

FLYING LINES

1411 BRYANT AVENUE
COTTAGE GROVE, OREGON 97424

EDITOR: JOHN THOMPSON
PUBLISHER: MIKE HAZEL

Sept. 1979 NEWS OF NORTHWEST CONTROL LINE MODEL AVIATION Number 5

A "CLASSIC" CONTEST

It wouldn't be summer in Northwest control-line modeling without the traditional Control Line Classic put on by the Portland Aeroliners. The Classic returned to Delta Park Aug. 26 after a year away (last year's was in Tigard, due to encroachment of softball players onto the Delta field) and there was a good mix of new faces and old regulars.

The Classic included two racing events, all three Navy Carrier classes, AMA combat and three PAMPA stunt classes. As usual, Northwest Sport Race was tops in the entry category, and both heat and final race records (being kept by FL) were broken.

The Aeroliners kindly assented to the addition of Goodyear (scale racing) to the program after hearing of renewed interest in that event. Though it fouled up the schedule a bit, the event drew seven entries, second best of the day. Precision aerobatics drew seven entries across three classes, for another good turnout.

Weather was dead calm most of the day, there was no rain, an array of beautiful stunt planes, a nice selection of merchandise prizes and good-looking handmade trophies. Congratulations to the Aeroliners and contest director Dave Gardner for another successful contest!

On to the highlights of the competition:

Richard Simpson and his speedy pit man, dad Roger Simpson, of Silverton, Ore., showed sport race fliers they will mean business in the 1980 Drizzle Circuit. Richard won junior-senior NWSR and finished third in open. Most impressive was the record-setting 4:01 heat Richard turned in the open race. Only two times are known to have been faster, both of those before FL records were created (3:54 by Jim Cameron and 3:55 by Bill Varner). Mike Hazel of Eugene, Ore., garnered first place in a trouble-plagued final. Following up his Northwest Regional Championships win, Hazel again emerged with eau de rose by winning with a three-pit stop feature (only two are required). Mike's final time of 9:43 is a NW record, though it's on shaky ground.

In Goodyear the trophy (hastily produced by Gary Stevens) went to John Thompson of Cottage Grove, Ore., who turned a 7:37 final with Hazel pitting.

Buzz Wilson of Edmonds, Wash., rose to the top of the pyramid in AMA combat, downing Gary Stevens of Seattle with a kill in the final.

Portlander Pat Webb bested a good turnout of profile carrier planes, scoring 203.7 and making that all-important landing. (See Bill Skelton's carrier report elsewhere in the newsletter.)

Rick Railston of Yakima, Wash., continued his winning ways, following up his advanced class victory at the Regionals with another in Portland. Rick's pretty Stiletto purred to a 471 score, downing two formidable opponents. John Clemans of Kelso, Wash., topped intermediate, and Richard Simpson jumped into a higher class by winning beginner with a 411 score.

Here are the complete results:

NORTHWEST SPORT RACE (junior-senior) (2 entries)

- | | | | |
|--------------------|--------|----------------------|-----|
| 1. Richard Simpson | 4:19.4 | Yak-9, K&B | .35 |
| 2. Jeff Young | 4:36 | Ringmaster, O.S. Max | .35 |

NORTHWEST SPORT RACE (open) (10 entries) (Jr-Sr winner advanced)

- | | | | |
|--------------------|-------------|-------------------|-----|
| 1. Mike Hazel | 9:42.8 | Ringmaster, Fox | .36 |
| 2. Jim Cameron | 9:50 | Yak-9, K&B | .35 |
| 3. Richard Simpson | 9:50.4 | Yak-9, K&B | .35 |
| 4. Phil Granderson | 10:24.2 | Ringmaster, McCoy | .35 |
| 5. Roger Simpson | 4:31 (heat) | Yak-9, K&B | .35 |

GOODYEAR (7 entries)

- | | | | |
|------------------|---------|------------------------------|-----|
| 1. John Thompson | 7:37 | Midget Mustang, Cox Conquest | .15 |
| 2. Mike Hazel | 8:11.6 | Rickey Rat, Cox Conquest | .15 |
| 3. Gary Stevens | 8:54.5 | Plumb Crazy, Rossi | .15 |
| 4. Ken Burdick | 13:06.4 | Jenny, ST G/15 | |
| 5. Dave Green | DNF | Rickey Rat, Cox Conquest | .15 |

PROFILE CARRIER	Bonus	High	Low	Landing	Score	
1. Pat Webb	10	64.26	21.78	100	203.7	Sterling Mustang, McCoy .35
2. Bill Skelton	10	72.26	23.04	0	113.6	G&S Bearcat, Supertigre .35
3. Loren Howard	0	62.04	31.4	25	106.7	Vulture, K&B .35
4. Dick Salter	0	53.23	25.89	20	93.8	Vulture, Supertigre .36
5. Jim Gola	10	57.85	25.09	0	90.9	G&S Skyraider, Enya .29

CLASS I/II CARRIER

1. Loren Howard 100 Attempt Sterling Guardian, McCoy 60

PRECISION AEROBATICS, BEGINNER

1. Richard Simpson	411	Top Flite Tutor, K&B .35	AMA COMBAT (6 entries)
2. Jeff Young	382	Wallace original, ST .35	1. Buzz Wilson

