

# FLYING LINES

1411 BRYANT AVENUE  
COTTAGE GROVE, OREGON 97424

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June, 1982 NEWS OF NORTHWEST CONTROL LINE MODEL AVIATION Number 36

## SUN SHINES ON A BIG REGIONALS

Two days of beautiful sunshine helped make the 1982 Northwest Regional Controlline Championships the traditional highlight of the Northwest control-line competition year. Some 62 people -- largest entry since 1977 -- were evenly distributed over 28 events. They collected 84 trophies and a like number of merchandise prizes.

The massive contest crew made up of the Eugene Prop Spinners, Seattle Skyraiders, North Coast CLAMS and many unaffiliated individuals cooperated in unprecedented style to make the contest smooth from start to finish.

Several hundred spectators both days were treated to performances by top national names in each competition type, as the field was littered with former national champions in racing, speed and combat, world championship team members in stunt and racing, and many other top West Coast names.

Competitors came from seven states and provinces -- Oregon, Washington, California, British Columbia, Alberta, Utah and Montana. The on-field camping site was full of tents and RVs. New displays spiced the experience for the spectators. Terry Miller of Roseburg, Ore., brought his extensive collection of plastic ready-to-fly airplanes by many manufacturers. R.F. Stevenson displayed his hundreds of engines. Frank Macy of Milwaukie, Ore., displayed several restored and original Jim Walker Fireballs in seaplane, racing and biplane form, among others.

Good weather in the preceding week made it possible for the Propspinners to do an excellent job getting the field ready. Racing in the sport classes went off without a hitch on the domed grass circle. Stunt also proceeded well, though the fliers would have liked to use a softer surface, since the ground under the stunt circle was baked hard after several weeks of sunshine.

The schedule revision, shifting two sport racing classes to Sunday, alleviated the crowded schedule of Saturday racing. Carrier fit nicely into one day, with an excellent turnout of hookers. The new balloon bust was a big hit, with enough entries to make sure the contest organizers will give it more time next year.

Credit is due to the following people, though they are far from all those who helped out: Field preparation by the Eugene Prop Spinners, including Mel Marcum, Tom Kopriva, Jeff Shelby, Gene Pape, John Thompson, Bruce Guenzler and several others who put finishing touches on at the last minute. Prop Spinners and various campers also helped with the fine clean-up effort afterward. Registration was run by the CLAMS' efficient crew under the direction of Dave Green. Many thanks to Dee Dee, Lori, Lisa, Donna and the rest! Dave Childs ran combat with almost no problems at all. Orin Humphries shepherded the profile scale and balloon bust projects. Bill Skelton directed carrier. Don McClave, with judges Rich Schaper and Jim Parsons, help from Dave Gardner and others, ran a top-notch precision aerobatics show. Racing events were run by Mike Hazel, Gene Pape, John Thompson, Dave Green and Rich Schaper. Earle Moorehead and Oba St. Clair handled precision scale and Mike Hazel directed speed. We can't possibly name all the timers and other judges, but thanks to all. Among those attending were both past and president AMA district vice presidents, Homer Smith and Ed McCullough.

As usual, Paul Agerter from Eugene's Toy & Hobby provided a well-stocked truckload of hobby supplies at bargain prices. Chuck, our faithful catering truck operator, sold out two days in a row and left on Sunday after a \$25 donation to the contest. There was fine cooperation from airport officials who opened their rest rooms and put up with two days of crowds and congestion, not to mention noise.

The 1982 Regionals proved again to be an incomparable contest, the only place in the West where a control-line modeler can see five circles, all at the same location, in use at once. It's a real five-ring circus, and those who missed it missed a great time. It was all under the able direction of Mike Hazel of Salem, Ore., with a lot of help from many friends.

The weekend was capped off with the third annual Flying Lines birthday party, where the beer and pop flowed, the hamburgers and steaks barbecued, the cake was cut and the stories re-told. At the end, everyone was tired and glad to take a rest, but the words "next year" were on everyone's lips.

Following are the complete contest results:

REGIONALS, continued

PRECISION AEROBATICS (Beginner-Intermediate) (8 entries)

1. Jim McClellan, Burlingame, Calif. -- 459. Nobler (Top Flite kit), 52" span, 39 oz., balsa, Monokote/Superpoxy finish. OS Max .35, reworked by Art Adamasin, Rev-Up 10x6 prop, Fox plug, Sig 10% nitro fuel, muffler pressure, World 4-oz tank, EZ-Just Hot Rock handle.
2. Rory Tennison, Libby, Mont. -- 362.
3. Terry Miller, Roseburg, Ore. -- 353.
4. Dave Mullens, Seattle, Wash. -- 350.

PRECISION AEROBATICS (Advanced-Expert) (6 entries)

1. Ted Fancher, Foster City, Calif. -- 522. Excitation II (original), 60" span, 56 oz., balsa, acrylic laquer finish, adjustable leadouts, weights and control ratios. Supertigre .46, reworked by Vic Garner, Rev-Up 12x6 prop, K&B 1L plug, Sheldon's 10% nitro fuel (all castor), muffler pressure, Fancher 5.75-oz. uniflow tank, EZ-Just Hot Rock handle. This is plane Fancher will take to world championships in Sweden.
2. David Fitzgerald, San Mateo, Calif. -- 504.
3. Paul Walker, Seattle, Wash. -- 497.
4. Gary McClellan, Burlingame, Calif. -- 488.

FAI COMBAT (8 entries)

1. Tom Kopriva, Eugene, Ore. -- Cheap Imitation (Pape-Thompson design), 26" span, 3-oz., balsa, Fascal finish, TeeDee .049, Kopriva rework, 5x4 Tornado prop, TeeDee plug, Sheldon's 40% nitro fuel, bladder pressure.
2. Gene Pape, Eugene, Ore.
3. John Thompson, Cottage Grove, Ore.
4. Bruce Guenzler, Eugene, Ore.

SLOW COMBAT (5 entries)

1. Gary Byerly, Spanaway, Wash. -- Proctologist II (Granderson design), 47" span, foam, Fascal finish. Supertigre G21-.35, 8 3/4x7 prop, K&B 1L plug, home brew 25% nitro fuel, modified venturi, suction uniflow Clary 3-oz outboard tank.
2. Dick Salter, Seattle, Wash.
3. Dick McConnell, Seattle, Wash.
4. Jarl Boles, Salt Lake City, Utah.

FAI COMBAT (5 entries)

1. Howard Rush, Kirkland, Wash. -- Atropos II (original), 46" span, 16 oz., foam/carbon fiber/epoxy, Solarfilm finish, Rossi .15, reworked with some TWA parts, Taipan 7x4 prop, McCoy plug, Doc Anderson carb, home brew 10% nitro fuel, Kentucky pen shop bladder, 4" EZ-Just handle.
2. John Thompson, Cottage Grove, Ore.
3. Dick McConnell, Seattle, Wash.
4. Ken Burdick, Seattle, Wash.

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REGIONALS, continued

AMA COMBAT (11 entries)

1. Gene Pape, Eugene, Ore. -- Devastator (original), 48" span, 21 oz., foam-balsa-ply-spruce, Fascal finish. Fox Combat Special, Pape rework, Top Flite 8 $\frac{1}{2}$ x6 $\frac{1}{2}$  pylon racing prop, K&B plug, home brew 50% nitro fuel, bladder, Magnum handle, pressure regulator.
2. Howard Rush, Kirkland, Wash.
3. John Salvin, Orinda, Calif.
4. Bob Carver, Snohomish, Wash.

RAT RACE (9 entries)

1. Jeff Hollfelder, Castro Valley, Calif. -- 4:31. Shark (Gillott design), K&B 40S, other airplane data unavailable (left contest early).
2. Tim Gillott, Salinas, Calif. -- 4:52.
3. Gary Buffon, El Cerrito, Calif. -- 5:47.
4. Scott Newkirk, Seattle, Wash. -- 70 laps.

SCALE RACE (GOODYEAR) (7 entries)

1. Tim Gillott, Salinas, Calif. -- 6:43.22. Airplane data unavailable.
2. Jeff Hollfelder, Castro Valley, Calif. -- 7:48.4.
3. Clarence Bull Jr. -- 7:51.6.
4. Jarl Boles, Salt Lake City, Utah. -- 12:42.2.

