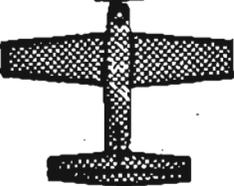


FLYING LINES



NEWS OF NORTHWEST CONTROL LINE MODEL AVIATION

1073 WINDEMERE DRIVE NW
SALEM, OREGON 97304

EDITOR: MIKE HAZEL

February 1986

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.

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Yes, I know the issue number was left off last month. I hope the above helps compensate for the oversight. sorry 'bout that!

INSIDE

DRIZZLE CIRCUIT ACTION!

CUTS & KILLS BY JOHN THOMPSON !

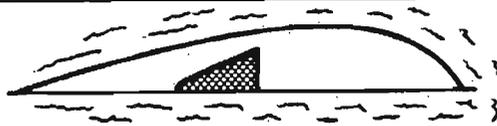
SCALE BY ORIN HUMPHRIES!

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INCLUDING CANADIAN NATIONALS!!!!

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COCKPIT CHATTER



NOTES FROM THE EDITORS' DESK

What? Is this FLYING LINES? Yes, it is! Some of you old-time subscribers might have looked right over this piece, thinking it was just some advertising or something. This new format is something that I thought we would try. Read on.....

First let me emphasize that there was nothing wrong with the newsletter layout we have done for the past 69 issues. As you know, I have mentioned that opportunities to streamline the publication would help alleviate the work load to get this thing out. Going to a 11 inch sizing allows us to have the print shop completely assemble the issue. This will be a great time savings, which is the biggest concern. There was a bit of handwork on the 14 inch format, which was not feasible to have our printer do.

What about cost? Yes, it will cost a little bit more on our monthly bill for the assembly work. However, it is rather nominal in comparison to the total cost to put out an issue. There is no price hike in the subscription rates as far as I can see----in regard to the format change. Also, the 14 inch is not more cost effective.

Another reason for the change is one of convenience. The 14 inch paper is somewhat an odd size, and coupled with 14 inch envelopes for certain mailings, made for having an "extra" stock of stationary.

Is there a "fly in the ointment"? Yes. One advantage that the 14 inch paper has a reduced "breaking" from page to page. Simply stated, it is easier on long paper to paste up the copy without having to make it fit the size. This will give me some extra effort to go through, initially.

The important thing is whether or not the FL reader likes the change, and some input would certainly be appreciated. There are a few other factors involved, but no sense getting too deep in publication mechanics here. Let's hear from ya!

In John Thompson's Round & Round column, he mentions some gifts being bestowed upon him in recognition of his years of editorship. A word of explanation to our entire readership about this. In December, our long term subscribers were asked to make a contribution for this special presentation. The generosity demonstrated by this core group again goes to show that we have a great gang within our modeling persuasion.

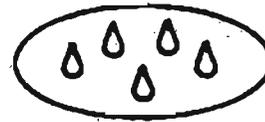
Flying Lines Advertisers: Be on the lookout for our new revised advertising policy and rate sheet. This will be sent out shortly, and will explain some new ad sizes and prices, including special discounts.

Speaking of discounts, we are starting a policy of 100% discount to our readers to place ads in the Flying Flea Market section. The only stipulation is that business ads are not allowed here, personals only.

A clarification on policy needs to be made here on a subject. In the competition records section, you will see that a record was noted in AMA rat race. Normally, it would not qualify, since it was done flying solo. However, since the category is empty it will fill the space until a "bonafide" rat race is flown, at which time the solo record will step down.

THE DRIZZLE CIRCUIT

ROUND and ROUND In the RAIN?



DRIZZLE CIRCUIT 2 -- FAST TIMES AT DELTA PARK

PORTLAND, Ore. -- The Northwest Sport Race Drizzle Circuit is turning out to be the Dry Circuit for the second year in a row.

It was a perfect day for being outside and going fast at Delta Park on Jan. 12, and what a day of racing it was.

When it was all over, the standings showed a four-way tie at the top of the Northwest Super Sport Race heap between Dave Green, S&S Racing Team, Dick Peterson and John Hall, along with a two-way donnybrook at the top of the Northwest Sport Race standings. Beers-Cole Racing led Green by two scant points in the latter category.

Circuit fast heat and feature race times were reduced in both events as the December shakedown evolved into serious business in January.

Beers-Cole Racing Team (Greg Beers of Vancouver, Wash., and Steve Cole of Portland) took the Northwest Sport Race feature with a Northwest record 8:53 time. Dave Green was a familiar face in the Super Sport Race winner's circle with a 7:48, following up a record 3:29 heat. As predicted, the Drizzle Circuit times are edging close to the records set before the 10-percent nitro fuel rule went into effect last June.

Secondary event was Rat Race, with only two entries flying. Dick Salter took the top spot with a 5:38.36 time, which established a feature race record where there had been none since the 10-percent rule took effect.

A highlight of the contest was the visit by Bob Hoffman from Southern California, who made the DC a stop on a Northwest trip. He entered Northwest Sport Race and made a respectable showing. Everyone's looking forward to his showing of videotapes from the meet, too.

The eighth annual Drizzle Circuit continues Feb. 9 at Delta Park with Northwest Sport Race, Northwest Super Sport Race and Half-A Combat.

Here are the complete results, as provided by Drizzle Circuit Coordinator Steve Cole, of contest 2. Times are unavailable except for winners.

NORTHWEST SPORT RACE (10 entries)

1. Beers-Cole Racing Team, Vancouver, Wash./Portland, Ore. -- 8:53. Airplane data unavailable. Pilot Greg Beers, Pit Crew Steve Cole.
2. Dave Green, Astoria, Ore.
3. S&S Racing Team, Seattle, Wash.
4. Glenn Salter, Seattle, Wash.

NORTHWEST SUPER SPORT RACE (7 entries)

1. Dave Green -- 7:48. Minotaur, K&B .35. Pilot Bill Varner, Pit Crew Dave Green.
2. Beers-Cole Racing Team.
3. John Thompson, Cottage Grove, Ore.
4. Dick McConnell, Seattle, Wash.

RAT RACE (2 entries)

1. Dick Salter, Seattle, Wash. -- 5:38.36.
2. Dave Green.

FAST TIMES

HEAT

NWSR: 4:25 (Dave Green)
NWSS: 3:29 (Dave Green)

FEATURE

NWSR: 8:53 (Beers-Cole)
NWSS: 7:48 (Dave Green)

HOBBY SHOP DIRECTORY

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.

DRIZZLE CIRCUIT STATISTICS AFTER TWO CONTESTS

CHAMPIONSHIP POINT STANDINGS

NORTHWEST SPORT RACE

- 1. Beers-Cole . . 22
- 2. Dave Green . . 20
- 3. Gene Pape . . 10
- S&S Racing . . 10
- 5. Glenn Salter . 9
- Dick Peterson. 9
- 6. John Hall. . . 4
- Dick McConnell 4
- 8. John Thompson. 3
- 9. Bob Hoffman. . 2
- 10. Wayne Drake . 1
- D. Phillips . 1

NW SUPER SPORT RACE

- 1. Dave Green . . 8
- S&S Racing . . 8
- John Hall. . . 8
- Dick Peterson. 8
- 5. Beers-Cole . . 7
- 6. John Thompson. 6
- 7. Dick McConnell 4
- 8. Glenn Salter . 3

AIRPLANE DATA FROM JAN 12 DRIZZLE CIRCUIT MEET:

NW Sport Race: Beers-Cole Team, data unavailable(c'mon guys, no secrets!)