PRECISION AEROBATICS, INTERMEDIATE

1. John Clemans	438	Sig Banshee, Fox .40	2. Gary Stevens
2. Roger Simpson	398	Original, K&B .35	3. Ken Burdick
			4. Willie Naemura
			5. John Thompson

PRECISION AEROBATICS, ADVANCED

1. Rick Railston	471	Stiletto, O.S. Max .40FSR
2. Loran Crumrine	445	Miss Poppy, O.S. Max .35
3. Rich Porter	433	Copa, Cox TD .049

CL CLASSIC CARRIER DETAILS and other commentary
By Bill Skelton

...Profile carrier had a good turnout with five entrants, though there was only one entrant in Class I&II. The big battle for first place was between Pat Webb and myself, as we were pretty much neck to neck on performance. On my third attempt I know I would have to have the 100 points landing to nose Pat out.

Anyway, a gust of wind caught me and I ballooned a little but set it down anyway. It hooked beautifully on the last wire but the next section of deck was about an inch higher and caught and tore off my right gear and wheel, making it a no-point landing...It looks like a new plane for next season.

The October issue of Flying Models has an ad for a Sterling F6F-3 Hell-

Kustom Kraftsmanship

**1ST PLACE AT NATS!
IN JR., SR., AND OPEN!**

LIL' RODENT, AN ALL NEW 1/2A CLASS I MOUSE RACER KIT \$9.95

This is a competition proven plane, and unlike the usual commercial 1/2A kits, this one flies beautifully. There are no "squirrely" flight characteristics. It's "on rails" all the way. Kit wood and materials are the finest available. Everything is there -- all balsa, spruce, plywood etc. Further, ALL hardware is provided, including a formed, complete landing gear assembly, KK monoline button bellcrank, control horn, and every necessary nut, bolt and piece of wire. There is no machine drilling or soldering required. All the difficult machining steps have been prefabricated. In fact, even the soldering of the wheel retaining washers to the landing gear has been done for you. The kit was designed for popular reed valve engines such as the Cox Golden Bee or Black Widow and the Testors 8000. Without reservation, it is absolutely the finest Class I Mouse Racer kit. For extraordinary performance, use the combination of this kit and the following custom engine.

CUSTOMIZED REED VALVE ENGINE FOR CLASS I MOUSE OR SCALE RACING \$29.95

This is a completely custom, large tank reed valve .049 engine. The crankcase has a special Oilite bronze bushing installed in the front end, the tank and venturi are modified, and the crankshaft is tempered for very high performance. A custom modified T.D. .049 cylinder/piston assembly and glow head are added for peak reed valve operation. Further, a custom needle valve assembly is installed in the backplate to ensure consistent, fine carburetor settings. This is truly an extraordinary reed valve engine. Please specify left or right hand starter spring.

Send check or money order. Sorry, no C.O.D.
California residents, please add 6% sales tax. Your order will be shipped postpaid via first class mail.

Kustom Kraftsmanship
P.O. Box 2699
Laguna Hills, CA 92653

1ST PLACE AT NATS IN JR. AND OPEN

PORTLAND CARRIER, continued.

cat profile with 42" wingspan and the same type construction as the new series Ringmaster. As soon as I can get one of these kits and see what has to be done to convert it to carrier use I'll make a report on it.

As the National Carrier Advisory Committee (NCAC) member from this district I have just received the results of the final ballots on rules for the next rules cycle to be recommended to the Control Line Contest Board. This is the result of a ballot of the 10 NCAC members and 32 responses from National Carrier Society (NCS) members. The majority favor keeping engine and equipment rules the same and retaining the 10 bonus points on profile, adding a judges guide, changing the wording "closely resembles" to "should be recognizable from three-views as such." All other proposals are clarification of wording, and a plus or minus deck tolerance.

So anybody thinking about carrier can get their winter building projects going, put on your old Fox .36 RC, Enya .35, K&B Stallion or whatever you have laying around...and enter profile.

Jim Gola from Woodland, Wash., did a real good job with a .29 his first time out in Portland. Low speed scores heavier than the high speed, and the experimental high-performance engines are just not reliable enough at low speeds...So hang your RC engines on a profile and turn out for carrier. It can be a lot of fun and a challenge to put that thing on the deck on the first landing pass around. Noone in the Northwest is trying to compete in the top 10 level anyway.

Anyone who is interested in NCS and receiving their newsletter, Hi-Low Landings can send \$6 to LeRoy Cordes, 1412 W. Hood Ave., Chicago, Ill., 60660.

--Bill Skelton, 45 SW 11th, Warrenton, OR 97246.

THE HAVE FUN CLUB

That's what the masthead of the Seattle Skyraiders' newsletter says, and from newsletters sent us by "volunteer scribe" A. Johnson, the newly-revived club does have fun.

The club was resurrected last winter after a dormant period, and has been having fun-fly type events all summer long. The club uses Carkeek Park's model airport, a one-circle grass area tucked away in a huge park.

