

# FLYING LINES

1411 BRYANT AVENUE  
COTTAGE GROVE, OREGON 97424

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## DRIZZLE CIRCUIT '81 -- A GLORIOUS START!

The 1981 Northwest Sport Race Drizzle Circuit started Dec. 14 in Portland Oregon in a fashion that left all the contestants -- 28 entries over four events -- with a warm glow of satisfaction.

It was a very encouraging start indeed.

First of all there was no drizzle. Oh, it tried hard but a few sprinkles for about five minutes was the best Mother Nature could do.

And the racing!

The new Fox .35 - powered Northwest Sport Race was a smashing success. Ten entries in that event proved that the stunt .35s are not nearly as hard to deal with as some expected. In six preliminary heats and a feature race, not a single entry recorded a "did not finish!" Heats were close, many entrants showed consistency across both heats, all winning times were within 29 seconds of each other, there were no crashes, no beefs and much pleasure.

Dave Green won NWSR with a blistering 9:33 time, a Northwest record and one that should stand. John Thompson of Cottage Grove, Ore., followed Green (of Astoria, Ore.) with a second-place finish and the day's fast heat, a 5:10, also a Northwest record.

The new Super Sport race event also had to be called a success. This is an event where creativity will be exercised, and practice and preparation will be important. Mike Hazel of Salem, Ore., set the standard by coming out with an entirely new airplane, designed from the ground up for Super Sport, a very stable, clean and quick slow rat type plane with K&B .35. Hazel won over 10 other entries, turning a modest 9:20 time in the feature but streaking to a record 4:06 heat. Both those times should fall drastically as the event goes on. We predict fairly common sub-4-minute heats and some sub-8-minute features, slightly better than the old NWSR rules produced.

Super sport featured a lot of sorting out and many different engine-plane combinations. There were a few DNFs but not an excessive number. Again few mishaps and other problems. The only bona fide crash of the race befell the old NWSR record-collector, John Thompson, whose venerable Ringmaster bit the concrete when another pilot's cap caught the down line on a glide to the pit stop. A backup plane was tossed up for the second prelim but without a needle setting Thompson over-ran the 70 laps for a disqualification and his first NW sport race loss in 10 contests.

Bright lights: Good participation from around the region. Stunt flier Paul Walker placing second in NWSR in his first try with a very competent and well-prepared entry. Dave Green emerging as a long-anticipated power, placing in both events for the big ones as well as both mouse race classes. Newcomer Greg Beers looking good in Super Sport with a quick Mongoose. Ralph Pastor of Seattle entering both sport classes, finishing all four heats in his first circuit try. Junior flier Bruce Guenzler winning one heat and looking good throughout in Super Sport.

Everyone flying the sport classes began their march toward the big circuit trophies to be awarded after the five contests.

And there was more: two classes of  $\frac{1}{2}$ A mouse race.

Bill Varner of Astoria, Ore., spun to first place in Class I mouse with a smart 5:59, preceded by a 2:41 prelim. The prelim time bettered a record he already holds in the Northwest. John Thompson captured the Class II mouser with a respectable 10:43 feature (no prelims flown). Class I was very close racing and looked expert aloft and in the pits. Feature times in that event were only 11 seconds apart from first to third.

The action moves to Seattle, where the Skyraiders will host the Jan. 11 contest at Carkeek Park. Slow combat is the secondary event, followed by the two sport racing classes as usual. Action must start on schedule, so be on time! See contest calendar in this issue for details.

The Portland contest was the first chance for FL to use a new data-gathering system that should allow much better reporting of engine-plane combinations from now on in all kinds of events. We've developed simple forms that we hand out to those placing in each event. Information on the forms goes into our contest reports.

Here are the complete results from Portland, plus circuit statistics. FL keeps a book of Drizzle Circuit data which goes beyond what is presented here, and it's available for inspection at any of the contests.

## COMPLETE RESULTS, 1981 Northwest Sport Race Drizzle Circuit Contest No. 1

### FEATURE RACES

#### NORTHWEST SPORT RACE (10 entries)

1. Dave Green, Astoria, Ore. -- 9:33, 10 championship points. Fox .35, Sterling Yak-9, Zinger 9x6W, K&B plug, Sheldon's 15% nitro fuel, Fox 2½-oz tank.
2. John Thompson, Cottage Grove, Ore. -- 10:04, 9 points. Fox .35, Sterling Ringmaster, Zinger 9x7, K&B plug, K&B 300 (12%) fuel, Fox 2-oz tank.
3. Dick Salter, Seattle, Wash. -- 10:36, 8 points. Fox .35, Sterling Ringmaster, Zinger 9x6, Skeldon's 15% nitro, adjustable leadouts, uniflow TKO Racing tank (2-oz.)
4. Paul Walker, Kent, Wash. -- 10:59, 7 points. Fox .35, Goldberg Shoestring, Tornado 8x8, Thunderbolt RC long plug, 10%nitro/25%castor homebrew fuel, 2-oz. uniflow tank.

#### SUPER SPORT RACE (11 entries)

1. Mike Hazel, Salem, Ore. -- 9:20, 11 points. K&B .35, Cro-Magnon (Hazel design), 36" span, 27-oz., Garner glass slow rat prop, K&B plug, 20% nitro home brew fuel, fastfill, shutoff, Veco 3.5-oz tank.
2. Greg Beers, Portland, Ore. -- 9:41, 10 points. Fox .35 (Loren Howard rework), M&P Mongoose, Grish prop, Fox plug, K&B 1000 (25% nitro) fuel.
3. Dave Green, Astoria, Ore. -- 96 laps, 9 points. K&B .35, Sterling Yak-9, 8x8 Tornado prop, K&B plug, Sheldon's 15 % nitro, Fox 4-oz tank.

### HEAT WINNERS

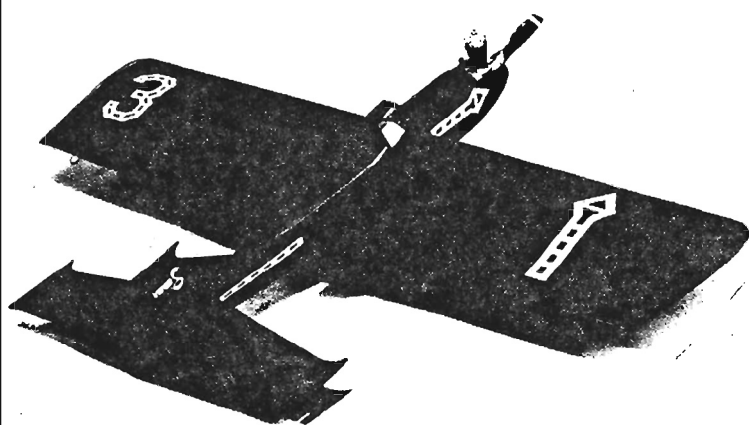
#### NORTHWEST SPORT RACE

Round 1 -- John Thompson (5:10), Paul Walker (5:26), Dick Salter (5:12).  
Round 2 -- Salter (5:12), Thompson, 5:15), Dave Green (5:39).

#### SUPER SPORT RACE

Round 1 -- Mike Hazel (4:06), Loren Howard (5:25), Bruce Guenzler (4:39), Dave Mullens (5:56).  
Round 2 -- Hazel (4:43), Dave Green (5:37), Greg Beers (5:00), Ralph Pastor (6:59).

