

# FLYING LINES

1505 ASH AVENUE  
COTTAGE GROVE, OREGON 97424

EDITOR: JOHN THOMPSON  
PUBLISHER: MIKE HAZEL

February, '85 NEWS OF NORTHWEST CONTROL LINE MODEL AVIATION Number 61

## DC BOOMS IN JANUARY

The sun shone on one of the brightest days of racing in Northwest Sport Race Drizzle Circuit recent history, with a strong turnout of racers and a great day of racing in Portland Jan. 13.

With so many individuals pairing up in teams, the 15 entries in NWSR actually accounted for a large number of bodies that made the Delta Park hardtop circle hum with constant activity in the 1984-85 season's second race.

The S&S Racing Team (Dick and Richie Salter of Seattle, Wash.,) moved to the lead in the NWSR championship race with a win following up their December second-place finish. But December's winner, the Beers-Cole Racing Team (Greg Beers of Vancouver, Wash., and Steve Cole of Portland) managed a fourth-place finish to stay close in the standings.

In Northwest Super Sport Race, Dave Green of Astoria, Ore., last year's double-champion, returned the Dark Ages Racing Team to the winner's circle. Beers-Cole, December's winner, was second in January but held on to a lead in the championship standings.

In both classes, several other teams remained within striking distance of the lead.

S&S knocked down the fast heat of the day in NWSR at 4:22, a scant eight seconds from the Northwest record set by Dick Salter about three years ago. Green had the fast NWSS heat at 3:31. Both times took the lead in the sprint for the circuit fast heat trophies.

The secondary event for January was Rat Race, with the Nitroholics Racing Team dusting off the old Yippie to capture first place.

Here are the complete results of Contest 2 and the statistics after two contests:

### NORTHWEST SPORT RACE (15 entries)

1. S&S Racing Team, Seattle, Wash. -- 8:54. Sterling Ringmaster, 42" span, balsa/plywood construction, Monokote finish. Fox .35 stunt, McCollum fiberglass prop, Aldrich long plug, Sheldon's 12.5%-nitro fuel, TKO 50-cc tank, Dick Salter handle. Pilot Rich Salter, pit crew Dick Salter.
2. Nitroholics Racing Team, Salem/Cottage Grove, Ore. -- 9:44.
3. Dave Green, Astoria, Ore. -- 10:03.
4. Beers-Cole Racing Team, Portland, Ore./Vancouver, Wash. -- 10:52.

### NORTHWEST SUPER SPORT RACE (7 entries)

1. Dave Green -- 7:57. Minotaur, original, 33" span, 26 oz., balsa/spruce, K&B Super Poxyl/Solarfilm. K&B .35, Dave Green rework, Dark Ages Racing Equipment 8 3/8x7.5 epoxy glass prop, Thunderbolt long plug, Cool Power 10% nitro fuel, spray bar turned .015, fastfill, shutoff, hot glove, DARE 2.75-oz tank, Fox handle with 2" spacing. Pilot Bill Varner, pit crew Dave Green (Dark Ages Racing Team).
2. Beers-Cole Racing Team -- 8:06.
3. Dick Peterson -- 8:11.
4. Nitroholics Racing Team -- 4:12 heat.

### RAT RACE (2 entries)

1. Nitroholics Racing Team -- 5:38. Yippie (Mike Hazel design), 32" span, 29 oz., balsa/bass/magnesium, Super Poxyl. K&B 40S, Tim Gillott rework, McCollum 7.75x7.5 fiberglass prop, GloBee plug, Sheldon's 50%-nitro fuel, crankcase pressure, fastfill, shutoff, hot glove, Don's 4-oz. tank, Fox handle. Pilot Mike Hazel, pit crew John Thompson.
2. Dave Green -- 6:46.

### HEAT WINNERS

#### NORTHWEST SPORT RACE:

Round 1: S&S Racing Team (4:31), Beers-Cole Racing Team (4:28), Nitroholics

DRIZZLE, continued

Racing Team (4:45), Dick McConnell (5:57).

Round 2: Rich Schaper (5:02), Dave Green (4:50), Glenn Salter (4:51), S&S (4:22).

**SUPER SPORT RACE:**

Round 1: Dave Green (3:41), Nitroholics Racing Team (4:12), Dick Peterson (3:50).

Round 2: Beers-Cole Racing Team (3:59), Peterson (5:16), Green (3:31).

**CHAMPIONSHIP POINT STANDINGS**

- NORTHWEST SPORT RACE**
1. S&S Racing Team . . . 27
  2. Beers-Cole Team . . . 25
  3. Nitroholics Team . . . 16
  4. Dave Green (DART) . . . 15
  5. Wayne Drake (CDRT) . . . 12
  6. John Hall . . . . . 11
  7. Low-Budget Team . . . 4
  - Jeff Byers . . . . . 4
  - Dick Peterson . . . . . 4
  - Glenn Salter . . . . . 4
  - Dick McConnell . . . . 4
  12. Low-Tech Team . . . 3
  13. Rich Schaper (DART) 2
  14. Kevin Collins . . . 1
  15. Mz. America Team . . 1

- NW SUPER SPORT RACE**
1. Beers-Cole Team . . . 13
  2. Dave Green (DART) . . 9
  3. Rich Schaper (DART) 8
  4. Dick Peterson . . . . 7
  - Glenn Salter . . . . . 7
  6. Nitroholics Team . . . 4
  - Dick McConnell . . . . 4

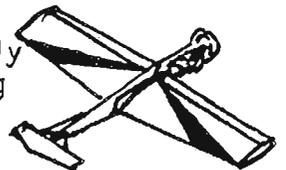
POLAR BEAR FLY-IN, JAN 1, 1985

By Chris Sackett

It was for sure a real polar bear meet at Richmond field on New Years' Day -- six inches of snow on the ground with a temperature of -5 degrees celcius. However, there was no wind and the skies were relatively clear. Some of the hard-working club members cleared the entire flying circle so as to have decent conditions for Northwest Sport Racing and conditions were really not too bad. There were very few fun fliers out there, mostly all the guys were geared up for Northwest Sport Race although I did manage to see RC pattern flier George Mobley stuff in his brand-new Sig Banshee after flying some nice maneuvers. Keep at it George, we'll get you away from RC yet!

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POLAR BEAR, continued

Things got rolling around 10:30 a.m. with some pretty wiped-out people from the night before. Most of the guys put a few test flights to get the feel of the conditions with the U.S. contingent of Dick Salter, Dick Peterson and Dick McConnell really having their problems -- most unusual as Salter is the record-holder at 8:27.

Henry Hadjik showed up with a beautiful little M&P Bonanza which he picked up at Creative Hobbycraft in New Westminster (sorry, guys, I think they're all gone) and unloaded an 85-mph test flight right off the trailer, instantly blowing the minds of some of the sideline hacks who were crying "foul" and "tear him down." Poor Henry didn't know what to make of it. All he did was build a nice streamlined plane and power it with a very old, well-broken in Fox that seemed to run happy on Cool Power 25%-nitro fuel and an 8.5x7 Rev-Up prop. Around noon the first heat of the was under way.