NORTHWEST SPORT RACE (Open) (8 entries)

1. Greg Beers, Vancouver, Wash. -- 9:20. Yak-9 (Sterling kit), 38" span, 22 oz., balsa, Hobby Poxxy finish. Fox .35 stunt, Grish prop, Fox plug, Sheldon's 5% nitro fuel, Perfect 2-oz. tank, Fox handle.
2. John Boles, Salt Lake City, Utah. -- 11:09.
3. Ken Bugar, Pouksbo, Wash. -- 89 laps.
4. Dick Salter, Seattle, Wash. -- 72 laps.

NORTHWEST SPORT RACE (Jr.-Sr.) (3 entries)

1. Jarl Boles, Salt Lake City, Utah. -- 9:54. Sterling Ringmaster, Monokote finish. Fox .35 stunt, 9x7 prop, Fectner 10% nitro fuel, uniflow 1 3/4-oz. tank.
2. Todd McNulty, Troy, Mont. -- 10:50.
3. Richie Salter, Seattle, Wash. -- 15:39.

NORTHWEST SUPER SPORT RACE (7 entries)

1. Vic Garner, Livermore, Calif. -- 7:19. Fat Wing I (original), 38" span, balsa-hardwoods, Monokote & K&B Super Poxxy finish, K&B .35, Garner slow rat prop, Sheldon's 25% nitro fuel, shutoff, Garner uniflow tank.
2. Dave Green, Astoria, Ore. -- 8:18.
3. John Boles, Salt Lake City, Utah. -- 8:49.
4. Clarence Bull Jr. -- 4:47.

CLASS I MOUSE RACE (Jr.-Sr.) (4 entries)

1. Jarl Boles, Salt Lake City, Utah. -- 6:12.6. Onesided (John & Jarl Boles design), 5 $\frac{1}{2}$ -oz., balsa-bass-spruce, epoxy finish, asymmetrical airplane. Engine assembled by Jarl Boles from Cox parts, with rework by Jarl Boles and Glen Dye, 50% nitro fuel, bushed crankcase, Cox tank reworked by Jarl Boles, 3/32" venturi, spring starter.
2. Richie Salter, Seattle, Wash. -- 43 laps.
3. Gerry Van Dyk, St. Albert, Alberta -- 23 laps.
4. John Salvin, Orinda, Calif. -- 16 laps.

CLASS I MOUSE RACE (Open) (9 entries)

1. Dick Salter, Seattle, Wash. -- 7:19.4. Cat's Paw, Cox engine, reworked by Joe Klause, tornado 5 $\frac{1}{2}$ x4 prop, Sheldon's 25% nitro fuel.
2. M&M Team (Fred & Joyce Margarido), Fremont, Calif. -- 49 laps.
3. James Rhoades, Salt Lake City, Utah. -- 40 laps.
4. Paul Gibeault, Edmonton, Alberta. -- 7:10.6 heat.

CLASS II MOUSE RACE (4 entries)

1. Bob Boling, El Cerrito, Calif. -- 10:37.1. Ignatz II (original), 18" span, 7 oz., balsa-bass, K&B Super Poxxy clear finish. TeeDee .049, Boling rework, Cox 4 $\frac{1}{2}$ x4 prop, TeeDee plug, Sheldon's 25% nitro fuel, crankcase pressure, home-made venturi, Kustom Kraftsmanship needle valve assy., fastfill, hot glove, Boling 1.5-oz. outboard uniflow tank, Boling handle.
2. Paul Gibeault, Edmonton, Alberta -- 12:41.8.
3. Dave Green, Astoria, Ore. -- 74 laps.
4. Mike Petri, Redwood City, Calif. -- 49 laps.

SLOW RAT RACE (3 entries)

1. Vic Garner, Livermore, Calif. -- 5:49. Fat Wing II (original), 38" span, 32 oz., balsa, plywood, maple, K&B Super Poxxy finish. Tune-Hill GS .35, Garner rework, Garner slow rat prop, GloBee plug, Sheldon's 50% nitro fuel, Garner suction uniflow 3 $\frac{1}{2}$ -oz inboard tank, fastfill, shutoff, hot glove, carburetor.
2. Gary Buffon, El Cerrito, Calif. -- 6:31.5.
3. K&B Burdick, Seattle, Wash. -- 56 laps.

PROFILE SCALE (6 entries)

1. Todd McNulty, Troy, Mont. -- Cherokee, Best Novice.
  2. Terry Miller, Roseburg, Ore. -- Navion, Best Simplicity.
  3. Randal Schultz, Seattle, Wash. -- Me 109, Best Military.
  4. Dick Salter, Seattle, Wash. -- F4B-3, Best Expert.
- Honorable Mentions: Dave Mullens, Seattle, Wash. -- P-38, Best Twin Engine.  
Rory Tennison, Libby, Mont. -- P-40, Best Sport Profile.

REGIONALS, continued

PRECISION SCALE (4 entries)

1. Orin Humphries, Spokane, Wash. -- Airplane data unavailable.
2. Lave Mullens, Seattle, Wash. (Editor's note: Somehow we did not get the
3. Harry DeBuhr, Ridgefield, Wash. airplane information for this event. We'd
4. Greg Beers, Vancouver, Wash. be glad to follow up if some is submitted!)

CLASS I-II NAVY CARRIER (6 entries)

1. Loren Howard, Vancouver, Wash. -- 323.7. Guardian (Sterling kit), 36" span, balsa, Aerogloss dope, Supertigre .60, Howard rework, Zinger prop, K&B plug, K&B 10% nitro fuel, carburetor, throttle, G&S handle.
2. Roy Beers, Vancouver, Wash. -- 293.0.
3. Orin Humphries, Spokane, Wash. -- 224.0.
4. Gerry Van Dyk, St. Albert, Alberta -- 214.4.

PROFILE CARRIER (11 entries)

1. Gerry Van Dyk, St. Albert, Alberta -- 214.8. Grumman AF2S Guardian (Bill Melton design, modified), 38" span, 29 oz., balsa, K&B Super Poxo and Monokote finish. Supertigre C-35, Van Dyk rework and Hempel chrome, Zinger 8½x8½ cut to 8" (True pitch) 8¼, Fox RC long plug, Mag 4 carb, Sig 35% nitro fuel, throttle, suction uniflow modified Fox profile 2½-oz. tank. Engine has shaft valve opened 13° to 206° duration, exhaust opened .070 to 145° duration. Plane has full flaps, kickover rudder, symmetrical airfoil. G&S handle.
2. Bill Skelton, Warrenton, Ore. -- 206.2.
3. Dick Salter, Seattle, Wash. -- 196.2.
4. Orin Humphries, Spokane, Wash. -- 191.7.

½A SPEED (2 entries)

1. M&M Team (Fred & Joyce Margarido), Fremont, Calif. -- 94.2 mph. Original airplane, 12" span, 5½ oz., basswood-balsa, Super Poxo finish. Cox Tee Dee .049, 2½x5 single-blade prop, Cox 1702 plug, home brew 70% nitro fuel, suction uniflow M&M 1/3-oz. tank, Brassell handle.
2. James Rhoades, Salt Lake City, Utah. -- 87.94.

A SPEED (4 entries)

1. M&M Team (Fred & Joyce Margarido), Fremont, Calif. -- 171.2 mph. Original airplane, 22" span, 16 oz., basswood, aluminum, glass epoxy top, K&B Super Poxo finish, semi-assymetrical wings. Rossi .15, Rev-Up 6x7 400 prop, K&B plug, home brew 70% nitro fuel, suction uniflow M&M 3/4-oz tank, Brassell handle.
2. Frank Hunt, Merced, Calif. -- 167.53.
3. James Rhoades, Salt Lake City, Utah, 152.87.

B SPEED (2 entries)

1. Clarence Bull III, Eugene, Ore. -- 132.64. Original airplane, basswood, G21-.29 Supertigre, Bull rework, Rev-Up prop, K&B 1L plug, 50% nitro fuel, bladder tank.
2. Greg Beers, Vancouver, Wash., attempt.