Here are some highlights of club activity, plucked from the newsletter:

**A March 4 fun-fly featured a "club" plane, for flights by beginners as well as old hands. It was a junior ringmaster donated by the Hobby House hobby shop and powered by a Fox .15 thrown in by R.F. Stevenson. J. Fuller was the builder.

**Fuller was elected club president, Dan Burdick is vice-president, Dave Mullens is treasurer and A. Johnson maintains the archives. The club started with 11 charter members.

**Skyraiders hold some of their business meetings on the field, combined with fun-fly activity.

**Activity is not only CL, as the club also has some free-flyers. An

EUGENE'S TOY AND HOBBY

Serving Central Oregon model aviators for 45 years, Paul Agerter offers complete supplies for sport and competition control-line modelers.

- | | | |
|-------------|---------|-------------|
| * Fuel | | * Magazines |
| * Hardware | * Props | * Engines |
| * Tools | * Kits | * Wood |
| * Coverings | | *Paints |

If we don't have it, we'll order it!



Eugene's
Toy and
Hobby

32 EAST 11th AVENUE
EUGENE, OREGON 97401

We ship daily, UPS or mail. Give us a call!

(503) 344-2117

HAVE FUN CLUB, continued

unsanctioned AMA Cub rubber power meet was held May 20.

**The club issues "solo certificates" to newcomers, especially youngsters upon their accomplishing certain flying tasks.

**A 1/2A sport race has been designed for fun-flys, as well as a World War I multi-wing sport race. The club also flies a full-sized sport race, albeit with their own set of rules. All are similar to Northwest Sport Race in concept.

**The club is working toward development of a CL site at Sand Point, an old Naval Air Station where some huge meets once were held.

**Novice stunt and slow combat have been tried, and the club participated this month in an endurance event to raise money for the John Wayne Cancer fund

MORE NORTHWEST RECORDS FALL

Young Simpson is man to beat in NWSR heat

Three more records have been set since the last issue of FL, all in racing events. FL 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 at an AMA-sanctioned contest. Record performances need not be in the Northwest but must be documented.

Many of the early records were not representative of the potential, since they were simply the first times established for the various events. However, they have been improving with each contest. The first record to really break into the realm of excellence has been the 4:01 Northwest Sport Race time turned in by Richard Simpson, a junior pilot, with pitting by his dad Roger. The Simpsons have been gradually improving since their first race in the 1978-79 Drizzle Circuit, and are now among the top teams. Richard's super time was at the Portland Control Line Classic Aug. 26.

Other new records both were set by Mike Hazel, a 3:52 goodyear heat turned at the Eugene Propspinners' August Meet, Aug. 12, and a NWSR final of 9:43 at the CL Classic. Simpson's heat record broke Hazel's 4:25 mark. Hazel's goodyear record broke John Thompson's 3:57 and the NWSR final record broke Mike's own 9:45.

Here are the complete records:

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: 3:52 (Mike Hazel)	160-lap: 7:31 (John Thompson)
SLOW RAT	70-lap: --	140-lap: 9:06 (Richard Simpson)
RAT RACE	70-lap: 2:35.55 (Mike Hazel)	140-lap: 5:21 (Mike Hazel)
TEAM RACE	100-lap: --	200-lap: --
NW SPORT RACE:	70-lap: 4:01 (Richard Simpson)	140-lap: 9:43 (Mike 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 NAVY CARRIER:	208.78 (Marty Phillips)	
CLASS I NAVY CARRIER:	268.98 (Terry Miller)	
CLASS II NAVY CARRIER:	319.65 (Orin Humphries)	

DJ'S HOBBIES

has the most complete stocks of building materials, tools and accessories for modelers to be found in this area.

CHECK OUT

our ever-expanding selection of control-line kits, engines and accessories.

You need it, we will stock it!

We mail out telephone orders. **VISA -- Master Charge**

DJ's HOBBIES

2025 N.W. CIRCLE BLVD.
CORVALLIS, OREGON 97330
503-753-7540

DRIZZLE CIRCUIT APPROACHES

Yes, sport race fans, there will be a 1979-80 Northwest Sport Race Drizzle Circuit, organized by the Eugene Propspinners and FLYING LINES. This year we are working toward a five-contest circuit, with each in a different location.

Based on results of the questionnaire mailed to all Drizzle Circuit participants and FLYING LINES subscribers last May, we have settled on a circuit configuration that will be almost identical to last year's. The configuration, with changes noted, is as follows.

Each contest will include NWSR as the main event, with one secondary event selected by the host club. The secondary events are designed to be the type that can be run off in a couple of hours, leaving the entire afternoon for sport race. Last year's secondary events were Goodyear, $\frac{1}{2}$ A mouse race, $\frac{1}{2}$ A combat, AMA combat and rat race.

In sport race, every entrant will have the opportunity to fly three preliminary heats (last year it was four prelims), advancing to the feature race on the basis of placing in the heats. Heat times are not important outside the context of the individual heat, except when two or more fliers are tied in points when feature points are totaled. Four planes will be taken to the final race.

Circuit points will be awarded to final race planes on the basis of their placing and the number of planes entered in the race. In addition, each other entrant will get one point per preliminary heat finished. Circuit points are cumulative.

