

FLYING LINES

NEWS OF NORTHWEST CONTROL LINE MODEL AVIATION

1073 WINDEMERE DRIVE NW
SALEM, OREGON 97304

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MAY - JUNE 1987

ISSUE NUMBER 82/83 (double issue)

Like Wow! Inside this issue:

- 1987 Regionals
- 1987 Drizzle Circuit Summary
- Round & Round by John Thompson
- Updated Records and Standings
- Airmail from the FL Readers
- Contest Calendar
- Stunt by Paul Walker
- Scale by Orin Humphries
- Photos, and more.....

NORTHWEST REGIONALS 87

CONTROL LINE MODEL AIRCRAFT CHAMPIONSHIPS
MAY 22-23-24 EUGENE, OREGON



COCKPIT CHATTER



NOTES FROM THE EDITORS' DESK

Greetings! At long last, here is your Regionals issue. As promised in the last issue, this one is a biggie! Because of the cost and effort required to get out this one, please note that it is being treated as a double issue. The next issue will be out after the Nationals, probably around the first week in August.

One bit of business that needs to be taken care of is the condition of the FL bank account. Long time FL readers may get tired of hearing about this, sorry 'bout that! Your subscription fee and the nominal amount of advertising (paid) does cover the cost of the actual printing and distribution of the rag here in your hot hands. However, it does not take care of many miscellaneous overhead expenses. This includes photo costs (film and developing), layout paper, layout adhesive and other equipment, cost of FL correspondence, stationary, and other nickel and dime items.

Some of these items are not expensive, but they do add up. If the FL funds are low, guess who pays for them out of pocket? To get FL out to the readership, ye olde editor is willing to sacrifice only one of the following: 1. time 2. money. Take yer choice.

Oh yes, we could raise the rates, but I consider that a last resort. I would rather see the rates held down to help keep the readership up, and then do some fundraiser activities on the side. I do believe that means it is time for the.....FLYING LINES RAFFLE!!!!

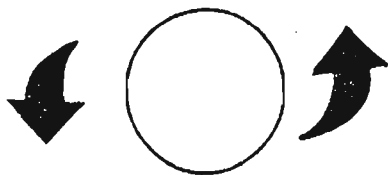
Uh, the only problem is that we ain't got nuthin' to raffle. Soocoo, that's where the generous and loyal FL reader can help out. In the past, we have such items as kits, engines, spray paint outfits, etc., generously contributed. So now we are looking forward for some generous donor to give us something like an expense paid trip to the Nats, a machine shop, or perhaps a five year supply of custom RIF fast combat planes! If we don't receive a significant single prize, (okay, maybe something smaller), then let's try a different angle, and perhaps have several smaller prizes so that we can have multiple winners.

Okay folks, here's where you come in. If you have something that would be suitable, either send it or give me a call. Raffle tickets can then be sold, with prices dependent upon what the pot has to offer. By the way, FL headquarters phone number is (503) 364- 8593.

Lots of stuff in this issue, let's get reading.....

FLASH!.....

It was announced at the NW Regionals that the Propspinners flying site would soon be no more after many years of use. It is now history.... the site is now gone. A new site will be constructed later this year to replace. News just came that due to some changes necessary in the airport plan, the new site will be even better than originally anticipated. Are you ready for this?..... How does three paved circles and six grass circles grab ya? That's the plan! A parking area, fenced in perimeter and all of those circles will add up to one of the very best flying sites for CL in the nation. I can't wait! Oh yea.....



ROUND & ROUND

By: John Thompson

REGIONALS REFLECTIONS...

Outside of the Nats, there's just no other contest quite like it. As the contest season approaches, everyone has his or her own mixture of eager anticipation and apprehension, especially those charged with responsibilities in the huge kickoff meet. We look forward to it with great joy, but we worry...will everyone show as usual; will everything get done; will the weather cooperate; how on earth will we find the energy to do all the work of preparing for the contest itself and our own competitive effort. And then it rolls around, ever miraculous.

It hits me Thursday night, or, as this year, Thursday afternoon. Cruising up the freeway toward the field to lay out the combat circles, I'm on my way to do work. But, arriving at the field, it turns into THE REGIONALS. There they are -- the early arrivals. License plates from Alberta, Utah. The sound of model airplanes. Yes, this is it!

They came again this year, 74 strong; and everything got done. The field was better than ever. The weather had its ups and downs but the competition was great.

Racing was up! Stunt was an all-time record entry! Speed and carrier were strong! Scale and profile scale were about normal. Combat was down -- the money contests clearly were showing the down side of their contribution to the hobby. Everything else was the usual pure excitement. When that jet hit 196mph late Sunday afternoon, the spectators found out what that day of burp-burp-burp was leading up to.

We won't get into results in this column, other than the big result -- the 1987 summer contest season got under way with a bang! When the contestants gathered round that huge table of merchandise and that array of 99 trophies, there were nothing but smiles.

Perhaps the biggest smiles were shown when the announcement was made that the 20-year-old Mahlon Sweet Airport field in Eugene will be replaced by autumn with an all-new CL site, including two asphalt circles and three grass circles. Planning already is under way for the 1988 Regionals.

It'll be on a new site, but we guarantee -- that same old magic.

RAMBLINGS FROM THE MAILBAG AND ELSEWHERE...

THINKIN' LINCOLN -- Don't forget the deadline for advance Nats entry is June 26. Lincoln, Neb. is an outstanding Nats site. Being centrally located in the country, it's sure to draw a good number of fliers from all over the country. There's only one contest bigger than the abovementioned Regionals -- this is it. We'll see you there.

SUPER-DUPPER BURP -- Do you know the all-time world CL speed record? It's 245 mph, set in 1971 by L. Lipinsky of the U.S.S.R. with a home-made jet, asymmetrical flying wing, one-line uncontrolled tether model. This historical note is from SPEED TIMES, the outstanding newsletter of the North American Speed Society, published the Northwest's own Chris Sackett. To join, send \$25 to NASS, Box 82294, North Burnaby, B.C. Canada V5C 5P7. Speed newsletter also has a detailed report on the hot new Hungarian Moki S-12 FAI speed engine.

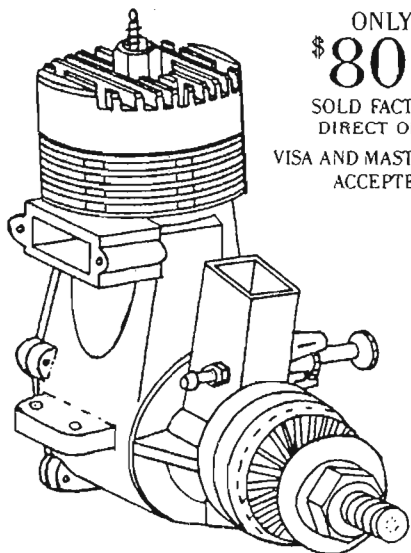
FOX COMES THROUGH -- Early problems with the pistons of the new Fox Combat Special MkVI are being made good free of charge by the Fox Manufacturing Co., which has changed the piston design. If you have one of the early ones with the ringed piston, send it in for replacement.

SPREAD THE WORD -- AMA members can donate subscriptions to MODEL AVIATION Magazine to their local schools for \$9 a year and to libraries for \$13.50.

SNAPPY -- The Vancouver Gas Model Club had a turnout of 18 airplanes in their fun fly for 1/2-A Snapper airplanes, of some 30 being built by club members. They're old designs but very good fliers and the B.C. bunch is having a lot of fun with them, reports the HOT HEAD, the newsletter of the VGMC, a CL/FF club. Club officers in 1987 are President Frank Boden, Vice President Henry Hajdik, Secretary-Treasurer Chris Sackett, FF Rep. Doug Hannay, CL Rep. Bruce Duncan and Indoor Rep. Mike Slessor. More on the Snapper contest, as we turn a page... The contest involves craftsmanship, a stunt pattern, a spot landing contest and a favorite model voting. Kits are available from Partner Products, Box 82294, Burnaby, B.C., Canada V5C 5P.

PRO COMBAT -- Fifty-three combatants turned out for the Money Mats in Los Angeles in April to compete for the \$1,000 first prize. The win went to Jim Womack of Salt Lake City, Utah, over Michael Willcox, last year's Bladder Grabber Champion. Second place was a Carver stereo receiver, third a Hoffelt .36 taken home by Mike Petri. Reports from the MACA newsletter and those from the Northwest who attended were very complimentary to the contest. MACA News by the way is looking sharp again under Editor Pete Plunkett. To join, send \$10 to Mike Urban, 316 Spring Ave., Glen Ellyn, IL 60137. That's the Miniature Aircraft Combat Assn.