A total of nine teams finally entered so we ran three preliminary heats of three-up racing. The Seattle gang really had problems as only Dick McConnell managed to qualify with a time of 6:03. The No. 1 qualifier needless to say was Hadjik with a 4:50. The time included a lousy start and slow pit stop by his man Chris Sackett. No. 2 position went to Art Lander at 5:09 with an M&P Mongoose. Mel Lyne checked in at third spot with his Sig Twister at 5:27 and the fourth qualifier was Paul Dranfield flying in his first-ever sport race using a 21-oz. Flite Streak to the tune of 5:42.

The final promised to be fairly respectable compared to the November contest and almost was until around the half-way mark when things started to go wrong. Anyway, at the start Hadjik got off to an instant one-flip start with the others up in short order.

It was real good close Northwest Sport Racing with good pitting and fairly close racing. Henry's ship was clearly the fastest albeit with an overlean engine but had just a superb pit stop. The timer told us he turned a 4:19 for 70 laps. Wow! Art Lander was real close, too, with his Mongoose but a broken prop during a pit killed his chances for a victory. Dranfield was apparently running 35%-nitro and was flying and restarting quite nicely, although the Flite Streak, most believe, is a bit too big for this event.

Mel Lyne was pitting very consistently with his big Twister and was probably the slowest of the four but was hanging in real close. Hadjik was well ahead when those little racing gremlins jumped up and got him. At lap 133 his engine suddenly stopped as his prop and crankshaft departed from the engine and buried itself in a snowbank, barely missing a timer's stopwatch. Instant agony for Henry, who is a very competitive and talented modeler. (Editor's note: This helps explain why so many long-time NWSR competitors have settled in at the 10- to 15-percent nitro range.) So, Mel Lyne from Squamish, B.C. flew very consistently to win with a 9:57 time, Art Lander managed to change props in time to claim second and Paul Dranfield snared third with good work from his pit man Nigel Tarvin.

After the race Henry asked Chris Sackett to tear down the engine and show one and all that it was indeed the stockest of Foxes in contention. It was! We have never seen a Fox .35 stunt with so much black carbon throughout the motor. In fact, it had two head gaskets! The point here is that the fastest guy doesn't always win these races. Being steady and reliable usually gets the job done.

Let's have everybody out on Feb. 3. and do it again. This is real fun racing!

(Editor's note: We've asked the B.C. fliers to provide us with a schedule so upcoming events can be listed in the FL action calendar.)

Here are the complete results:

NORTHWEST SPORT RACE (9 entries)				
PLACE	COMPETITOR	HOME TOWN	PRELIMINARY	FEATURE
1.	Mel Lyne	Squamish, B.C.	5:27	9:57
2.	Art Lander	Richmond, B.C.	5:10	11:44
3.	Paul Dranfield	Vancouver, B.C.	5:43	12:37
4.	Henry Hadjik	New Westminster	4:50	133 laps
5.	Dick McConnell	Seattle, Wash.	6:03	
6.	Ron Underhill	Richmond, B.C.	DNF	
7.	Dick Salter	Seattle, Wash.	DNF	
8.	Frank Boden	Burnaby, B.C.	DNF	
9.	Dick Peterson	Seattle, Wash.	DNF	

A Note From the Publisher.....

As announced in the last issue, we can no longer hold the line of the subscription price. The factors involved here are threefold: Increase of printing production cost, forthcoming postage rate hike, and a small deficit that has been carried for some time.

Let me explain that last one for the benefit of our newer readers. When FLYING LINES first started publication in 1979, the price of the N/L was rather nominal. This was not only because the cost had not been thoroughly analyzed, also it did not seem likely to succeed with a high initial price. Price hikes in the subscription rate have been made over the years, but the initial deficit has dogged us ever since, at least until recently. Several of the faithful FLYING LINES readers have helped out with generous donations of either cash, or merchandise prizes for raffling. This has been instrumental in keeping the banking balance in the black during a few crucial points. Due to this help, we are at a threshold at which a rate increase will fully pay the way, without the need of ongoing fundraising to avert bankruptcy.

Almost all of the readers that have communicated have been in favor of a price increase. As it has been pointed out, FLYING LINES will usually have more general control line content than entire magazines.

As of February 1st, the subscriptions rates are as follows:

	<u>5 issues</u>	<u>10 issues</u>
United States	\$6	\$12
Canada/Mexico	\$6.50	\$13
Overseas-surface	\$7	\$14
Overseas-airmail	\$12	\$24

As always, please remember to make checks or money orders out to: FLYING LINES. US funds only, please. Some other changes to note; foreign subscribers have their choice of fast or slow delivery, pay for your pick. Also, the "premium" subscription has been discontinued. Those who are still paid up for it, will continue to receive the special handling until it expires.

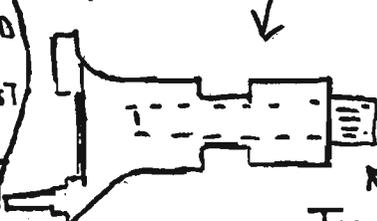
At this time, it would be appropriate to give a reminder regarding renewals. FLYING LINES does not send renewal notices. Rather, when it is time to re-up, it will be noted by the address label. Please note that the address label lists the beginning and ending issue numbers. To keep our records current, it is appreciated if renewal payment can be sent shortly after receiving your last issue. This also insures uninterrupted service. Thank you!

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ALL RULES PROPOSALS ARE IN, DEBATE BEGINS

Results of the initial vote on the five general rules proposals from the combined Academy of Model Aeronautics contest boards have been received at FL headquarters.

Only one of the six proposals, Gen-86-6, was passed. This is the rule that would prohibit a contest director from refusing a protest. It does not say that he must rule in favor of the protestor; but simply that he must accept the protest and start the AMA process.

Proposals required an initial vote of two-thirds of the combined board members voting in order to pass. Passage in the initial phase means that the proposals will be retained for further consideration in the final vote cycle.

There is still time to comment on proposals that passed the initial vote. Results of CL proposals have not been received as of this writing.

The Control-Line Contest Board representative for District XI is John Thompson. Comments on any and all rules change proposals are invited. Mail them to Thompson in care of Flying Lines.

A comment from Thompson about the current voting process:

"Because the radio-control contest board has been broken up into separate aerobatics, racing, helicopter and soaring contest boards, RC fliers now dominate the rules-making process as regards GENERAL rules. This appears to me to be a dangerous situation which may not have been considered by AMA when creating these several boards.

"As it is now structured, RC fliers have a total of 44 votes out of the 88 possible on general rules proposals. Free-flight has 22 possible votes, with separate outdoor and indoor boards. Control-line has only 11 votes! (All three are represented on the scale contest board, adding to the potential RC majority).

"It would seem reasonable to me for AMA to reconsider the proliferation of contest boards. I see no reason for more than the following contest boards: One for control-line, one for outdoor free-flight, one for indoor, one for RC, and a combined board for scale. I would encourage anyone who agrees with this viewpoint to communicate with their appropriate AMA district vice presidents and contest board members."