At the end of the season, trophies will be awarded to the top three circuit participants (based on circuit points accumulated), the fastest heat, and possibly one or two other trophies as finances permit.

Rules for NWSR will be exactly those used in 1978-79. If you don't have a copy, write FL and we'll make sure you get them. Any points not covered in the NWSR rules are covered by AMA unified racing rules. Backup planes are allowed (one only).

At this time, the following schedule is being proposed. Bear in mind that this is a proposed schedule and is not final. Negotiations are being conducted with host clubs at the present time.

DATE	CITY	SITE	HOST CLUB	2ND EVENT
Dec. 9	Portland, OR	Delta Park	Aeroliners/Propspinners	AMA combat
Jan. 13	Redmond, WA	Marymoor	Red-Max	$\frac{1}{2}$ A mouse
Feb. 10	Astoria, OR	Camp Rilea	CLAMS	$\frac{1}{2}$ A combat
March 9	Seattle, WA	Garkeek	Skyraiders	?
April 13	Eugene, OR	Airport	Propspinners	Goodyear

The dates suggested are the second Sunday of each month. Sites are the usual sites for the host clubs. Secondary events are based on last year and may change according to local clubs' desires.

Ten persons returned the questionnaire asking opinions about how the 1979-80 Drizzle Circuit should be run. Eight of the ten said they would be competitors this year. Last year's DC drew 31 participants in all, with 12 to 16 at any one time. We hope to get them all out at once some time this year.

In response to a question about the kind of main event, all 10 respondents said NWSR should remain the feature. However, five also said they would favor two classes of sport race, one allowing hotter equipment. That was not incorporated in this year's circuit, but it has set some of us to thinking. More on that in a future FL. (We welcome your suggestions. We will be mentioning some events run in other regions.) Regarding that hotter class, two said they would favor the same planes and engines as now allowed, but add the use of shutoffs, hot gloves, etc. Three said keep the same engines but allow any kind of airplane. Somebody else suggested "anything goes" and somebody else suggested anything goes for engines, with a 2-ounce tank maximum and 100-lap races. One said add shutoffs only.

Six persons favored three preliminary heats, with three for last year's four-heat system. It was decided to go with three heats, since the days got a bit long after four prelims last year. Eight persons favored random heat pairings and two favored pairings after the first round based on placing in earlier rounds. Majority ruled on that point.

New secondary events suggested were stunt, beginner stunt, stunt with sport race-legal planes, and slow rat race. Looks like the "grunts" may have some support. Perhaps we can work them into the schedule at Seattle? The only event anybody suggested we drop was rat race. In the preliminary proposal rat fell through the cracks anyway (it was run at the second Eugene contest last year).

Regarding engines, eight persons favored sticking with 1979-80 rules, which allowed optional use of manufacturer-provided venturi restrictors and modification of the spraybar. Two opposed the restrictor-spraybar option. The option was allowed to remain (This should not be construed to allow use of home-made venturis, carburetors or other tuning or reworking). Only one person favored use of Perry ported engines. They remain a no-no.

Who to be gunning for: Mike Hazel won the 1978-79 circuit with a Ringmaster/Fox. 36. John Thompson was second, Tracy Brazzle third. Bill Varner turned the fast heat, 3:55, and Thompson the fast final, 7:53.

WHERE THE ACTION IS

It may be autumn but the competition goes on. Here is the slate of upcoming events, as of Sept. 8:

- SEPT. 15.....SUNNYSIDE, Wash. -- Invitational control-line fun fly sponsored by Control Line Association of Sunnyside (CLASS) Unsanctioned fun fly is part of local "Sunshine Days" festival. Stunt, slow combat, baloon 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 three or more events. Juniors half price. Contest director: Mike Hazel, 1319 Aspen St., Eugene, OR (503) 726-1185. Site: Mahlon Sweet Airport.
- SEPT. 22.....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 fast combat include stereo equipment, pool table, plus prizes for other events as well, totaling \$4,000 value. Registration starts 9 a.m., flying at 10 a.m. Trash can event will conclude combat day. \$4 per event, \$10 maximum. Contact Gary Stevens, (206) 633-3992, for information, lodging, ridesto and from airport. Sponsored by Red-Max club and Jive Combat Team.
- DEC. 9.....(tentative) PORTLAND, Ore. -- 1980 Northwest Sport Race Drizzle Circuit Contest #1. Northwest Sport Race (three preliminary heats for each entry, four-plane final, points accumulate for circuit trophies), AMA combat. Contact John Thompson c/o FLYING LINES. Site: Delta Park.
- JAN. 13.....(tentative) REDMOND, Wash. -- Drizzle Circuit Contest #2. NWSR and 1/2A mouse race. Contact John Thompson, c/o FLYING LINES.
- FEB. 10.....(tentative) ASTORIA, Ore. -- Drizzle Circuit Contest #3. NWSR and 1/2A combat. Contact John Thompson, c/o FLYING LINES.
- MARCH 9.....(tentative) SEATTLE, Wash. -- Drizzle Circuit Contest #4. NWSR and ?. Contact John Thompson, c/o FLYING LINES.