FAI SPEED (6 entries)

1. Chris Sackett, Burnaby, B.C. -- 147.17 mph. Schuette Sidewinder (Newton) 24" span, 16 oz., fiberglass, aluminum, DuPont Acrylic Enamel finish, Rossi .15, Sackett rework, Newkirk 6.3x5.8 prop, Hempel fuel switch, AAC, 12 mm crank, timing 190° exhaust, 137° intake, Rossi plug, Contest-supplied 0% nitro fuel, crankcase pressure, .340 venturi, Sackett 20 cc. tank, Sackett 2-line handle.
2. Charles Vassallo, -- 146.97.
3. PAUL Gibeault, Edmonton, Alberta -- 127.69.

FORMULA 40 SPEED (5 entries)

1. Scott Newkirk, Seattle, Wash. -- 148.33 mph. Hazel F-40, 24" span, 24 oz.,

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## REGIONALS, continued

wood, glass finish, K&B 6.5 front rotor, Newkirk rework, home-made wood prop, .430 carb, K&B short plug, 40% contest-supplied fuel, crankcase pressure, uniflow Newkirk 60cc tank.

2. Ken Burdick, Seattle, Wash. -- 136.62.
3. Ken Burgar, Poulsbo, Wash. -- 131.43.
4. Dave Green, Astoria, Ore. -- 131.05.

### D SPEED (4 entries)

1. Frank Hunt III, Merced, Calif. -- 191.21 mph. Original airplane, 32" span, 30 oz., epoxy glass and aluminum, clear epoxy finish, OS VF RR, Hunt rework, Rev-Up 9x12 prop, McCoy long plug, 70% nitro home brew fuel, pressure regulator, 9/16 venturi, bladder tank, monoline handle.
2. M&M Team, Fremont, Calif. -- 189.2 mph.

### JET SPEED (3 entries)

1. Chris Sackett, Burnaby, B.C. -- 192.64 mph. Old Ironsides (Jerry Thomas design), 23" span, 30 oz., aluminum, titanium, polished metal finish. Dynajet with 1.25 sq. in. intake, reworked by Jerry Thomas, 3" long intake, .425" extended tailpipe, .060 mod. retainer, .104 metering jet. Home brew 50% nitro fuel, suction uniflow Thomas 12-oz. tank.
2. James Rhoades, Salt Lake City, Utah -- 161.23.

### BALLCON BUST (Jr.-Sr.) (2 entries)

1. Richie Salter, Seattle, Wash.
2. Rick Humphries, Spokane, Wash.

### BALLCON BUST (Open) (10 entries)

1. George Mickey, Seattle, Wash.
2. Bob Danielson, Seattle, Wash.
3. Dave Mullens, Seattle, Wash.
4. (Tie) Pete Bergstrom, Tacoma, Wash.; Dick McConnell, Seattle, Wash.; Terry Miller, Roseburg, Ore.; Stan Johnson, Spokane, Wash.

## LIST OF ENTRANTS:

Dave Green, Richard McConnell, Pete Bergstrom, Gerry Van Dyk, Gary Byerly, Vic Garner, Roy Beers, Stan Johnson, Greg Beers, James Rhoades, Tim Gillott, Jeff Hollfelder, John Boles, Bill Varner, Don McClave, Jarl Boles, W.L. Skelton, Dave Mullens, Dick Salter, Gary Buffon, Ken Burgar, Charles Vassallo, Mike Petri, John Salvin Jr., Harry DeBuhr, Norm McFadden, Howard Rush, John Salvin, Bruce Guenzler, Jim McClellan, Gary McClellan, David Fitzgerald, Ted Fancher, Paul Walker, Dave Gardner, Dave Robinson, Hank Bull, Richard Porter, Randall Schultz, George Mickey, Bob Carver, Steven Cole, Richie Salter, Todd McNulty, Rory Tennison, Scott Newkirk, Orin Humphries, Gene Pape, Tom Kopriva, Rick Humphries, John Thompson, Clarence Bull, Robert Danielson, Chris Sackett, Terry Miller, Shawn Parker, Bob Boling, Frank Hunt, Paul Gibeault, Loren Howard, Fred & Joyce Margarido, and Ken Burdick.

## HERE'S WHO TO THANK -- REGIONALS PRIZE DONORS

Regionals participants, and especially those who won prizes, are urged to write the following hobby merchants and manufacturers to express thanks for their donations of prizes. All of the merchandise prizes given away at the Regionals were donated by these business people.

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MODEL BUILDER, 621 W. 19th St., Costa Mesa, CA, 92627 (subscriptions)  
CAROLINA TAFFINDER, 8345 Delhi Rd, Charleston Heights, S.C., 29405 (tanks, fuel)  
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EUGENE'S TOY & HOBBY, 32 E. 11th, Eugene, OR 97401 (kits)  
EASTWOOD HOBBY, 1577 Hawthorne N.E., Salem, OR 97301 (fuel and glue)  
BK HOBBY CENTER, 2672 W. Hampden, Englewood, CO, 80110 (certificates)  
AMERICA'S HOBBY CENTER, 146M W. 22nd St., New York, NY, 10011 (certificates)  
EMERSEN (DREMEL), P.O. Box 954, Racine, WI, 53405 (certificate)  
SATELLITE CITY, P.O. Box 836, Simi, CA 93605 (certificates)  
J&Z PRODUCTS, 25029 S. Vermont Ave., Harbor City, CA, 90710 (certificates)  
MIDWEST MODEL SUPPLY, P.O. Box 518-R, Romeoville, IL, 60441 (certificate)  
WINDSOR PROPELLOR, P.O. Box 112, Windsor, CA (certificates)  
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# NW COMPETITION RECORDS

RECORD PERFORMANCES ESTABLISHED BETWEEN NORTHWEST  
MODELERS IN SANCTIONED COMPETITION

Chris Sackett of Burnaby, B.C. raised the speeds of his records in FAI and jet speed at the Northwest Regional Controline Championships over Memorial Day weekend. His jet speed flight of 192.64 was better than his Nationals-winning time last year, and erased his old Northwest record of 190.2 mph. The FAI record was increased from 143.37 to 147.17.

Loren Howard of Vancouver, Wash., also bumped his own record, this one in Class II Navy Carrier. He increased his score from 320.9 to 323.7. We note that Roy Beers scored a 293.0 in the combined Class I-II competition, but our results do not show whether Roy was using a Class I or II airplane. Let us know, Roy -- if it was a Class I plane you captured the record.

The record also should show that Vic Garner turned record times of 3:39 and 7:19 for heat and feature races in Northwest Super Sport Race. Since Flying Lines records apply only to Northwest residents (Dist. XI of AMA and B.C.), the Garner times are mentioned here for interest only.

Current records are listed below:

FAI MOUSE CLASS I 50-lap: 2:38 (John Thompson)	100-lap: 5:50 (Bill Varner)
FAI MOUSE CLASS II 75-lap: 3:54 (John Thompson)	200-lap: 9:21 (Bill Varner)
GOODYEAR 70-lap: 3:28 (Dave Green)	140-lap: 7:42 (John Thompson)
SLOW RAT 70-lap: --	140-lap: 10:41 (Dick Salter)
RAT RACE 70-lap: 2:29 (Mike Hazel)	140-lap: 4:53 (Mike Hazel)
FAI TEAM RACE 100-lap: 3:51.07 (Knoppi-McCollum)	200-lap: --
NW SPORT RACE 70-lap: 4:14 (Dick Salter)	140-lap: 8:27 (Dick Salter)
NW SUPER SPORT 70-lap: 3:45 (Rich Schaper)	140-lap: 7:33 (Rich Schaper)
FAI SPEED: 88.2 mph (Paul Wallace)	FAI SPEED: 147.17 (Chris Sackett)
FAI PROTO SPEED: 83.63 (Paul Wallace)	FORMULA 21: --
A SPEED: 125.82 (Mike Hazel)	FORMULA 40: 148.58 (Scott Newkirk)
B SPEED: 153 mph (Mike Hazel)	JET SPEED: 192.64 (Chris Sackett)
D SPEED: --	PROFILE NAVY CARRIER: 208.9 (Marty Phillips)
	CLASS I NAVY CARRIER: 268.98 (Terry Miller)
	CLASS II NAVY CARRIER: 323.7 (Loren Howard)

## RAFFLE WINNER ANNOUNCED

Winner in the latest of a series of sporadic Flying Lines benefit raffles was the P&M Team of Fremont, Calif., Fred and Joyce Margarido. The winning ticket was drawn by FL's official ticket-plucker, 6-year-old Heather Thompson.