Below are synopses of the general rules proposals and the outcome of their votes.

Watch the MODEL AVIATION Competition News section for additional details of contest board activity.

GENERAL RULES PROPOSALS	
NUMBER	SYNOPSIS
GEN-86-1	Creates "Elementary Modelers" competition class FAILED -- 66 NO votes, 8 YES votes, 49 required to pass.
GEN-86-2	Eliminates "Senior" class except for dues FAILED -- 45 YES, 27 NO, 47 required to pass.
GEN-86-3	Defines supercharging restriction WITHDRAWN BEFORE VOTE.
GEN-86-4	Creates Combat records FAILED -- 28 NO, 16 YES, 29 required to pass.
GEN-86-5	Establishes electric motor classes FAILED -- 58 NO, 14 YES, 48 required to pass.
GEN-86-6	Prevents CD from refusing protests PASSED -- 57 YES, 17 NO -- 49 required to pass.

WIN A "BIG ART" CUSTOM STUNT ENGINE

One of the most coveted prizes ever offered in the Flying Lines Raffle is on the block in the winter, 1985 bonanza.

The prize, donated by Alan Resinger of Delta, B.C., is a "Big Art" Adamisin customized OS .35 stunt engine, complete with an Adamasin muffler and Supertigre needle valve assembly.

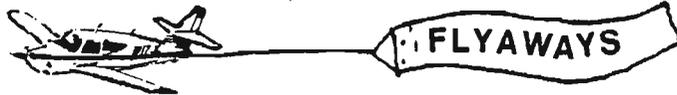
It's a \$100 value. You'll be the envy of all the stunt fliers on your block if you win. Ticket prices remain the same bargain rates, and proceeds go to help keep Flying Lines publishing.

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## RANDOM TIPS AND RIBS FROM THE FL WORKSHOP FLOOR

====FRACTIONS: The Vancouver, B.C., Gas Model Club has fun with an event called 33 1/3. This event judges airplanes by their mixture of construction, finish and flyability. In their Nov. 11 meet, Vic Chometsky took first place with a DC-3, Jim Low second with a Sterling Spitfire stunter and Ron Underhill third with a Top Flite Nobler. Other planes were a Beaver, Boeing F4-B4, Veco Mustang stunter, Sterling Yak-9 and Sig Twister.

====WAKING UP: Another major hobby outlet has awakened to the fact that control-line is growing again. Hobby Shack's January-February SPORT FLIER publication has two full pages of control-line kits and equipment. Now, pupils, recite the golden rule: Try your local hobby shop first, then try a FL advertiser, and finally, patronize businesses that support control-line.

====BUYING IN: Numerous hobby and non-hobby businesses are signing up to sponsor trophies for the 1985 Northwest Regional Control-Line Championships. Brainstorm of Eugene Prop Spinners President Mel Marcum, this project is cutting costs and allowing for purchase of some very top quality trophies for the 1985 bash.

====DELTA WINGS: Work is progressing toward construction of a new CL site not far from the current Delta Park Jim Walker Memorial site. The Northwest Aeroliners of Portland have joined the new Portland Area Model Aircraft Association, a multi-interest group. Portland RC, FF and CL people are working together toward their mutual benefit.

====HIGH NOTES: Stereo king and combat aficionado Bob Carver is featured in a December SCIENCE DIGEST article. No, it's about stereos, not combat, but the picture shows Bob with that "I'd rather be flying" look in his eyes. Thanks to Larry Miles for the clipping. They know you in Missouri, too, Bob.

====NO THANKS: Precision Aerobatics Model Pilots Association has declined to be involved in the officiating or flying in an FAI Stunt event at a U.S. Nats. AMA asked PAMPA to administer the event at the Nats as a separate event. PAMPA says its resources and personnel are committed to the AMA event and the two are "essentially redundant."

### EUGENE'S TOY & HOBBY

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## FLYAWAYS, continued

=====**BOX SHOT:** Satellite City has introduced a new size of their "Hot Shot" cyanoacrylate accelerator -- the "Cool Box size." This handy little pump-spray bottle, much improved over the original design (as is the regular-size bottle), is perfect for those on-the-field crises.

=====**DEAD HEAT:** Bob Bearden and Phil Cartier tied in the balloting for Miniature Aircraft Combat Association president. A runoff election is under way.

=====**STATUS QUO:** A United States proposal to eliminate the one-minute starting period for FAI combat was defeated by the CIAM, the international rules board. However, FAI did approve a line size increase to .385 mm, which works out to .0151".

=====**FAI JR.:** The FAI Combat Team Selection committee has announced a new junior award program. The winner will accompany the 1986 U.S. control-line team to the world championships. The honor goes to the junior or senior flier who wins the most matches at the U.S. team trials in 1985. Information is available from Paul Smith, 11112 Dill Drive, Sterling Heights, MI 48077 (313) 939-1076. Tell him FL tipped you.

=====**GOODIES:** J&J Sales has just mailed its 1985 catalog of CL goodies. If you didn't get one, write 709 Crescent, Sunnyside, WA 98944.

=====**TYPE CAST:** Many people have started sending their contributions to FL in typed, camera-ready form, which drastically decreases the editor's late-night labors. Many thanks to you! A couple of things would help in submitting typed copy: Single-space with fairly wide margins (measure your FL page!), and use WHITE paper. Naturally, hand-written copy is still gratefully accepted, but for those who can type, it helps us a lot.

## **NW COMPETITION STANDINGS**

**FLYING LINES' COMPILATION OF EVENT PLACINGS BY NORTHWEST  
MODELERS COMPETING IN NORTHWEST REGION CONTESTS**

### FIGHT BEGINS IN '85 RACING STANDINGS

The "team concept" has come of age in Northwest racing, with many of the region's racers jumping into the 1985 points race with coordinated efforts that serve to make the season one of the most exciting in history.

Dave Green of Astoria, Ore., working with Dark Ages Racing Team partner Bill Varner, jumped to a slim lead in the overall racing standings in January but chasing close behind are the Nitroholics Racing team (John Thompson and Mike Hazel of Cottage Grove and Salem, Ore.), the Beers-Cole Racing Team (Greg Beers and Steve Cole of Vancouver, Wash., and Portland, Ore.), and the S&S Racing Team (Dick and Rich Salter of Seattle, Wash.).

S&S tops the Northwest Sport Race standings, Green the Northwest Super Sport list and Nitroholics the Rat Race list.

Flying Lines keeps track of the performances of Northwest control-line modelers in sanctioned (AMA/MAAC) Northwest competitive events. Information on the scoring system is available from FL.

Standings listed below are complete through Jan. 25.