chop's products, inc.

p.o. box 316



yardley, pa. 19067



215-493-4430

OUR OWN CARBON/GLASS/EPOXY PROPS

(All require thinning & balancing for top performance)

1/2A Size (Many others available-inquire)

5.5 Dia x 4 pitch (R.H.) Cox Grey Copy \$2.25 ppd

5.0 Dia x 4.5 pitch (L.H.) "Kasmer" Copy 2.25 ppd

.15 Size

6.25 Diz x 5.5 pitch Willoughby type \$5.50 ppd

6.5 Dia x 5.5 pitch Ballard type 5.50 ppd

(Larger sizes available soon - - inquire)

ECONOMY PITCH GAUGES

Help you get max performance from your engine & plane. Unlike other gauges, ours handle BOTH Left Hand & Right Hand rotation!

1/2A - Up to 6 Dia x 5 pitch -- \$4.95 ppd

Speed/Racing - for 3/16 & 1/4 shafts, to 9 Dia x 9 pitch -- 8.95 ppd

Send S.A.S.E. for complete list of goodies

THANKS!!
Toodles & Chop

carbon fiber props racing accessories

ACTION, continued

APRIL 13.....EUGENE, Ore. -- Drizzle Circuit Contest #5. NWSR and Goodyear.
Site: Mahlon Sweet Airport. Final circuit trophies awarded.
Contact John Thompson c/o FLYING LINES.

Note: Drizzle Circuit details may be changed as they are firmed up with host clubs, but a five-contest circuit is planned. Watch this space for updated schedule, details.

HELP YOURSELF...The contest calendar is published monthly by FLYING LINES. Any contest or other organized event in the Northwest can be published here, free of charge. Send us details early enough to make sure we can get it in. (That means before the first of the month preceding your event.) We also will distribute contest flyers through the newsletter. Send 75 copies. Please indicate whether the event is AMA sanctioned.

RACING ROUNDUP

By Mike Hazel

At long last, here is the first column on racing.

My tentative plan for a format for this column will be to feature a specific event, and then spare a few words for whatever else of a general nature may be relevant.

First thing I would like to say is that racing has been very enjoyable for me over the years. I started out in rat race back in '65 and have been doing it since. Boy have things changed since then! New events, more advanced technology. But one thing remains the same. Finish the race before the competition.

NORTHWEST SPORT RACE:

It won't be long before the Drizzle Circuit featuring NWSR gets under way. You will find some tentative details elsewhere in this issue. Anyhoo, it would seem appropriate to get ready for the season. So let's go through some preparation for the event. Whether you participate in a low-key event like NWSR, or one of the big gun classes, preparation can make the difference between being among the consistent top finishers, or having a big DNF scratched beside your name in the results.

Here are a few basic tips:

Number one, make sure your plane complies with the rules. Assuming you haven't built your plane yet, here are some suggestions:

1. Reinforce the nose and engine mounts. Substitute any cheap garbage wood on the front end with good stuff, and maybe lengthen the motor mounts. Do the same with the plywood doublers if appropriate, although most included in kits seem OK.
2. Landing gear should be strong enough to withstand lots of hard landings. A main strut of 1/8" with a reinforcing strut of 3/32" (music wire, of course) will take a lot of guff. For reliability on grass fields, place the wheel just behind the prop. However, don't put it so close the prop hits it when you push the plane down when hanging on in the pits. Also, make sure the wheel is angled straight ahead. No in or out. This gives the best ground handling for this type of plane on any surface.
3. Landing skids: Assuming you will do some flying on asphalt, tailskids and a wingtip skid (for single wheel gear) are a must, unless you want your plane ground away. Again, make them strong. If you install removable skids (recommended) make sure you check them before every flying session. They won't do any good if they rotate around and make the plane do funny things upon landing.
4. Control system: I know I don't have to tell you to make a strong and safe control system. I do recommend that you gear it so that it is less sensitive than what you normally use for sport flying. This makes the piloting a lot easier and a smooth-flying plane covers the distance a little bit faster. Of course, you need enough control to keep your plane from going into any midair disasters. If you can do a big wide loop, you have adequate control.
5. Fuel system: Follow through with all the regular good stuff, like make sure the inside of the tank is clean, does not leak, etc. The fill tube takes a lot of stress and it is a good idea to reinforce it by soldering a washer around it where it heads into the tank. Make sure your tank is mounted securely. Whether you use a metal strap, rubber bands or something else, it is bad news to have the tank twisting around and messing up your engine setting. Also, it probably will go flying off and hit the event director. Be familiar with the characteristics of your tank. This means knowing what your engine setting will be in the air from what it is on the ground. Also very important is the lap count. Not using shutoffs in this event means that your tank-engine combination economy should not be in question. As you know, an over-run is equal to a disqualification. For a two-pit 140-lap race, a tank with an approximate 55-lap range is perfect. You need 47 laps per tank to prevent an extra pit stop,

RACING ROUNDUP, continued

and of course less than 70 to prevent an over-run. If your tank delivers 60-plus laps, it would be a good idea to check the economy for the day before you race. Short the tank on the start if necessary. Along with that good tank, make sure you are well-plumbed up to the engine intake. That means the fuel line, son. Don't use that plastic junk. Other than that, make sure the tubing is on the fittings securely. If you use a fuel filter (recommended) make sure it is screwed together tight and clean it regularly. Also, use only the length of tubing necessary and don't be cheap--replace it now and then. Refer to the Fuel Lines column in Model Builder magazine of recent issue about additional information on care and feeding of your plumbing.