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CIRCUIT STANDINGS

NORTHWEST SPORT RACE

|                           |    |
|---------------------------|----|
| 1. Dave Green . . . . .   | 10 |
| 2. John Thompson. . . . . | 9  |
| 3. Dick Salter. . . . .   | 8  |
| 4. Paul Walker. . . . .   | 7  |
| 5. Ralph Pastor . . . . . | 2  |
| Dick McConnell . . . . .  | 2  |
| Dave Mullens . . . . .    | 2  |
| Mike Hazel . . . . .      | 2  |
| Paul Wallace . . . . .    | 2  |
| 10. Bill Varner . . . . . | 1  |

SUPER SPORT RACE

|                            |    |
|----------------------------|----|
| 1. Mike Hazel . . . . .    | 11 |
| 2. Greg Beers . . . . .    | 10 |
| 3. Dave Green . . . . .    | 9  |
| 4. Dick Salter. . . . .    | 2  |
| Ralph Pastor . . . . .     | 2  |
| Bruce Guenzler . . . . .   | 2  |
| Dave Mullens . . . . .     | 2  |
| Paul Wallace . . . . .     | 2  |
| 9. Loren Howard. . . . .   | 1  |
| 10. John Thompson. . . . . | 0  |
| Dick McConnell . . . . .   | 0  |

1/2A MOUSE RACE CLASS I (6 entries)

1. Bill Varner, Astoria, Ore. -- 5:59 (2:41 prelim). Cox Black Widow .049, Little White Mouse (Frank Scott design), 14" span, Cox plug, 40% fuel, hot glove.
2. Loren Howard, Vancouver, Wash. -- 6:01 (3:08 prelim). Cox Black Widow .049 (Howard rework), Kustom Kraftsmanship Li'l Rodent, 14" span, 4.2 oz., Tornado prop, Cox plug, KK needle valve.
3. Dave Green, Astoria, Ore. -- 6:10 (3:07 prelim). Cox Black widow .049 (Green rework), Little White Mouse, Tornado 5x4, Cox TD plug, 40% home brew fuel, teflon reed, bored venturi, fastfill, hot glove.

1/2A MOUSE RACE CLASS II (3 entries)

1. John Thompson, Cottage Grove, Ore. -- 10:43. Cox Tee Dee .049 (Klaus rework), Nighthawk (Thompson design), 16 1/2" span, 6 oz., Tornado 5x4, TD plug, Sheldon's 50% nitro, fine-thread needle, bored venturi, ball-check pressure valve, crankcase pressure, fastfill, shutoff, D. Green 1-oz. outboard tank.
2. Dave Green, Astoria, Ore. -- 14:34. Cox Tee Dee .049 (Green rework), Midwest Super Mouse, 17" span, 5x4 Tornado, Cox plug, 40% nitro home brew, crankcase pressure, bored venturi, fastfill, shutoff, hot glove, D. Green 1 1/2-oz. outboard tank.
3. Paul Wallace, Cottage Grove, Ore. -- 163 laps. Cox Tee Dee .049, Org (Wallace design), 16" span, 4.75 oz., Tornado 5x4, GloBee sport plug, Sheldon's 40%, shutoff, suction uniflow Fox/Wallace 1-oz. tank.

## NW COMPETITION STANDINGS

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

With the new year comes the end of the 1980 contest season, and the compilation of final 1980 Northwest competition standings.

To review: At the beginning of the year, FL began keeping track of the performances of Northwest fliers in Northwest sanctioned contests. We recorded the top four placing entrants in each event in each contest, applying a score based on the number of entries. We also kept track of "overall" standings in each grouping.

As "Ridiculous" Rich Porter observed mid-season, the standings rewarded participation as well as winning -- and not entirely by accident, since it was our idea that anything that rewarded participation was needed.

So we've come to the end of the experiment with the firm resolve to keep going in hopes that participation continues to grow. And, with year's end, we list below the final standings for all events, along with an overall competition listing just for fun.

OVERALL RACING

(25 contests, 179 entries)

|                            |     |
|----------------------------|-----|
| 1. John Thompson . . . . . | 133 |
| 2. Dave Green. . . . .     | 62  |
| 3. Jim Cameron . . . . .   | 50  |
| 4. Mike Hazel. . . . .     | 41  |
| 5. Rich Schaper. . . . .   | 39  |
| 6. Bill Varner . . . . .   | 33  |
| 7. Bruce Guenzler. . . . . | 29  |
| 8. Dan Burdick . . . . .   | 15  |
| 9. Tom Knoppi. . . . .     | 14  |
| Dave Mullens. . . . .      | 14  |

NORTHWEST SPORT RACE (Old rules)

(9 contests, 83 entries)

|                              |    |
|------------------------------|----|
| 1. John Thompson . . . . .   | 80 |
| 2. Rich Schaper. . . . .     | 39 |
| 3. Jim Cameron . . . . .     | 22 |
| 4. Dave Green. . . . .       | 20 |
| 5. Bruce Guenzler. . . . .   | 18 |
| 6. Bill Varner . . . . .     | 15 |
| Dan Burdick . . . . .        | 15 |
| 8. Tom Knoppi. . . . .       | 14 |
| 9. Mike Hazel. . . . .       | 11 |
| 10. Richard Simpson. . . . . | 10 |

FINAL STANDINGS, continued

NORTHWEST SPORT RACE (Fox .35)

(2 contests, 13 entries)

1. John Thompson . . . . . 12
2. Dave Green. . . . . 10
3. Dick Salter . . . . . 8
4. Paul Walker . . . . . 7
5. Bill Varner . . . . . 2
6. Bruce Guenzler. . . . . 1

SCALE RACING (GOODYEAR)

(3 contests, 19 entries)

1. John Thompson . . . . . 12
2. Mike Hazel. . . . . 9
3. Willie Naemura. . . . . 8
4. Dave Green. . . . . 5
5. Jim Cameron . . . . . 4
6. Roger Simpson . . . . . 3

1/8A MOUSE CLASS I

(3 contests, 22 entries)

1. John Thompson . . . . . 15
2. Bill Varner . . . . . 13
3. Dave Mullens. . . . . 6
- Jim Cameron . . . . . 6
5. Bruce Guenzler. . . . . 5
- Loren Howard. . . . . 5
7. Dave Green. . . . . 4

COMBAT

OVERALL COMBAT

(20 contests, 115 entries)

1. John Thompson . . . . . 49
2. Bill Varner . . . . . 43
3. Howard Rush . . . . . 30
4. Gene Pape . . . . . 28
5. Dick Salter . . . . . 21
6. Jeff Young. . . . . 17
- Ken Burdick . . . . . 17
8. Bob Carver. . . . . 16
9. Buzz Wilson . . . . . 15
10. Jim Cameron. . . . . 14
- Phil Granderson. . . . . 14

SUPER SPORT RACE

(2 contests, 14 entries)

1. Mike Hazel. . . . . 11
2. Greg Beers. . . . . 10
3. Dave Green. . . . . 9
4. Dave Mullens. . . . . 8
5. John Thompson . . . . . 3
6. Bruce Guenzler. . . . . 2
7. Bill Varner . . . . . 1

RAT RACE

(2 contests, 12 entries)

1. Mike Hazel. . . . . 10
2. Scott Newkirk . . . . . 2

SLOW RAT RACE

(1 contest, 5 entries)

1. Dick Salter . . . . . 3

1/8A MOUSE CLASS II

(3 contests, 11 entries)