#### **NORTHWEST SPORT RACE (1 contest, 15 entries)**

1. S&S Racing Team	Seattle, Wash.	15
2. Nitroholics Team	Salem/Cottage Grove	14
3. Dave Green	Astoria, Ore.	13
4. Beers-Cole Team	Vancouver/Portland	12
5. Mel Lyne	Squamish, B.C.	9

#### **OVERALL RACING (4 contests, 33 entries)**

1. Dave Green	Astoria, Ore.	21
2. Nitroholics Team	Salem/Cottage Grove	20
3. Beers-Cole Team	Vancouver/Portland	18
4. S&S Racing Team	Seattle, Wash.	15
5. Mel Lyne	Squamish, B.C.	9

#### **NORTHWEST SUPER SPORT RACE (1 contest, 7 entries)**

1. Dave Green	Astoria, Ore.	7
2. Beers-Cole Team	Vancouver/Portland	6
3. Dick Peterson	Renton, Wash.	5
4. Nitroholics Team	Salem/Cottage Grove	4

#### **RAT RACE (1 contest, 2 entries)**

1. Nitroholics Team	Salem/Cottage Grove	2
2. Dave Green	Astoria, Ore.	1

### COCKPIT CHATTER (From the Editor's notebook)

With the 1985 season under way, control-line model aviation in the Northwest appears to be continuing its solid growth. Including those already held, there are 19 contests on the Northwest competition schedule already this year, with one or two more anticipated.

Coming off a very successful 1984, which drew more competitors than have come out in many years, the prospect for 1985 appears bright.

We'll repeat our plea for contest directors and clubs to get together

COCKPIT, continued

and consolidate these events in some way in order to prevent a repeat of the "Crash of '78" when the overwhelming contest activity in 1977 (which was a small-time schedule compared to that of 1985) led to a near-fatal burnout the following year. We hope Northwesterners are perceptive enough to not let history repeat itself.

With things going so well, it seems a good time to bring up another topic that's been in the FL "In" basket for about a year.

That is: who is to occupy the editor's chair? This writer has handled the chores for six years and 61 issues. For about the past year, I have been looking for an opportunity to pass the joystick on to another person with the time, interest and ability to carry on the FL tradition.

I am willing to continue with the job until the right replacement can be found. However, consider notice hereby given that, some time in the not-too-distant future, I would appreciate a break from the job. If there is anyone out there who would like to be considered for the position, please contact FL so that discussions toward that end could be opened.

Before relinquishing the duties, I would have to be convinced that FL would continue to be published on a regular basis and continue to contain the features and quality that FL readers have come to demand.

The job requires 8 to 20 hours a month, depending on the time of year and things that need to be done. Besides gathering, typing and assembling the information for the newsletter, the editor is responsible for keeping track of Northwest standings and records, the contest calendar and other running features. He also handles a variety of correspondence and promotional chores.

It is truly a labor of love, but the rewards are a significant contribution to the continuing health of Northwest control-line model aviation. If you have a little writing ability and an oversupply of energy, give the FL editor's post some thought. You just might be the right person for the job.

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A ONE YEAR WARRANTY on fuel tanks bought in 1984 and after. Tanks bought between 1/1/84 and 10/1/84 are all covered through 10/1/85. Crash damage and tanks modified by the flyer are not covered. Replacement is free, upon return of the tank with a note about the defect, to CAROLINA-TAFFINDER. (Not the dealer)

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# WHERE THE ACTION IS

## UPCOMING ORGANIZED EVENTS

Listed below are the control-line model aviation events currently known to Flying Lines. If you or your organization is sponsoring an upcoming event, contact FL NOW. All events listed here are sanctioned by AMA or MAAC (Canada) unless otherwise noted. There is no charge for listing here, and FL will distribute contest flyers free as well. All AMA-sanctioned events are open to all AMA members unless otherwise noted. Age class code: (J)=junior. (S)=senior. (O)=open. All events JSO unless otherwise noted.

Feb. 10 ... PORTLAND, Ore. -- Northwest Sport Race Drizzle Circuit Contest No. 3. Northwest Sport Race, Northwest Super Sport Race, Half-A Combat. NWSR, NWSS points accumulate for championship trophies. Site: Delta Park. Contest Director: Dave Green, 200 W. Franklin Ave., Astoria, OR 97103. Sponsored by North Coast Control-Line Aeromodelers' Society.

Feb. 24 ... SEATTLE, Wash. -- Skyraiders Beginners Day. Site: Carkeek Park. All beginners welcome, members or not. Club trainers available for all levels of beginners. Flight instructors will assist novices. No fee. For information, contact Dave Mullens, 15559 Palatine Ave. N., Seattle, WA 98133.

Feb. 24 ... RICHMOND, B.C. -- Combined Carrier meet. Richmond flying site. Contact Chris Sackett, (604) 299-4500.

March 10 ... PORTLAND, Ore. -- Northwest Sport Race Drizzle Circuit Contest No. 4. Northwest Sport Race, Northwest Super Sport Race, Northwest Sport Combat. NWSR, NWSS points accumulate for championship trophies. Site: Delta Park. Contest Director: John Thompson, 1505 Ash Ave., Cottage Grove, OR 97424. Sponsored by Eugene Prop Spinners.

March 24 ... SEATTLE, Wash. -- Skyraider 3x1. Stunt, Super Sport Race and Balloon Bust with the same airplane. Cumulative scores determine winners. First-place trophies for each event, trophies through third place for overall winners. Entry fee \$5. Flying begins at 10 a.m. Site: Carkeek Park. Contest Director Dan Cronyn, 9028 7th NW, Seattle, WA.

April 14 ... PORTLAND, Ore. -- Northwest Sport Race Drizzle Circuit Contest No. 5. Northwest Sport Race, Northwest Super Sport Race, Slow Rat Race. Championship trophies awarded in NWSR, NWSS. Site: Delta Park. Contest Director: Gene Pape, 4528 Souza St., Eugene, OR 97402 (503) 689-1623. Sponsored by Eugene Prop Spinners.

April 27-28 ... SPANAWAY, Wash. -- Spanaway Spring Tune-Up. Saturday: Old-Time Stunt, Record Ratio Navy Carrier, Half-A Combat, Slow Combat. Sunday: Precision Aerobatics (4 classes, no BOM rule), Scale (precision/sport/sorta combined, highest percentage of maximum available score wins), FAI Combat, AMA combat. Site: Bethel High School athletic field. Entry fee \$5 registration, \$5/event. Contest Director: Pete Bergstrom, 110 192nd St. Ct. E., Spanaway, WA, 98387.

May 24-26 ... EUGENE, Ore. -- Northwest Regional Control Line Championships. RACING: Rat, Slow Rat, Goodyear, Mouse I, Mouse II, Northwest Sport, Northwest Super Sport. COMBAT: AMA, FAI, Slow, Half-A. PRECISION AEROBATICS: 4 PAMPA classes. OLD-TIME STUNT. SCALE: Precision, Profile. SPEED: Half-A, A, B, D, FAI, Formula 40, Jet. NAVY CARRIER: I, II, Profile. BALLOON BUST.

Junior events in NWSR, Balloon Bust, Mouse I. Displays. On-field hobby shop. Food concession, Within walking distance: Airline connections, rental cars, restaurant, rest rooms, gift shop. Largest CL contest on the West Coast. Trophies and merchandise through third place in all events. Site: Mahlon Sweet Airport. SPEED FLIERS NOTE: Speed circle opens for official flights at noon Friday. Contest Director Mike Hazel, 1073 Windemere Dr. NW, Salem, OR 97304, (503) 364-8593.