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COMPLETE REGIONALS RESULTS, INCLUDING FIRST PLACE EQUIPMENT DATA, AS SUPPLIED BY THE CONTESTANT.....

PRECISION AEROBATICS - BEGINNER (7 entrants)

- 1) 284 points, Dave Royer, Portland, Oregon. "Twister", built from Sig plans. 48 inch span, 39 ounces, silk & dope finish, .015x60 lines, Magnum handle, Enya 35 engine, Zinger 10x6 wood prop, Sig RC long glow plug, RedMax 10% nitro fuel, Taffinder uniflow tank with muffler pressure.
- 2) 255 points, Carl Bumgarner, Vacaville, California
- 3) 226 points, Roy Andrassy, Calgary, Alberta
- 4) ? points, Darrel Rupnow, Federal Way, Washington (score missing)

PRECISION AEROBATICS - INTERMEDIATE (3 entries)

- 1) 365 points, Dick McConnell, Seattle, Washington. "Red One" design, (modified Combat Streak), 43 inch span, 29 ounces, Monokote and dope finish, flaps added, .015x60 lines, modified Pylon handle, Fox 35 engine, Fox glow plug, Grish 10x6 nylon prop, own 10% nitro fuel, 3½ ounce uniflow tank by John Hall.
- 2) 338 points, Terry Miller, Roseburg, Oregon.
- 3) 327 points, Bob Danielson, Seattle, Washington.

PRECISION AEROBATICS - ADVANCED (11 entries)

- 1) 449 points, Ray Mathis, Bremerton, Washington. McDonald "Stiletto". 60 inch span, 62 ounces, foam and balsa construction, dope finish, .018x70 lines, ST 60 engine, K&B idle bar glow plug, Zinger 12x6 wood prop, Sound 10% nitro fuel, own 7½ ounce uniflow tank with muffler pressure.

PRECISION AEROBATICS - EXPERT (8 entries)

- 1) 514 points, Gid Adkisson, Clovis, California (no data available)
- 2) 513 points, Don McClave, Portland, Oregon
- 3) 511 points, Randy Schultz, Seattle, Washington
- 4) 497 points, Bob Ellis, Fresno, California

OLD TIME STUNT (10 entries)

- 1) 290 points, Randy Schultz, Seattle, Washington. "Barnstormer", Fox 35 engine, dope & silkspan finish, .015x60 lines, E-2 Just handle, Zinger 9x6 wood prop, Thunderbolt RC glow plug, Redmax 10% fuel. ST needle assembly.
- 2) 283.5 points, Ray Mathis, Bremerton, Washington
- 3) 283 points, Bob Emmett, Renton, Washington
- 4) 261 points, Dave Gardner, Renton, Washington

FAI COMBAT (1 entry)

- 1) Dick McConnell, Seattle, Washington

½ A COMBAT (3 entries)

- 1) Dick Salter, Seattle, Washington. "Fantail" design, Cox TeeDee 049. pit crew; Rich Salter.
- 2) Glenn Salter, Seattle, Washington
- 3) Rich Salter, Seattle, Washington

AMA FAST COMBAT (8 entries)

- 1) John Thompson, Cottage Grove, Oregon. own "Undertaker" design. 45 inch span, 21 ounces, Foam balsa, fir construction. Fascal covering, .018x60 lines, E-Z Just hot rock handle, Fox Combat Special engine, own rework, Top Flite 8 $\frac{1}{2}$ x6 $\frac{1}{2}$ prop cut to 8 inches. McCoy glow plug, Cool Power 40% nitro fuel. bladder tank with regulator. pit crew: Bill Varner.
- 2) Phil Granderson, Portland, Oregon
- 3) Norm McFadden, Lynnwood, Washington
- 4) Mike Rule, Redmond, Washington

SLOW COMBAT (4 entries)

- 1) Dick Salter, Seattle, Washington. Granderson design "Proctologist II" Fox 36 engine reworked by Gary Byerley, TKO suction uniflow tank. pit crew: Rich Salter.
- 2) Glenn Salter, Seattle, Washington
- 3) Raul Alva, Sandy, Utah
- 4) Dick McConnell, Seattle, Washington

$\frac{1}{2}$ A SPEED (5 entries)

- 1) 87.86 mph, Loren Howard, Vancouver, Washington (no data available)
- 2) 68.72 mph, Roy Andrassy, Calgary, Alberta
- 3) 68.11 mph, Bob Boling, Richmond, California
- 4) attempt, Bob Danielson, Seattle, Washington

A SPEED (8 entries)

- 1) 167.37 mph, Fred/Joyce Margarido, Fremont, California. own "#1" design, 22 inch span, 16 ounces, fiberglass shell fuselage, basswood, epoxy construction. assymmetric wing, K&B Superpoxy finish, .020x60 monoline, Rossi 15 engine, own rework Top Flite 6x7 wood prop, K&B glow plug, own 70% nitro fuel, own suction uniflow tank.
- 2) 165.99 mph, Jim Rhoades, Salt Lake City, Utah
- 3) 161.66 mph, Ron Salo, Vancouver, British Columbia
- 4) attempt, Roy Andrassy, Calgary, Alberta

B SPEED (3 entries)

- 1) 149.94 mph, Greg Beers, Vancouver, Washington. Glenn Lee "Piped Bee" design, 24 inch span, 26 ounces. wood/speed pan construction. K&B epoxy finish. own monoline handle, OPS 29 engine, own rework, Dave Green fiberglass 7x9 prop, Fox long standard glow plug, own 70% nitro fuel, own suction uniflow tank. pilot: self.
- 2) 143.39 mph, Ron Pfingston, Vancouver, Washington
- 3) 110.61 mph, Don Chandler, Redwood City, California

D SPEED (4 entries)

- 1) 195.57 mph, Bill Nusz, Lancaster, California. own design, 30 inch span, 38 ounces, constructed from Newton glass fuselage, Nightingale pan, aluminum wings. K&B epoxy finish. own monoline handle. O.S. 65 reworked by Glen Dye. Rev-Up 9x13 wood prop, K&B glow plug, own 75% nitro fuel. own crankcase pressure uniflow tank. pilot: self
- 2) 179.39 mph, Loren Howard, Vancouver, Washington.
- 3) 171.52 mph, Fred/Joyce Margarido, Fremont, California
- 4) 169.42 mph, Greg Beers, Vancouver, Washington

JET SPEED (4 entries)

- 1) 192.64 mph, Bill Nusz, Lancaster, California. "Super Burp" design, 30 inch span, 32 ounces, basswood, balsa construction, K&B epoxy finish, own monoline handle, Dynajet engine, reworked by self, 55% nitro fuel, 9 ounce suction uniflow tank, pilot: self
- 2) 175.88 mph, Mike Hazel, Salem, Oregon
- 3) attempt, Joe Kirn, Anaheim, California
attempt, Jerry Thomas, Puyallup, Washington

FAI SPEED (3 entries)

- 1) 142.38 mph, Paul Gibeault, Calgary, Alberta
- 2) attempt, Jim Rhoades, Salt Lake City, Utah

FORMULA 40 SPEED (5 entries)

- 1) 154.31 mph, Dick Peterson, Seattle, Washington. "The Move" design by Mike Hazel. 24 inch span, 26 ounces, balsa, basswood, speed pan, fiberglass construction. K&B epoxy finish. Salter racing handle. K&B 6.5 FI, intake increased to .435 bore. Dave Green 8x8-7/8 fiberglass prop, McCoy racing glow plug, contest supplied 40% fuel, Taffinder 1½ ounce tank, pilot: Mike Hazel
- 2) 138.94 mph, Bob Howard, Vancouver, Washington.
- 3) 136.31 mph, Roy Andrassy, Calgary, Alberta
- 4) 126.91 mph, Don Chandler, Redwood City, California

AMA SLOW RAT RACE (4 entries)

- 1) 6:14.90, Vic Garner, Livermore, California. own design, balsa, basswood, maple, ply construction, fiberglass-epoxy finish. own handle, SuperTigre X36 engine by Henry Nelson, J&J fiberglass Pop's prop, Globee 1L glow plug, own 3½ ounce inboard fuel tank, fastfill, shutoff, hot glove, pilot: Bob Kerr.
- 2) 6:15.74, Gary Crawford, Concord, California
- 3) 9:08.05, Dick McConnell, Seattle, Washington
- 4) 11:17.09, Bob Danielson, Seattle, Washington

AMA RAT RACE (6 entries)