NW Super Sport Race: Dave Green. "Minotaur", Dave Green design, 34 inch span, 306 square inches, 25 ounces. constructed of balsa, spruce, maple, basswood. K&B Superpoxy/Econocote finish. K&B 35, reworked by Green, 83/4 x 7 1/2 epoxy glass prop made by Dark Ages Racing Equipment. K&B glow plug, homemade 3 1/2 ounce uniflow tank. Pilot: Bill Varner Pit Crew: Dave Green. Timed at 96 mph in traffic.

AMA Rat Race: Dick Salter. "Yippee", Mike Hazel Design, 34 inch span, 115 square inches, 30 ounces. constructed of balsa, maple, plywood, basswood, fiberglass cloth, magnesium speed pan. K&B Superpoxy finish. O.S. 40 SR, fiberglass prop, K&B glow plug, "Randy's" 4 ounce rat race tank. Pilot: Dick Salter, Pit Crew: Glen Salter



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CUTS & KILLS



COMBAT NOTES

by: JOHN THOMPSON

WHOA! STOP THOSE ENGINE WOES

In my "Round & Round" column in the January issue of FL, I invited fliers to send in questions about model airplane topics, which I would attempt to answer. Mel Lyne of Garibaldi Highlands, B.C., took up the invitation and sent along a letter with a number of questions, all relating to Combat. Since I am also the Combat columnist, and since Editor Mike Hazel has noted that it's time for Cuts & Kills to appear in FL, I'm taking the liberty of handling Mel's questions in this column.

Since most of Mel's questions were related to engine problems, I consulted one of the Northwest's foremost Combat engine experts to help answer the questions. The answers that follow are a compilation of the knowledge of Gene and myself together. Mel's letter is in capitals, with our answers in small type.

I HAVE HAD ONE SEASON'S FLYING USING FOX .36 MKIII ENGINES IN FAST COMBAT AND I HAVE A RECURRING PROBLEM OF LEAN RUNS COOKING ENGINES. I CAN'T GET THE ENGINE TO RUN RICH ENOUGH ON THE GROUND EVEN WHEN PINCHING THE FUEL LINE. I GET ABOUT HALF A BLADDER OF GOOD RUN, THEN THE LAST HALF TOO LEAN. IN HOT WEATHER THE PROBLEM IS WORSE.

I RUN FOX .15 SCHNEURLES ON THE SAME BLADDER IN THE SAME SETUP IN THE PLANE AND THEY HOLD A GOOD SETTING RIGHT TO THE END OF THE BLADDER.

IN THE .36 ENGINES I'M USING RED MAX 40%, FOX PLUGS, TOP FLITE 8 1/2X 6 1/2 PROPS, AND A BORED OUT MARK IV CRANK. I'VE CHANGED ALL OF THESE VARIABLES ONE AT A TIME AND I'VE TRIED DIFFERENT BLADDER MATERIALS, BUT I STILL GET LEAN RUNS. BOTH .36 ENGINES HAVE BEEN LAPPED SO THEY ARE NOT TIGHT AT ALL.

I HAVE SEEN YOUR CONSISTENT RUNS THIS PAST SEASON. CAN YOU OFFER ME ADVICE?

We can offer several suggestions, but it may take further experimentation to pinpoint the cause of your problems. Probably the single most important determinant of the consistent runs you have seen in my engines, those of Gene Pape and Norm McFadden, is the McFadden pressure regulator. Bolt one of those on and learn how to use it, and your problems will be solved -- assuming there's nothing mechanically wrong with your engines. The problem is that regulators are not commercially available. However, at least two Northwest modelers have been talking of making regulators. They may become available some time in the future, probably in the \$20 to \$30 range. That sounds like a lot, but I am still using the two I got from Norm in 1980. Fliers talking about making regulators are Dave Childs, a machinist from Eugene, Ore., and Dave Green, premier racing engine man from Astoria, Ore.

But let's set the regulator issue aside, since you don't have one.

There are several possible reasons for your lean runs:

1. You may be using too much prop. The Top Flite 8.5x6.5 is normally cut to 8" for use with the Combat Special. Are you doing that?

2. It's unlikely to happen simultaneously in both engines, but have you checked for a minute crack in the piston? The symptoms you describe are exactly those of a cracked piston -- and they have been known to come that way from the factory. Such cracks also will develop during use. They are difficult to see with the naked eye, but if you disassemble your engine, wash the piston in solvent, dry it and inspect it minutely, you may see a streak of discoloration running up from the wrist pin and possibly across the top of the piston. If your engine is extremely hard or impossible to start right after one of those lean runs, the cracked piston is the prime suspect.

3. Bladder material may not be right. Try the heavy-walled stuff that comes from an RC glider fliers' Hi-Start launcher. That's the best we have found for strong pressure and a steady output.

4. What kind of needle valve assembly do you use? I've had best luck with the stock Fox slow-combat type needle. I had worst runs with a remote setup.

5. Are you using stock crankshaft timing? I've found opening up the crank's closing causes needle-setting problems with an unregulated motor. With a regulator, you can time it pretty radical without any trouble. Boring the crank, however, should not have much effect.

6. Compression ratio and the heat range of your glow plug also can cause needle-setting problems. You might experiment with those. If your engine tends to blow plugs every flight, try adding a Supertigre head gasket to reduce the compression.

AS A RELATIVE NEWCOMER TO HIGH-ZOOT COMBAT LAST YEAR, I AM STILL EXPERIMENTING WITH THE EQUIPMENT SO I'M GOING TO ASK YOUR ADVICE ON A COUPLE OF OTHER THINGS. (I FLEW MOST OF MY COMBAT 20 YEARS AGO WITH .15 DIESELS AND OS MAX-H ENGINES.)

IN SLOW COMBAT, I COULDN'T GET THE FOX MKIII TO SUCK WELL WITH ANY VENTURI CONFIGURATION. I'VE NOW GOT A FOX MARK V. AFTER LAPPING IT IN, WHAT CAN I DO TO GET MORE POWER OUT OF IT. THE OBVIOUS SOLUTION WOULD BE TO BORE OUT THE CRANK TO .360" AS THE MK IV CRANK. DO YOU HAVE ANY MARK V EXPERIENCE TO DRAW ON?

Improving the seal between the venturi restrictor and the inner wall of the venturi will have a marked effect on the Combat Special's ability to draw fuel. Leakage around the restrictor can be plugged with gasket material, for example. You'll be surprised at the improvement.

Tanks are obviously also a key factor. The best system may be the non-pressurized balloon or bag type tank that has emerged in the past two or three years. Take a look at Dick Salter's equipment for an example.

In regard to making the Mk V run like a Mk III or IV, Gene Pape opines that if you match the port timing and compression ratio to the earlier versions, the performance should be nearly equal.

FAI COMBAT OR .15 COMBAT IS MY FAVORITE, BUT TO BE REALLY COMPETITIVE YOU NEED NELSONS OR THE EQUIVALENT. ONE NELSON ENGINE WITH THE EXCHANGE RATE NOW COSTS ALMOST \$300 CANADIAN. THREE OF THESE WOULD DO THE JOB, BUT SINCE I'M NOT A ROCKEFELLER, I'M LOOKING FOR SOMETHING A LITTLE (LOT) LESS PRICEY.

