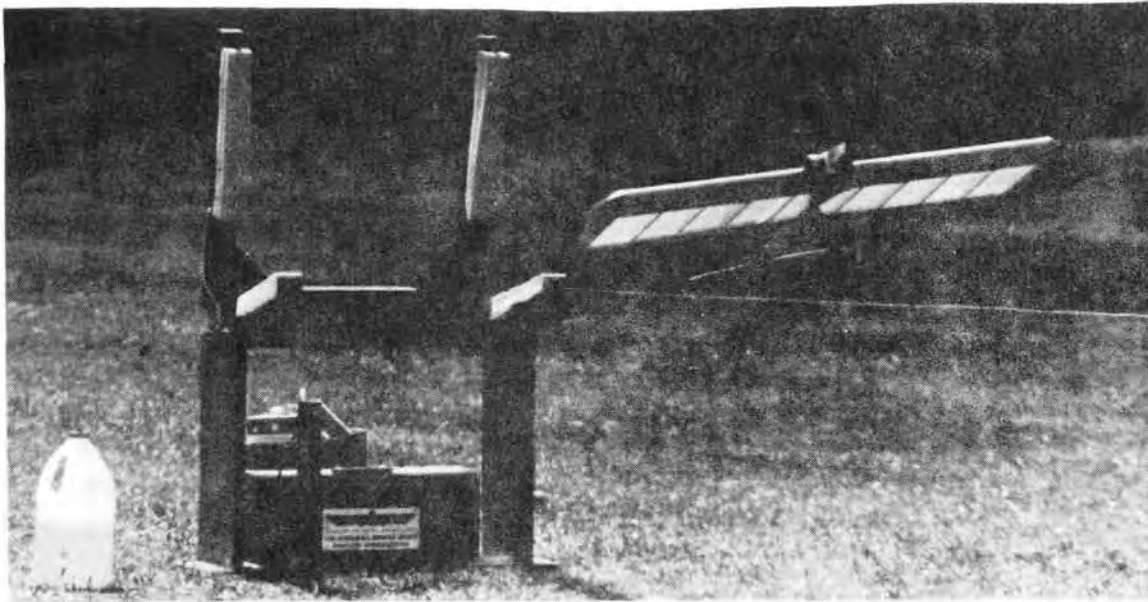
EVENTS, GROUPINGS,	* AMA RAT RACE	(JSO) 3
NUMBER OF AWARDS:	* AMA SLOW RAT RACE	(JSO) 3
	* AMA MOUSE I	(JS) 2 (0) 2
	* AMA MOUSE II	(JSO) 3
	* FORMULA 40 SPEED	(JSO) 2
	* NW SPORT RACE	(STANDARD) 3 (EXPERT) 3

EVENT DETAILS: MOUSE FLOWN BY AMA RULES, INCLUDING USE OF 42' LINES.
NW SPORT RACE: FLOWN IN TWO PROFICIENCY CLASSES. EXPERT IS TOP DRIZZLE CIRCUIT PARTICIPANTS, PLUS ANYONE WHO HAS TURNED A SUB 9:00 FINAL. DECLARE YOUR CLASS AT REGISTRATION.
EVENT DIRECTOR WILL ASSIST IF NECESSARY TO PREVENT SANDBAGGING.

APPROXIMATE SCHEDULE:

REGISTRATION	9:00 TO NOON.
MOUSE	10:00
SLOW RAT	11:30
FORM 40	12:30
AMA RAT	1:30
NWSR	2:30

ENTRY FEES: ONE EVENT \$4, TWO EVENTS \$8, THREE OR MORE \$10 (JRS HALF PRICE)
SITE: PROSPINNERS FLYING FIELD, MAHLON SWEET AIRPORT, EUGENE, OREGON
CONTEST DIRECTOR: M W HAZEL, 1319 ASPEN ST, EUGENE, OR 97401 PH (503) 726-1185
AMA MEMBERSHIP REQUIRED.....AVAILABLE AT REGISTRATION



FUN FLYING is what it's all about. This month's photos were submitted by sport-oriented CLAMS club of Astoria, Ore. Left, Bill Varner's "Ogre" launches from combat stogie designed by Dave Green. Center left, Jim Cameron launches $\frac{1}{2}$ A plane at Astoria Drizzle Circuit meet. Center right, CLAMS photog caught FL editor John Thompson at DC meet. (continued below)



Bottom, line-up of planes at CLAMS summer fun-fly and picnic. Chris Genna readies sport plane, left, as Dave Green fires Goodyear. FLYING LINES invites all Northwest clubs to submit photos of local activities. Clear 5x7 or 3x5 black and whites, please.