June 9 ... ASTORIA, Ore. -- CLAMBash '85. Details to follow. For information contact Dave Green, 200 W. Franklin, Astoria, OR 97103.

June 23 ... RICHMOND, B.C. -- Stuntacular. Four classes of Precision Aerobatics. Site: Richmond flying field. Entry fee \$5. Prizes and trophies through third place. Contact Alan Resinger, (604) 594-0931.

July ?? ... KENT, Wash. -- Bladder Grabber for AMA combat??? Details to follow, we hope.

July 6-7 ... KENT, Wash. -- Boeing Air Fair and Stuntathon '85. Stunt clinic, four PAMPA classes of Precision Aerobatics, Junior Stunt, Old-Time Stunt. Contact Bob Emmett, 17972 W. Spring Lake Drive SE, Renton, WA 98055.

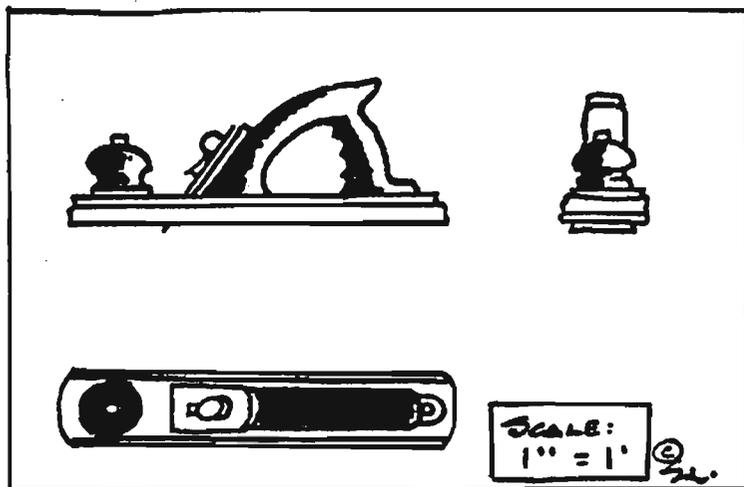
Aug. 4-11 ... CHICOPEE, Mass. -- United States Model Airplane Championships.

Aug. 18 ... SPANAWAY, Wash. -- Spanaway Spectacular, Hosted by Seattle Skyraiders, sponsored by Bill's Hobby Town. Four classes of Precision Aerobatics, Old-Time Stunt, AMA combat, Half-A Combat, FAI combat, Slow Combat. Site: Spricker Park. Contest Director Pete Bergstrom, 110 192nd St. Ct. E., Spanaway, WA 98387.

Aug. 31-Sept. 1 ... VANCOUVER, B.C. -- Vancouver Internats. Details to follow.

Sept. 14-15 ... KENT, Wash. -- Raider Roundup, the Washington State Control-line Championships. Details to follow. Contest Director Dave Gardner, 17210 109th Pl. SE, Renton, WA 98055.

Sept. 28-29 ... First Annual Masters Precision Aerobatics contest. All contestants will judge except for the flier up and the next flier in order on deck. Best score of each day combined to determine winners. Contest Director Pete Bergstrom, 110 192nd St. Ct. E., Spanaway, WA 98387. (Editor's note: We have no site info.)



**"PLANE THREE-VIEW"**  
-FOR THE SCALE MODELER-

# SUNDAY Flier

by Larry Miles

## UNIFLOW TANKS

Virtually every reader of FL will know that a uniflow fuel tank as used by model plane enthusiasts achieves its desired results of maintaining a nearly constant pressure head to the fuel pickup point within the tank by injecting near the point of fuel pickup a source of nearly constant gas pressure (i.e. atmospheric pressure, engine exhaust or crankcase pressure) thereby forcing the fuel pressure at the pickup point to assume the same pressure as that of the injected gas source.

But what may not be so universally known are some of the consequences of injection of that source of gas pressure within our fuel tanks and why it might concern us. Since understanding those consequences is of some import to the users of uniflow tanks and of particular impact to the builder and designer of such tanks, that will be the concern of the remainder of this article.

1. A uniflow tank whose source of constant gas pressure at the fuel pickup point is the atmosphere will have a potential vacuum exist within the tank when the plane is flying, the strength of such vacuum varying from a maximum value shortly after takeoff to a minimum value at engine cutoff. Additionally, the faster the plane flies the more complete that partial vacuum will be. These facts could have consequence in the tank design so as to insure the tank is structurally capable of maintaining the demanded vacuum. These facts could have consequence in the tank design so as to insure the tank is structurally capable of maintaining the demanded vacuum. These facts make it imperative that the uniflow tank be leak-free.

The statement numbered 1 above and the one immediately following at first glance without thought seems absurd since there is no machine attached to our fuel tanks creating the claimed vacuum. On closer inspection, it becomes obvious that the statements are true. The forces that act upon the fuel within a gas tank are additive (gravity, centrifugal forces, gas pressure, etc.). For a fuel tank attached to a control-line plane in flight centrifugal force operating on the fuel increases with the plane's speed and operate so as to increase the pressure at the outboard or fuel pickup edge of the tank. However, the fuel pressure on a uniflow tank whose source of constant gas pressure is the atmosphere at the fuel pickup point will be nearly constant and will be atmospheric pressure or approximately 14.7 lbs. psi. Since the fuel pressure at the pickup point within the tank is constrained to be 0 relative to atmospheric pressure or ~14.7 lbs. psi. absolute by the uniflow action, the pressure on the inboard side of the tank, away from the fuel pickup is certainly less, since centrifugal forces demand such. Those demands' magnitude are proportional to speed and the radial fuel head. Ergo, a partial vacuum (relative to the atmosphere) must exist. Similar arguments apply to uniflow tanks operating on exhaust or crankcase pressure.

2. The termination point of the uniflow tube within the fuel tank is optimally placed not only dependent upon intended use -- race, carrier, stunt, combat, etc., but also upon the fuel usage rate of the engine. This last fact probably explains why no maker of uniflow tanks has met with the commercial success to the extent others, such as Veco and Perfect, have. Neither have the more recent manufacturers of what have been termed "clunk tanks" as used primarily by RCers seen fit to produce a uniflow tank although it would be possible to manufacture a clunk that not only served as the fuel pickup but the dual function of fuel pickup and uniflow terminator.

As before, the numbered statement above at first glance appears suspect. Further thought reveals that as the engine uses fuel the space that was formerly occupied by fuel within the tank must be taken up by gas (air, exhaust, atomized fuel-air) from the uniflow tube. As the gas enters the fuel via the uniflow tube it has the potential of being sucked into the fuel pickup and causing erratic engine operation. The greater the fuel usage rate the faster fuel flows around the fuel pickup within the tank and thus around the uniflow termination and for a given uniflow tube terminator point the more likely gas bubbles from the uniflow tube will interfere with proper engine running. For a "gas hog" the uniflow termination will of necessity require greater separation from the fuel pickup point then it would for an engine whose fuel usage was miserly.