Proceeds from the raffle were used to pay the bills for the newsletter. Our thanks to all who participated. We'll wait a while to let all of you save up while we hunt for another donated prize. The Margaridos' prize was a GloBee Fireplug and charger, donated by Twinn-K, Inc.

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# NW COMPETITION STANDINGS

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

The annual pilgrimage to Eugene for the Regional Championships guarantees a juggling of standings in all events, since just about every event occurs at the Regionals. Below are the standings for June 1.

Flying Lines keeps track of standings in all AMA and popular regional events. The scoring system is based on the number of entries in the event, and reflects the placing of the top four competitors at each contest. More information about the standings is available from FL's editor.

Regular readers will note one change in our scoring system. In precision aerobatics, the scoring method now reflects the difference in skill level and difficulty between PAMPA classes. As in the past, beginner-intermediate fliers will receive the usual 1 point for each competitor they beat (i.e. First place = number of contestants, second place = number of contestants - 1, etc.). However, advanced and expert fliers will receive 1.5 times the base points. For example, the winner of a 5-entry advanced-expert contest will receive 1.5 times 5 points, or 7.5 points. This change should correct the situation in which beginner and intermediate fliers always seem to be higher in the standings than expert fliers because of the higher number of entries in the beginner-intermediate category. Hopefully, the competition for standing status will be equalized. FL would appreciate any comments on this system.

## SPORT-PROFILE SCALE

(2 contests, 10 entries)

1. Todd McNulty . . . 6
2. Dick Salter . . . 5
- Terry Miller . . . 5
4. Dan Cronyn . . . 4
- Randall Schultz . . 4

## SPEED (combined)

(9 contests, 30 entries)

1. Chris Sackett . . . 9
2. Scott Newkirk . . . 5
3. Ken Burdick . . . 4
4. Mike Hazel . . . 3
- Ken Burgar . . . 3

## NORTHWEST SPORT RACE

(6 contests, 41 entries)

1. Dick Salter . . . 26
2. Ken Burgar . . . 24
3. John Clemans . . . 19
4. Bill Varner . . . 14
5. John Thompson . . 10

## SLOW COMBAT

(1 contest, 5 entries)

1. Gary Byerly . . . 5
2. Dick Salter . . . 4
3. Dick McConnell . . 3

## FAI COMBAT

(1 contest, 5 entries)

1. Howard Rush . . . 5
2. John Thompson . . 4
3. Dick McConnell . . 3
4. Ken Burdick . . . 2

## SCALE CARRIER

(1 contest, 6 entries)

1. Loren Howard . . . 6
2. Roy Beers . . . 5
3. Orin Humphries . . 4

## PROFILE CARRIER

(1 contest, 11 entries)

1. Bill Skelton . . . 10
2. Dick Salter . . . 9
3. Orin Humphries . . 8

## PRECISION SCALE

(1 contest, 4 entries)

1. Orin Humphries . . 4
2. Dave Mullens . . . 3
3. Harry DeBuhr . . . 2
4. Greg Beers . . . 1

## RAT RACE

(3 contests, 20 entries)

1. Scott Newkirk . . . 14
2. Ken Burgar . . . 8
- Dave Green . . . 5
4. K&B Team . . . 4
- Mike Hazel . . . 4

## CLASS II MOUSE RACE

(2 contests, 6 entries)

1. Tom Kopriva . . . 2
- Dave Green . . . 2
3. John Thompson . . 1

## SUPER SPORT RACE

(5 contests, 30 entries)

1. Mike Hazel . . . 21
2. Rich Schaper . . . 16
3. Dave Green . . . 14
4. Ken Burgar . . . 9
5. SKARE Team . . . 5

## AMA COMBAT

(1 contest, 11 entries)

1. Gene Pape . . . 11
2. Howard Rush . . . 10
3. Bob Carver . . . 9

## OVERALL COMBAT

(6 contests, 39 entries)

1. Gene Pape . . . 23
2. John Thompson . . 19
3. Howard Rush . . . 15
4. Bob Carver . . . 9
- Mike Hazel . . . 9
- Tom Kopriva . . . 9

## PRECISION AEROBATICS

(7 contests, 28 entries)

1. Rory Tennison . . 11
2. Paul Walker . . . 10.5
3. Dave Mullens . . . 8
4. Terry Miller . . . 6
5. Rick Railston . . 4.5
- Don McClave . . . 4.5

## OVERALL SCALE

(3 contests, 14 entries)

1. Todd McNulty . . . 6
2. Dick Salter . . . 5
- Terry Miller . . . 5
4. Dan Cronyn . . . 4
- Randall Schultz . . 4
- Orin Humphries . . 4

## GOODYEAR

(1 contest, 7 entries)

1. Clarence Bull Jr. 5

## CLASS I MOUSE RACE

(4 contests, 23 entries)

1. Mike Hazel . . . 9
- Dick Salter . . . 9
3. John Thompson . . 5
4. Rich Schaper . . . 4
5. Tom Kopriva . . . 3
- Dave Green . . . 3
- Richie Salter . . . 3

## OVERALL RACING

(21 contests, 127 entries)

1. Ken Burgar . . . 41
2. Dick Salter . . . 35
3. Mike Hazel . . . 34
4. Dave Green . . . 24
5. Rich Schaper . . 20

## FA COMBAT

(3 contests, 18 entries)

1. John Thompson . . 15
2. Gene Pape . . . 12
3. Mike Hazel . . . 9
- Tom Kopriva . . . 9
5. Rich Porter . . . 4

## OVERALL CARRIER

(2 contests, 17 entries)

1. Orin Humphries . . 12
2. Bill Skelton . . . 10
3. Dick Salter . . . 9
4. Loren Howard . . . 6
5. Roy Beers . . . 5

SKYRAIDERS TUNE UP FOR REGIONALS WITH MAY CONTEST

By Dave Mullens

Precision aerobatics and rat race were the events for the Spring Tune-Up May 2 and the Boeing site in Kent was chosen as the contest site to make use of the paved facility.

A monsoon came in from the west and the contest was postponed from 9:30 to 12:30. This is not to say that the conditions were ideal, but tolerable. Six fast rat entries ran a finals-only race. Due to the postponement, many of the pilots and/or pitmen had to leave to satisfy other commitments. Scott Newkirk won with a time of 4:54. Dave Green was second at 6:25 followed by Mike Hazel with a 6:37 and Ken Burgar with a 7:15. Other entries were Bill Varner and Richard McConnell.

Beginner-intermediate precision aerobatics was won by Rory Tennison with a score of 370. Dave Mullens was second at 364 and George Mickey posted a 340 for third place. Beginner-intermediate had five entries. Dave Green withdrew and Richard McConnell finished fourth. Later in the afternoon, once the beginner-intermediates beat the nasty air into submission, the advanced-expert contingent gave up their game of prop, prop, who's got the prop and were coaxed out of Paul Walker's car and put up a few flights. Paul walker won with a score of 512. Don Schultz brought out his Chipmunk for second and a score of 480. Don McClave was third with a 462.

Many thanks to Jim Parsons for braving the events and judging stunt. Dennis Patera came all the way from Olympia to help out and be the second stunt judge, but due to the delay had to leave before things really got started.

Dick Salter ran the rats with Bob Danielson helping out. Yvonne Thue did the registering and prepared the stunt scoring sheets. Carolyn Mullens tallied stunt scores and Dan Cronyn helped out as needed. Dan's biggest contribution was supplying the van for use as a day care center for the kids.

Once again, we had more Skyraiders spectating than competing. How about a special event; we could call it Skyraider Stunt. Everyone build a 20-point stunter, hang it on the wall, assemble in one group (preferably inside out of the weather), and see who come up with the best story about how great their stunt machine flies.

Complete results:

RAT RACE (6 entries)

1. Scott Newkirk, Seattle, Wash. -- 4:54. Modified Shark (Gillott design), balsa-maple-ply-fiberglass, epoxy finish. K&B 6.5 ABCD, Newkirk rat prop, 60% nitro fuel, Gillott shutoff, hot glove, Gillott pressure tank.
2. Dave Green, Astoria, Ore. -- 6:25.
3. Mike Hazel, Salem, Ore. -- 6:37.
4. Ken Burgar, Poulsbo, Wash. -- 7:15.