CIPOLLA ITALIAN ENGINES SEEM TO BE WIDELY USED IN EUROPE AND THEY ARE NOW AVAILABLE IN THE U.S. AT ABOUT \$60 U.S. FOR THE .15 AND \$70 FOR THE .36. THE LATEST MACA NEWSLETTER HAS THEM ADVERTISED. THEY SEEM TO BE VERY LIGHT WEIGHT AND HIGH RPM. CAN YOU TELL ME ANYTHING ABOUT THEM? ARE THEY REAR-EXHAUST, FRONT INTAKE?

Sorry, we have no info on the Cipollas except that we are eager to find out a little about them ourselves. We recommend writing to Doc Passen, the distributor, at the following address for information: Motori Cipolla Combat, 608 West Main St., Jasonville, IN 47438. It might be worth also inquiring of Fox Manufacturing Co. about the latest news on their reported 1986 version of the Combat Special, which we assume will be called the MkVI.

ONE LAST QUESTION FOR YOU. THE NEW HIGH-RPM ENGINES ALL HAVE DESIGNATIONS SUCH AS ABC, AAN, AAC, FSR. I UNDERSTAND THESE REFER TO PISTON/LINER AND OTHER COMPONENT MATERIALS. COULD YOU DO AN ARTICLE ON THESE DESIGNATIONS EXPLAINING THEM AND WHAT BENEFITS THEY HAVE, ONE VS. THE OTHER?

A quick course from Gene Pape:

The FSR designation doesn't really fit with the others. It is an OS Max designation for their front-intake Schneurle engines.

The ABC, AAC and ASN designations all are the result of efforts to develop a liner that would expand at the same rate as the piston. As you know, an aluminum piston with a steel sleeve needs a ring because of the different expansion rates.

ABC indicates the engine has an aluminum piston with a chromed brass liner. AAC indicates an aluminum piston with a chromed aluminum liner. AAN indicates an aluminum piston and a nickel-plated aluminum liner.

ABC was the first attempt to achieve the equal growth rates, in view of the fact that it is hard to stick chrome to aluminum. AAC provides the equal expansion and is a little lighter. AAN occurs because nickel is easier to stick to aluminum than chrome.

Performance is pretty similar for all three. Obviously, chrome provides excellent wear for the parts.

I'D BETTER CUT OFF NOW BEFORE YOU LOSE PATIENCE READING THESE REQUESTS. I BET YOU'RE THINKING, "THESE CANADIANS LIVING IN THE BACK WOODS ARE TECHNOLOGICALLY DEPRIVED."

Nobody who is technologically deprived could formulate such excellent questions. You're thinking about the guy who comes up, watches a flight, and then asked if they're "remote controlled."

P.S.: I FORGOT TO MENTION THAT YOUR FLYING LINES HAS BEEN A TREAT TO READ THE PAST YEAR. A BIG HAND FOR YOU, YOUR STAFF AND MIKE HAZEL, THE NEW FLAG-BEARER.

PPS: I'M LOOKING FORWARD TO SEEING YOU AT SOME MEETS IN '86. YOUR "UNDERTAKER" PLANE LOOKS DECEPTIVELY LARGE AND A LITTLE SLOW, BUT YOU REALLY GET THE JOB DONE WITH IT! I SAW YOU KILL NORM McFADDEN TWICE LAST SEPTEMBER AND I STILL DON'T KNOW HOW YOU DID IT.

Neither does Norm, and if we find out, I'm not telling him!

But seriously, I'm a believer that it is more important to match the plane to the pilot than it is to have the absolute fastest airplane. The Undertaker's main strengths are that it is absolutely pilotable...that is, the pilot flies the plane, and not the other way around. Some of the "ultimate" airplanes are a bit beyond their pilots much of the time.

The Undertaker is a little slower in straight-ahead speed than some planes because of its fat airfoil and relatively mild taper, which both are among the factors contributing to pilotability. On the other hand, it plane does not slow down in turns when properly trimmed, giving it sometimes an element of deceptive quickness in a closely fought match.

Recognizing differences in individual preferences, I pointed out on the MODEL AVIATION article on the Undertaker that it is a "concept" plane. Such factors as straight-ahead speed could be adjusted to taste by experimentation with different wing panels on the same fuselage assembly, without damaging the good performance habits (within limits). Bill Varner is trying some Pape Underdog cores -- a move which I think will virtually equalize performance with the best of the foam planes. If you haven't seen it, the Underdog (very similar to the Undertaker except for wing shape and some lightening tricks) is about the best combination of speed and turning ability I've ever flown. My recommendation for the best of all worlds is to combine the simplicity of the Undertaker construction with your favorite wing for your style of performance.

When you've hit upon the right combination for your own piloting skill, and then added a couple of years of heavy-duty practice, you'll find yourself frequently meeting the ultimate goal of all Combat fliers -- putting the prop in the string! It's the all-time model flying high!

Before signing off for this edition, I'd like to invite Combat fliers to write me their favorite tricks, tips, opinions and observations. Since my own flying nowadays is mostly combined to Fast and 1/2-A, I'd especially like input for the column on Slow and FAI Combat.

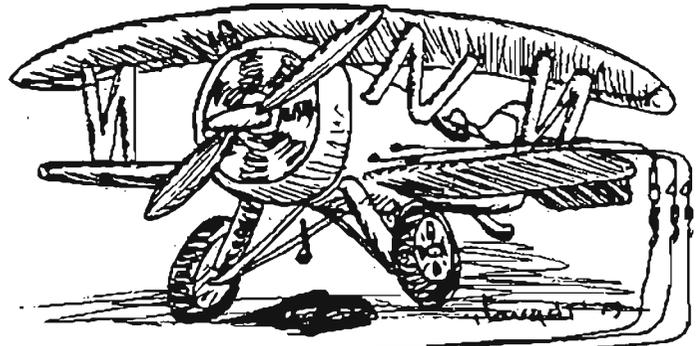
Like, for example, how about an article from you FAI fliers on the care and feeding of that money tree you all have in your back yards. Come on, now, admit it, you're not supporting that habit on a normal salary!

--John Thompson, 1505 Ash Ave., Cottage Grove, Ore. 97424.

CONTROL LINE

SCALE

by orin humphries



SCALE PAIL

Columns shouldn't be just for veteran modelers, I think, and in my humble opinion, FL tries pretty hard to meet the needs of the new-comers, too. Toward that end we have the following. There's just an awful lot of basic information that new-comers need, and since we tend to be relatively isolated from each other this is a good place for basics. In this past year I have found both a new man and an old hand who had a gap in their knowledge about fuel tanks, so no one is immune, I guess. Yep, this month we're talking

TANKS A LOT

(yer welcome)

The most basic fact that everyone must be aware of and keep foremost in the mind is that a fuel tank is a two - condition device. What is true inside the tank while stationary on the ground is one thing. What's happening in there while airborne is quite another. Stationary. That's a silly word. Who ever wrote their Mom on an old fuel tank? Moving right along...let me illustrate this with the problem a fellow had with his scale model last year.

He had a tank made by Perfect, one which I use very often. It comes with two vent pipes near the front, neither of which penetrates the interior of the tank to speak of; they terminate just inside the surface. The tank in this model was oriented with the vents on the outboard edge at the top. On the ground everything seemed fine. There was a little fuel syphoning, which was cured by plugging one vent after filling. The trouble came when he tookoff. The model never ran long enough to finish the ten laps necessary to qualify in a contest. The engine stopped after five or six laps, but it was neither flooded nor lean/hot. What was the problem, do you suppose?