6. Engine: Very important. Without one of these you will never win. Before a flying session make sure that your engine is not falling apart. Check the backplate and head screws and tighten if necessary. Also inspect the needle valve assembly. Some people go as far as to check the glow plug too.
 7. Propeller: Also important. The pit man needs something to cut his fingers on. Always carefully inspect the ol' airscrew every session. Toss away any in suspect condition. I always break questionable props into two pieces to prevent accidental use in the future. It's a good idea to loosen and retighten it every session, especially with nylon props. Balancing the prop is a little extra work that always pays off. Even on our low (?) performance sport racers, a teeter-tottered prop will give the engine a chance to rev a little more. Also, an out-of-balance prop will effectively put old age into your plane before its time with the extra vibration.
 8. Lines: Make sure they are in good condition. Check the length. They should be 60 feet from centerline of plane to center of handle grip. (Plus or minus 6 inches). Cut down if necessary. No sense in dragging around any extra.
 9. Pit box: Should include one battery fully charged, with a good set of long-enough leads, which have a good glow plug clip that is easy to get on and off. It should not fall off the engine. Also include spare plugs, props, wrench, clean fill-bottle, lots of fuel, etc. Other optional items could include Hot Stuff, wire cutters, additional parts and tools for engine and plane rebuild, lunch, etc. (Editor's note: The box or handful of items you take to the circle for the heat itself should include everything you might need for the race, as listed above, but no more than absolutely necessary.)
- Ready to race? I hope so. I think that covers the basics.

This last year, I had good success flying NWSR. My setup isn't real fast, just reliable. Here are the statistics: Ringmaster (Sterling kit) with single-wheel landing gear, Fox .36 (stunt), K&B glow plug, Zinger 9x7 prop, and home-brew 8% nitro fuel.

Coming up real soon is an all-racing contest. That's the RATBASH '79. The flyer was included in the last issue. But here's a plug for it again. Date is Sept. 16 in Eugene. Events are fast and slow rat, AMA mouse I&II, Formula 40 speed and NWSR. Not the following details: Mouse will be flown by AMA rules, including use of .008" by 42' lines. If you don't have any, bring your plane and buy some lines from me, and use my tape measure for free.

NWSR will be broken up into standard and expert classes. An expert is defined as any of the top finishers in last year's Drizzle Circuit, or anyone who has turned a sub-9:00 final. Declare your class at registration. Please note that splitting the classes is just an experiment and not any thought on the way it will necessarily be done in the future. Y'all come!!!

RANDOM NOTES:

Next Racing Roundup will have a directory of where to get specialty equipment...Subscribe to CL-RPM Racing News for racing news and information. Send \$6 to CL-RPM, 306 Yardley Commons, PA 19067...There will be a racing and speed meet in Merced, Calif., OCT. 21. Anyone interested in going with me?...A past issue of the Portland Aeroliners' newsletter told stunt fliers coming to the Regionals to bring lawn mowers. Well, when you fly racing in Portland, bring a broom for their circle. Touche', Dave Gardner...See you at the RATBASH!! For questions, comment, etc., contact Mike Hazel, 1319 Aspen St., Eugene, OR 97401 (503) 726-1185.

FLYING LINES is published monthly as a communications network of Pacific Northwest control-line model aviators. Subscriptions cost \$5 for 12 issues. Advertising rates: \$5 for half page, \$3 for quarter page, \$1 for five lines of classified advertising. Hobby shop directory listing, \$10 per year. Contact FLYING LINES, 1411 Bryant Ave., Cottage Grove, OR 97424.

Sell a subscription for FL and keep the network alive.

***Page 9 here is a last minute supplement to the September issue. As you could tell from reading the contest calendar, this issue got out a little later than previously intended. sorry 'bout that. So, Flying Lines is taking this opportunity to go ahead and report on the Ratbash Racing meet, whilst still fresh in mind.

Contest Report: Ratbash '79, September 16, Eugene, Oregon

Attendance was a little on the shy side, with none of the Seattle regulars able to make it. As with past meets with light attendance, the competition took on a fun fly flavor in some events.

The activity started with the meeces, or is that mouses? Class I saw only one entry in Jr-Sr. Four entries battled it out in Open, with Jim Cameron emerging victorious. There was quite a variety in planes entered. Besides a couple of originals, there were some of the "little white mouse" design, besides a "catspaw", and a supermouse.

In class II we elected to fly only one prelim heat, as the schedule had already kind of slipped away. Cameron took top honors again with his Class I ship, winning with a consistent performance, something the TeeDees just won't deliver some days. The Gilbert-Shelby team had built their entry just the nite before. The fastest plane had to be Willie Naemura's, but he suffered from slow pits.