PRECISION AEROBATICS (Advanced-Expert) (3 entries)

1. Paul Walker, Kent, Wash. -- 512. This is It (original), 61" span, 50 oz., balsa-carbon fiber, dope and acrylic laquer finish, carbon fiber main spar.

MCCOLLUM'S PROP SHOP  
21842 BASS LAKE CIRCLE  
EL TORO, CA., 92630

GOODYEAR

GLASS & EPOXY PROPS

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___#2	GY Ong Willoughby	-----	6.50
___#3	GY Kelly - Willoughby	-----	6.50

SLOW RAT

___#21	SR. Garner	-----	7.50
___#22	SR. Ballard's 1981 Nats Winner	-----	7.50

FAST RAT

___#31	FR Lambert	-----	7.50
___#32	FR Gillot	-----	7.50
___#33	FR Garner X-40	-----	7.50

F.A.I. TEAM RACE

___#41	TR Jenson Type	-----	6.50
___#42	TR Metkemeyer - large hub	-----	6.50
___#43	TR Metkemeyer - small hub	-----	6.50

F.A.I. COMBAT

___#51	USSR 1980 Type	-----	6.50
___#52	7/4 Tipan	-----	6.50

ADD \$1.00 postage on all orders in the U.S.A. Make checks or money orders payable to John McCollum.



## TUNE-UP, continued

OS .45FSR, Nelson-Garner rework, 11x6 Zinger prop, Thunderbolt RC long plug, home brew 10% nitro fuel, muffler pressure, uniflow Walker 8-oz tank.

2. Don Schultz, Renton, Wash. -- 480.

3. Don McClave, Portland, Ore. -- 462.

### PRECISION AEROBATICS (Beginner-Intermediate) (4 entries)

1. Rory Tennison, Libby, Mont. -- 370. Gentry (built from Sig Twister), 48" span, 45 oz., balsa, silkspan-Formula U finish. McCoy .40 Series 21, 11x5 prop, K&B plug, Bruce Batch 10% nitro fuel, Pylon 6-oz. tank, CSC custom control components (lead-out guide, etc.), tip weight box built from dental floss container, Bob Hunt (CSC) handle.

2. Dave Mullens, Seattle, Wash. -- 364.

3. George Mickey, Seattle, Wash. -- 340.

4. Richard McConnell, Seattle, Wash.

## MERCED SPEED AND RACING CONTEST RESULTS

Frank Hunt's annual spring speed and racing contest was held March 21.

Here are the results:

### 1/2 A SPEED, FORMULA 40, 1/2 A PROTO (Record Ratio) (4 entries)

1. Tim Gillott -- 91%.

2. Jerry Bradshaw -- 84%.

3. David Williams -- 77%.

4. Joe Armstead -- 69%.

### A SPEED (3 entries)

1. M&M Team -- 171.85 mph.

2. Frank Hunt III -- 165.83.

3. Harry Knollman -- 105.85.

### GOODYEAR (4 entries)

1. Vic Garner -- 7:57.16.

2. Bob Boling -- 8:24.56.

3. Jed Kusik -- 10:39.94.

4. Tim Gillott -- 93 laps.

### SLOW RAT (2 entries)

1. Vic Garner -- 62 laps.

2. Gary Crawford -- 2 laps.

### NW SPORT RACE (2 entries)

1. Jed Kusik -- 10:11.53.

2. Joe Armstead -- 22 laps.

### NW SUPER SPORT (2 entries)

1. Vic Garner -- 8:11.92.

2. Joe Armstead -- 68 laps.

### D SPEED (2 entries)

1. Frank Hunt III -- 186.07 mph.

2. M&M Team -- 176.23.

### FAI TEAM RACE (4 entries)

1. Tim Gillott -- 8:14.29.

2. Jed Kusik -- 8:21

3. John McCollum -- 19 laps.

### RAT RACE (3 entries)

1. Tim Gillott -- 4:48.57.

2. Bob Kerr -- 6:10.23.

3. Vic Garner -- 7:07.17.

### MOUSE RACE CLASS I (5 entries)

1. John McCollum -- 5:08.38.

2. Bob Boling -- 5:10.25.

3. Jonna McCollum -- 5:42.71.

4. Joe Armstead -- 6:51.89.

### MOUSE RACE CLASS II (5 entries)

1. John McCollum -- 10:12.84.

2. Bob Boling -- 10:27.66.

3. Jonna McCollum -- 11:38.99.

4. Patty Sasnett -- 12:04.22.

## THE WORLD'S GREATEST PEOPLE...

The people who don't go to contests because they're "not into" competition are missing a chance to spend some time with the world's greatest people -- model aviators. You don't have to be "into" anything to enjoy the company, and mere presence, of the people who gather at model airplane contests.

Those who make the annual pilgrimage to Eugene for the Regional Championships -- and many of those are not "into" competition, know what we're talking about. There's no place this side of a Nats where so many interesting and enjoyable characters congregate, doing so many interesting -- and educational, in modeling terms -- things.

We were reflecting just now on some of those at the '82 bash:

R.F. Stevenson, that crusty, talkative old-timer who can still fly two or three planes at once, engaging big crowds in colorful descriptions of the hundreds of engines he displays.

Frank Macy, CL historian, beaming as spectators marveled at his collection of Jim Walker Fireballs.

Terry Miller, the perpetually smiling all-round modeler, displaying his unusual collection of plastic RTF planes going back 30 years.

Rich Porter, the astonishingly innovative stunt flier, circulating around, pumping the hand of every human being on the field, memorizing everyone's name, the mysterious stunt ball dangling from his neck.

Howard Rush, world-reknowned combat flier, past national champion and innovator, nervously watching Porter fly one of his dazzling combat planes, all the while looking at the plane through some funny little instrument.

Tim Gillott, enigmatic California racer, beating the prop with a balsa log, and then launching a plane that travels 160 mph in racing traffic! Performances like that are just not available to be seen every day.

Vic Garner, some 30 years a top racer, observing goings on, arms folded, wryly commenting on the passing scene. An hour with this man will progress a novice a whole year in his modeling.

Oba St. Clair, one of the inventors of control-line modeling, inconspicuously judging scale entries. Few on the site knew they were in the presence of a man without whom the hobby might not exist.

PEOPLE, continued

Homer Smith, a free-flighter and former AMA official who just magically materializes, grabs a stop watch and lap counter and becomes a worker. This man comes from Seattle to help out at a contest in a sector of the hobby he doesn't participate in!

Fred and Joyce Margarido, the world's most pleasant couple, tinkering with speed planes and plying the trade of the M&M Speed Team the way some married couples spend an afternoon at the country club -- with class.

Ted Fancher, world championship team stunt flier, risking his world champs plane to show the Northwest what a stunt pattern -- Excitation style -- looks like.

The softshoe team of Gibeault and Van Dyk, bringing the good tidings of Edmonton, Alberta -- in trade for a couple of trophies and a lot of humor all round.

Norm McFadden, known to most people on the field only as the man under the straw sombrero, but to combat fliers as -- well, let's put it this way -- when Norm talks, combat fliers listen.

Orin Humphries, himself a competitor, but who spends much of his time figuring out ways to provide activities for the non-competitor by bringing events like profile scale and balloon bust to the Regionals -- and being willing to bring his own equipment and trophies to do it if necessary.

Paul Agerter, grinning from ear to ear and juggling the change in his apron, selling hobby supplies out of a borrowed van for little profit other than the fun of being there.

A whole tent city of spouses, kids and girlfriends grilling up a feast for the competitors, having their own good time while putting up with modeling's attractions to their loved ones.

The list of interesting and colorful characters goes on and on, but you get the message. A contest is a lot more than hot competition with airplanes. IT's a gathering of people, and people are always interesting.

BUSINESS, BUSINESS...

After the fashion of the incredible shrinking candy bar, Flying Lines has made a change in its subscription rates that will not actually cost readers any more per year but will, over a period of time, improve our financial picture.

From now on, subscriptions to FL will cover 10 issues, rather than the previous 12. Half-year subscriptions will cover five issues, rather than 6. This should work out to a full year for the readers, because we have been on about a 10-per-year publication schedule for the past year, and that is expected to continue.