However, there are a couple of other avenues of investigation that I think might prove very fruitful:

A. Use a baffle to separate the uniflow and fuel pickup terminations.

(Caution: Be careful that the baffle does not interfere with the flow of fuel.)

B. Break up the gas bubbles that come from the uniflow line as they enter the fuel so that if one of the smaller bubbles does happen to get in the fuel pickup it's consequence will be less. (Caution: An attempt to break the gas stream from the uniflow tube into small bubbles could create more problems than it resolves because of fuel foaming.)

If you plan on building a uniflow tank for your own use only or marketing a universally usable uniflow tank set for modelers everywhere, keep the facts contained in this article in mind -- they apply. And, many thanks for allowing me to blow a little gas your way.

-- Larry Miles, 2112 Scott Ave, Independence, MO 64052.



## AIR MAIL

COMMENTS.....NEWS.....VIEWS  
FROM THE FLYING LINES READER



DEAR FL:

The dates for Air Fair/Stunt-a-thon '85 have been set for July 6-7, not July 13-14 as previously listed in Flying Lines. We are planning to make Stunt-a-thon a significant happening, with a stunt clinic planned for Saturday with full stunt schedule on Sunday. Should be a three-circle event with four PAMPA classes, junior and Old-Time Stunt. We'll fill the sky with stunters.

I've enclosed a sketch of my "squared" stunt tank design which I have used for too many years to count (would you believe 30?) Various venting schemes have been used, but the shape has been varied only to suit the airplane. The rectangular shape makes most efficient use of available volume. Physics being what they are, the only thing a wedge does is make a tank harder to build.

A word of caution about getting into a battle with other segments of our hobby...The Skyraiders have been invited to participate in the symposium in Puyallup in February by RC interests. It seems that the RCers are interested in promoting model aviation. I can understand the manufacturers' point of view also, as several valiant attempts by control-line fliers to market quality kits and accessories have not met with enough financial success to permit other than part-time marketing activity. Let's be positive about our segment and try to promote excellence as have other segments of our hobby.

## FLYING LINES

Flying Lines is produced monthly by a dedicated staff of volunteers interested in keeping lines of communication open between Northwest modelers. FL is totally independent of any organization, depending entirely upon support from subscribers, advertisers and donors.

FL is your link to the rest of the Northwest's control-line modelers. Help keep it alive by spreading the word. Wear your FL T-shirt and tell your buddies what it stands for. FL shirts available at \$8 -- name your size and color. FL caps, \$5.

Prices for subscriptions: \$6 for 5 issues and \$12 for 10 issues. Canada and Mexico: \$6.50 for 5 issues and \$13 for 10 issues. Overseas by surface mail: \$7 for 5 issues and \$14 for 10 issues. Overseas by airmail: \$12 for 5 issues and \$24 for 10 issues. U.S. funds, please.

Advertising rates: \$6 per half page, \$4 per quarter page, \$1 for five lines of classified advertising. Hobby Shop Directory, \$15 per year. Help FL and yourself by selling an ad!

Here is the FL staff:

Publisher.....Mike Hazel	Combat.....Gene Pape
Editor.....John Thompson	Engines....Help Wanted
Advertising....Steve Lindstedt	Racing.....Mike Hazel
Photo editor..Pete Bergstrom	Scale.....Orin Humphries
Aerobatics....Paul Walker	Speed.....Mike Hazel
Beginners....Ken Burdick	Sport.....Larry Miles
Carrier.....Orin Humphries	Artwork....S. Lindstedt



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## AIR MAIL, continued

Also, with regard to Northwest competition news, am I considered a Northwesterner? When plaudits were listed for Nats workers, my wife, who worked all four days of precision aerobatics, was not mentioned. (Editor's Note: Apologies to her and anyone else we missed. Our info was gathered from other sources...we printed what we received.)

I've sent in stuff (untyped) which has not appeared in Flying Lines. (Editor's note: Again, we're sorry if something fell through the cracks. We are not aware of having ever rejected anything from Bob -- nor having received anything other than routine contest notices which have been listed in the calendar. We welcome all article contributions, especially those of such top quality as Bob's tank article!)

Now, I cannot find my name listed anywhere in the Northwest competition standings for 1984, although I did compete in most of the contests (even Eugene) when I was not too involved as CD or official. Please satisfy my curiosity and let me know if and where I wound up. I competed in Expert Stunt (although I probably am at advanced skill level by present standards) and in Old-Time Stunt. (I wound up on top of the oldies).

--Bob Emmett, 17972 W. Spring Lake Drive SE, Renton, WA 98058.

(Editor's note: Bob was listed in the FL standings throughout the year and in the final standings. However, he was inadvertently left off the overall competition standings which are compiled annually and printed in the January edition. He scored 30 points, which would have placed him in a tie for 16th position overall. Bob was No. 1 in Old-Time Stunt (see FL, Jan., 1985, Page 6). He was tied with four others No. 16 in Precision Aerobatics (only top fives were listed due to space considerations). Anyone who observes an error or omission in the FL standings, or who would like a printout of the complete or current standings, simply write FL.)

DEAR FL:

Enclosed is a check for \$1 to fill in the gaps in my FL library. I have issues 57-59 and have enjoyed them immensely. Just send any three issues you have handy.

I just got a letter from Gene Pape in response to some questions I had about his November combat article. You've got a great staff. Please thank him for me!

--Kevin Sheen, 4918 W. Northern, Glendale, AZ 85302.

(Editor's note: We've just done some file-cleaning and now have a better-than-ever supply of back issues. Issues of many numbers are available going as far back as August, 1979. When ordering, send 50 cents per issue desired and specify by issue number or month and year. Please provide some alternates just in case we don't have the issue you specify. If you don't want an alternate, just say so and we will refund.)

DEAR FL:

Enclosed is my renewal plus some for the kitty.

Did you guys know that you put out more issues per year -- even with your summer "intermission" than the prestigious NFFS (National Free-Flight Society) DIGEST?

--Bob Kampmann, 6312 Kenneth Ave., Orangevale, CA 95662.

## THE FLYING FLEA MARKET

WANTED -- Aluminum 1 3/4" spinner for three-bladed props, or information on where I can obtain one  
Ray H. Mathis, 4507 Pine Ave. N.E., Bremerton, WA 98310 (206) 377-7389.

FILL THE GAPS IN YOUR FL LIBRARY -- Copies of many Flying Lines back issues are available. Send 50 cents per issue to FL. Refunds or alternates for any issues out of stock.

HELP WANTED -- Flying Lines seeks a volunteer to write a monthly engine column. Payment is free subscription for as long as you continue the work. Contact the editor.

BARGAIN -- One free flea market ad for each new or renewed subscription. Collect for yours or get one for signing a buddy up. Send ad with subscription to Flying Lines, 1505 Ash Ave., Cottage Grove, OR 97424.

## HOBBY SHOP DIRECTORY

FIRGROVE MODEL SUPPLY -- Radio Control, control-line and gliders. 10611 136th St. East, Puyallup, WA 98373. (206) 845-7675. Open daily 12-8, Saturday 12-6, closed Sunday and Monday. Owned by R.B. "Bob" Pfeiffer.