- 1) 5:13.75, Vic Garner, Livermore, California. Gillott design "Shark". 36 inchspan, 32 ounces, maple, plywood, balsa/speed pan construction. fiberglass finish. Sturdi-Built handle, ST X40 engine, own rework, J&J fiberglass Pop's prop, Globee 1-L glow plug, Gillott 4 ounce pressure tank, Gillott shutoff, hot glove, fastfill, pilot: Bob Kerr.
- 2) 5:49.42, Gary Crawford, Concord, California
- 3) 8:00.99, Roy Andrassy, Calgary, Alberta
- 4) 8:06.21, Dick Salter, Seattle, Washington

NW SUPER SPORT RACE (12 entries)

- 1) 8:26, Dick Salter, Seattle, Washington. Knoppi "Dirty Harry" design. K&B 35 engine, own rework. McCollom fiberglass prop, TKO suction uniflow tank. fastfill, shutoff, hot glove. pilot: Rich Salter.
- 2) 10:02, John Thompson, Cottage Grove, Oregon.
- 3) 10:03, Wayne Drake, Troutdale, Oregon
- 4) 3:57 heat, Jim Cameron, Bremerton, Washington

NW SPORT RACE (Sr-Op) (16 entries)

- 1) 8:33, Vic Garner, Livermore, California. Sterling Ringmaster, balsa, maple, plywood construction. Hobbypoxy finish. own handle. Fox 35 engine, Tornado 8x8 nylon prop, K&B standard plug, own 2 ounce uniflow suction tank. pit crew: Gary Crawford/Bob Kerr.
- 2) 8:58, John Hall, Sumner, Washington
- 3) 9:32, Jim Rhoades, Salt Lake City, Utah
- 4) 10:00, Dick Salter, Seattle, Washington

NW SPORT RACE (Junior) (2 entries)

- 1) 15:10, Shawn Mullens, Seattle, Washington. (no data available)
- 2) 52 laps, Wesley Mullens, Seattle, Washington

MOUSE RACE I (Junior) (0 entries)

MOUSE RACE I (Sr-Op) (9 entries)

- 1) 5:37.26, Bob Boling, Richmond, California. own "Ignatz 1B" design, 18 inch span, 7 ounces, basswood, balsa, aluminum construction. epoxy finish, E-J Just handle. Cox .049 reworked by self, Cox TD glow plug, Cox 4.5x4 plastic prop, Sheldon 50% nitro fuel. Engine intake bored with #43 drill, tank modified to uniflow vent, spring starter. pilot: Bob Kerr.
- 2) 6:13.34, Roy Andrassy, Calgary, Alberta.
- 3) 7:13.31, Dick Salter, Seattle, Washington
- 4) 2:49.22 heat, Paul Gibeault, Calgary, Alberta

MOUSE RACE II (6 entries)

- 1) 11:49.00, Bob Boling, Richmond, California. same airplane specs as Class I. pit crew: Gary Crawford
- 2) 12:34.78, Paul Gibeault, Calgary, Alberta
- 3) DQ-overrun, Ron Salo, Vancouver, British Columbia
- 4) 9:26 heat, Jim Cameron, Bremerton, Washington

GOODYEAR (7 entries)

- 1) 6:26.59, Vic Garner, Livermore, California. Scoville Star Duster design by Bill Lee. 22.8 inch span, balsa, basswood, maple, plywood construction. fiberglass epoxy finish. own handle. Rossi 15 engine, reworked by self. J&J fiberglass Pop's prop, special Nelson glow plug, contest supplied fuel, own 3 ounce pressure tank with quickfill, shutoff, hot glove, pilot: Bob Kerr.
- 2) 7:24.00, Gary Crawford, Concord, California
- 3) 7:33.61, Paul Gibeault, Calgary, Alberta
- 4) 8:45.19, Joe Armstead, Redwood City, California

CLASS I CARRIER (6 entries)

- 1) 306.3 pts Roy Beers, Vancouver, Washington. Wildcat, balsa construction, 26 ounces, K&B epoxy finish, K&B 40, Perry pump, Rev-Up 9x7 wood prop, Fox idle bar glow plug, 25% nitro fuel.
- 2) 294.5 pts Dave Shrum, Roseburg, Oregon.
- 3) 274.6 pts Bob Danielson, Seattle, Washington.
- 4) 204.06 pts Terry Miller, Roseburg, Oregon

CLASS II CARRIER (4 entries)

- 1) 329.96 pts, Orin Humphries, Spokane, Washington. Sterling Corsair, 35 inch span, 52 ounces, balsa construction, epoxy finish, G-S handle, Super Tigre 61 with Perry carburetor and Robart pump. Master Airscrew 11x7 $\frac{1}{2}$ prop, Rossi R-5 glow plug, Sig 35% nitro fuel, own 5 ounce tank.
- 2) 318.54 pts, Roy Beers, Vancouver, Washington
- 3) 298.6 pts, Bob Danielson, Seattle, Washington
- 4) 241.01 pts, Wayne Spears, Portland, Oregon.

PROFILE CARRIER (13 entries)

- 1) 224.14 pts, Bob Danielson, Seattle, Washington. Guardian, (scratch built), Fox 36
- 2) 210.80 pts, John Hall, Sumner, Washington.
- 3) 204.91 pts, John Thompson, Cottage Grove, Oregon
- 4) 199.97 pts, Terry Miller, Roseburg, Oregon.

BALLOON BUST (OPEN) (20 entries)

- 1) 1148 pts, Dick Salter, Seattle, Washington. own Foamstreak, Oliver .21 diesel engine, TKO suction uniflow tank.
- 2) 949 pts, Dave Mullens, Seattle, Washington.
- 3) 553 pts, Dick McConnell, Seattle, Washington
- 4) ? Glenn Salter, Seattle, Washington.

BALLOON BUST (JUNIOR) (5 entries)

- 1) score n/a Mark Levings, Veneta, Oregon Sterling Hellcat, 42 inch span, epoxy finish, McCoy 35 engine, Tornado 10x4 nylon prop, Fox standard glow plug, K&B fuel, Perfect 4 ounce suction tank.
- 2) " " Wesley Mullens, Seattle, Washington
- 3) " " Walter Sweet, Eugene, Oregon
- 4) " " John Rupnow, Federal Way, Washington.

NEW CONTEST

SKYRAIDER SUMMER BASH

NEW CONTEST

JULY 25

We had so much fun at the last contest where we had just two events, we thought we would try it again. The events are: Balloon Bust, two rounds, scores will be the average of both rounds combined. We will run the same type of B-bust we have been. A barrier, five targets with five scoring passes. No bonus points for military scale. There will be an award for the highest placing military scale entry. The second event will be Sport Combat. A sport type airplane with a minimum 300 sq. inch wing with a fuselage and normal type rudder and elevator. Flitestreaks, Ringmasters, etc. Fox .35 STOCK stunt engine on suction the only engine allowed. Trophies through second place in each event. Entry fee, \$5.00. Contest Director, Dave Mullens 365-5436

The contest will be at Carkeek Park, flying begins at 9:30. At this time of the year we will have to put a barrier around the entire flying area to control the pedestrian traffic. Dick McConnell will be the combat director and Dave Mullens will direct the B-busters.

NW COMPETITION RECORDS

RECORD PERFORMANCES ESTABLISHED BETWEEN NORTHWEST MODELERS IN SANCTIONED COMPETITION

As usual, the NW Regionals saw a couple of records set to update the following summary. Loren Howard pushed up his own D Speed record, and Orin Humphries took the Class II Carrier slot from Wayne Spears.

We also have a new NWSR heat time of four minutes flat, set by Bruce Duncan at the April 12 meet in Richmond, B.C.