The price will be the same as it has been for the past year -- \$9.50. for 10 issues and \$5 for ~~six~~  
FIVE issues.

ANNOUNCING!

A new company devoted to control-line products

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Solid lines \*\* ½A parts \*\* Cox parts (standard and custom)

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## CARE TO JOIN THE RESCUE SQUAD?

Faithful readers have put up with FL's crying the financial blues for a long time. A word of explanation about the situation: In the first year of publication, we started with a \$5 subscription rate, which was raised gradually to the present \$9.50. Unfortunately, the early subscription rates did not pay for the costs of printing and mailing. The \$9.50 almost allows us to break even, with ads and donations putting us over the top. However, the deficit built up in the early years "in the red" has created a vicious circle in which the month's income pays for that month's issue -- and if it's a lean month there's no money to cover current expenses. An infusion of \$300 or \$400 would wipe out that deficit, and put us on a break-even basis so that the month's income would pay for the future issues bought by those subscribers, rather than the current edition. Can you follow that?

**A POSSIBLE SOLUTION:** We have come up with a way to recoup some of the deficit, which would depend upon the voluntary good will of FL subscribers.

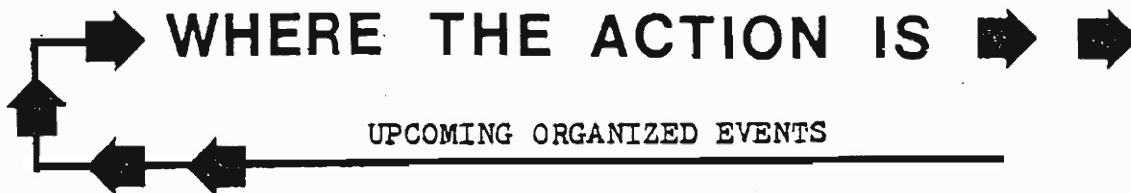
If every subscriber would pretend his subscription ran out last month and buy a new subscription, starting with next month's edition, FL would get that infusion of cash and be solvent on a long-term basis.

We invite all readers who consider that suggestion reasonable to take action -- send us \$9.50 and we will start a new 10-issue subscription next month -- and list your name in print as a member of the FL Rescue Squad.

This action would be entirely voluntary, as a type of donation to the cause of communication among Northwest fliers. As always, we're open to other fund-raising suggestions as well.

While we're at it -- some kudos to recent donors: Rich Schaper contributed \$20 to the kitty. The Seattle Skyraiders wives and family members kicked in some cash, too (sorry, don't have the amount handy but it was around \$20), the proceeds from a pot luck held at the Regionals. Thanks to those people from all FL readers!

More info: FL hats will be available for sale at upcoming contests...they sold like hotcakes at the Regionals! T-Shirts are also still available, by mail order, at \$8.



- June 26-27....REDMOND, Wash. -- Bladder Grabber VII. Triple-elimination AMA combat, starting 11 a.m. \$5,000 stereo eqpt. prizes. Entry: \$4. Site: Marymoor Park. Contact Howard Rush 206-823-6018.
- July 11-12....KENT, Wash. -- Boeing Hawks Air Fair. Rat race, Class I&II Mouse race, FAI team race, Northwest Sport Race, Northwest Super Sport Race, precision aerobatics, FAI speed, Formula 40, record ratio speed (all other speed events). Free flight events, too. Trophies through third place and merchandise. Site: Boeing Developmental Center, Kent. Contest Director: Scott Newkirk, 4426 S. 124th, Seattle, WA 98178 (206) 767-3311.
- Aug. 15.....EUGENE, Ore. -- Annual Eugene Propspinnners Summer Meet. AMA combat, 1/2A combat, slow rat race, rat race. Fee: \$5 for first event and \$2 each additional event, juniors half price. Trophies and merchandise. Site: Mahlon Sweet Airport. Contest Director: Gene Pape, 4528 Souza St., Eugene, Ore., 97402, (503) 689-1623.
- Sept. 11-12...KENT, Wash. -- Washington State Control-line Championships. FAI team race, AMA rat race, Northwest Sport Race, Northwest Super Sport Race, Class I Mouse Race (J), Class I Mouse (S-O), Class II Mouse Race, balloon bust (J), Balloon bust (S-O), profile carrier, Class I-II carrier, slow combat, combat, precision aerobatics (beginner-novice pattern)(intermediate)(advanced-expert), sorta scale, formula 40 speed, record ratio speed. Trophies through third place and merchandise. Contest Director: Dave Mullens, 15559 Palatine Ave. N, Seattle, wa, 98133. (206) 365-5436.
- October 11....PORTLAND, Ore. -- Stuntathon '82. All four PAMPA classes of precision aerobatics, 10 a.m.-4 p.m., at Delta Park. A judging clinic will be held Saturday, Oct. 10, for training of anyone interested in judging in 1983. A Fireball flying demonstration is tentatively scheduled for the noon hour. Dave Gardner, contest director, P.O. Box 2024, Lake Oswego, Ore., 97304 (503) 635-4579, days only.

RANDOM TIPS AND RIBS FROM THE FL WORKSHOP FLOOR

====The Seattle Skyraiders have done some renovation work at Carkeek Park. They've dug up the old concrete pad and put in a new pilots' pad. Don Reed, Dave Mullens and R.F. Stevenson headed the crew.

====Joe Just has bought out Chop's Products, the 1/2A racing supplier. He's also going to be selling numerous other CL products. Let's support this Northwest flier and supplier. Joe Just, 713 Crescent, Sunnyside, WA 98944.

====The Eugene Register-Guard newspaper is preparing an article on Oba St. Clair, CL pioneer. They were put on to the idea by the man who means a great deal to the Regionals and the Eugene Prop Spinners -- Bob Shelby, the Mahlon Sweet Airport manager.

====Don't forget to write Rich Schaper if you are interested in a helmet for competition pit headgear. P.O. Box 608, Kelso, Wash., 98626.

====Want to fly AMA combat but don't have the time to build? Gene Pape of Eugene, Ore., is now producing kits of his Dogfighter foam plane for \$15. These kits include everything but the engine. The plane has some seven or eight parts and can be assembled in a couple of hours. Not much to look at but good fliers (Howard Rush used them to take second at the Regionals). Gene Pape, 4528 Souza St., Eugene, Ore., 97402.



# SPEED SCOOP

by mike hazel

The first topic in our column is modification of the K&B 6.5. This information is by Scott Newkirk. Great writers always go first.

The K&B engine has some options that make it a good choice for speed and racing use. I have found that the front rotor can be made to run quite a bit faster than the rear, but has a tendency to come apart when run fast. As such, I usually run the front rotor for speed and the rear rotor for rat.

The engine setup varies vastly for the two events. In rat I run a ring. For speed, I add a lot of extra taper to the liner, which penalizes restart capabilities. The piston fits are obviously different for the two applications. With the ringed engine you want about 1 1/2 to 2 1/2 thousandths from the top to bottom of the liner. Without a ring, 7 to 7 1/2 thousandths of taper seems about right.

The factory has a new piston-liner assembly that is of a much higher quality. Most of the units I have did not have round pistons. This was due to a manufacturing problem. The pistons had a centerless ground outside diameter. The new engines have an externally honed piston. This will help considerably. The fitting of rings and adding liner taper are not operations that the ordinary modeler are equipped to do. As far as rings, I have had good success with the units made by Vic Garner. I can do the honing on the lapped sets or modify the taper for anyone interested.

On the front rotor engine I retune the crankshaft for a 35-62° opening, which is a large change. The stock timing is 45-55. The timing is not changed on the liner. The timing on the rear rotor engine is left stock.

Heads are a subject where a lot of different things seem to work. For Formula 40 I use the factory double bubble high compression head set at .006 clearance. For rat, the new two-piece factory head is set at .012 to .014 clearance.

Flying these engines on the mini-pipe is also very interesting, as the needle needs to be set somewhat more right on. Just a little rich, and you may lose 4 or 5 mph, and a little lean and the engine wears out PDQ.

Props seem to vary from 8 1/4 x 7 1/2 for Formula 40 to 8 x 8 for rat. These engines want to turn up. You want to be turning 19,500+ on the ground for rat and 23,000+ for Formula 40. Keep in mind you can run the rat motor at 23K on the ground and it will go faster, but it will also break. In F40, you get more than one chance, so you can better afford a blown motor once in a while.