MOTORS & MEMORIES -- Control-line model supplies. Mail orders to P.O. Box 78388, Seattle, WA 98178. (206) 772-7091. Owned by Dick Peterson, an active control-line flier.

TRIANGLE HOBBIES -- Everything you need to fly combat. Mail orders to 1211 Brookgreen Dr., Cary, N.C. 27511. (919) 467-6270. Owned by Bob Nicks.

HAVE YOUR FAVORITE SHOP LISTED HERE -- Ask your hobby supplier to buy a Directory listing. It's \$15 for a year, and he gets the newsletter, too!

## WHERE ARE ALL THE KIDS?

It's an old argument by now...the one group stressing the need for new members "if the hobby is to continue in years to come," while the other side counters with "there's not enough room for flying sites now, why would we want more members and jeopardize the few sites we do have?"

A valid argument for sure...on the surface. Without getting into a lengthy discourse on history with all the whys and wherefores leading up to today's dilemma, let's take a look at a possible solution.

First though (and particularly if you have kids), ask your wife if she would bake a cake or some cookies for a special family meeting you'd like to have. If this doesn't work, you'll have to jog on down to the ice cream store. Then, at a well-timed moment, as your family to turn the TV off, completely OFF, and join you for a few minutes of family discussion. Tell them to give some deep thought to the following question before they answer: Would they like to learn to build and fly model airplanes with you as a family activity?

After they've recovered, wait for an answer or comment from each one. Don't get shook up, or lose your cool if they say something like, "But Dad, that's YOUR hobby." They may hit you with "Why the sudden change," or "What brought this on all of a sudden?" Endure...maintain. Keep in mind that they may have reason to be wary at first, not quite believing what you just laid on them. The important thing is, and this is critical, keep cool, confident, kind and convincing. You might have to get around their side-stepping defense barrier by saying something like this: "I enjoy this hobby so much that I'd like to share this fun with my family."

If you're sincere, they'll pick up on it. If you're not, look out, they'll blow you out of the saddle. Of course, by now you're in the middle of the stream and man, it's your hide. Drastic action may be required at this point, so be prepared. Remember the old sales training advice...be sincere...even if you have to fake it!

So...ask the question...get some answers, and after YOU've recovered, suggest partaking of some cake and ice cream, or whatever (maybe it's scorched chocolate chip cookies, the result of a wife in shock). Think about it (the answers, not the cookies), it may change your whole life.

You may be wondering what this little family scenario has to do with the membership vs. flying site dilemma. Well...just everything, that's all. Read on.

### PUCKER HUDDLE CITY COUNCIL AGENDA ITEM 1

"Proposal to ban the flying of internal combustion powered toy model airplanes within the City of Pucker Huddle." (That's they way it usually reads, or some tripe).

#### TESTIMONY FOR ITEM 1

Sixteen people (your typical law-abiding, tax-paying, peace-loving average American citizens) serving on the Citizens' Action Committee testified that they object to the flying of the toy model airplanes because (1) they are too noisy, disturbing the peace and tranquility, (2) that they are extremely danterous, often uncontrollable, (3) they use much needed space for youth sports activities, (4) etc. (5) etc., etc. The committee recommended that the council proclaim an emergency, and immediately ban the flying of said toy model airplanes (flown only by a few grown men) because their (the committee) findings reveal that the unrestricted flying of said toy model airplanes constitutes disturbing the peace, is a threat to the health, safety and welfare of the community, and is therefore declared to be an extreme hazard to the community as a whole.

#### TESTIMONY AGAINST ITEM 1

Three men (names withheld) representing the Knuckle Busters Model Airplane Club, users of subject flying site, testified and pleadsed their case, citing among other things, the Grandfather Rights Clause (we've been flying in this field for 20 years or more) and reminding the council that they (the modelers) are also law-abiding, tax-paying, peace-loving, average American citizens, and as such, demand their rights in the matter, etc., etc.

One, maybe two more meetings in front of the council, and guess what? It's all over...no more good ol' flying site. Item 1 passed unanimously.

#### ITEM 2

"Discussion on proposed need for action against juvenile delinquency, by establishing a youth activity and sports center, and possible use of the former toy model airplane flying site. Feasibility study approved.

The modelers of course had left prior to Item 22 on the agenda. Stunned by their defeat, one was heard to say to the others, "Come on fellows, let's leave. I've got a friend that owns a piece of property about 23 miles out of town, and I think..."

That's the trouble, they didn't think. What do you think?  
--Frank Macy, P.O. Box 548, Oregon City, OR 97405.



# SPEED SCOOP

by mike hazel

My how time flies. In about what seems like the amount of time that it takes an FAI ship on pipe to go ten laps, it will soon be the flying season again! The contest agenda and level interest is looking very good for 1985, especially on the West coast.

The main topic for this column will be on preparing for the first flight session of a new ship. This will be basically oriented for the novice speed flier, but may serve as a review for some others. There is probably a ton of information that can be covered, but we only have about a page. Soooooo, here are some generalities.

This first session will have a number of goals. These will include: checking the flight characteristics, fuel feed familiarization, and perhaps determine a base speed performance from which further tests can be checked against. It will be assumed that the ship has been built with proper structural integrity. If there are any doubts, have an experienced modeler check it out.

One critical area to check first of all, is the control system. It is very important that it works freely and smooth. This is especially important with a torque unit control. If the elevator does not smartly neutralize itself when it is moved by hand, then it has failed the test. The next check is to give a proper pull test. Also check the control movement while there is some pull on the system, making sure that there is sufficient elevator movement. The need will vary from the type of design and class, but for an approximation, 15 degrees down and 20 degrees of up should be more than adequate.

The next thing to check is the fuel system. If using a metal tank, this should already be pressure tested at home. What will need to be checked here, is simply the starting sequence and needle valve response. The reason to check this next is that if you cannot get the engine started and ground tuned, it is time to go home and check things out. You are probably already familiar with starting the engine on the bench and noting response, but the proper test will involve your ship tank and flying prop. Several combinations exist on tank/engine configuration. If you have a piped engine on suction, the real test is in the air later. Assuming that you can easily get the engine fired up, then it is time for some flight testing.

If you are using a take-off dolly, this will need to be check out. Give the dolly a couple of pushes on the ground, and note how it tracks. It should be straight or slightly out of the circle. Put the plane in the dolly if it is of the mousetrap variety, and note at what point from the ground the trigger releases. It should be at least four inches for a small plane, and six inches for a large. If the trigger wire does not operate smoothly, you may want to weight it, so that there is little possibility that it will hang up. It is no fun to fly a "tethercar".

If your plane is equipped with a landing gear, check and see if when held under the fuselage with flying wire connected, the outboard tip hangs down slightly. If not, you will need to be very quick on the handle, otherwise you may be looking at your ship flying in at you. If you are flying clockwise, or your engine is set up with left hand rotation, this problem will be minimized.