The next event was AMA Slow Rat. This event hasn't really caught on in this area. Most everyone just used their NW sport racers for this. Exception to this was Paul Wallace. He had an original design with shutoff, etc, powered by an old Fox 36 needle bearing. It was the fastest plane in the running but suffered from what may have been fuel tank problems. The strangest moment of the day had to be when Cameron's hot glove setup hung up while launching Varner's entry. Ever see a plane do a loop around someone's thumb? Somehow, the plane got away OK.

Formula 40 was next. This event was included in anticipation of a few rat racers who would be eligible for entry, but didn't show up. Mike Hazel had his good plane there, but didn't fly it because of lack of competition. (and possibly some laziness). So he just flew a Rat. The comedy highlight of the day was second place entrant Bill Varner. Bill entered his sport racer, and after his first flight noticed that the outboard wing was a little loose, from a not so successful previous on the field repair. Well, we all know Bill is kind of strange, so just not to let us down, he quickly cut off the outboard wing, reasoning that he could go faster. He did, a blistering (?) 83.69 mph was the result. Some other Sport Race planes were quickly entered and tried to better his score, but were unsuccessful. Cut that extra wing off next time, fellas.

Next up was Fast Rat, and as mentioned the Rats from up North didn't show. Mike Hazel used a brand new ship with an old style Torp 40 to take the event.

Good 'ol NWSR was the finale event of the day. The event had been split into expert and standard classes in hopes of getting some more novice participants, but it didn't work that way. Kevin Buzzell was the only entrant in standard, and of course all the regulars were in expert. Perhaps we will try this idea again. It would probably be more appropriate to use it at a big contest.

A big thanx to all the contestants for coming and for their help in timing, etc.

Ratbash Results:

AMA MOUSE I OPEN (4 entries)

1. Jim Cameron (3:18/3:05) 6:36.9
2. John Thompson (3:55/3:52) 7:13.8
3. Mike Hazel (4:43/4:10) DNF
4. Wallace-Young (6:58/DNF)

AMA MOUSE I JR-SR (1 entry)

1. Kevin Buzzell

AMA MOUSE II (6 entries)

1. Jim Cameron (4:33) 14:32
2. Bill Varner (5:17) 14:56
3. Gilbert-Shelby (4:24) 15:20
4. John Thompson (5:29)
5. Willie Naemura (6:34)
6. Wallace-Young (33 laps)

AMA SLOW RAT RACE (5 entries)

1. John Thompson (4:18.8) 8:33.6
2. Mike Hazel (4:15.4) 9:09.1
3. Wallace-Young (8:13.7) 94 laps
4. Bill Varner (8:34.1)
5. Jim Cameron (0 laps)

FORMULA 40 SPEED (4 entries)

1. Mike Hazel 119.16
2. Bill Varner 83.69
3. John Thompson 80.30
4. Wallace-Young 76.57

AMA RAT RACE (2 entries)

1. Mike Hazel 6:00.0
2. John Thompson 7:56.0

NW SPORT RACE STANDARD (1 entry)

1. Kevin Buzzell 16.21

NW SPORT RACE EXPERT (4 entries)

1. Mike Hazel (4:09) 8:40
2. Jim Cameron (4:45) 9:36
3. John Thompson (4:19) 11:22
4. Wallace-Young (5:09)

Several records were established at the Ratbash. They will be included in the records section next issue.

The Red Max Model Airplane Club and the globally-feared Jive Combat Team present

BLADDER GRABBER IV

DOUBLE ELIMINATION AMA COMBAT TOURNAMENT

OCT. 7, 1979 A.D.

MARYMOOR PARK, REDMOND, WASHINGTON

More than **\$4,000** worth of prizes:

First Place- A complete Phase Linear stereo system, including
Andromeda III four-part speaker system
4000 II autocorrelation preamplifier
200 power amplifier

Second Place- A \$1,000 American Classic Billiards pool table

Third Place- Phase Linear 4000 autocorrelation preamplifier

Fourth Place- Phase Linear 200 power amplifier

ALSO

Three (3) events on Saturday, October 6 for trophy and merchandise prizes:

10:00 AM to 5:00 PM	Precision Aerobatics (2 skill levels)
10:00 AM to Noon	Northwest Sport Race (Call Gary for rules)
Noon to 5:00 PM	Slow Combat (single elimination)

Registration starts at 9:00 AM both days; flying starts promptly at 10:00.

