



NEWS OF NORTHWEST CONTROL-LINE MODEL AVIATION

1073 Windemere Dr. NW, Salem, OR 97304

Editor: Mike Hazel

OCTOBER--NOVEMBER 1992

Issue # 102

In this ever-exciting, staple-bulging issue.....

- * Round & Round, by John Thompson
- * Stunt Plane Tech Tips
- * Fuel Shutoff construction drawings
- * Navy Carrier, by Joe Just
- * Mouse Racer plans
- * Contest Results:
Richland, Washington, August 30, October 3 & 4
- * Updated Competition Records.
- * Photos, by Jim Cameron
- * And a bunch more of good stuff!

Cockpit Chatter



Notes from the
editor's desk
By Mike Hazel

As indicated on the cover page, this issue will hopefully get you through both October and November. The December issue is tentatively scheduled for publication on or about Dec. 1st. All you folks with something to contribute, please bear that in mind.

Speaking of schedules, ye olde editor has had a work schedule change, which will alter when I can take your phone calls. Please do not call after 8:00 PM!

According to Bruce Duncan, the Vancouver, BC. area clubs had an opportunity to meet with the Coquitlam parks administrator. It seems some other activity groups had their eye on the Coquitlam park, which is used for model flying. At this point, it appears that the park is secured for RC and CL model flying. It's good to see clubs get together for a common cause and emerge victorious.

This is the time of year when the contest schedule is winding down. It doesn't have to be that way, but with the lack of any positive response in regards to a Winter racing circuit, that's where we are at. There isn't a contest calendar in this issue, so let's quickly review what's coming up.

The weekend of the 17th and 18th is the date of the Eugene Propspinners double contest, Really Racing, and the Fall Follies. There is a flyer in this ish, so you can consult that for further details. Racing flyers should be reminded that this is only one of two contests in the NW with such a full slate of racing events.

The following weekend (24th & 25th), is the return of the Vancouver Gas Model Club Internats. This two day meet features Carrier and Speed in a record ratio format. The location is the Rice Mill Road site in Richmond, B.C. For more information contact: Bruce Duncan, Po Box 58037, Stn L., Vancouver, BC Canada V6P 6C5.

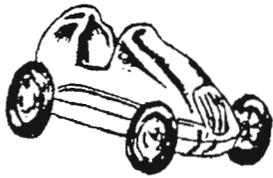
The American Junior Aircraft Historical Society presents their 2nd annual Swap Meet, on December 5th. Well, gee, just look across the page to the flyer and you can get more information on that. Last year this event was attended (read crowded), so they have moved into a larger facility, and should prove to be a fun event. If you plan on bringing stuff to sell, you must reserve your table in advance. You can't just show up and claim a table, so contact the individual listed on the flyer beforehand.

For you FAST COMBAT flyers, there is a money meet in Morgan Hill, California scheduled on December 5th & 6th. First prize is \$1500, second is \$750, and third \$500. This would appear to fill the gap for the "Money Nats", which was cancelled in April. For information, contact: Steve Smith (408) 776-1138.

Noticeably absent from this issue are the results of the Seattle Skyraiders Raider Roundup. FL headquarters has not received any of them yet. We should have them in the December issue, nearly three months after the fact. C'mon you guys!!!!!!

Well, any other news must wait. Must get this thing to the printer on time, so you have it on time. See you in Eugene and Richmond!!!!!!

.....mwh.....



AMERICAN JUNIOR

AIRCRAFT
HISTORICAL SOCIETY



PRESENTS THE 2ND ANNUAL
MODELERS

SWAP MEET



Haul out your old engines, cars, boats, planes or any items related to modelling... Clean out that attic or basement. Make room for all the great stuff you'll probably haul home. Buy... Sell... Swap and Have Fun!

SEE PART OF THE AMERICAN JUNIOR AIRCRAFT HISTORICAL COLLECTION, PLUS OTHER MODEL ARTIFACTS FOR THE NEW NORTHWEST MODEL MUSEUM.

SATURDAY DEC. 5th, 1992 * 9AM to 4PM

ADMISSION: ADULTS 2.00 CHILDREN 1.00
UNDER 12 FREE WITH PAID ADULT

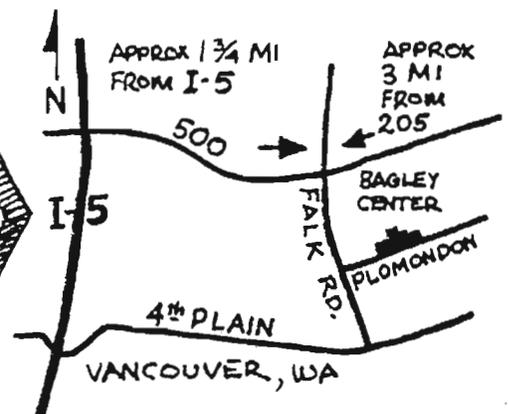
- DOOR PRIZES GALORE
- NO HOST CATERED LUNCH
- REFRESHMENTS
- FUN, FRIENDS & EXCITEMENT

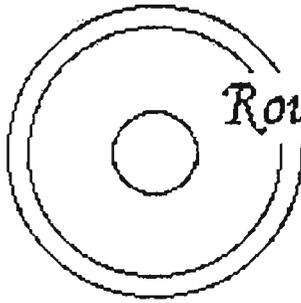
AT THE BAGLEY CENTER GYM
4100 PLOMONDON • VANCOUVER, WA

ALL PROCEEDS WILL BE USED BY THE AMERICAN JR. AIRCRAFT HISTORICAL SOCIETY TO HELP ESTABLISH THE NORTHWEST MODEL MUSEUM FOR EDUCATIONAL PURPOSES. FURTHER INFORMATION OBTAINED BY CALLING DON ANDERSON: (509) 667-2196

NEW LARGER LOCATION
NOW WITH PLENTY OF PARKING FOR YOUR CONVENIENCE

Join Us !!