MOUSE RACE I	50-lap:	2:52	(Mike Hazel)	100-lap:	6:33	(Mike Hazel)
MOUSE RACE II	75-lap:	3:40	(Dave Green)	200-lap:	11:49	(Dave Green)
GOODYEAR	70-lap:	4:22	(Clarence Bull)	140-lap:	9:02	(Clarence Bull)
AMA SLOW RAT	70-lap:	3:56	(Dave Green)	140-lap:	7:14	(Dave Green)
RAT RACE	70-lap:	2:40	(Dick Salter)	140-lap:	5:46	(Dick Salter)
TEAM RACE	100-lap:	3:48	(Knoppi-McCollum)	200-lap:	7:49	(Knoppi-McCollum)
NW SPORT RACE	70-lap:	4:00	(Bruce Duncan)	140-lap:	7:47	(Henry Hajdik)
NW SUPER SPORT	70-lap:	3:14	(Dave Green)	140-lap:	7:03	(Dave Green)
1/2-A SPEED:	88.20 mph	(Paul Wallace)	FAI SPEED:	172.33 mph	(Chuck Schuette)	
1/2-A PROTO:	83.63 mph	(Paul Wallace)	FORMULA 21:	79.54 mph	(Rich Salter)	
A SPEED:	181.56 mph	(Chris Sackett)	FORMULA 40:	154.84 mph	(Dick Peterson)	
B SPEED:	187.66 mph	(Chris Sackett)	JET SPEED:	194.73 mph	(Chris Sackett)	
D SPEED:	179.39 mph	(Loren Howard)				
PROFILE NAVY CARRIER:	232.5	(Bob Parker)				
CLASS I NAVY CARRIER:	318.3	(Roy Beers)				
CLASS II NAVY CARRIER:	329.96	(Orin Humphries)				

NW REGIONALS RECORDS

No less than eight new best scores and one tie were posted at the 1987 NW Regionals in Eugene. This record section honors only times set at this particular meet, and includes any entrant.

PROFILE CARRIER:	Bob Parker, Renton, Washington	226.3	(1986)
CLASS I CARRIER:	Roy Beers, Vancouver, Washington	306.3	(1987)
CLASS II CARRIER:	Orin Humphries, Spokane, Washington	329.96	(1987)
1/2A SPEED:	Dave Williams, Yorba Linda, Calif.	128.43	(1985)
A SPEED:	Frank Hunt, Merced, California	171.20	(1985)
B SPEED:	Frank Hunt, Merced, California	187.87	(1986)
D SPEED:	Bill Nusz, Lancaster, California	195.57	(1987)
JET SPEED:	Chris Sackett, Burnaby, B.C.	192.64	(1982)
	Bill Nusz, Lancaster, California	192.64	(1987)
F40 SPEED:	Dick Peterson, Seattle, Washington	154.31	(1987)
FAI SPEED:	Chuck Schuette, Vancouver, Washington	157.87	(1986)
SLOW RAT:	Vic Garner, Livermore, California	6:14.90	(1987)
FAST RAT:	Vic Garner, Livermore, California	5:13.75	(1987)
GOODYEAR:	Vic Garner, Livermore, California	6:26.59	(1987)
MOUSE I:	Bob Boling, Richmond, California	4:52	(1986)
MOUSE II:	Bob Boling, Richmond, California	10:52	(1986)
NW SPORT RACE:	Vic Garner, Livermore, California	8:33	(1987)
NW SUPER SPORT:	S & S Team, Seattle, Washington	8:05	(1986)

NW COMPETITION STANDINGS

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

First of all, apologies are in order to the competitors who may find their names not in place as expected in the following summary. Some of the season totals fell through the cracks at FL headquarters. Only some of the event overall totals are listed here. We'll get caught up in the next issue. The following totals include all meets through May, except the Ukie Tune-up in Richmond on the 17th.

OVERALL CARRIER 4 contests, 29 entries

1)	Bob Danielson	24
2)	John Hall	15
3)	Terry Miller	13
4)	John Thompson	11
5)	Roy Beers	10
6)	Bob Parker	5
	Orin Humphries	5
	David Shrum	5
9)	Darrel Rupnow	2
	Wayne Spears	2

OVERALL COMBAT 7 contests, 32 entries

1)	Glenn Salter	21
2)	Dick Salter	14
3)	John Thompson	8
4)	Phil Granderson	7
5)	Norm McFadden	6
	Bob Danielson	6
7)	Dave Pellerin	5
	Mike Rule	5
9)	Bill Varner	4
10)	John Hall	3
	Randy Schultz	3
	Rich Salter	3

PRECISION AEROBATICS 6 contests, 46 entries

1)	Dave Mullens	28.5
2)	Randy Schultz	25
3)	Ray Mathis	16.5
4)	Ralph Cooney	15
5)	George Mickey	14
6)	Jason Huntress	13
7)	Jack Pitcher	12
8)	Don McClave	10.5
9)	Dave Royer	7
10)	Darrel Rupnow	4

OVERALL RACING 23 contests, 177 entries

1)	Dave Green.....	67
2)	SHT Team.....	61
3)	Dick Salter.....	48
4)	Jim Cameron.....	45
5)	Bob Danielson.....	29
6)	Wayne Drake.....	25
7)	S & S Team.....	24
8)	Dick Peterson.....	20
9)	Marty Higgs.....	18
10)	Ron Salo.....	17

OVERALL SCALE 2 contests, 10 entries

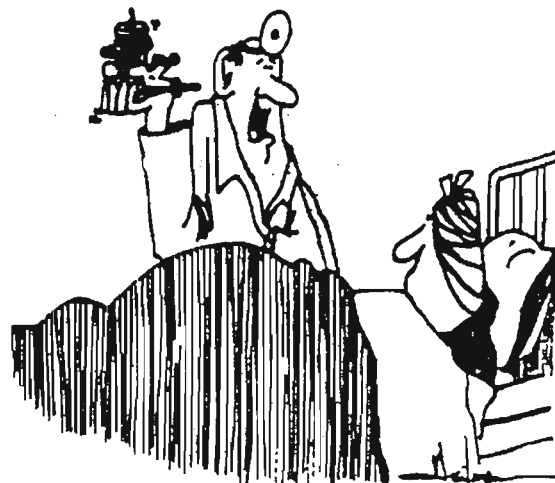
1)	Dave Mullens	10
2)	Bob Danielson.....	8
3)	Randy Schultz.....	5
4)	Wes Mullens.....	1

SPEED (combined) 7 contests, 25 entries

1)	Loren Howard	7
2)	Dick Peterson	4
	Greg Beers	4
4)	Bob Howard	3
5)	Mike Hazel	2
	Ron Pflingsten	2
	Ron Salo	2
8)	Bob Danielson	1
	Jerry Thomas	1

FOR SALE: Flying Lines back issues. Fill in the gaps of your FL library. Singles \$1 each. Four or more @ 50¢. Issues available:

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57	60	61	62	64	65
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74	75	76	77	78	79
80	81				



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WANTED: Monoline handle, complete or pieces. Jeff Cleaver, 454 Four Corners Road, Port Townsend, WA 98368

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HELLO! Any control line flyers in the tri-state area of Huntington, WV, Ashland, KY, Ironton, OH, call George Mitchell (614)894-4481

WANTED: Following kits, or good ready-builts: Berkeley AJ-1 Savage, 5BC Helldiver, A-12 Shrike, P6E Sterling P-38, Spitfire Stunt, Guardian, Polish Fighter, Consolidated Twin Terror, MewGull. Veco Chief, Brave. John Kelinske, Jr. 1312 Bomar, Houston, TX 77006

WANTED: SuperTigre G-21 .40 engine, excellent to NIB., Rear ball bearing ST G-15 front intake engine. Also Kelly fiberglass props: 8x7, 8x8, 9x7. Gabe Manfredi, 601 NW Selvitz Rd, Port St. Lucie, FL 34983

FOR SALE: ST 60 NIB \$75, Fox 25 used \$10, Fox 19RC NIB \$15, Sterling Monocoupe \$15, Sterling Waco SRE \$15, Goldberg Voodoo partially built \$5. Gerald Schamp, 931 Calapooia SW, Albany, OR 97321

WANTED: 1967/68 British Aero-modeler Annual. Mike Hazel % Flying Lines

NORTHWEST 1987 CONTROL LINE SCHEDULE

JUNE 27/28 ---RICHMOND, BRITISH COLUMBIA-----

Northwest CL Speed Championships
Events: All classes CL Speed
Site: Richmond field Sponsor: Vancouver Gas Model Club CD: Henry Hajdik, 1629 London St., New Westminster, B.C. Canada V3M 3C8 (604) 526-9554

JUNE 27-28 ---KENT, WASHINGTON-----

Bladder Grabber
Events: AMA Fast Combat (triple elims) \$7,000 in prizes. Site: Boeing Space Center-Kent. Sponsor: Carver Corp. CD: Howard Rush, 14321 SE 63rd St., Bellevue, WA 98006

JULY 11-19 ---LINCOLN, NEBRASKA-----

1987 AMA Nationals
For info send SASE to: Academy of Model Aeronautics, 1810 Samuel Morse Drive, Reston, VA 22090
Advance entry deadline: June 26

AUGUST 2 ---RICHMOND, BRITISH COLUMBIA-----

VGMC Sport Racing Series #4
Events: NW Sport Race, 15 Sport Race
Site: Richmond field Sponsor: Vancouver Gas Model Club CD: Henry Hajdik, 1629 London St., New Westminster, B.C., Canada, V3M 3C8 (604) 526-9554