In the air, the model is flying in a circle, and inertia stacks the fuel up against the outboard side. It is no longer laying flat on the bottom. The trouble this man had was that the fuel was dumping out through the vents while flying because of the fuel being piled against the outside of the tank. The proper orientation for the tank is where the vents are long the inboard edge. This way the holes will be in the air space "above" the fuel whether on the ground or flying. The fuel most commonly is at an angle steeper than 45 degrees in flight.

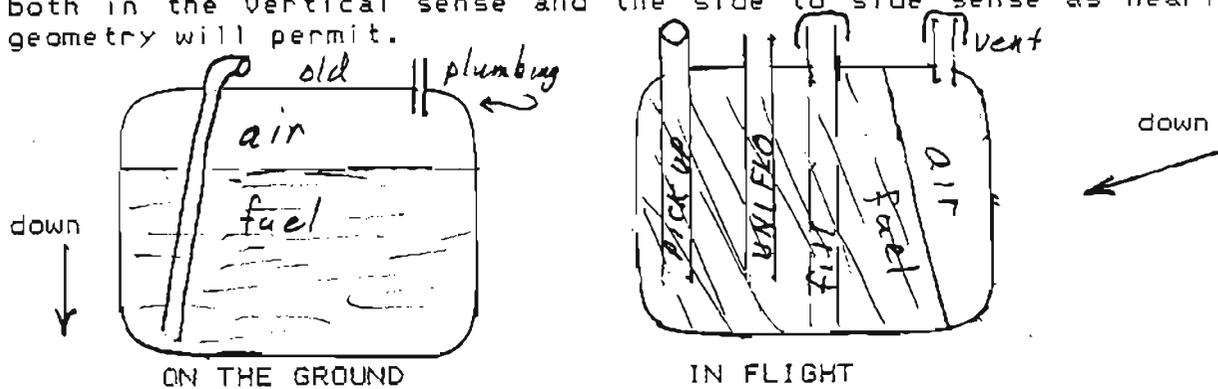
Another chap complained of his engine going from rich to lean throughout the flight in a slow, continuous fashion. A glance at his tank revealed that he was using a wedge - shaped tank, popular some time ago (the wedge is no longer recommended). Why do you suppose the mixture changed from start to finish?

On the ground there was a small distance from the surface of the fuel to the mouth of the fuel pickup pipe. and the model could run steadily for some time. Here, "down" is in the usual, gravitational sense.

Airborne, however, there is a new "down" defined by the combination of inertia and gravity, and the fuel is stacked along the outer edge, as we said. Hence, there is a relatively large distance from the surface of the fuel to the pickup pipe. As the fuel load burns off, this distance decreases. There is a mild pressure in the fuel at all points, increasing from where ever the surface of the fuel is toward the "bottom", where ever that is. This pressure is called, "fuel head". The fuel head decreases, changing your mixture, throughout the flight as the fuel burns off.

To minimize this, you first need to select tank shapes that are narrow from inboard to outboard sides. You may further minimize this by relocating the filler pipe to the aft end, for starters. You then put in a new pipe at a place that is about 1/4" inboard and 3/8" forward of the pickup and by then plugging the filler and vent pipes so the replacement air has to enter through the new pipe. This arrangement is called a uniflo tank that you may have read about.

Finally, you need to have your fuel pickup even with your spraybar both in the vertical sense and the side to side sense as nearly as your geometry will permit.



Call or write me for further clarification. Now go write your Mom on your old wedge tank and get a properly shaped one.* See ya.
 Orin Humphries, N. 5208 Elgin, Spokane, WA99205, 509-325-9773

* tank, that is...yer Mom's shape's okay (awright,awright.. I'm goin')

THE FLYING FLEA MARKET

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FREE: Flying Flea Market Ad placements for all FL subscribers. For personal use only----no business ads accepted.

MISTAKE TURNS STATISTICIAN GREEN WITH SORROW, RUBS SALTER IN WOUNDS

Yes, fliers, the FL 1985 statistician has the whole omelet on his face.

Due to what shall be recorded as a typographical error, the wrong "Mr. Competition" was congratulated in the January edition of Flying Lines.

Glenn Salter was definitely one of the cream of the flying crop in 1985, but not "Mr. Competition." That honor goes again to Dave Green, who scored 118 points to lead all of the 82 fliers who placed in 1985 contests.

A mischievous "1" hid in front of the "85" in Glenn Salter's score, making it look like he had 185 points, when in reality he had 85. That's still good enough for fourth place on the overall competition standings list for 1985.

To set it straight, the top of the list should look like this:

OVERALL COMPETITION (137 contests, 748 entries)

1. Dave Green	Astoria, Ore.	118
2. John Hall	Puyallup, Wash.	100
3. Mel Lyne	Garibaldi Hghlnds, B.C.	95
4. Glenn Salter	Seattle, Wash.	85
5. Dick Peterson	Renton, Wash.	82

Our apologies to all who were misled. As far as we know, there are no other errors.

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R O U N D & R O U N D

By John Thompson

I'm still shocked.

There's no other way to describe my reaction when fliers were called to a huddle during Drizzle Circuit Contest 2 in Portland Jan. 12. I had no idea what was coming.

The occasion was a presentation of gifts to me and my family in recognition for my seven years of editing Flying Lines.

The gifts were fabulous. A beautiful clock and pen trophy, inscribed "In appreciation -- John Thompson, Flying Lines editor -- 1979-1985." A \$125 gift certificate to Eugene's Toy & Hobby. And, best of all, a \$100 bill for the other members of my family, who made the biggest sacrifices during my term.

This is my opportunity to say thanks to all of you for your generosity and your recognition of my efforts -- even if it was a little bit sneaky to surprise me like that!

I've said before that model aviation is one of the few endeavors where hard work is not thankless. This applies to overall coordination efforts like Flying Lines, to contest work or whatever. Every time I've ever done anything of that sort, there always have been many modelers quick to say thanks. It think that is only one of many indications that control-line model aviation attracts a specially fine breed of people.

It's also worthy of note again that Flying Lines has never been a one or two-man operation. It's always been a team effort. I enjoyed my part, and I'm still enjoying the smaller part I continue to play on the newsletter. It continues to be a labor of love.

Once again, let me urge everyone out there to play a part in the Northwest communications network. Your current editor, Mike Hazel, still needs help in a variety of areas. Pitch in where you can and take some of the workload off his shoulders, and the newsletter will thrive.

Again, thanks for your kind recognition.

WING TIPS

BEAR MODEL PRODUCTS has just come out with what may be the finest all-CL product catalog yet published. Bear seems to have firmly established itself as a fine CL mail supplier. Though originally and primarily a Combat company, BMP now is a complete CL outfitter. A full line of both Bear and major manufacturers' kits, engines, accessories, props, hardware, plug and battery supplies, fuel items, lines, building supplies, coverings, glues and tools are included. There even are combat/stunt CL-style kites and a good supply of Free-Flight goodies. A discontinued merchandise clearance page lists lots of never-to-be-available-again items at bargain basement prices. How about a Sterling Ruffy, for example, or several old Sterling Carrier kits? And lots more. Send a picture of George Washington to Bear Model Products, 2709 Turtlecreek Drive, Hazel Crest, IL, 60429, and tell him FL sent you.