1. John Thompson . . . . . 11
2. Jim Cameron . . . . . 4
- Dave Green. . . . . 4
4. Bruce Guenzler. . . . . 3
5. Bill Varner . . . . . 2
6. Paul Wallace. . . . . 1

AMA COMBAT

(7 contests, 59 entries)

1. John Thompson . . . . . 29
2. Howard Rush . . . . . 25
3. Bill Varner . . . . . 22
4. Ken Burdick . . . . . 17
5. Bob Carver. . . . . 16
6. Gene Pape . . . . . 13
7. Buzz Wilson . . . . . 12
8. Norm McFadden . . . . . 10
9. Phil Granderson . . . . . 7
10. Mike Hazel . . . . . 5

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## STANDINGS, continued

### FAI COMBAT

(3 contests, 7 entries)

|                             |   |
|-----------------------------|---|
| 1. Howard Rush . . . . .    | 5 |
| 2. Dick McConnell . . . . . | 3 |
| Dick Salter . . . . .       | 3 |
| 4. Bill Varner . . . . .    | 2 |
| 5. John Knoppi . . . . .    | 1 |

### 1/2A COMBAT

(4 contests, 24 entries)

|                              |    |
|------------------------------|----|
| 1. Jeff Young . . . . .      | 17 |
| 2. Bill Varner . . . . .     | 14 |
| Jim Cameron . . . . .        | 14 |
| 4. Keith Iwanski . . . . .   | 8  |
| 5. Phil Granderson . . . . . | 7  |
| 6. Gene Pape . . . . .       | 6  |
| 7. Rich Porter . . . . .     | 4  |
| 8. John Thompson . . . . .   | 2  |

### NAVY CARRIER

#### OVERALL CARRIER

(2 contests, 10 entries)

|                             |   |
|-----------------------------|---|
| 1. Marty Phillips . . . . . | 9 |
| 2. Loren Howard . . . . .   | 8 |
| 3. Dick Salter . . . . .    | 5 |
| 4. Terry Miller . . . . .   | 3 |
| Jim Drury . . . . .         | 3 |

#### SPEED (ALL CLASSES COMBINED)

(7 contests, 18 entries)

|                            |   |
|----------------------------|---|
| 1. Mike Hazel . . . . .    | 4 |
| Wallace-Young . . . . .    | 4 |
| 3. John Thompson . . . . . | 3 |
| 4. Scott Newkirk . . . . . | 2 |
| Bill Varner . . . . .      | 2 |
| 6. Jim Cameron . . . . .   | 1 |

### AEROBATICS

#### OVERALL AEROBATICS

(11 contests, 43 entries)

|                            |    |
|----------------------------|----|
| 1. Rich Porter . . . . .   | 14 |
| 2. Jeff Young . . . . .    | 10 |
| 3. Terry Miller . . . . .  | 9  |
| 4. Paul Walker . . . . .   | 8  |
| 5. Dick Salter . . . . .   | 7  |
| 6. Rick Railston . . . . . | 5  |
| Jim Cameron . . . . .      | 5  |
| Bob Emmett . . . . .       | 5  |
| 9. Don Schultz . . . . .   | 4  |
| Joe Just . . . . .         | 4  |

#### OLD TIME STUNT

(2 contests, 7 entries)

|                           |   |
|---------------------------|---|
| 1. Bob Emmett . . . . .   | 4 |
| Dick Salter . . . . .     | 4 |
| 3. Dave Helton . . . . .  | 3 |
| 4. Dave Gardner . . . . . | 2 |
| Jerry Blackburn . . . . . | 2 |
| 6. Joe Just . . . . .     | 1 |

### SLOW COMBAT

(4 contests, 18 entries)

|                             |    |
|-----------------------------|----|
| 1. John Thompson . . . . .  | 13 |
| Dick Salter . . . . .       | 13 |
| 3. Gene Pape . . . . .      | 4  |
| 4. Bill Varner . . . . .    | 3  |
| John Knoppi . . . . .       | 3  |
| Buzz Wilson . . . . .       | 3  |
| 7. Dick McConnell . . . . . | 2  |
| Keith Iwanski . . . . .     | 2  |

### NORTHWEST SPORT COMBAT

(2 contests, 7 entries)

|                          |   |
|--------------------------|---|
| 1. Gene Pape . . . . .   | 5 |
| John Thompson . . . . .  | 5 |
| 3. Bill Varner . . . . . | 3 |
| 4. Dick Salter . . . . . | 2 |
| Bruce Guenzler . . . . . | 2 |

### SCALE CARRIER (CLASS I & II COMBINED)

(1 contests, 6 entries)

|                             |   |
|-----------------------------|---|
| 1. Loren Howard . . . . .   | 6 |
| 2. Marty Phillips . . . . . | 5 |
| 3. Dick Salter . . . . .    | 4 |
| 4. Terry Miller . . . . .   | 3 |

### PROFILE CARRIER

(1 contest, 4 entries)

|                             |   |
|-----------------------------|---|
| 1. Marty Phillips . . . . . | 4 |
| 2. Jim Drury . . . . .      | 3 |
| 3. Loren Howard . . . . .   | 2 |
| 4. Dick Salter . . . . .    | 1 |

### PRECISION AEROBATICS

(9 contests, 36 entries)

|                            |    |
|----------------------------|----|
| 1. Rich Porter . . . . .   | 14 |
| 2. Jeff Young . . . . .    | 10 |
| 3. Terry Miller . . . . .  | 9  |
| 4. Paul Walker . . . . .   | 8  |
| 5. Rick Railston . . . . . | 5  |
| Jim Cameron . . . . .      | 5  |
| 7. Don Schultz . . . . .   | 4  |
| 8. Joe Just . . . . .      | 3  |
| Marty Phillips . . . . .   | 3  |
| Don McClave . . . . .      | 3  |
| Rich Schaper . . . . .     | 3  |
| Don Anderson . . . . .     | 3  |
| Dick Salter . . . . .      | 3  |

### OVERALL COMPETITION

(65 contests, 365 entries)

|                             |     |
|-----------------------------|-----|
| 1. John Thompson . . . . .  | 185 |
| 2. Bill Varner . . . . .    | 78  |
| 3. Jim Cameron . . . . .    | 70  |
| 4. Dave Green . . . . .     | 62  |
| 5. Mike Hazel . . . . .     | 50  |
| 6. Dick Salter . . . . .    | 46  |
| 7. Rich Schaper . . . . .   | 42  |
| 8. Bruce Guenzler . . . . . | 31  |
| 9. Howard Rush . . . . .    | 30  |
| 10. Gene Pape . . . . .     | 28  |

### AD RATES

Advertisements in FL help support the newsletter and the control line hobby. The price is \$5 per issue for a half page ad, \$3 for a quarter page, \$10 per year for a Hobby Shop Directory listing, and \$1 for five lines of classified advertising. Also available, staple-in brochures for \$10 per issue. Contest flyers stapled in free of charge.

# NW COMPETITION RECORDS

RECORD PERFORMANCES ESTABLISHED BETWEEN NORTHWEST  
MODELERS IN SANCTIONED COMPETITION

Four racing records tumbled in the opener of the 1981 Northwest Sport Race Drizzle Circuit, three in the new sport racing classes and one in  $\frac{1}{4}$ A mouse race.

Bill Varner of Astoria, Ore., nicked seven seconds off his own Class I mouse race preliminary heat record, dropping the time from 2:48 to 2:41 for the 50 laps prescribed by AMA rules on 42' lines.