AUGUST 15-16---KENT, WASHINGTON-----

Rapid Richard's Record Ratio Meet
Events: All classes of Speed, Carrier Class I, Carrier Class II, and AMA Endurance. Site: Boeing Space Center Sponsor: Dick Peterson, Po Box 78388, Seattle, WA 98178

SEPT 5-6 ---RICHMOND, BRITISH COLUMBIA-----

43rd VGMC Internats
Events: Precision Aerobatics (2 classes) 15 Combat, Balloon Bust, 15 Sport Race, NW Sport Race, Record Ratio Speed, Profile Carrier, Class I & II Carrier
Site: Richmond field Sponsor: Vancouver Gas Model Club CD: Chris Sackett, Box 82294, North Burnaby, B.C. Canada V5C 5P7 (604) 299-4500

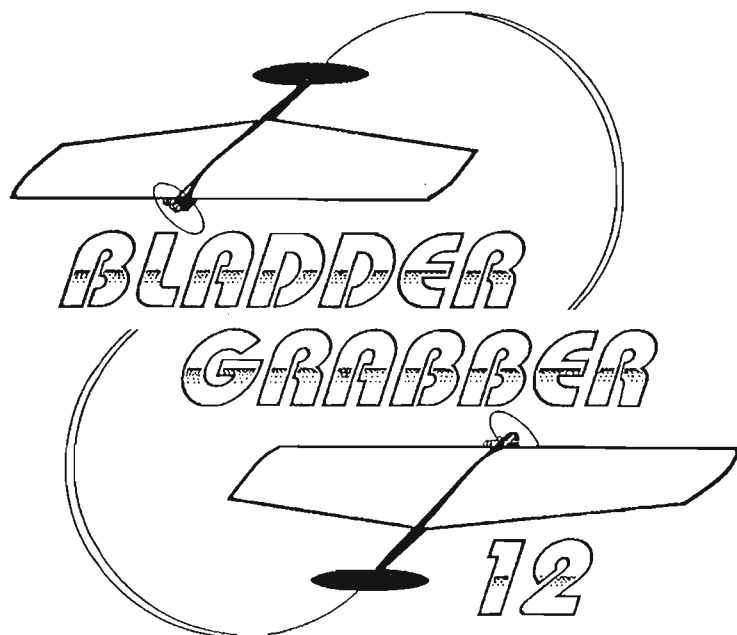
SEPT 19-20---KENT, WASHINGTON-----

Washington State Championships
Events: Combat: 1/2A, AMA Slow, AMA Fast, Racing: Mouse I, Mouse II, NW Sport Race, NW Super Sport Race, Sport Gdyr. Carrier: Profile, Class I & II Profile Scale, Sport Scale, Balloon Bust, Precision Aerobatics (4 PAMPA classes) Old Time Stunt, Record Ratio Speed
Site: Boeing Space Center-Kent Sponsor: Seattle Skyraiders CD: to be announced Skyraider contact, 15559 Palatine Ave N. Seattle, WA 98133

OCT 4 ---RICHMOND, BRITISH COLUMBIA-----

VGMC Sport Racing Grand Finale
Event: NW Sport Race
Site: Richmond field Sponsor: Vancouver Gas Model Club CD: Henry Hajdik, 1629 London St., New Westminster, B.C., Canada, V3M 3C8 (604) 526-9554

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INFORMATION: CHRIS SACKETT 299-4500

AIRMAIL



COMMENTS, NEWS , and VIEWS from FL READERS

Dear Flying Lines,

The first of three Northern California AMA sanctioned CL meets was held in San Mateo on April 12th, 1987

We had a total of 106 entries. Most Northern California meets are W.A.M. sanctioned only, but 3 or 4 a year also have AMA sanctions, since several events are flown by both organizations.

The next AMA meet is the 7th annual Speed and Race Day on June 28th, at Foothill College in Los Altos. The third meet is on August 23rd in San Mateo. The speed and race meet has 3 asphalt circles. San Mateo has 4 asphalt and 3 grass circles.

.....Don Chandler (C.D.) Po Box 2932, Redwood City, CA 94062


Dear FL:

This is a follow up note about Stunt at the Regionals. It wasn't mentioned at the awards presentation but we had a record turnout for Stunt this year with twenty-eight (28) total flyers. Only through the combined efforts of a lot of people were we able to get all these people flown and be done at a reasonable hour.

I'd like to take this opportunity to thank the primary judges for their tireless and wet efforts in making their end of this thing work. Jim Parsons, Bob Parker and Bob Emmett did their usual excellent job. To make the program run smoother our able "C.D." Dave Green juggled the schedule to allow us to fly the beginner class on the sport race circle. We enlisted Don McClave and Gid Atkisson to act as judges for the beginners. With all this voluntary cooperative effort the scheduling worked out well.

Alan Resinger acted as pit boss to make sure that everybody was in the right place at the right time and was pull-tested. Last, but by no means least, my thanks to the real working crew that gets all the numbers together to put the scores on the board. Marie Bergstrom started out the rounds in the morning with Joe Dill acting as a runner. Later in the day Alice Gardner and Sarah Shults picked up these duties and carried on through the end.

As a contestant, I've had better days; as the event director, I couldn't have had a better day due to the marvelous efforts of all those people above.


Dave Gardner,
Event Director
Precision Aerobatics

04/21/87

To: John Thompson
C/L Contest Board, Dist. XI
From: Frank Williams
C/L Racing Advisory Committee, Dist VIII
Subject: Proposal CL-88-17

John:

I'd like to respond to your March/April "Flying Lines" article objecting to the prospects of CL-88-17, Quickie Rat, passing the final CLCB vote. I'd like to try to clarify what seems to be some miss-conceptions about what the event is really like.

In your column, you say, "...if there is going to be another... event...it ought to be more in line with ... those used in the Midwest, Florida, and all over the West ... rather than an event only known and flown in Texas."

First of all I can't think of Q/R as a regional event. I think of it as a revival of 1960 national rat race.

Secondly, why in the world should we base a new event on the local events you mentioned, built around an engine (the K&B .35) that hasn't been in a hobby shop in six years? In the paragraph above your thoughts on Q/R you even refer to "... the rarity of the.... venerable K&B .35...". The K&B .35 was a great motor, cheap, durable, and ringed for good starting. But its gone, and there's not a lot we can do about it. What you are proposing is what has stymied the process so far, nobody wants to give up anything, even if they have the last one in captivity that's good enough reason to keep from changing anything.

The best thing to do, we felt, was to build around the K&B 35's cousin, the K&B .40. The K&B .40's are in every shop in town as well as several other brands that fit the class definition also. Many of the parts are interchangeable with the 35, and with venturi restrictions the power can be regulated to modest racing speeds. Four years with the 40 definition in Q/R has shown the dominant motor to be the \$49.95 K&B .40.

You have expressed concern that Q/R is, "closer to rat race than it is to sport race...".

Even as we are currently running it here with a .315 venturi, which is a larger venturi bore than what I put in the proposal, that's not really true. Certainly its not Fox 35's on Shoestrings. That level of racing does need to be kept on the local level. Q/R does have enough macho appeal to attract the very best of national level racers. But it is still flyable and attainable by the average competitor.

But let's see, you quote our times as 6:25 to 6:50, which is correct for the .315 venturi, and I see in "Flying Lines" that the best NWSSR time is 7:09. So we're within about 30 seconds of your areas sport race times. Whats a good time now for rat race? Say 5:15. So we're 1:15 off of rat times. Seems to me like we're really closer to sport race than rat.

But wait a minute, all that was for a .315 venturi. I actually got so scared when I was typing up the proposal, with claims that, with our rules they could easily run 15 flat, that I put a venturi of .305 in CL 88-17 instead of the .315 that we are locally running. Bingo, there goes 20-25 seconds added to feature times. That puts us right equal to NWSSR, and a far piece from fast rat.

Regarding airspeeds, I just can't see much escalation, even when some of the national level biggies get ahold of the event. The reason for this is that we've already had national level racers pushing on the event for the four years we have had the 40 definition active. The bottom line here is that, sure they win with more regularity that the people you have never heard of, but they do it simply by having their act together, and not by sheer overpowering airspeed.

With the .315 venturi we are currently 10 mph off the 15 flat "threats from the West". With the .305 as specified in CL-88-17, I can't believe it could ever happen. But even if it did, CL-88-17 has built into it paragraph 2.2 that says the venturi will be reduced if airspeeds increase.