--Scott Newkirk, 4426 S. 124th, Seattle, WA 98178.

This columnist notes that the RPM figures that Scott quotes for F40 are along the philosophy of instant acceleration with some compromise of top end speed. You may wish to turn the engine quite a bit slower with a high pitch prop and go for the top end speed. Acceleration events like F40 and proto can be quite complex, with regard to the correct prop. Many things must be taken into account, such as the model weight and drag, tank type and fuel feed characteristics, engine unloading, etc.

PIT BOX:

Every well-equipped competitor has one, and the speed fliers should be no exception. I am of course referring to the little collection of equipment that goes out to the circle on an attempt to ensure that everything gets off

## SPEED, continued

OK, and if not, may be able to remedy the problem. You of course do not want to have a bunch of junk in the way, such as the mythical truckloads of equipment we speed fliers supposedly have, i.e. drums of nitro, boxes of engines, portable machine shops, prop carving machines, computerized audio needle tuners, etc. All this stuff is left to the pit area.

I have looked at the pit boxes of many of the combat people, and the included items look similar to the circle needs of the speed mechanic. The only major exception would be to leave out the repair items. Speed planes are not to be repaired in the circle. When designing your zoot pit kit, remember the old saying, "a place for everything and everything in its place." I don't like the kind of boxes that simply have compartments for things to get thrown into. Then they are not quick to retrieve. All the tools should be upright and easy to grab. And of course the box should be easy to carry around, meaning, not too large and heavy.

Here are some suggestions for items to carry based on a box that this writer built. 1. Battery of your choice with meter. 2. Four-way wrench, to handle glow plug and prop nut. 3. Spinner nut tool (3/32" music wire), 4. Size 4 and 6 socket head ball driver wrenches. 5. One or two medium size slot head screw drivers. 6. Forceps. 7. Two-ounce syringe with fuel line and filter as appropriate. 8. Pint size can of fuel (optional if you keep spare fuel in your syringe). 9. Glow plugs. Attach a commercial glow plug receptacle or make your own by drilling and tapping a piece of aluminum or plastic. 10. Props. The method I prefer is to keep spare props sticking into a small piece of foam rubber. That way, they don't get damaged and are easy to retrieve. 11. And don't forget a small rag, always useful for something.

With this small amount of equipment, one should be able to quickly get a plane back up while on the circle without having to tromp back into the pit area, and maybe save an attempt. Your individual application may require more equipment than this. Maybe less, that is, if you never break props, burn out plugs, etc. My last suggestion would be to paint the box a bright color so you don't lose it.

SPEED SCOOP INDEX: Past articles.

Issue No. 3 -- Breaking into speed flying -- Why fly speed?

Issue No. 7 -- Designing a plane for Formula 40

Issue No. 11 -- Speed pan work (fitting engine, drilling, tapping, etc.)

Issue No. 18 -- Fuel systems.

Issue No. 23 -- Designing and flying a 1/2A profile proto plane.

Issue No. 28 -- Speed dolly design and adjustment, with Sacket drawing.

Write this columnist for copies of those articles.

--Mike Hazel, 1040 Windemere Dr. N.W., Salem, OR 97304.

## THE FLYING FLEA MARKET

FOR SALE -- Two Falcon Goodyears with or without engines. Two or three slow rats, complete. K&B 6.5 rat, HP rat, ready to fly. Northwest Super Sport and Northwest Sport Race planes. Vic Garner, 283 South Livermore Ave., Livermore, Calif. 94550 (415) 447-1766.

FOR SALE -- RC planes, kits and motors. Send SASE for list. WANTED -- ST G21/35 MkII Perry ported engine, reasonable. Send description and price. Also, parts engine or basket case OK 1" shaft and crankcase good, price cheap. Bill Skelton, P.O. box 105, Warrenton, OR 97146.

FASCAL -- Covering for combat planes, paintable for other types of planes. Clear, 27" wide, 60¢ per foot, add \$1 for shipping. WANTED -- Crankcase for Fox .15 BB Schneurle engine, other parts immaterial. John Thompson, 1411 Bryant Ave., Cottage Grove, OR 97424 (503) 942-7324.

## HOBBY SHOP DIRECTORY

FIRGROVE MODEL SUPPLY -- Radio control, control-line and gliders. 10611 136th St. East, Puyallup, Wash. 98373. (206) 845-7675. Owned by R.B. (Bob) Pfeiffer.

HERB'S SPEED AND RACING PRODUCTS -- Speed pans, epoxy glass speed tops, and other supplies. Send SASE for info. 1621 M St., Merced, CA 95340. (209) 722-7836. Owned by Frank Hunt.

## AD RATES

Advertisements in Flying Lines help support the newsletter and the control-line hobby. Prices are \$6 for a half-page ad, \$4 for a quarter-page ad, \$15 a year for hobby shop directory listings and \$1 for five lines of classified advertising. Also available, staple-in brochures (price negotiable based on weight.) Club flyers stapled in free of charge.

## LETTER WRITERS, DON'T DESPAIR!

Yes, we know that a great many of you have written letters to FL and are still waiting to see them in print. They are all neatly typed and waiting the first available opening. Unfortunately -- or fortunately, depending on how you look at it, there's been so much control line news in this "dead" hobby that we just haven't had space. We will find room for your letter in an upcoming issue!

## FLYING LINES

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

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

Prices for subscriptions: \$5 for six issues and \$9.50 for 12 issues. Canada and Mexico: \$5.50 for six issues and \$10 for 12 issues. Overseas, \$10 for six issues and \$18 for 12 issues, U.S. funds please.

Staff openings: FL would like a volunteer to act as advertising representative. A new photo editor also is sought. Contact the editor.

Here is the FL staff:

Publisher....Mike Hazel	Aerobatics.....Rich Schaper	Speed.....Mike Hazel
Editor.....John Thompson	Paul Walker	Scale.....Orin Humphries
Photo editor.....John Thompson	Combat.....Gene Pape	Sport.....Larry Miles
Carrier.....Orin Humphries	John Thompson	Beginners.....John Thompson
	Racing.....Mike Hazel	

## GloBee Glow Plugs are the talk of the model airplane industry. Here's Why!

- there are 4 different GloBee Glow Plugs (available in long and short reach).
- there are 2 (Sport and Racing) GloBee Glow Buttons (complete heads for 1/2A engines .049/.051).
- they withstand the heat and pressure of the "hottest" engines on the market.
- they have a unique glow element and a high temperature glass seal.
- the spiral element is at the firing tip of the plug, and doesn't stretch up into the body.
- being closer to the fuel means faster ignition and increased RPM.
- special glass provides superior sealing characteristics and sustains the element in its ideal position.

With a GloBee Glow Plug there is little danger of broken elements damaging your valuable engine. In some bench tests designed to stretch capabilities with fuels hotter than other plugs permit, engineers burned holes in the pistons before the GloBee coil failed.

GloBee Glow Plugs were developed by Fusite, a world leader in glass-to-metal technology, and are now manufactured solely by *Twinn-K Inc.* under their own strict quality control regulations.

The GloBee Glow Plug is so superior to other plugs that it has produced:

- a serious challenge to existing records.
- a whole new standard of engine performance.
- a de-limiting factor in engine design and modification.

With this new power potential, the greatest flyers become even better. GloBees have unmatched dependability, too—a rugged plug with the stamina you've always wanted for a perfect flight every time!