YOURS TRULY HAS been elected (kidnapped, hijacked, held hostage) to preside over what may be the last Eugene regionals -- certainly the last at the current Mahlon Sweet Airport site. As you recall from previous reports, the 20-year-old Prop Spinner Field will be dug up for an expansion of the airport this summer. A new field is now being planned, but it may not duplicate the lost facilities. Then again, it may.

Anyway, the point is that our hope this year is for a Regionals to End All Regionals -- the biggest and best in terms of participation and hoopla. If it's not the last Eugene regionals, it won't be wasted -- we'll retroactively rename the going-away party as a celebration of its continuation, or something.

As usual, the West's biggest CL contest takes a special region-wide effort. Several of the event directors and workers already are signed

up, but I'm looking for lots more help. Please contact me soon if there's any way you might be able to assist.

WELCOME TO THE Northwest, Bob Hoffman. Bob is a Southern Californian who trekked all the way to Portland for the January Drizzle Circuit contest. He combined the trip with some family visits, but brought along a plane for Northwest Sport Race. His carrying box had the letters "Drizzle Circuit or Bust" on the back for all his fellow motorists to see. He made it all the way, and it was no bust, as he had a couple of enjoyable races.

EXCITEMENT IS BUILDING for a great 1986 flying year, with such highlights as the Canadian National Championships (Vancouver, B.C.), the Regionals (Eugene, Ore.), the Raider Roundup (Kent, Wash.) and all the other contests big and small.

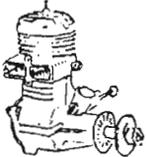
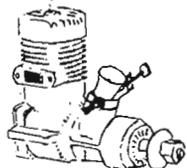
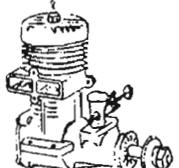
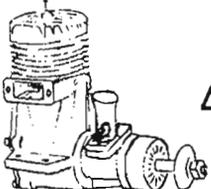
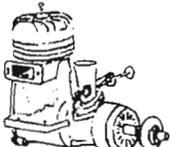
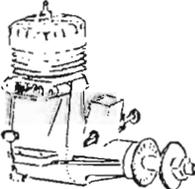
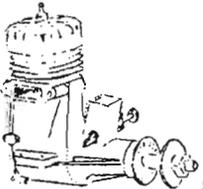
AND YES, I really am working on that Stunt plane. Got the wing about half done. And I'm thinking up a name. Since it's a Fancher derivative, I've been through all the possible unused 'ations. Tarnation, Constipation, Salutation, Degredation, etc. Rich Porter suggests Irritation. I guess that would be with big Rs: iRRitation. Then maybe it could be a descriptive name: Snail's Pace, or Warpmobile, or Lead Sled, or (optimistically) Feather Duster.

I need help on this one.

See you at the pilot's meeting.

--John Thompson, 1505 Ash Ave., Cottage Grove, Ore. 97424.

♥♥♥ FOX LOVES CONTROL LINE FLYERS TOO ♥♥♥♥

 <p>FOX 15X</p> <p>The lightest weight lowest cost 15 you can buy. Ideal for Streak Trainer, Ringmaster Jr, etc. This little gem has been finding favor with control liners everywhere for 25 years now. Priced at only \$24.95</p>	 <p>FOX 35 STUNT</p> <p>In 1949 this motor started winning control line contests, and has been at it ever since. In 36 years nobody has been able to improve on its easy starting and reliable control line performance. Same quality that has made it a legend — Still only \$37.95</p>	 <p>FOX 19BB</p> <p>This remarkable state of the art motor has to be one of the easiest starting, nicest running 19's ever produced. Super hot restarts too. Not advertised as C.L. but available from the factory on request. Specify pressure or Suction Intake \$49.95</p>	 <p>FOX 25</p> <p>Lighter weight than even our Stunt 35, but has about equal power. Smaller displacement makes use of smaller line size legal. You will like flying this one. Priced at only \$27.95</p>
 <p>FOX 40BB COMPACT</p> <p>A bored out version of our famous Combat Special. Really hauls. Our special iron piston gives exceptional hot restarts. Only \$44.95</p>	 <p>FOX 45BB</p> <p>Built like a Combat Special but a little larger. Suitable for large stunt and scale models. Not a listed product but available on special order. For only \$64.95</p>	 <p>FOX EAGLE III 60 Side Exhaust</p> <p>Has the power to fly heavy scale models. You had better have a strong arm however. On special order. Priced at \$84.95</p>	 <p>FOX 15BB</p> <p>1982 Worlds Champion Combat. By far the best Combat 15 you can get for under \$100.00. 2 ball bearings. mehanite piston. Priced at only \$39.95</p>
 <p>FOX 29BB</p> <p>A sleeved down version of our famous Combat motor. Hot restarts like no aluminum piston motor. Mehanite piston. Leaded steel cylinder. Alloy crankshaft. Only \$44.95</p>	 <p>FOX 36BB</p> <p>Successor to the famous Fox Combat Special. Interchangeable with MK III and MK IV except case and crankshaft. The most competitive combat motor you can buy today. Priced at \$44.95</p>	<p>ATTENTION DEALERS: Due to low sales volume, many of these items will have to be obtained directly from the factory. Call 501-646-1656</p> 	

NORTHWEST COMPETITION STANDINGS

Standings for 1986 began to develop in January with Northwest Sport Race Contest 2.

Flying Lines keeps track of the performances of Northwest Control-Line model aviators in sanctioned AMA/MAAC Northwest competitive events. Information about the scoring system and printouts of complete standings are available from the acting statistician, John Thompson, at 1505 Ash Ave., Cottage Grove, Ore. 97424. SASE, please.

Top fliers in events in which standings have been established for 1986, as of Jan. 30, are:

NORTHWEST SPORT RACE (1 contest, 10 entries)

1. Beers-Cole Racing	Vancouver/Portland	10
2. Dave Green	Astoria, Ore.	9
3. S&S Racing Team	Seattle, Wash.	8
4. Glenn Salter	Seattle, Wash.	7

NORTHWEST SUPER SPORT RACE (1 contest, 7 entries)

1. Dave Green	Astoria, Ore.	7
2. Beers-Cole Racing	Vancouver/Portland	6
3. John Thompson	Cottage Grove, Ore.	5
4. Dick McConnell	Seattle, Wash.	4

RAT RACE (1 contest, 2 entries)

1. Dick Salter	Seattle, Wash.	2
2. Dave Green	Astoria, Ore.	1

OVERALL RACING (3 contests, 19 entries)

1. Dave Green	Astoria, Ore.	17
2. Beers-Cole Racing	Portland/Vancouver	16
3. S&S Racing Team	Seattle, Wash.	8
4. Glenn Salter	Seattle, Wash.	7
5. John Thompson	Cottage Grove, Ore.	5

NW COMPETITION RECORDS

RECORD PERFORMANCES ESTABLISHED BETWEEN NORTHWEST MODELERS IN SANCTIONED COMPETITION

The January Northwest Sport Race Drizzle Circuit contest resulted in two racing records being swept away.

Dave Green nipped eight seconds off the Northwest Super Sport Race best record with a 3:29 time. The old record of 3:37 was held by Dick Salter.

The Beers-Cole Racing Team, Greg Beers and Steve Cole, clipped four seconds off the Northwest Sport Race feature race record with an 8:53. The old record of 8:57 belonged to the S&S Racing Team, Dick and Richie Salter.