John, you state that "...we should try to improve the events we have and NOT add more racing events." I agree with you on that point 100%, and I tried for six years to do that. But it wouldn't work, because even though there were only a few people left flying Slow Rat, those few were not going to let go of the event. "How dare you try to obsolete my equipment!" Even if the world could get back to three up racing, they wouldn't dare consider letting go at all. "When the sport dies, at least I'll be on top.", is their attitude. So, quite frankly, the only way to slip past at least the first ballot was to propose the supplemental event, rather than to replace, as I think we both agree really should be done.

True Q/R doesn't look exactly like current sport race from other parts of the country, but it's not really as far removed as you might make it appear. It does have it's history and lineage as a 1960 rat racer.

The alternative to passing CL-88-17 is to wait another rules cycle to bring up the issue again. That puts us about a decade down the line from the time where something should have been done. Everyone complains but no one will do anything.

Three up competitive racing that will last is what we all are after. It comes in a lot of different flavors, Quickie Rat, NWSSR, Florida Slow Rat, Formula Unlimited, Big Goodyear, Midwest Sport Race, some better than others. Do something! Even if it goes the route of other events, which I think is rare, at least we get five years or so of renewed interest.

Quickie Rat is working and is a stable event. It would work I believe on a national level. Please reconsider your vote.

Thanks,

Frank Williams
710 Silverpines
Houston, TX 77062
(713) 488-1371

cc:CLCB
Flying Lines

THE DRIZZLE CIRCUIT

ROUND and ROUND In the RAIN?



The last and final installment of the 86-87 Drizzle Circuit took place on April 12th, at Delta Park. This year the season belonged to Dave Green. Going into the fifth contest, it was apparant that he was far out in front in the Super Sport class, with no chance of anyone catching up. However, in the Fox-powered Sport race, it was down to the wire.

The number five contest results can be seen in the season summary, so won't be repeated here. Also held at the final meet was AMA Rat Race. Entry was low, but it's nice to see this event held at other meets other than the Regionals to keep some interest up. The results in that event typify a day when just getting engines started will determine the placing:

1) Dave Green 6:06 2) S&S Team 6:30 3) Mike Hazel DNF

In other D.C. statistics, Dave Green ran away with all of the fast heat and final times honors:

NW Sport Race- heat 4:08 final 8:01
 NW Super Sport Race- heat 3:13 final 7:03

Guess that's it until next year. See you racers then?

1987 Drizzle Circuit Summary

Event: NW Super Sport Race

Entrant Season Points	#1		#2		#3		#4		#5	
	heat	final	heat	final	heat	final	heat	final	heat	final
Dave Green 37	4:00 3:22	9:14	3:26 3:26	7:09	4:01 5:38	8:48	5:38 3:55	7:03	3:13 4:23	7:33
S H T 26	9:06 5:16	11:32	5:08 4:29	8:55	4:26 4:14	-	4:27 4:13	11:34	3:55 3:56	9:15
S & S Team 24	5:02 4:21	-	53laps -	-	3:46 4:02	7:52	3:47 4:09	7:46	3:44 4:03	8:30
Dick McConnell 16	5:51 4:54	48laps	11:42 4:57	10:02	8:23 5:28	-	5:41 4:53	-	5:09 4:44	-
Bob Danielson 12	DQ 5:05	-	7:47 5:38	-	6:14 3:55	9:39	6:53 9:09	-	6:54 DNF	-
Jim Cameron 9	51laps -	-	5:26 5:01	-	4:15 4:42	-	4:11 6:19	-	4:44 4:06	-
George Mickey 7	7:54 6:01	-	- -	-	8:28 6:38	-	7:23 4:33	-	4:04 DNF	-
Dick Peterson 5	4:25 38laps	-	- -	-	4:56 4:29	-	4:05 4:34	-	- -	-
Wayne Drake 2	- -	-	- -	-	- -	-	- -	-	5:09 4:21	-

1987 Drizzle Circuit Summary Event: NW Sport Race

Entrant Season Points	#1		#2		#3		#4		#5	
	heat	final	heat	final	heat	final	heat	final	heat	final
Dave Green 37	4:25 4:35	89 laps	4:25 5:17	47 laps	4:14 4:41	8:45	4:32 5:10	12:16	5:47 4:08	8:01
Jim Cameron 35	4:46 4:49	10:38	5:19 4:34	11:56	5:35 6:11	-	4:34 5:14	9:57	5:00 4:45	9:48
S H T 32	4:38 5:07	10:54	4:33 7:03	9:04	4:44 4:31	9:42	7:09 5:13	-	4:25 4:24	8:46
Wayne Drake 24	5:10 5:15	10:45	DQ 49laps	-	4:44 4:28	8:53	7:52 6:11	-	4:20 5:02	11:56
Bob Danielson 23	9:26 5:43	-	4:49 4:58	11:50	5:44 5:08	-	4:56 4:48	10:17	4:45 4:56	-
Dick Peterson 19	5:55 6:24	-	4:58 5:04	-	4:41 4:32	12:44	10:13 4:35	10:20	- -	-
S&S Team 10	4:53 4:56	-	5:11 5:07	-	5:16 4:51	-	4:53 5:06	-	5:07 5:09	-
Dick McConnell 10	6:35 5:31	-	6:25 4:59	-	5:29 8:26	-	6:30 5:51	-	5:18 4:59	-
George Mickey 7	DNF 7:23	-	- -	-	7:39 6:26	-	6:58 8:35	-	5:35 5:20	-
Quentin Brown 2	- -	-	- -	-	- -	-	5:13 6:34	-	- -	-
Dan Burdick 2	5:17 5:39	-	- -	-	- -	-	- -	-	- -	-
Jason Huntress 1	- -	-	- -	-	- -	-	15laps 6:18	-	- -	-

"THIS SPACE FOR RENT"

To all businesses: Flying Lines offers 1/8, 1/4, & 1/2 page advertising space at very reasonable rates. The fee also includes the newsletter, so for not very much extra over the subscription price, you can get your message out to the CL audience. Contact the editor and request information.

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TANKS FOR YOUR PATIENCE..... Fuel tank manufacturer and FL advertiser Doug Taffinder, reports on some equipment break-down. He says that several hundred tanks are now on back-order, while awaiting equipment repair parts.

ADDRESS CHANGE..... Paul Gibeault announces his new address as: 87 Macewan Parkway NW, Calgary, Alberta T3K 1H1, Canada. Paul is a zone director for MAAC (Model Aeronautics Association of Canada), which is roughly the equivalent of an AMA V.P.

PRO SHOW..... Coming right up is the Bladder Grabber, Combat's premiere event for big bucks awards. The prizes are listed with a value of ten grand, the largest purse yet.

DATE CHANGE..... The NW CL Speed Championships were moved to the week-end of June 27/28. All speedsters are encouraged to attend this annual event.

SUB FOUR? With the NWSR record for heat time at four minutes flat, how long will it be before someone pops the bubble and crosses into the twilight zone? That's a mighty fast Fox!

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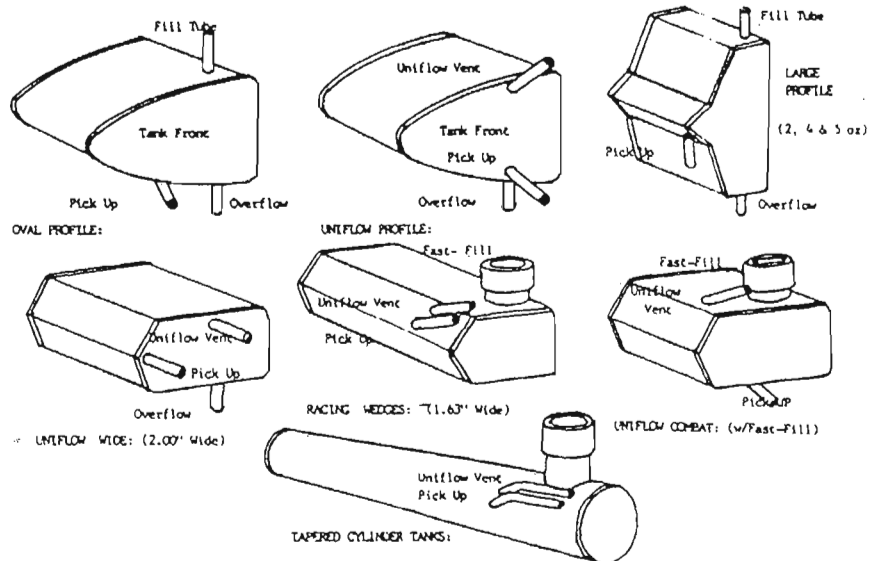
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STUNT SCENE

inverted anyone?



by: PAUL WALKER

IN SEARCH OF POWER by Paul Walker

Oh, the good ole days of stunt. One could just visit the hobby shop, lay down a few bucks and pick up a good running motor to put in your latest plane. McCoy, Veco, Fox and K&B were the tickets. Pick up a gallon of Fox Super Fuel and you were ready for some serious flying. It all brings back such fond memories. Things are not always as good as remembered. I remember also the fact that a good McCoy would last only from fifty to one hundred flights and that was it! New motor time. Also, a good lean run or two would ruin them.