Hokay, now perhaps we can do some test flying. The first couple of flights you will want to go easy on the horsepower, so as not to be surprised by any quirky flying characteristics that may exist. Some suggestions here are to back off the head clearance if it is tight. Otherwise it will be hard to needle rich. Also don't tip the nitro can. You may also want to run a reduced load prop. This can be either cut down, or lower pitch. It is always best to be under-propped than over-propped in the event of a poor needle setting.

Be sure to set the engine for a safe fast-rich for the first couple of flights. Absolutely do not send up the plane blubbery rich, as a smooth take-off may not be possible, and tripping up in the dolly may be the result.

The first flights you need to carefully note any transistion of fuel setting in the air, from the ground. If you have a significant leaning out with a bladder tank, make sure the tank is not pinched or constricted when it is full.

After you feel comfortable with all of the above, check to see how the plane flies right on the deck. If you have a full length pan with the stab bolted on, you have an advantage in that the stab can be shimmed.

The next step is to send up some flights in full horsepower mode. Establish a standard fuel and prop from which you can do later comparisons. It is hard to know where you are going, if you don't know where you've been. Out of room already! This discussion can be further detailed in future columns, if there is interest. Fly Fast! Mike Hazel, 1073 Windemere NW, Salem, OR 97304

# CONTROL LINE

## *Spanaway Spring*

### **TUNE-UP**

*April 27-28, 1985*

Sat Apr 27

OLD TIME STUNT      11-3:00

Carrier-Record Ratio      10-4.00

PROFILE →  
CLASS I →      Combined  
CLASS II →

1/2A COMBAT      9-1:00

SLOW COMBAT      1-5 00

Sun Apr 28

STUNT - 4 Pampa Classes      10-5:00  
NO BOM Rule

SCALE      10-3:00  
% of Max Available Score Wins  
PRECISION

SPORT →      Combined  
SORTASCALE →

FAI COMBAT      9-12:00

AMA COMBAT      12-5:00

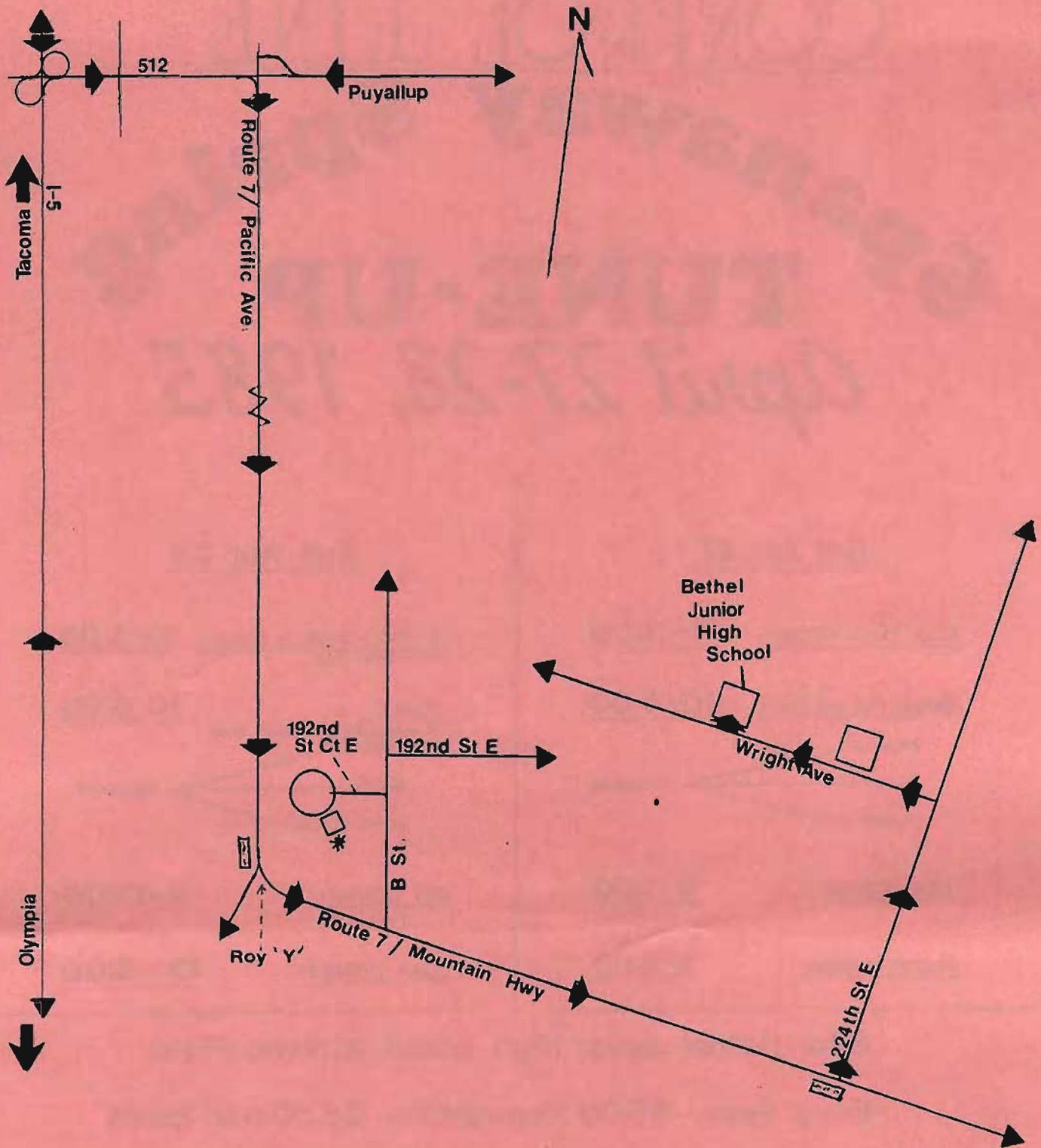
Site: Bethel Junior High School Athletic Field

Entry Fees - \$5.00 Registration \$5.00 per Event

AMA Membership Required

*For More Info:*

*Pete Bergstrom, 110 192nd St. Ct. E.  
Spanaway, Wa 98387*



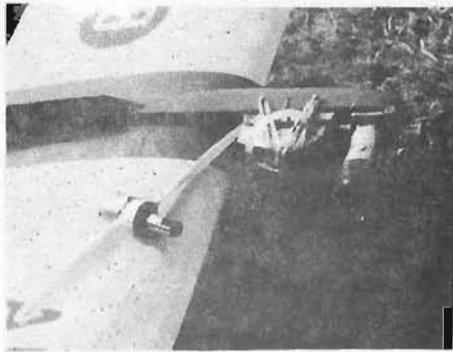
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# Pot Luck Party

Saturday Night, Apr 27, 1985  
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1985 NW SPORT RACE DRIZZLE CIRCUIT ACTION AND PEOPLE

FL Art Director Steve Lindstedt captured the January Drizzle Circuit meet on film:

Left column: Dick Peterson starts a NW Sport Race feature race. Dave Green ready for Rat Race start. Richie Salter, January's winning pilot in NWSR.

Right column: Wayne Drake with NWSR entry. One of two broken Cranks in January meet, on Rich Schaper's Mongoose. Schaper in the pits. John Thompson warms Nitroholic's Rat Racer.