Dick Salter got back on the board by turning the first official Rat Race feature time since the 10-percent nitro rule took effect -- 5.38.36.

Flying Lines keeps track of the best performances of Northwest control-line fliers in AMA-sanctioned contests (or MAAC-sanctioned contests using AMA rules), and in Northwest regional events. Here are the complete records as of Jan. 30:

MOUSE RACE I 50-lap: 2:35 (Knoppi-McCollum)	100-lap: 5:08 (Knoppi-McCollum)
MOUSE RACE II 75-lap: 3:54 (John Thompson)	200-lap: 9:21 (Bill Varner)
GOODYEAR 70-lap: ---	140-lap: ---
SLOW RAT 70-lap: 3:56 (Dave Green)	140-lap: 8:03 (Dave Green)
RAT RACE 70-lap: ---	140-lap: 5:38.36 (Dick Salter)
TEAM RACE 100-lap: 3:51 (Knoppi-McCollum)	200-lap: 7:49 (Knoppi-McCollum)
NW SPORT RACE 70-lap: 4:03 (Henry Hajdik)	140-lap: 8:53 (Beers-Cole Team)
NW SUPER SPORT 70-lap: 3:29 (Dave Green)	140-lap: 7:45 (Dave Green)
HALF-A SPEED: 88.2 mph (Paul Wallace)	FAI SPEED: 158.98 mph (Scott Newkirk)
HALF-A PROTO: 83.63 (Paul Wallace)	FORMULA 21: 79.54 (Rich Salter)
A SPEED: 181.56 (Chris Sackett)	FORMULA 40: 152.28 (Scott Newkirk)
B SPEED: 184.57 (Chris Sackett)	JET SPEED: 194.73 (Chris Sackett)
D SPEED: 170.71 (Mike Hazel)	PROFILE NAVY CARRIER: 232.5 (Bob Parker)
	CLASS I NAVY CARRIER: 311.1 (Rick Wallace)
	CLASS II NAVY CARRIER: 323.7 (Loren Howard)

AIRMAIL



COMMENTS, NEWS , and VIEWS from FL READERS

Dear Mike,

I sure had a swell time at the Drizzle Circuit race on Jan. 12. All of you were sure nice to me. This was especially true as everyone was willing to help me get into the air (shorter lines, etc.) and offers to lend me an engine when my #1 engine locked up. Wish I could live up that way.

I've since talked to Roy and Greg Beers, and Steve Cole by phone this past week. They are going to help me round up some supplies so I can do better and go faster next time. I've since been to the two largest hobby shops in San Jose. There is practically no control line stuff at all. At Sheldon's- no CL engines, and he is closing out his CL kits, and at D & J (hobby shop supermarket) no CL engines, no CL kits, no 4-40 bolts and on it goes. So, you guys are lucky up there.

Please find enclosed my subscription, check and ad for Flying Lines. Please start with the Feb. 86 issue, just in case you mentioned me attending the contest. Also, enclosed is a snapshot of you and John Thompson. I'll be sending John his snapshot shortly. Will be sending movies to Roy Beers shortly.

I'm a student at San Jose State Univ, (returning senior after 20 years) so I've got to go study. Happy Landings,

..... Robert Hoffman (California Bob) 24 Eastern Dr. Watsonville, CA 95076

(editor's note: Thanx for the pix! Now go check out the photo page.)

Dear Mike,

Enclosed is my FL renewal. Good thing you reminded me or I'da got left out in the cold!

You might want to tell your readers that they can save a few bucks when subscribing to Aeromodeler by buying it through AMA Supply & Service. Also, it takes a couple of months for all the paper shuffling and currency exchanging! I agree, it's an excellent mag! Sincerely,

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

Dear Mike,

Have enclosed a check for \$12 for 1986 Flying Lines. You all do a great job. Keep up the good work.

..... Frank Williams, 710 Silverpines, Houston, TX 77062

Dear FL,

The airbrush has arrived- now I have to start practicing to live up to that headline in FL Jan. '86! Thank the Thompson daughters drawing team -must of been an error, I'm 46 and never won a raffle before! Am really glad to support FL- this is really gravy!

Don't feel too bad about the prize going to California- I'm a second generation Oregonian from Brookings Hi and Oregon State! Sincerely,

..... Gerald Myers, Po Box 284, Redway, California 95560

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Mr. Mike Hazel
Flying Lines
1073 Windemere Dr. N.W.
Salem, OR 97304

Jan. 24, 1985

RECEIVED JAN 27 1986

Dear Mike,

Thanks you for your thoughtful letter. With similar good intentions to shine light on my way, I receive several other newsletters--tho they are much more than that. I have wondered what the trouble is--for the past few years in fact, and I think I may have isolated some root cause.

I know there is much misunderstanding. First, I have always known that there is healthy CL activity. I have done CL myself and raised kids on Trixter profile, Firecats, Ringmasters, etc, and we had fun. We never flew in meets. One of my early designs was in the pioneering stage and Wagner will tell you he picked up from it things for the Chief. My ship is an approved Oldtimer. For fun, however, I did, and published, things like a Ford Tri-motor with two free wheelers, the tiny Infant Forty Niner also, etc.

Another point, I do not say you guys don't have fun. We all have fun doing whatever pleases us. There is a distinction. I am talking of fun planes, not fun activity. The different, the sport, configurations, experiments, the novel--whether huge or tiny, etc. Scale perhaps. Don't people enjoy such things anymore? I am not supposed to talk much about contests, meets, etc. The general reader can't see the difference between many stunters--which look alike to him, almost cast in a mold. We know better, but that's a problem. And combat? There is more novelty there sometimes, in shapes and materials.

I'd even talk about a guy's building pleasures. No one in CL ever writes me anything, shall we say, impressionistic, inspiring, poetic, feeling. If I can show people just enjoying themselves outside of a contest, on their own, with buddies, and old reliable fliers, etc. I'd have some chance of tempting outsiders who don't give a damn, frankly, to see an avenue of pleasure, such as exists in some other branches of our hobby. If I talk like this, you guys fight me, criticize me, kick me in the nuts if you can understand, and I vanish in discouragement. I even published a delta stunter of my own--and I did those things in "mechanical/science" mags reaching millions. For special things, the mag has columnists for Speed, Stunt, Scale, Combat. Isn't that enough for serious stuff? For God's sakes can't anyone show me anything for the masses--in CL?

Don't anybody write a constructive letter - p. x too? Why do I miss some thing - no preaching no stunting

JUST NEW!!!

Publish this, OK

Dear Mike,

I want to put forward an idea. There is no doubt that it will be an unpopular idea. What is it, you ask? We can learn from the R/C folks.

Every month I give, at least, a quick reading of nearly every column in Model Aviation. You find out all kinds of neat things from the other columns. New ways of doing things or neat new fun things to do. For instance, Bob Hunt had great article in his Project Pattern series about stenciling detail on a model. Now, before somebody jumps on me, Bob has a stunt heritage. How many people would avoid the article just because it was about an R/C airplane? Here is the point. Bob has done the experimenting, and found out which contact paper works best, how long to leave it on, etc. We have a saying in the computer business, "Why reinvent the wheel?".