Today, I hear people complaining of the lack of choice in stunt motors. In fact, it is just the opposite of this - variety abounds. Today's metallurgy is far superior to the past. My O.S. 45 FSR went 800 flights before it needed only a new ring. It then went 700 more flights until it needed a major rebuild. This can be fairly typical of modern engines. The following is a list of engines that I have used, have seen used or flown myself.

In the 35 size category are, Fox 35, old style O.S. 35, new O.S. 35 FPS, S.T. G21 35 and K&B 35. The old standard Fox 35 has been around for years. The new ones being produced these days are the most durable ones I have seen for quite a few years. The Fox does have one problem, and that is vibration. I have found it to be worse with a 10-6 more than any other prop. Unfortunately that is the very prop needed to fly a stunt plane. I have found that mounting it in a full bodied stunt ship instead of a profile takes care of most of the vibration, though I have seen some full bodied planes shake with this motor. If you must use one in a profile, use a 9-6 prop as the engine is much smoother in this r.p.m. range.

Another good 35 is one of the old style O.S. 35 stunts. If you can find one now (as they are no longer produced) they make a good stunt engine. They don't vibrate as much as a Fox but they still do a little. Putting them in a full bodied plane solves most of their vibration problems. Unfortunately these engines are also prone to somewhat short lives and replacement parts are now next to impossible to find.

Replacing the old O.S. 35 is the new 35 FPS. The metallurgy is far superior to the old 35's. This engine is a schruerle ported engine now. They run extremely smooth compared to the old engines. They also produce significantly more power. From all indications they last a long time.

Another 35 size engine is the S.T. G21-35. This engine is also no longer produced, so if you can find one remember that replacement parts are hard to come by. This engine is similar to its big brothers, the 40 and 46. It is smooth running and will generally last a long time. Its one drawback is its weight. For its size it is one of the heaviest.

Yet another 35 is the K&B, used mostly by Super Sport racers, it can be used for stunt. It does not four-cycle as good as some of the others but it is still adequate. This is another engine that is hard to find but if you do find a good one, it will last a while.

Moving up to the 40 size engines are the old style O.S. 40, the new O.S. 40 FPS, O.S. 40 FSR, S.T. G21-40 and H.P. 40. These are all smooth running (low vibration) engines.

The old style O.S. 40 is no longer in production. This is an acceptable running engine but is probably the least powerful of all the 40's. It's four-cycle capability is limited also. The engine that "replaces" it is the 40 FPS. It does not like to run with its stock muffler but one of SST's mufflers works fine. I have one of these in the stock condition and am quite pleased with it. But if you are searching for more power in this engine, send it to Art Adamison. I also have one of these and it runs very well. This modified engine is probably the best 40 around.

Another 40 that is used frequently is the O.S. 40 FSR. This motor when it is right has more power than the other 40's. Unfortunately this motor's problem is consistency. I never used one seriously because they would never keep a ring very long. Thanks, but no thanks!

Another engine that is out of production but still good is the S.T. G21-40. It is the little brother of the S.T. 46. It is a good running engine and I recommend you get one if you can find one in good shape. The replacement for this is the Bull Ring 40. It is a Schnuerle ported engine now. I have not seen this new engine run so I can't recommend it. The cousin to this engine is the Como 40. It too is Schnuerle ported and looks very much like the S.T. 40. Again I have not seen this one run.

The last 40 on the list is the H.P. 40. The only people I have seen make this work are the McDonalds (Bob and Rollie). Other people have told me that it is not as powerful as the O.S. 40. Don McClave used one several years ago and was not happy with it. I just mention this engine as it does exist and people have successfully used it but I would not recommend it to any body.

Moving up the ladder of engine sizes brings us to the 45 - 46 size. There are only two engines in this size range that I have experience with. They are the S.T. 46 and the O.S. 45 FSR. If you can get your hands on a new S.T. 46 do so. It is a good running motor that will hold together for quite a while. This engine has won many National Championships. The other engine is perhaps my favorite, the O.S.45 FSR. It is the most powerful engine used in stunt except for (maybe) the S.T. 60. In its stock form it has the same type ring as the 40 FSR, but it seems to last longer for some reason. It also four-cycles better. The ones that I used for so long were modified though. The stock rings were replaced with Garner Dykes rings and the sleeves were chromed by Henry Nelson. In this configuration this engine lasted 1500 patterns on just 2 rings. The bad news is that Vic Garner no longer provides this service. Since then I have set it up in the A.B.C. configuration and it runs just the same as the good ringed one. This engine comes right out of the box and into a plane. Just add on SST muffler and you are in business.

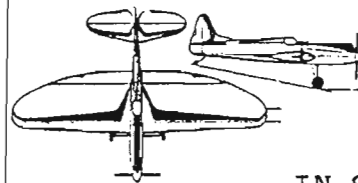
The last engine is the S.T. 60. It is the only 60 that is useable that I have seen. This engine runs very well in its stock form. I have used one for 2 years without a problem. The only bad characteristics they have is that they vibrate. If you don't build your plane stout it will shake it to pieces.

In summary there are three engines I would recommend. They are the O.S. 40 FPS, O.S. 45 FSR (ringed or A.B.C.) and the S.T.60. These engines combine the best in running, durability and the ability to run out of the box. Good luck and good choosing.

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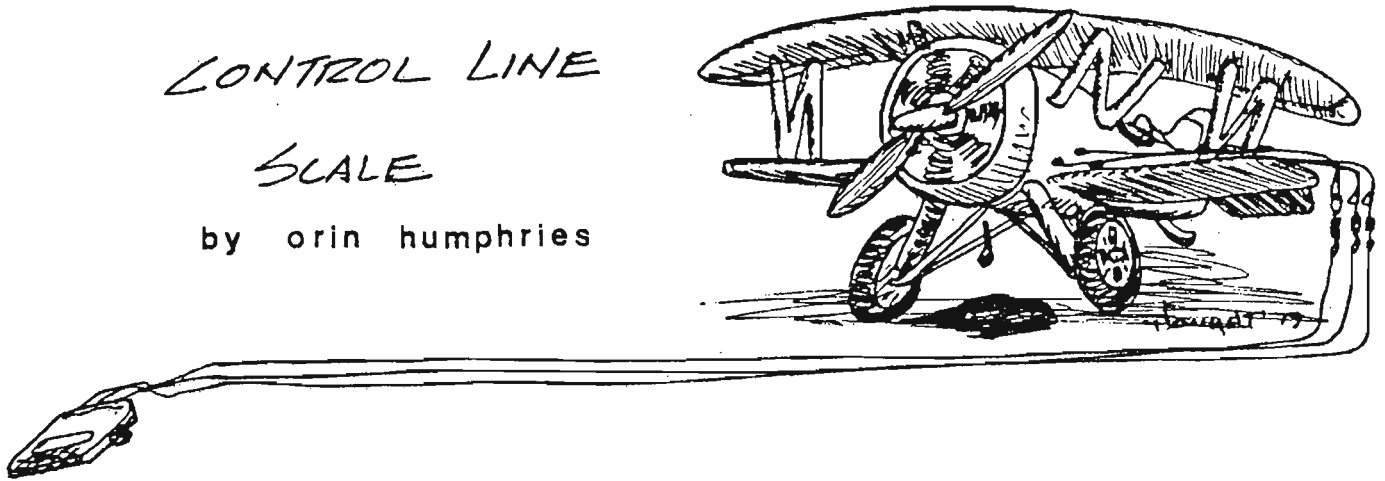
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SCALE

by orin humphries



How many of you have heard things about multi-engine models like, "If the inboard engine dies, you're dead,"? Or, how about, "You have to set the outboard engine rich so it will run out of fuel first,"? These all come under the heading of:

MULTI-ENGINE MYTHS

Let me present my credentials on the subject to those friends whom I haven't met just yet. I finished a Douglas A-26 INVADER over sixteen years ago and it by now has a trophy shelf full of dust collectors. That model taught me "the ropes" the hard way. By that I mean it had the apocryphal first flight crash, so very common to new comers in scale, and the learning sessions with it that followed its repair "made me what I am today" (talk to myself, limp, facial muscle tic).