Dave Green of Astoria blew away the month-old Northwest Sport Race (Fox .35) record with a 9:33 feature race, beating John Thompson's old 10:08. Thompson dropped the preliminary heat record by one second, hitting the 5:10 mark.

Mike Hazel of Salem, Ore., brought the Northwest Super Sport Race heat record down to 4:06, erasing Thompson's month-old 4:25 mark.

The level of performance at the Portland, Ore., DC contest indicated that both Super Sport records and the Sport Race prelim probably will soon be bettered, but Green's NWSR feature may stand for some time.

Flying Lines keeps track of best performances by Northwest modelers in AMA-sanctioned competition. Some documentation is required for records claimed to have been set in out-of-region contests. All AMA events or those with regional rules that can be compared by times or scores are recognized.

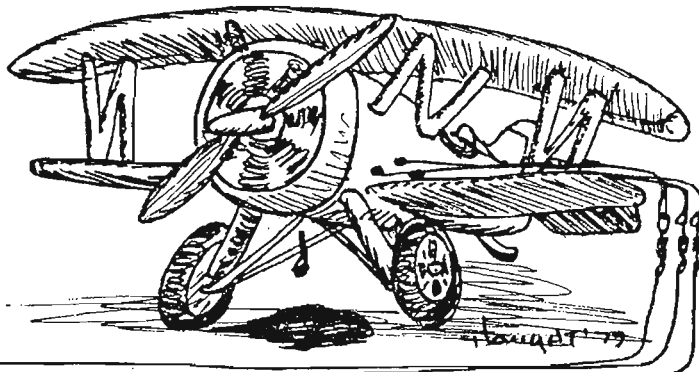
Here are the latest records, as of Jan. 1, 1981:

|                                  |                              |  |
|----------------------------------|------------------------------|--|
| $\frac{1}{4}$ A MOUSE CLASS I    | 50-lap: 2:41 (Bill Varner)   | 100-lap: 5:50 (Bill Varner)                    |
| $\frac{1}{4}$ A MOUSE CLASS II   | 75-lap: 3:54 (John Thompson) | 200-lap: 10:24 (John Thompson)                 |
| 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: --                  | 200-lap: --                                    |
| NW SPORT RACE                    | 70-lap: 5:10 (John Thompson) | 140-lap: 9:33 (Dave Green)                     |
| NW SUPER SPORT                   | 70-lap: 4:06 (Mike Hazel)    | 140-lap: 9:05 (John Thompson)                  |
| $\frac{1}{4}$ A SPEED: 80.33 mph | (Wallace-Young)              | FAI SPEED: 88.05 (Anonymous)                   |
| $\frac{1}{2}$ A PROTO: 71.97     | (Jeff Bell)                  | FORMULA 21: --                                 |
| A SPEED: 125.82                  | (Mike Hazel)                 | FORMULA 40: 144.75 (Scott Newkirk)             |
| B SPEED: 153                     | (Mike Hazel)                 | JET SPEED: 165.83 (Mike Hazel)                 |
| D SPEED: --                      |                              | PROFILE NAVY CARRIER: 208.9 (Marty Phillips)   |
|                                  |                              | CLASS I NAVY CARRIER: 268.98 (Terry Miller)    |
|                                  |                              | CLASS II NAVY CARRIER: 319.65 (Orin Humphries) |

CONTROL LINE

SCALE

by orin humphries



(The scene: Basement workshop. As the curtain rises, the phone rings...) "Ring-Ring!"

"Hello. This is Orin. Yes, I'll accept the charges (Bet it's that cheap editor guy again). Yeah, hi, John, what's up? ... What do I know about scale? Everything, man; I know more about scale than anyone in my entire basement! Sure, I'd be glad to do a column ... Hokay, see ya. ... Operator, reverse the charges."

Dear Readers: First you wrap a thousand feet of bell wire around the base of your hot water heater and hook up a battery. The magnetic field this makes prevents the buildup of scale in your tank.

"RING-RING!!"

"Hello? Hi, again, John, what's...huh? You said scale, fella, and I just read in Popular Mechanics ... Oh, that scale. Alright, never fear."

## CL SCALE, continued

Dear Readers: My uncle Ferd had this Lizard Plane, you see, and it had the strangest skin. Little round scales that covered it and kept out the rain and...."

"RING-RING-RING-RING!!!!"

"Yes? Geeezis, John, calm down! ... John? ... Listen, now take it easy, I think I get the picture, no need to get that insultin', awright, awright!"  
Sheesh, Never met an editor yet that acted like he was breast-fed once.

Dear Readers: All seriousness aside, scale is my other area of interest. In case you haven't read one, I do the Carrier column also. Dave Haught, who was going to do the scale column, has gone back to school to become a youth counselor and will be tied up a couple years.

I would like to do this one for the average guy, instead of the guys on the US World Scale Team, so that everybody out there might even read it. Forgive my wierdness above. It helps keep my sane (no comment) all tucked in.

Scale in the Northwest, as far as contest entries go, has turned purple and died. I hope to stir up a little interest on a more relaxed level through this column.

### DOCUMENTATION

That can be a double-edged sword. Probably the grand, number one mistake a scale nut can make is to fall in love with a particular airplane and then try to find documentation for it. I did that with my first, my A-26, and everybody I know does that the first time around. I didn't set out to build a competition bird, but a year after it was begun, the bug bit. And that happens over again. A guy wants to build the Polish Fighter from the Sterling kit and can't get a three-view. So he never finishes the model. See what documentation you can find first, and then pick one of those that turns you on. No matter what, though, let your heart pick.

Listen, with the low turnouts at the contests the last five years, I guess you don't need documentation. Just go there and fly your bird. You have at least an 80% chance of bringing home hardware. But why do we let the chances of trophying be our highest priority?

My priorities at a contest are: 1) Have fun, 2) Learn, 3) Share the experience of flying with others who do the same thing.

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## CL SCALE, continued

If you are in love with a particular airplane, for crying out loud, BUILD IT! And who cares if you don't want to fly it in a contest; just go out and enjoy your creation. Let the passers-by "ooh" and "ah" over it. You'll like it.

### SCALE REVOLUTION?

Awright, you guys, listen up. I just got the list of events for the 1981 Regionals, and once again, there are no scale events. Because you and I have said "no" to going in the direction taken nationally. Okay, so we don't want to spend two years on a project, take it to a contest, and have some gnome from the cathedral basement take us out with something he put together for the Smithsonian's display. On his lunch break. So, let's do something different.

Profile Scale is what's happening around here. A great example is the Beech Staggerwing by Clarence Haught of Coeur d'Alene, Idaho, that appeared in the July, '80 Model Aviation. We can't get anything built up to come out at the ISB contest in August (more later), but we always get some profiles.

So, why don't we do that for the Regionals? No rib stitching/taping, no skin panels/rivets, no working instruments/relief tubes, no sliding canopies. Just a scale profile, with the wing sized to give a dreamy flier (no where shall it say you have to hate how it flies). Standoff scale rules, or, as Gil Horstman puts it, "Stand Way Off" scale rules.

How long would it take you to put together an .049 scale profile ship with a representative paint job? Let's agree: no three-views, one picture would be nice, but not mandatory.

By the way, the Staggerwing does square loops without flaps, as if the maneuver was made for the plane...who says we shouldn't enjoy flying the plane, too?

See ya, guys.

--Crin Humphries, N. 5208 Elgin, Spokane, WA 99208 (509) 325-9773.