The President of the local R/C club flies mostly R/C gliders. He is a corporate pilot and started with C/L modeling. His son flies stunt with our club and is pretty good. Anyway, at one of our annual "Just For The Heck Of It - Let's Have Fun" rubber powered/hand-launched glider contests, we were discussing how to get the two clubs (C/L & R/C) to work together and get more people into the hobby. He proposed an interesting thought. There are not too many "real modelers" anymore. There are many people who are highly skilled at their particular event. How many are able to enjoy many phases of the hobby? Neither way is wrong. They are just different. Seems to be true around here. How about other parts of the country.

We are very fortunate in our area. We have two very active clubs, two kit manufacturers, and two of the best stocked hobby shops I have ever seen. Not bad for a town of 40,000 with unemployment pushing 15%. We are also fortunate in that the two clubs help each other. Our C/L group provides some man power to run winches and retrievers for the annual 2 day glider meet. They in turn provide help to judge and run our annual stunt/combat contest. Without our wives, daughters, sons, and 6 or so R/C types, there would be not Skywinders Fall Classic.

There is another big plus that comes out of this showing of help. We all gain an appreciation for other aspects of the hobby. I don't know how many times I heard, "Wow, that's neat" or "I didn't know you could do that with control line planes" from our R/C friends.

Now, I'll grant you that not all R/C folks are like these guys. There is division within their own club even. I guess to make an already very long story even longer, I'm saying don't close your minds, eyes, and ears just because somebody flies R/C. Open up, you might learn something. Who knows, they may learn something too.

Well Mike, thanks for the soapbox. Good luck as Flying Lines editor. You have a job ahead of you.


Bob Rogers
Contest Director
Skywinders M.A.C.

P.O. Box 236
Mendon, IL 62351
January 11, 1986

CANADIAN NATIONAL MODEL AIRPLANE CHAMPIONSHIPS



EVENT	WHERE	SAT. 19th	SUN. 20th	MON. 21st	TUE. 22st	WED. 23st	THUR. 24st
CONTROL LINE	RICHMOND CIRCLE A	REGISTRATION		R, R Spd F-40	NW Sport Fast Rat	Scale Carrier 15 C'bat Sl. C'Bat	Stunt Fast-Combat

ENTRY PROCEDURES

I ADVANCE ENTRY: by mail using enclosed forms. **Deadline:** all advance entries must be received no later than June 13 1986, payment included. Acknowledgement will be sent by return mail. Mail entries received later than June 13 1986 will be held for the sender at the central registration desk, and they will not be eligible as advance entries, but will be treated as late entries.

Instructions: Complete both copies of the enclosed entry form and mail to:

THE REGISTRAR, 1986 Nationals,
4214 - W. 15 AVE.
VANCOUVER, B.C. V6R 3A6

including the required entry fees. Events entered on arrival, but not included in your advance entry, will be treated as late entries.

Acknowledgements: will be mailed to you including half of the double entry form herein.

II LATE ENTRY: Is entry in person at the contest - not having completed Advance Entry requirements. Must be done at "Registration" times indicated on the timetable.

Report to the main National Headquarters or the appropriate Flying Site at times indicated in the Timetable of Events. Registration at Boundary Bay Field.

III REGISTRATION: must be confirmed for any event entered, upon arrival in the city.

Proof of membership in M.A.A.C. or A.M.A. is required. M.A.A.C. memberships may be purchased at the site.

R/C - D.O.C. or F.C.C. license must be shown and number recorded.

IV PROCESSING: in some events, planes are to be submitted for inspection for safety, processing or judging. Where the timetable indicates processing or judging, be sure to have your plane on the line.

V FEES: consist of a **Basic Entry Fee** plus individual **Event Fees**. Each contestant must pay one **Basic Entry Fee** regardless of the number or types of events entered. In addition to the **Basic Entry Fee**, each contestant will pay on **Event Fee** for each event entered (including the first event entered). The schedule of fees is shown on the entry form.

EXAMPLE: If you decide to enter three R/C events and two C/L events, your total advance fee would be \$50.00 as follows:

BASIC ENTRY FEE.....	\$25.00
3 R/C Events @ \$5.00 each.....	\$15.00
2 C/L Events @ \$5.00 each.....	\$10.00
TOTAL	\$50.00

VII MISCELLANEOUS:

- For R/C Pylon events, there will be a maximum of 25% of the contestants per frequency, on a first-come, first-served basis. For other R/C events, a maximum number of contestants per frequency may be necessary, at the Event Director's discretion. R/C contestants are expected to use the frequencies they show on the advance entry form. Changes to frequencies will be allowed or refused at the discretion of the Event Director. Notification of frequency changes should be sent to The Registrar as far in advance as possible. We will try to accommodate everyone.
- All contestants must be current members of M.A.A.C., A.M.A. or another modeling organization recognized by F.A.I.
- If sufficient entries have not been received in advance, any event will be cancelled and fees refunded.
- Awards will be given to first, second and third place in each event. Championship awards will be presented according to the category requirements. Awards will be presented at the completion of each event at the site of the event.

RULES: For all events at the 1986 Nationals, rules are available upon request from M.A.A.C., Box 9, Oakville, Ontario L6J 4Z5, Telephone (416-844-8764).

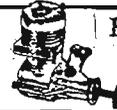
Rule Book Description:	Cost
R/C Scale Rule Book	\$4.00
R/C Pylon Rule Book	\$4.00
R/C Pattern Rule Book	\$4.00
R/C Soaring Rule Book	\$2.50
R/C Helicopter Rule Book	\$4.00
Free Flight Rule Book	\$2.50
Control Line Rule Book	\$2.50



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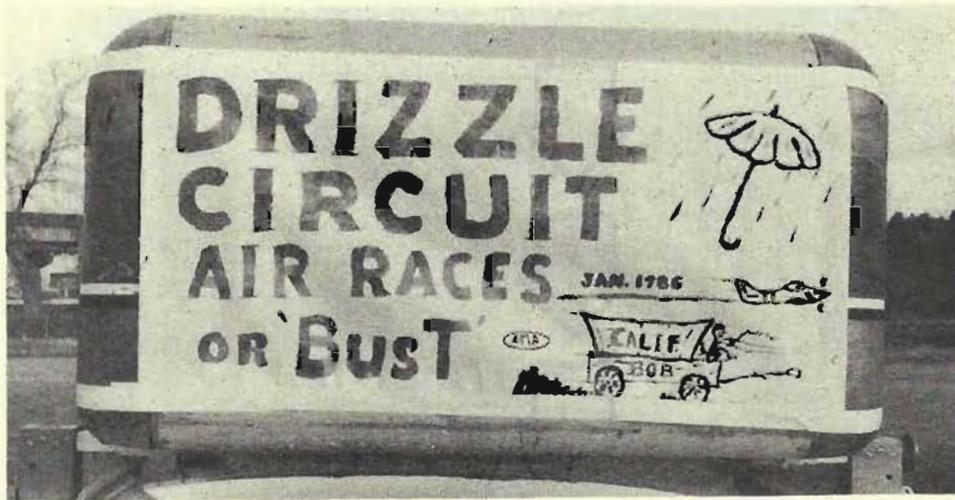
- Motel and hotel brochures will be sent to out-of-town advance entrants. It is advised that reservations be made well in advance.
- Contestants' helpers are allowed in the pit area. They must wear identification.
- Motorized retrieval of free flight models will not be allowed within field limits.
- Any one model may only be flown by one competitor and in no way transferred to another entrant, except control line combat.
- Fly-offs will be held in all pattern events. To qualify for all fly-offs the total of the scores for your best three rounds will be used. Winners of the fly-off will use their best two scores of three rounds.
- Combs prepared to fly safely and to avoid shooting other competitors down. Remember to TURN YOUR TRANSMITTER OFF. Most shoot downs are caused by forgetting to switch off.
- Transmitters will be impounded and released only with the proper frequency pin. Anyone flying without a frequency pin may be disqualified.
- Under M.A.A.C. rules a back up plane may be flown but it must be your own and subject to M.A.A.C. rules for the event.
- With the exception of mornings first events, all contestants should be available one hour in advance of scheduled event times. It is all contestants responsibility to make themselves available to fly when required, otherwise they will miss the opportunity.
- Back up planes for Pylon must be on the same frequency as the first plane.
- Free flight & Control Line. Muffler rules will be waived.
- Aircraft exceeding MAAC Sport Scale Specifications in weight and or engine displacement will be eligible for giant scale.