The first thing I learned was proper fore-and-aft C.G. location. This was a Japanese kit that was common in the mid-'60s, and like kits even today the designers knew how to draw kits but didn't know squat about C.G. for C/L flying. The plans showed a C.G. for R/C (Sorry, Ladies) or F/F. It was simply too far aft for good controlability. There was only one way to find this out, though. The nose popped up upon takeoff and the model did a wingover and collided with the third planet from the Sun (I somehow didn't see it coming). An old hand who was with me advised moving the C.G. forward until the nose didn't tend to pop up on takeoff (determined by many careful taxi tests easing up to the point of takeing off but setting it down before reaching six inches altitude.). The myth, here, was that crashes always happen on the first flight. They don't with proper C.G. position. I recommend setting it around 15% to 18% of the root chord for the first flight (from the leading edge at the side of the fuselage heading aft, of course). You might ease it aft a teeny bit once familiar with it. I don't care what the plans say. And don't just suppose the C.G.'s location might be okay. Unless you have measured it with a ruler and divided by the root chord to verify it's in the range I gave, don't come crying to me when it re-kits itself on its first one, pal!

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Before continuing with myths, let me add another critical point related to C.G. There is a vertical position for the C.G. as well as horizontal that must be accounted for in your leadout guide's location. Again, put some white-out on the C.G. shown on the plans and find out for yourself. Flyers, designers, and kit manufacturers just don't know diddly about this. Leave the left wing uncovered until the last. Hang all the engines, tanks, wheels,....all of the hardware, on the model and then suspend it from the leadouts. Looking at the model from in front toward the rear, it must be rolled slightly in the counterclockwise direction in order to have the proper attitude on the lines in flight. If not it will be rolled in toward you in flight and you will have poor or non-existent line tension (you'll get a tension headache of another kind, friend!). While you are hanging it, look at it from the belly toward the top, as well. The leadout guide position must be such that the nose is slightly lower than the tail. This is called proper "rake".

Once the leadout guide's position has been determined by hanging it, go ahead and cover the left wing.

Back to myths. If your leadout guide is both low enough and aft enough, all the rest of the myths will never visit themselves upon you. How can they be myths if they really can happen, you ask? Novices believe that it simply is the basic nature of multi's. Are you familiar with the Spanish term, "El toro poo-poo"? It's all in proper leadout guide positioning, people.

It's nice to start the outboard engine first so it will run out first in case the wind increases once you are airborne. This will give you good line tension. I remained airborne too long once and on this flight the inboard engine quit first. Scared? Me? One really ought to change his shorts now and then anyway, guys. By forcing myself to stay cool I piloted to craft to an uneventful landing five laps later. It flew fine on the outboard engine. And this has happened twice since then. No biggy. Bob Parker's famed Bf-110 (twin) actually took off on the outboard engine only at the 1971 Internats. No problem. (Yes he and I are that old. Hi, gramps!) Another guy had a Royal P-38 twin that had the inboard engine die from a lean needle in flight and it had no problem staying up.

Don't use different pitch props or different needle valve settings to promote line tension "in case the inboard engine quits". With properly determined leadout guide location that's all counterproductive, and totally unnecessary. It hurts the model's performance.

Listen to me, please. A properly rigged multi-engine model flies like a big single-engine one. Period. Fini.

Put the fuel tanks in each nacelle just like that nacelle was itself a single-engine model. You can't feed from a fuselage tank as the inboard will starve in the air and the outboard will flood even though they run fine on the ground.

Just who in the R/C (sorry) propagate all these multi-engine myths you've heard spread as gospel? (Are you paying attention?) Single-engine pilots who've NEVER tried it.

There is nothing like the special sound of multi engines! And seeing TWO oil streaks on the propound in the pit area. Orin (I may be as old as Parker, but I'm better looking) Humphries.

RAIDER ROUND UP

-----"87"-----

WASHINGTON STATE CONTROLINE CHAMPIONSHIPS

SEPTEMBER 19TH AND 20TH, 1987/ AMA SANCTION #1251/ SITE: BOEING SPACE CENTER
TROPHIES THROUGH THIRD PLACE; FOUR OR MORE ENTRIES, OTHERWISE TROPHIES
THROUGH SECOND PLACE.

EVERY JUNIOR ENTRY WILL RECEIVE A MERCHANDISE AWARD.

THE PERPETUAL SKYRAIDER SPORTSMAN AWARD TROPHY WILL BE PRESENTED TO THE
HIGHEST OVERALL CUMULATIVE SCORE OF ALL EVENTS ENTERED.

SCHEDULE OF EVENTS

SATURDAY SEPTEMBER 19TH			SUNDAY SEPTEMBER 20TH		
9:00	NW SPORT RACE	JSO	9:30	SLOW COMBAT	JSO
12:00	OLD TIME STUNT	JSO	9:30	PRECISION AERO	JSO
10:00	FoxDoo COMBAT	JSO	10:00 to 4:00	SPEED	JSO
10:00	to 4:00 CARRIER	JSO		RECORD RATIO	
	PROFILE/ CLASS I&II	JSO	12:00	AMA FAST COMBAT	JSO
11:00	NW SUPER SPORT	JSO	12:00	STATIC JUDGING FOR	
12:30	MOUSE I	JR		PROFILE & SPORT SCALE	JSO
1:00	MOUSE I	SO	2:00	ALL SCALE FLYING	
2:00	MOUSE II	JSO		NOTICE	
3:00	SPORT GOODYEAR	JR		SPORT GOODYEAR IS A FOX .15 ONLY	
3:30	SPORT GOODYEAR	SO		EVENT. SUCTION TANK, STOCK PROP.	
3:00	½A COMBAT	JSO		.014 SINGLE STRAND OR .015 MULTI-	
12:00	to 5:00 BALLOON BUST	JR/ SO		STRAND LINES.	

REGISTRATION EACH DAY FROM 9:AM UNTIL START OF EVENT.

OPEN ENTRY FEE: \$10.00 1ST EVENT, \$5.00 EACH ADDITIONAL EVENT, \$25.00 MAXIMUM
JUNIOR/SENIOR : \$5.00 1ST EVENT, \$2.00 EACH ADDITIONAL EVENT, \$10.00 MAXIMUM.
AMA MEMBERSHIP REQUIRED OF ALL FLIERS AND MECHANICS, AVAILABLE AT CONTEST.
AMA FAST COMBAT AND ½A COMBAT WILL BE FLOWN DOUBLE ELIMINATION.

THE CONTEST SITE IS ON THE WEST PARKING LOT OF THE BOEING SPACE CENTER IN KENT, WA. FROM I-5
TAKE EXIT 152(ORILLIA ROAD), AND FOLLOW IT EAST DOWN THE HILL. WHERE IT STRAIGHTENS OUT, ORILLIA
BECOMES 212TH S. ENTER PARKING LOT FROM 212TH S., AT THE SIGNAL ACROSS FROM THE KOA CAMPGROUND.

CONTEST DIRECTOR: DAN CROMYNI: 9028 7TH NW, SEATTLE, WA 98117 (206) 782-5552



1987 NORTHWEST REGIONALS!!!!!!!!!!!!!!!!!!!!

clockwise starting at top left:

- * Racing pits were very busy on Saturday.
- * Oh howdy! John Thompson at the moment of a quick "hand-off" combat plane launch.
- * Bill Nusz busy in the speed pits. Took first in Jet and "D" events.



- * Bob Kerr (left) and Roy Andrassy hang on to Fast Rat ships.
- * Vic Garner launches his "Shark" rat in a winning race. Gary Crawford acts as back-up pitman.
- * Wesley Mullens looks quite casual while flying his scale event entry.
- * Wayne Spears is starting low speed phase of Carrier attempt. Big entry in profile class this year.



Watch for more Regionals pix in future issues!



FLYING LINES is produced ten times a year by a dedicated staff of volunteers interested in keeping lines of communication open between Northwest control line modelers. FL is totally independent of any organization, depending entirely upon support from subscribers, advertisers, and donors.

Prices for subscriptions:

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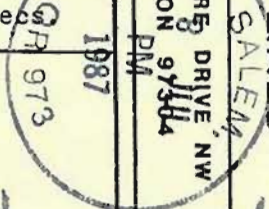
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