### REGIONALS!!

Yes, it's 1981 and time to plan for another running of the Northwest Regional Controline Championships. Just when you think it's gone away forever, the Regionals comes back better than ever.

This year's Regionals will be a bit different than the past few in several ways.

First, a new contest director, FL's editor John Thompson. Because of his admitted inexperience, "Stone Ax" is beginning planning for the Regionals a bit earlier. And, because he has more energy than brains, he is planning to do more promotion and publicity than in the past few years.

Already, initial contacts are being made with various persons who may become event directors and committee chairmen. In a continuing effort to make this championship a truly regional contest, contest workers are being recruited from around the entire region, though coordinated still by the Eugene Propspinners.

There will be some changes in events, too, primarily in the addition of four new events (two of which were run as informal events last year). FAI and slow combat will be elevated to double-elimination. New events will be Super Sport Race,  $\frac{1}{2}$ A combat, and  $\frac{1}{2}$ A Mouse Classes I and II. Because of the new events, efforts will be made to run the contest on a more rigid schedule than the past.

As usual, winners will receive excellent trophies and merchandise prizes.

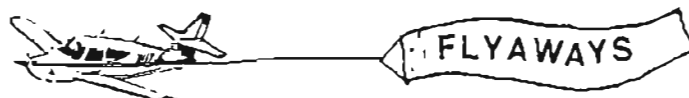
VOLUNTEERS ARE NEEDED to work in the following areas: Racing, combat, carrier, aerobatics, speed, registration, field preparations, general support.

The contest will be May 23 and 24, Memorial Day Weekend as usual, at Mahlon Sweet Airport in Eugene, Ore. with events starting at 9 a.m. both days. Camping will be allowed adjacent to the flying field, and rest room facilities will be provided. Restaurant, snack bar, vending machines and other facilities are nearby (in walking distance), at the airport terminal.

Here are the events: AMA rat race, slow rat race, scale race (Goodyear), NW Sport Race, NW Super Sport Race,  $\frac{1}{2}$ A mouse Class I & II, AMA combat, slow combat, FAI combat,  $\frac{1}{2}$ A combat, profile Navy carrier, scale navy carrier (I&II), precision aerobatics (PAMPA beg-int and adv-exp),  $\frac{1}{2}$ A speed, A speed, B speed, D-Jet speed, Form. 21 speed (Junior only), Form. 40 speed (senior-open), FAI speed. Junior-senior classes will be offered in Northwest Sport Race and slow combat. Fast, slow and FAI combat will be double-elimination.

Persons interested in helping out, or needing information, should contact Thompson at 1411 Bryant Ave., Cottage Grove, OR 97424 (503) 942-7324.





## RANDOM TIPS AND RIBS FROM THE FL WORKSHOP FLOOR

====Dave Mullens has been elected president of the Seattle Skyraiders. Dan Cronyn is vice president, Allyn Johnson secretary-treasurer and George Mickey safety officer. Skyraiders held a Northwest Sport Race (Fox .35) race Nov. 16 (unsanctioned) and Dan Burdick was the winner with a 12:13 final. Ralph Pastor was second with 16:07 and Dick McConnell third with 60 laps. Max Thue won the mouse race event. The Skyraiders will host the Northwest Sport Race Drizzle Circuit Contest No. 2 Jan. 11. Skyraiders are discussing a two-day meet in June.

====Anybody missing the December issue of Flying Lines? It seems that one copy came back to us, missing an address. Either the mailing label fell off in the mail, or it never was stuck on. Anyway, somebody may not have received their December issue. If it was you, let us know and we'll send it on.

====Combat fliers may be interested in taking another look at the Miniature Aircraft Combat Association, which is making a comeback from a rather low participation point the past couple of years. Of particular interest is the MACA Newsletter, now edited by Frank McCune, which has offered excellent information on products, technical tips and other combat news on a fairly regular basis. We like to read the newsletter's ads for some combat specialty businesses and for engines, etc., being sold by individuals. Some good sources listed there. To join, send \$6 to Jordan Segal, 8314 W. Oak Ave., Niles, IL 60648.

## WHAT GLOBEE PLUG DO I NEED?

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| GB - 2s<br>GB - 2L<br>Radio Control<br>and all throttle<br>Equipped<br>Engines | All Events  | Stunt<br>Carrier<br>Scale<br>Combat                               | Ducted Fans<br>Pattern<br>Scale and<br>1/4 Scale<br>Helicopter<br>Boats<br>Cars<br>Sport | 1.25 -<br>2.0<br>VDC | Excel. | 0% to<br>70%<br>Nitro  |
| GB - 3S<br>GB - 3L<br>The R/C Club<br>Racers Choice                            | All Events  | Stunt<br>Sport<br>Combat  | QM<br>Quickie 500<br>Racing<br>Sport   | 1.25 -<br>1.5<br>VDC | Good   | 0% to<br>15%<br>Nitro  |
| GB - 4S<br>GB - 4L<br>"The High Nitro<br>Power output<br>plug"                 | All except<br>FAI events  | Rat Race<br>Goodyear<br>Speed                                     | Formula I<br>Racing<br>Ducted Fans   | 1.8 -<br>2.0<br>VDC  | Poor   | 50% to<br>80%<br>Nitro |
| GB - 5R<br>(Racing Hemi-<br>Head)  | 1/2A Glo Button for high performance heavy duty applications in T.D. .049/.051 engines only - can increase Engine RPM 500 - 2000 RPM.   |   |  | 1.8 -<br>2.0<br>VDC  | Poor   | 50% to<br>80%<br>Nitro |
| GB - 5P<br>Sport Conical-<br>Head  | 1/2A Glo Button designed for Sport type applications such as Baby Bee, Golden Bee, Medallion, and TD .049/.051's. Has hotter element and conical design chamber. Can increase engine RPM's 500 to 2000 RPM. |   |  | 1.25 -<br>1.5<br>VDC | Good   | 5% to<br>50%<br>Nitro  |



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## FLYAWAYS, continued

====FL occasionally receives requests for back issues. We do not keep back issues except for our own file copies. However, we easily can provide photocopies of specific articles upon request. An index to the first 12 issues was published recently. Another index, of the second 12 issues, will be published in issue No. 25. For copies of the index, or any specific article, send FL a self-addressed, stamped envelope and 50¢ per article (to cover copying costs).

====Good news for Goodyear! Joe Klause of Kustom Kraftsmanship has announced the production of a new competition .15 engine in cooperation with team race master engine maker Henry Nelson. The new glow .15 will be called the Nelson Competition .15. It features front intake, rear-exhaust, ABC for good restarts, investment cast crankcase, bushed rod, 12mm rear bearing, 7mm front bearing. The first batch of 500 will be available by June 1. The price will be \$165 -- but the makers claim the engine will be competitive out of the box. For information or reservations, send a large SASE to Kustom Kraftsmanship, Box 2699, Laguna Hills, Calif., 92653. (Tell 'em FL sent you). This news gleaned from CL-RPM Racing News.

## SCALE AT THE REGIONALS?

At this point, no scale competition has been listed as part of the 1981 Northwest Regional Control-line Championships. Scale fliers could change that situation if they want to, however.

Because of declining entry, last year's Regionals did not include a scale competition. However, several months before the contest we indicated scale would be added if we received at least two advance entries. We did not receive any response.