AND FURTHERMORE,

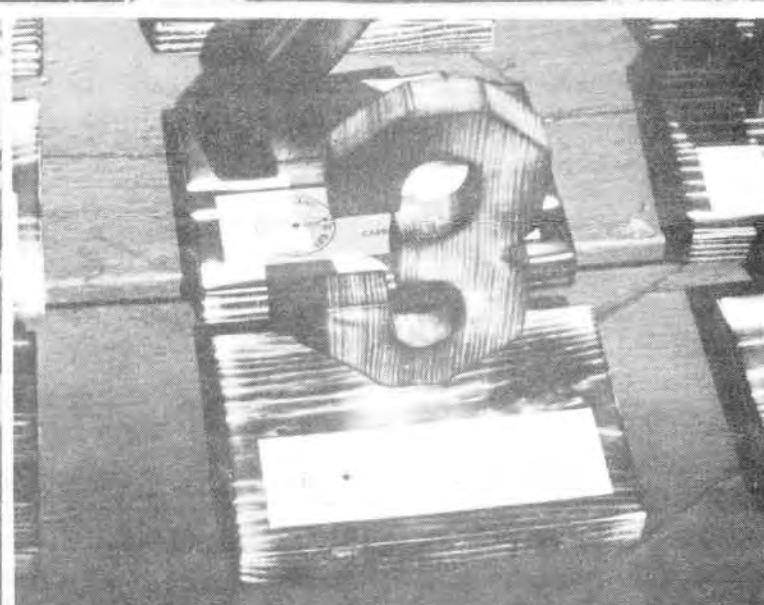
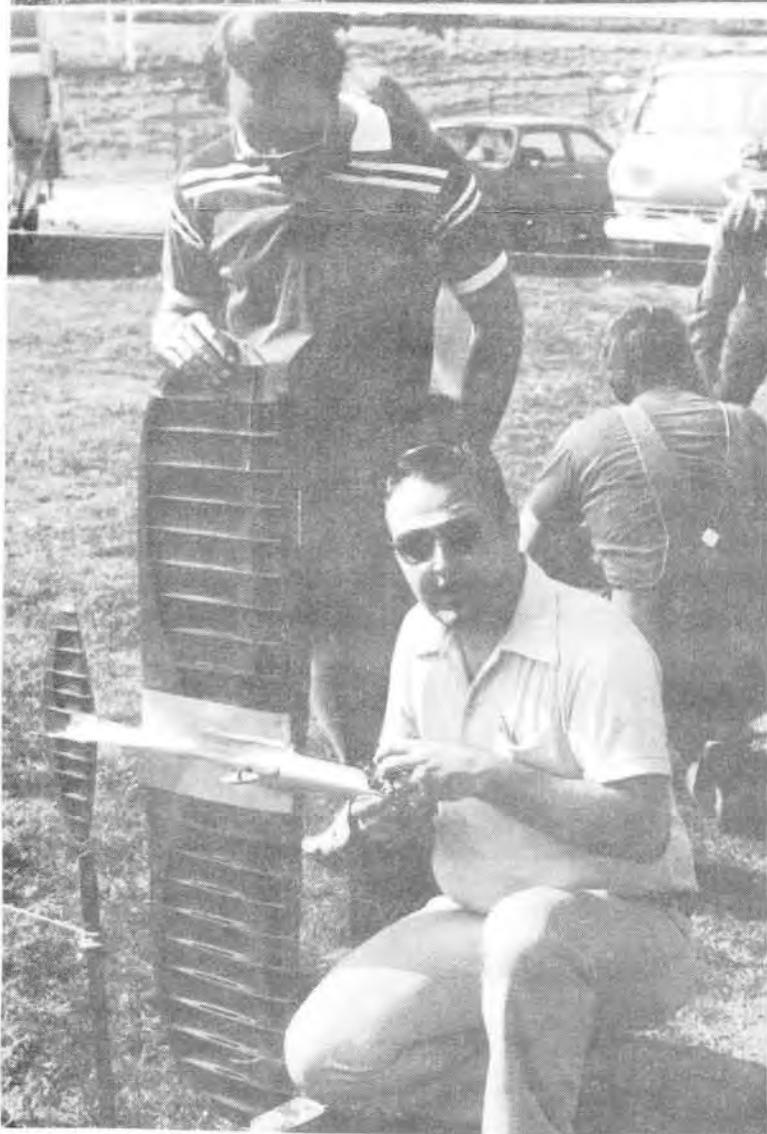
the traditional Trash Can Impact event will be held following the conclusion of BG IV.

Fees: \$4 per event (\$10 max).

For further information, contact Gary Stevens, (206) 633-3992. Let us know if you need a place to stay or a ride from and to the airport.

If you're less than 21, please have this form signed and bring it with you.

Parent's Consent, Waiver, Release: As parent or natural guardian of, a minor, I hereby give my full and unqualified consent to his/her participation in Bladder Grabber IV. I further release the sponsors, promoters, and officials of said fine contest from responsibilities for any claims of damage, loss, or injury resulting from any cause in the course of the contest. I also assume full responsibility for any damage or injury caused by above named or his/her model aircraft to any person or property.
SIGNED (PARENT OR GUARDIAN).....



Variety was the spice of the 1979 Portland, Ore., Control Line Classic. Top Photo: Buzz Wilson of Edmonds, Wash., starts AMA combat plane on way to win in that event. Ken Burdick holds. Bottom, left: Rich Porter, kneeling, prepares one of his unique $\frac{1}{2}$ A stunters, flown to third place in advanced precision aerobatics. Nobody believes those planes will fly till they see it! Center, right: Unique trophies were made by the Aeroliners. Bottom, right. The Northwest's only FAI team race pilot (active, that is) posed with his plane. It's Tom Knoppi of Seattle. Darkroom work by Chris Genna.