WHERE THE ACTION IS

CONTESTS and EVENTS THAT ARE COMING UP

Listed below are the Northwest control Line model aviation events known to FLYING LINES. If you or your organization is sponsoring an upcoming event, contact FL now! Two months advance notice is absolute minimum for guarantee of publication. All events listed here are sanctioned by AMA or MAAC unless otherwise noted. All sanctioned events are open to all AMA members unless otherwise noted.

- FEB 9 -----PORTLAND, OREGON-----
NW Sport Race Drizzle Circuit Meet #3
Events: NW Sport Race, NW Super Sport
Race, 1/2A Combat Site: Delta Park
CD: Gene Pape
- FEB 16-----RICHMOND, BRITISH COLUMBIA ---
Vancouver Gas Model Club Racing Series
Event: NW Sport Race Site: Richmond
Field CD: Chris Sackett(604)299-4500
- FEB 23 -----SEATTLE, WASHINGTON-----
Seattle Skyraiders Beginners Day.
All beginners welcome to fly the club
trainers, receive help on trimming,
engine starting, etc. Site: Carkeek
Park Contact: Dave Mullens, 15559
Palatine Ave. N. Seattle, WA 98133
- MARCH 9 -----PORTLAND, OREGON-----
NW Sport Race Drizzle Circuit Meet #4
Events: NW Sport Race, NW Super Sport
Race, NW Sport Combat Site: Delta
Park CD: John Thompson (503) 942-
7324
- MARCH 16 -----SEATTLE, WASHINGTON-----
Seattle Skyraiders 3 X 1
One plane and engine used to fly NW
Super Sport Race, Stunt, and Balloon
Bust. Trophies for first place in each
category and through third place for
best overall. Site: Carkeek Park
Fee: \$5 Contact: Dave Mullens
15559 Palatine Ave N. Seattle. WA 98133
- APRIL 6 -----RICHMOND, BRITISH COLUMBIA--
Vancouver Gas Model Club Racing Series
Event: NW Sport Race Site: Richmond
Field CD: Chris Sackett (604)299-4500
- APRIL 13 -----PORTLAND, OREGON-----
NW Sport Race Drizzle Circuit Meet #5
Events: NW Sport Race, NW Super Sport
Race, AMA Slow Rat Race. Season
trophies awarded. Site: Delta Park
CD: Wayne Spears
- APRIL 20 -----PORTLAND, OREGON-----
NW Control Line Speed Record Trials
Events: All rule book speed events.
Site: Delta Park CD: Mike Hazel
(503) 364-8593
- APRIL 26-27 ---SPANAWAY, WASHINGTON-----
Bill's Hobby Town Spring Tune-Up
Events: 1/2A Combat, Fast Combat, Slow
Combat, Precision Aerobatics (four
classes), Old Time Stunt, Combined
Scale, Carrier
Contact: Dave Mullens, 15559 Palatine
Ave. N., Seattle, WA 98133
- MAY 4-----RICHMOND, BRITISH COLUMBIA---
V.G.M.C. Spring Opener
Events: "33-1/3", NW Sport Race,
Profile Carrier Site: Richmond Field
CD: Chris Sackett (604) 299-4500
- MAY 23-25 -----EUGENE, OREGON-----
NW Regional Control Line Championships
Events: RACING: Rat, Slow Rat, Mouse I,
Mouse II, Goodyear, NW Sport Race, NW
Super Sport Race, COMBAT: 1/2A, FAI,
Slow, Fast PRECISION AEROBATICS;
Four PAMPA classes, Old Time Stunt
SCALE: AMA precision, Profile
SPEED: 1/2A, A, B, D, FAI, Jet, Form 40
NAVY CARRIER: Profile, Class I, Class II
& BALLOON BUST Trophies and merchand-
ise awarded thru third in all events.
Largest CL meet on the West Coast
Site: Mahlon Sweet Airport (Eugene)
CD: John Thompson, 1505 Ash Avenue
Cottage Grove, OR 97424 (503) 942-
7324
- JUNE ?? -----ASTORIA, OREGON-----
CLAM-bash 1986
Details to be announced. Contact:
Dave Green, 200 W. Franklin, Astoria,
OR 97103
- JUNE 21-22 ----RICHMOND, BRITISH COLUMBIA---
Northwest Control Line Speed Champs
Events: All classes of Speed Site:
Richmond Field CD: Henry Hajdik
(604) 526-9554
- JUNE 28-29 -----REDMOND, WASHINGTON-----
Bladder Grabber XI
Event: AMA Fast Combat Details to
be announced. Contact: Howard Rush,
8817 NE 137th, Kirkland, WA 98033
- JULY 13 -----KENT, WASHINGTON-----
Seattle Skyraider's Boeing Air Fair
Stuntathon. Details to be announced
- JULY 20-26----VANCOUVER, BRITISH COLUMBIA---
Canadian Nationals
Events: Formula 40, Record Ratio Speed,
Fast Rat Race, NW Sport Race, Combined
Class I & II Carrier, Profile Carrier,
Junior Stunt, Open Stunt, .15 Combat,
Slow Combat, AMA Fast Combat, Sport
Scale. Note: Pre-entry date is June 13.
Contact: Mr. Brian Dalling, 4214-W,
15 Ave. Vancouver, BC V6R 3A6
- AUGUST 30-31---VANCOUVER, BRITISH COLUMBIA---
V.G.M.C. Internats--Tentative
- SEPTEMBER 6-7---KENT, WASHINGTON-----
Raider Roundup/Washington State Champs
Details to be announced Contact:
Dave Mullens, 15559 Palatine Ave N.,
Seattle, WA 98133



California Bob drove this Drizzle Circuit "billboard" hundreds of miles up I-5 to get in on the NWSR action.



In the "driver's" seat: (l to r)
John Hall, Greg Beers, Bill Varner



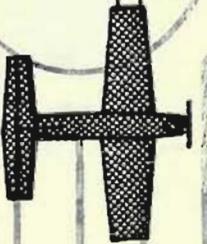
Glen Salter is releasing brother Dick's Fast Rat entry. This was first rat flown since 10% nitro was implemented last summer.

Dick McConnell launches his
K&B powered Super Sport



February 1986

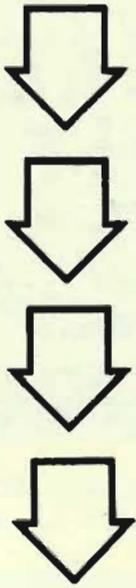
FLYING LINES



1073 WINDEMERE DRIVE NW
SALEM, OREGON 97304

6 FEB 1986 PM
OR 973

6 FEB 1986 PM
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