Orin Humphries has suggested a profile scale event (see CL Scale column, this issue). That could definitely be worth considering. However, at this point, the contest director offers this compromise:

Once again, we will leave it up to the scale fliers. If we receive firm commitments from at least two persons to enter a scale event at the Regionals, we will put it on the schedule. As in the past, it will simply be called "scale." But there is no requirement whatsoever that every entry be a full-blown museum scale plane. Profiles, carrier planes and whatever can enter. If there's enough interest, perhaps the profile scale idea could be pursued in the future.

Because of our desire to sanction the Regionals by Feb. 1, along with the need to arrange a scale judge, get trophies, etc., the commitment from two scale entrants must be received by the contest director by Feb. 1. See the article on the Regionals in this issue for the address.

## LAST CHANCE FOR COMBAT SPECIAL RAFFLE

Deadline for the Fox Combat Special raffle is Jan. 20. Prices for tickets are 50 cents per ticket, three for \$1, and seven for \$2. The winning ticket will be drawn Jan. 20 by Heather Thompson, FL's five-year-old raffle queen. FL editor and publisher are not eligible to enter the raffle.

Fill out this form and mail with payment to FL:

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(Hobby Shop Directory listings are presented as a service to area model aviators who want to know where to go for their CL supplies. If your favorite shop isn't listed here, show them your copy of Flying Lines and suggest they sign up. Ad rates listed elsewhere in the newsletter. Support FL advertisers.)

# STUNT SCENE

by paul walker

ALL YOU WANTED TO KNOW ABOUT TRIM, BUT WERE AFRAID TO ASK!

Being able to trim a stunt plane will make or break a prospective stunt pilot. How many times have you built a stunt plane and had it fly properly right off the workbench, without changing a thing? I did! It was about 12 years ago, before I know what a good flying plane was supposed to fly like. But I thought it was in trim. Was I ever wrong!

Being able to trim a plane is essential. Don't let the flow chart scare you off. It isn't difficult to follow, and it will get your plane into "basic" trim. Basic trim for the time being will be defined as the following: wings parallel to the ground at 4-5' altitude, has the right sensitivity for your own feel, stays tight on the lines at all attitudes, turns equally well both ways, tracks and does not hunt.

Before we get into this flow chart, we need to discuss several aspects of the plane. First, I know that most everybody knows this, has been told this, and is sick of hearing this, but the plane must be free of all warps and must be aligned properly. Otherwise, this exercise is futile. It will just frustrate you. Second, the vertical center of gravity must line up with the leadouts at the wing tip. Figure 2 shows an example of one that does not. The solution to that problem is to put dihedral into the wing so that they line up. To check your plane for vertical CG to leadout position, hang your plane by the leadouts from the ceiling and also hang a string with a weight on the bottom in front of the plane. If the string is parallel to the wing center line (assuming a wing with no dihedral or anhedral), the vertical CG is in line with the leadouts. Third, the plane must have several adjustable features on it. These should include: tip weight box, adjustable leadouts, adjustable rudder and quicklink or similar type of adjustment on the elevator. Also, the flaps should be able to be adjusted relative to each other. Some kits have a plywood doubler that attaches flap to flap through the fuselage (usually a profile). Don't use this. Use a 3/32" piano wire bent into the form of a long U (Fig.3). This type of attachment can be bent and is adjustable.

Now, on to the flow chart.

1. Are your wings level upright and inverted? This will require the help of a second person. With your plane flying at four feet altitude, your hand at four feet, your lines will be parallel to the ground. In this configuration, the wings should be parallel to the ground also! Have your helper check for this as the plane is headed directly at him. Note that four feet is just a reference height; fly at whatever height is comfortable for you, just as long as the lines are parallel to the ground. Once your helper has checked it upright, turn it inverted (this may not be possible if it is flying too outboard tip low). Check it inverted. If it is level (parallel to the ground), go on to step 2. If not, 1A.

1A. If your outboard tip was low in upright and high inverted, bend the flaps (inboard up, outboard down) so that there is about 1 to 2 degrees difference from the original setting. Repeat this until the

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STUNT SCENE, continued

wings are level. If the outboard is constantly low upright and inverted or constantly high, go on to step 1B and 1C.

1B, 1C. If your outboard tip is low both ways, remove  $\frac{1}{4}$  ounce tip weight and try again. If it is high both ways, add  $\frac{1}{4}$  ounce tip weight and check again. Once you have determined that your wings are level, proceed on to step 2.

2. When a corner of a square maneuver is done, does it seem that it requires too much force to move it through that corner? The plane should turn easily, yet not jump as soon as you touch the controls. If it is too sluggish, remove  $\frac{1}{4}$  ounce of nose weight and see how it feels. If it jumps too quickly, add  $\frac{1}{4}$  ounce nose weight. Add or subtract weights until it feels comfortable.

3. When your plane flies through loops, does the line tension remain constant all through the loop? If not, suspect the leadout position. If it is tight in level flight but gets loose at the top of the loop, try moving the leadouts forward 1/8" and try again. After you are happy with this step, go back and check your balance point again (2). After moving the leadouts very far forward or aft, the plane might feel as if the balance has changed; if so, change to your liking.

4. Wing tip weight. To check for wing tip weight, put your plane in a dive (such as a wingover) and at about 35° elevation, hit full up. If the outboard tip drops relative to the inboard (roll), there is too much tip weight (4A). Remove ½ ounce tip and try again. Keep doing this until the situation