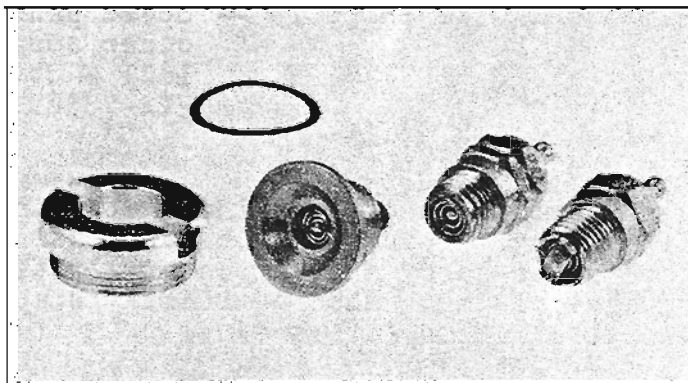
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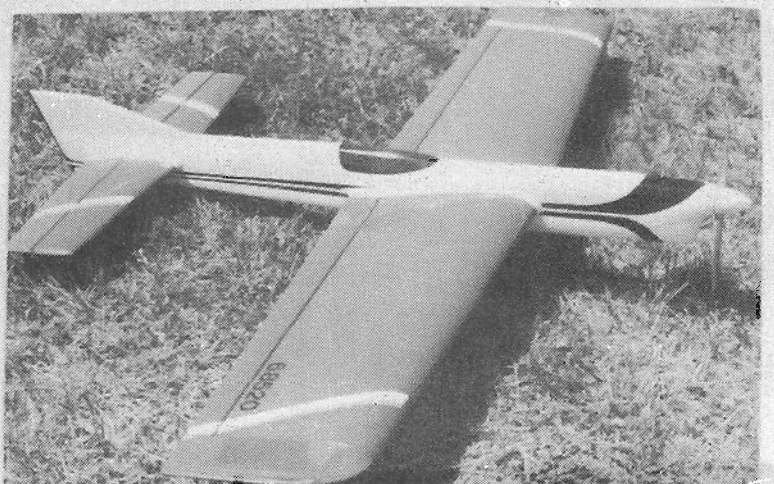
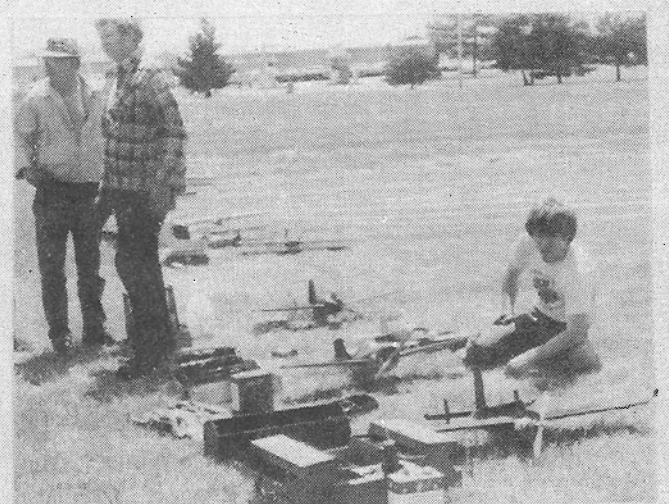
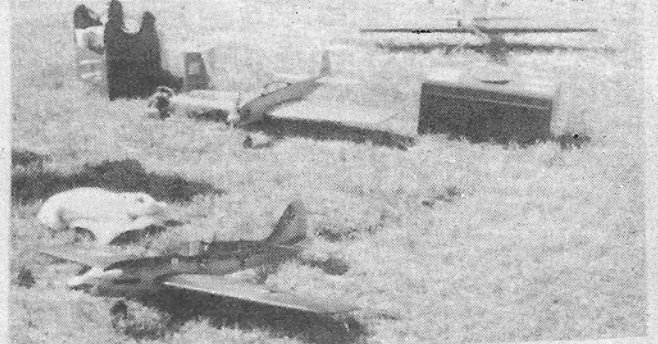
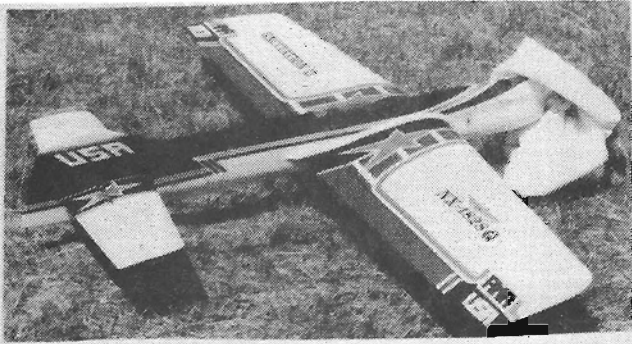
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Glow plug guide.

U.S. Patent No's 4080944  
4088105



There's a GloBee Glow Plug that's BEST for You!



**REGIONALS POTPOURRI**

FL photographers Bill Varner and Bruce Guenzler caught a variety of items from the 1982 Northwest Regionals. Left column, top to bottom: Rare appearance by the Excitation II, Ted Fancher's plane for the 1982 world stunt championships. Race action between pilots Paul Gibeault, left, and Gary Buffon. A portion of the displays -- Terry Miller's plastics and Frank Macy's Fireballs. Just to keep you on your toes -- a non-Regionals picture, Ken Parent of Canada pitting an FA+ Team racer at 1981 Winston-Salem U.S. Championships (Sam Burke photo). Right column, top to bottom: Crowded profile scale pits, crowded carrier pits (with Roy Beers, left, Loren Howard and Greg Beers (seated)). Dick Salter watching a carrier slow flight. Buffon piloting while Bill Varner awaits Dave Green's pit work. Another fine California stunter.

the EUGENE PROPSPINNERS PROUDLY PRESENT THEIR

# 8<sup>TH</sup> ANNUAL SUMMER CONTROL LINE MEET.

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AUGUST 15

FOR

COMBAT AND RAT!

Events this year are:

- \* AMA Fast Combat
- \*  $\frac{1}{2}$ A Combat (usual rules)
- \* Rat Race
- \* AMA Slow Rat Race

Those of you who don't own a slow rat are encouraged to bring a NW super sport. The NW records are wide open. Who will be the first on the block to grab a NW prestigious record?

Entry Fees: \$5 for one event, \$2 for each extra. Juniors half price  
Trophy and merchandise awards thru third place in each event.

Site: Propspinners flying field, Eugene Airport, Eugene, Oregon  
Meet gets underway about ten o'clock.

For more info contact: Contest Director:

Gene Pape  
4528 Souza St  
Eugene, OR 97402

phone (503) 689-1623



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# RAIDER ROUND--UP

82

## The WASHINGTON STATE CONTROL LINE CHAMPIONSHIPS

BOEING SPACE CENTER- KENT, WASH  
SEPTEMBER 11 & 12, 1982

SPONSORED BY THE SEATTLE SKYRAIDERS MODEL AIRPLANE CLUB

TROPHIES THROUGH THIRD PLACE

MERCHANDISE AWARDS THROUGH THIRD PLACE

ENTRY FEES: \$5 first event, \$4 each additional event, \$15 maximum

JUNIORS: \$1 entry fee per event. Every junior entry will receive a merchandise award.

REGISTRATION BEGINS AT 9:00 AM EACH DAY, TO EVENT STARTING TIME

### SCHEDULE OF EVENTS

SATURDAY, SEPT 11			SUNDAY, SEPT 12		
9:30	NWSR	JSO	9:30	Slow Combat	SO
11:00	NWSSR	JSO	9:30	Precision Aerobatics	
11:00	to 4:30			3 PAMPA classes	
	Carrier I&II (comb)	JSO		Beginner	
	Profile Carrier	JSO		Intermediate	
12:30	Mouse I	J		Advanced/Expert	
1:00	Mouse I	SO	11:30	Fast Combat	SO
2:00	Mouse II	JSO	11:00 to 4:00	Speed	JSO
3:00	Fast Rat	O		Formula 40	
4:30	FAI Team Race	O		Record Ratio	
4:30	Balloon Bust	J	1:00	Static judging for	JSO
4:30	Balloon Bust	SO		Sorta-Scale	
			3:00	Flying -- Sorta-Scale	

What type of model qualifies for SORTA-SCALE??? Any model that represents an actual flying machine. PROFILES ARE ENCOURAGED. No documentation unless the model is of a really obscure aircraft. This is a fun scale event, no big hassle, bring your bird out and have some fun.

### FLYING SITE

Boeing Space Center, Kent, Washington. Take the orillia Road exit off I-5, enter the parking lot off 212th S., across the road from the KOA. Three paved circles and one hayfield for combat and Balloon bust.

The perpetual Skyraider Sportsman award trophy will be awarded to the contestant with the highest overall cumulative score.

For further information contact: Contest Director, Dave Mullens  
15559 Palatine Ave. N  
Seattle, WA 98133  
206-365-5436

AMA "AAA" sanctioned. AMA membership required, available at contest.