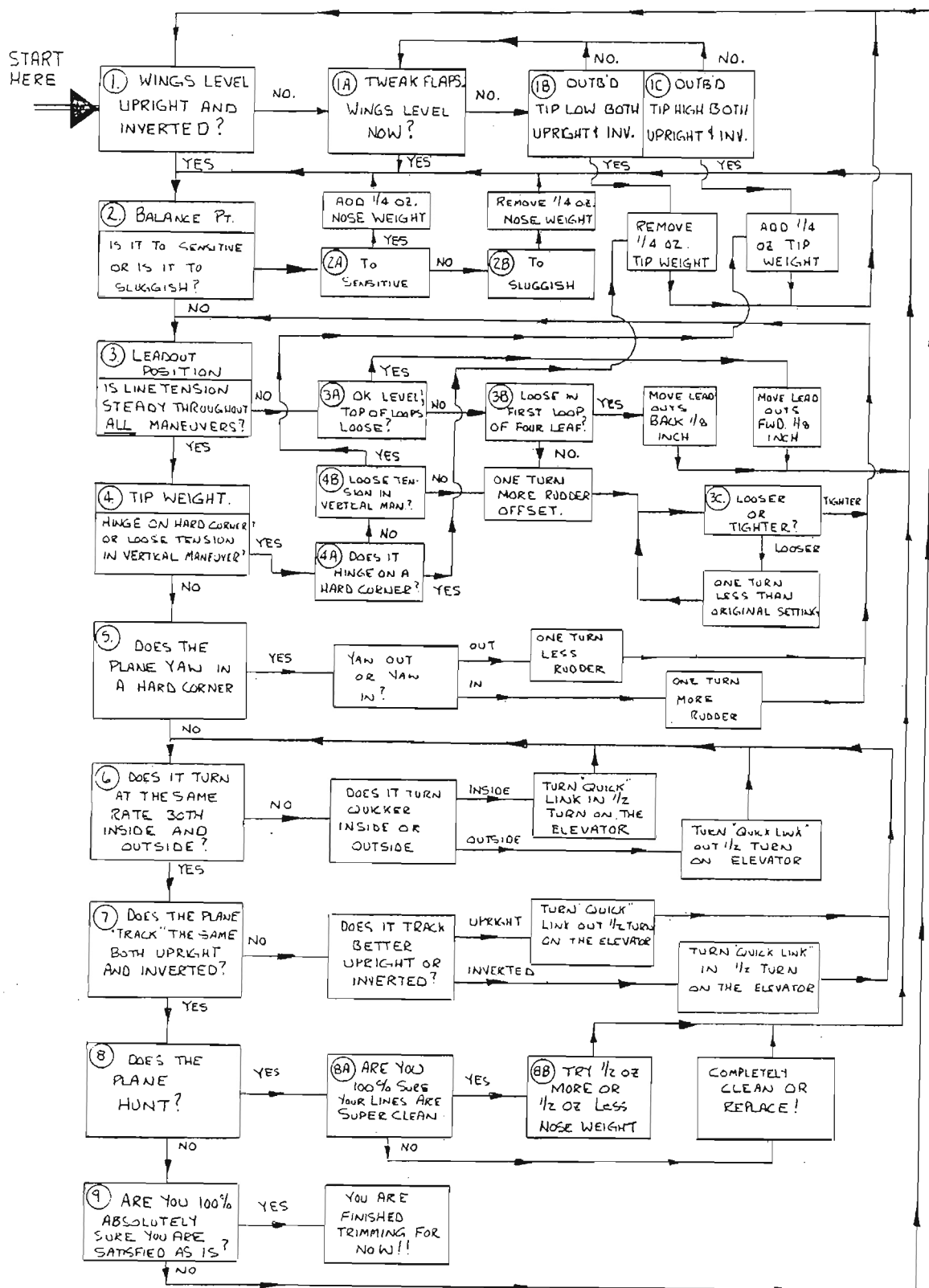


FIGURE 1

## STUNT SCENE, continued

is cured. Then go back to step 1. If on the other hand, the plane continues to come loose in vertical maneuvers (4b), add  $\frac{1}{4}$  ounce tip weight. Keep adding weight until it hinges (outboard tip dropping) then back off  $\frac{1}{4}$  ounce. In all cases, go back to step 1 when finished with this one.

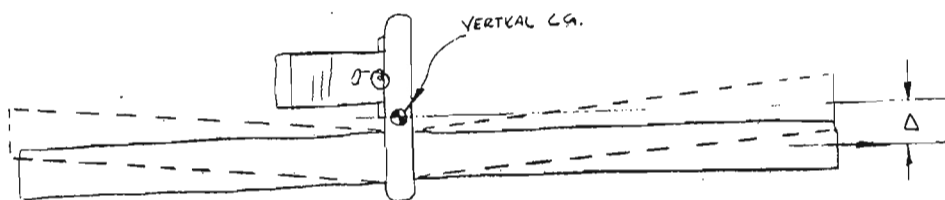


FIGURE 2

5. Take the same situation as in (4). But instead of hinging, does the plane yaw? Yaw is the inboard, outboard motion of the nose in relation to the center of the plane. If the plane yaws out on inside corners, try one turn less rudder. If it yaws in on an outside corner, try one turn more rudder. In all cases, go back to step 3.

6. When flying through corners, does it turn better one way than another? This assumes that if your handle spacing is adjustable, that is spaced evenly now. If the plane turns easier inside than outside, turn the quick link (or other adjusting device) in  $\frac{1}{2}$  turn on the elevator. Test again. Adjust until insides and outsides are the same. If the outsides are easier, turn quick link out  $\frac{1}{2}$  turn on the elevator. Again, adjust until it turns the same both ways.

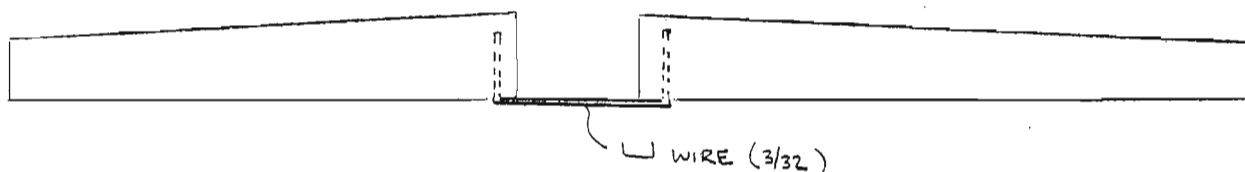


FIGURE 3

7. Does the plane track the same both upright and inverted? Track is defined as the ability that a plane placed at a certain flight altitude (usually 4 to 6 feet high) will stay there without "flying" needed to keep it there. If it tracks well upright but not well inverted, turn the quick link on the elevator out  $\frac{1}{2}$  turn and check again. In all cases, go back to step 6. It should be noted here that you may have reached an impossible situation here and may have to compromise between turning the same both ways. Solution: If you find for instance that to get tracking both ways, the inside corners are slower than the outside corners, and if you adjust the corners the same, tracking one way goes to pot, adjust so that it tracks the same both ways and move the handle spacing so it speeds up the slow corner. This assumes that the line spacing on your handle is adjustable.

8. Does the plane hunt? Hunt is different from track. A hunting plane is one that will fly at a given altitude but will do a series of climbs and dives to stay at that altitude. Another name is porpoise, like the animal, doing a series of climbs and dive but the mean line is a level one.

8A. When was the last time you cleaned your lines? Any dirt on them can cause this, so run a clean rag past them several times, and be amazed at how dirty they are! Another trick is to soak a rag with laquer thinner and pass it over them. Now that they are clean, check again. If it still does it, try adding  $\frac{1}{2}$  ounce nose weight and see if it improves. If not, remove  $\frac{1}{2}$  ounce from original setting and check again. In all cases, go back to step 2.

9. The heading may be a little misleading. It should say, "Are you satisfied with the trim under the previous 8 categories?" This exercise is not intended to put your plane into perfect trim, but should get you close. This is the point where trimming the plane gets fun. After you are sure you are satisfied with the trim in all categories, some experimentation can go on. Further trim changes will be discussed in another article.

One final note: If you are a beginner to stunt, don't let this chart snow you. If you don't understand something (such as too sensitive or sluggish) try a trim change (add some nose weight) and see what happens. You will get a feel for what is meant. In all cases, this chart is not meant as an absolute but as a general guide. Keep trying little changes until you feel you have it right. Your plane should ultimately be trimmed for one person only -- you! You are the one who has to fly it. Be scored for the performance, and it is the score that counts! So, be comfortable with it. Until next time, any questions or comments, give me a buzz.

--Paul Walker, 25900 127 Ave SE, Kent, WA 98031 (206) 630-2848.

# WHERE THE ACTION IS

## UPCOMING ORGANIZED EVENTS

Listed below are the modeling events known to be upcoming in the Northwest at FL's press time.

If you know of a contest or informal event not listed here, remind the contest director to send details to FL for inclusion in the next edition. No need to wait until the flyer is done to send the information. Give us the outline now so people can start planning. FL will publish flyers free of charge and report results. All events listed here are AMA-sanctioned unless otherwise noted.

- January 11....SEATTLE, Wash. -- Northwest Sport Race Drizzle Circuit Contest No. 2. 9 a.m. slow combat. 11 a.m. Northwest Sport Race. Northwest Super Sport Race immediately follows NWSR. Be on time -- all events will start on schedule! Placings in NWSR and NWSS count for circuit trophies. Site: Carkeek Park. Entry fee, \$2 per event. Trophies. Contest Director Mike Hazel. Contact Flying Lines or Seattle Skyraiders for details.
- February 8....ASTORIA, Ore. -- Northwest Sport Race Drizzle Circuit Contest No. 3. 9 a.m.  $\frac{1}{2}$ A combat. 11 a.m. NWSR, followed by NWSS. Site: Camp Rilea. Contest Director: Dave Green, 200 W. Franklin Ave., Astoria, OR 97103 (503) 325-7005.
- February 22...(tentative) EUGENE, Ore. -- Second Annual Eugene  $\frac{1}{2}$ A Day.  $\frac{1}{2}$ A mouse race I & II,  $\frac{1}{2}$ A stunt,  $\frac{1}{2}$ A speed,  $\frac{1}{2}$ A combat.  $\frac{1}{2}$ A merchandise prizes. Site: Mahlon Sweet Airport. Contest Director Mike Hazel, 1040 Windemere Dr. N.W., Salem, OR 97304 (503) 364-0128. Entry fee \$3 for 1 event, \$2 each additional (juniors half price).
- March 8.....YAKIMA, Wash. -- Northwest Sport Race Drizzle Circuit Contest No. 4. 9 a.m. precision aerobatics, 2 PAMPA classes. 11 a.m. NWSR, followed by NWSS. (Stunt fliers note: Racing events will not wait, due to time constraints, in case you're doing both.) Site: Valley Mall. Entry fee \$5. Contact Flying Lines for details.
- April 12.....EUGENE, Ore. -- Northwest Sport Race Drizzle Circuit Contest No. 5. 9 a.m. Goodyear. 11 a.m. NWSR, followed by NWSS. Site: Mahlon Sweet Airport. Entry fee \$3 for 1 event, \$2 for each additional. Merchandise prizes. Circuit championship trophies awarded. Contest Director: Mike Hazel, 1040 Windemere Drive N.W., Salem, Ore., 97304 (503) 364-8593.
- May 23-24.....EUGENE, Ore. -- Northwest Regional Control Line Championships. AMA rat race, slow rat race, scale race (Goodyear), NWSR (J-S) (O), NWSS,  $\frac{1}{2}$ A mouse I & II, slow combat (J-S) (O -- double elim.), FAI combat (double-elim.), AMA combat (double-elim.),  $\frac{1}{2}$ A combat (single-elim.), profile carrier, Class I-II carrier (combined), aerobatics (PAMPA beg-int & adv-exp),  $\frac{1}{2}$ A, A, B, D-Jet and FAI speed, Formula 21 speed (J only) Formula 40 speed (S-O). Site: Mahlon Sweet Airport. Contest Director John Thompson, 1411 Bryant Ave., Cottage Grove, Ore., 97424 (503) 942-7324.
- June ?.....SEATTLE, Wash. -- Seattle Skyraiders 2-day contest. More details later.
- July 11 & 12..KENT, Wash. -- Boeing Management Association Scholarship Contest. Scholarship events: Scale race (Goodyear), precision aerobatics, profile Navy carrier, slow combat,  $\frac{1}{2}$ A profile proto speed. Open events: Precision aerobatics (beg, int, adv-exp), profile Navy carrier, NWSR, AMA and FAI combat. Also indoor and outdoor FF events, RC glider, rocketry events. Boeing Aerospace Center, Kent, Wash. Entry fees: \$1 per event, \$5 max for scholarship events (under 19), open \$2 per event, \$8 max. Contact Ted Caputo, BMA, P.O. Box 3707, Seattle, WA 98124.

### THE FLYING FLEA MARKET

FOR SALE -- One Top Flite 1" - 1' scale CL Mustang P51D, no longer in production. \$31.95 list -- \$20. One OS Max .35 w/M, new in box, \$30. Add \$2 for mailing. W.L. Skelton, P.O. Box 105, Warrenton, OR 97146. (503) 861-1033

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## AIR MAIL

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



DEAR FL:

Just a note to say I enjoyed my first issue of FL. Please send the rules for NWSR and NWSS (Sent! Copies always available from FL -- Ed.).

We have a similar event here called Shoestring 140, which is growing in popularity. It is designed to give everyone a shot at winning, even the newer modelers. The rules are quite strict, and I'll just touch them briefly now. You will fly a stock Goldberg Shoestring kit, use a Fox stunt .35 with a 1 1/2-ox. Fox profile tank, 2" balloon tires, 1 3/4" spinner as shown on the plans for Shoestrings, fuel will be furnished by the club, which is Duke's 10%. The only option to the contestant is choice of plug and choice of any commercial nylon or wood prop. We fly three-up for 140 laps and have had very close times. At our last contest in September we ran this and the first three places were within 20 seconds. As I recall, the winning time was in the 10:30s.

The new fliers in the area were not afraid to try this event, and the "big boys" had fun also. Most everyone has built new planes for this event, but many of them are used for sport flying also...

...Also, do you have any programs to teach flying to juniors and promote modeling? Thanks for sending the rules mentioned above...

--Gary Vreeland, president, Wichihawks MAC, 1920 S. Santa Fe, Wichita, Kansas, 67211.

(Editor's note: Anybody who has information on junior programs should pass it on to Gary...also send an article to FL about it!)

DEAR FL:

Enclosed is my check for 12 issues of Flying Lines. My daughter and I are newcomers to control line. She is flying a Sterling Cherokee powered by a Cox .049. I currently am flying a modified Skyshark powered by a Fox .35.

On the building board is a Guillows SBD-3 (.09 powered). This is my first scale project (difficult, but enjoyable).

This winter a Top Flite Tutor and Sterling Guardian. My daughter (age 11) will be building an unspecified .35 powered trainer this winter. By the way, my age is 36. I work for the 3M Company as a senior technical instructor. We both are looking forward to the spring and flying!! Navy carrier and stunt are the activities of choice for both of us.

We would like to correspond with other Navy carrier and stunt fliers. My daughter (her name is "Tammy") asks to correspond with other junior fliers.

We hope to be moving out west in about three years and hopefully we will meet you in person.

There is some control line club activity here but because we live in the country, not much contest flying.

We are looking forward to the next issue of Flying Lines.

Best regards and happy landings.

--David and Tammy Babulski, 2110 Quarry Ave. South, Lakeland, MN 55043

### WHO'S WHO AT FLYING LINES

Flying Lines is produced every month by a staff of volunteers interested in keeping open lines of communication between Northwest model aviators. FL is totally independent of any organization, depending entirely on subscriptions and advertisements for financial support.

FL is your link with the rest of the Northwest's control-line modelers. Help keep it alive by spreading the word.

The price is \$4.50 for six issues and \$8 for 12 issues. Canada and Mexico, \$5 for six issues and \$9 for 12 issues. Overseas, \$10 for six issues and \$18 for 12 issues. U.S. funds, please.

Here's the FL staff:

|                            |                            |                        |
|----------------------------|----------------------------|------------------------|
| Publisher.....Mike Hazel   | Aerobatics...Rich Schaper  | Sport...Chris Genna    |
| Editor.....John Thompson   | Paul Walker                | Speed...Mike Hazel     |
| Photo Editor...Chris Genna | Beginners....John Thompson | Scale...Orin Humphries |
| Racing.....Mike Hazel      | Combat.....Gene Pape       |                        |
| Carrier.....Orin Humphries | Buzz Wilson                |                        |

### PHOTOS ON THE WAY!

Technical problems prevent us from presenting photographs in this issue but several good pages of photographs will be in coming issues. Watch this space. (By the way, club photos are gladly accepted!)