Round and Round

The Control-Line
modeler at large

By John Thompson

A home away from home

WHAT'S THE MOST EXPENSIVE part of model airplane competition? Engines, right? No. Not airplanes? No. Entry fees — nah! Fuel, props, plugs, balsa wood? No, no, no, no.

What, then?

Motel rooms. Yeah, and gas, and food, and coolers full of pop. Indeed, the most expensive part of model competition has nothing to do with airplanes at all — it's travel and lodging.

Help is on the way.

As often happens when a bunch of model aviators get together, a good idea emerged at the Raider Roundup in Kent, Wash., last month. Can't tell you exactly whose idea it was, because it sort of grew spontaneously out of a group of modelers discussing the subject of lodgings.

Kind and gracious Seattle Skyraiders members offered several of us out-of-town fliers lodging for the Saturday night of the contest, but most of us already had made plans.

The idea that emerged was: Why not keep a list of people who have room for out-of-town modelers?

Bingo!

There already is a list. In fact, it's called The List. Many of you are aware that during the period during which *Flying Lines* took "time off" recently, your *Round & Round* columnist started a comprehensive Northwest mailing list. It contained three parts: Northwest CL fliers, Northwest hobby shops, and a national directory of suppliers and manufacturers of CL products.

The purpose of The List was to make it possible for contest directors and organizers to be able to reach fliers, hobby shops and manufacturers to spread the word about contests.

Now, it appears we need one more section for

The List: Lodging.

As before, I am volunteering to keep this new list, but I need help from you readers. Here is what I am asking:

Every modeler who has space available for lodging modelers at contest time, or possibly those just passing through your area and looking for a night's lodging and hangar talk, please send me the following information:

Name, address, phone number, what kind of facilities you have available (sleeping for how many, bed, couch, floor, etc).

I will compile this information in a new computerized list, which will be updated whenever I receive new information.

When someone requests the information, I will forward it by mail. For those on the move who need a quick reference, I will provide phone service. However, I recommend contacting me in advance for a mailed copy of the list, because I am notoriously hard to reach by phone. Naturally, the list will be available to clubs on request, as are other parts.

Some general information about The List model information service:

The List is available free to any modeler, though it (except for the lodging list) is intended for use by clubs and contest directors. However, there is a cost associated with maintaining the list, and I do accept donations to cover those costs.

The List's modeler, hobby shop and industry listings are in the form of mailing labels. If you wish The List printed on actual labels, a \$10 donation would be appreciated. For a simple printout on plain paper, let your conscience be your guide. At the very least, send me a self-addressed, stamped, large envelope.

The List currently contains names and addresses of 271 CL modelers, 128 hobby industry firms and 60 hobby shops.

As an added bonus, I will also make available my list of model aviation press contacts as part of The List.

At present there are 25 names on the model press list, including magazine columnists and club and special interest newsletter editors.

Because the information is constantly changing, I encourage CL fliers to take part in maintaining The List, which is kept for your use and benefit.

Please send me changes of address and names of new modelers you may have discovered, and any new industry sources you have encountered.

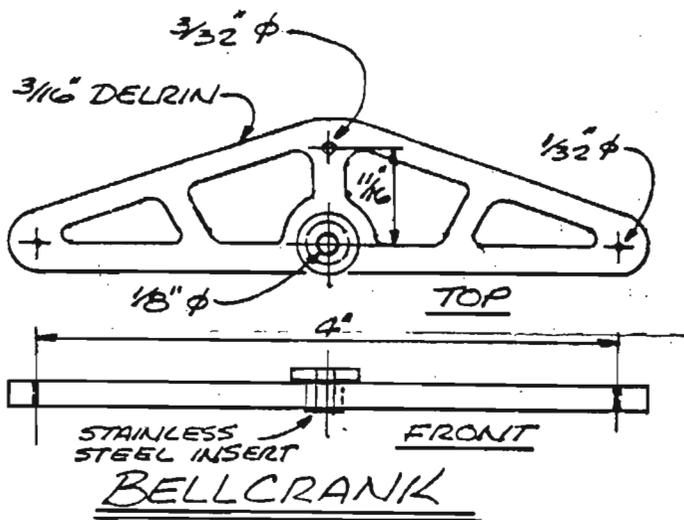
And, a special request: The hardest list to maintain is the hobby shop list, because it changes constantly. If every FL reader would send me a list of the names and addresses of your favorite hobby shops, I would be able to bring the list up to date.

In summary, The List contains the following:

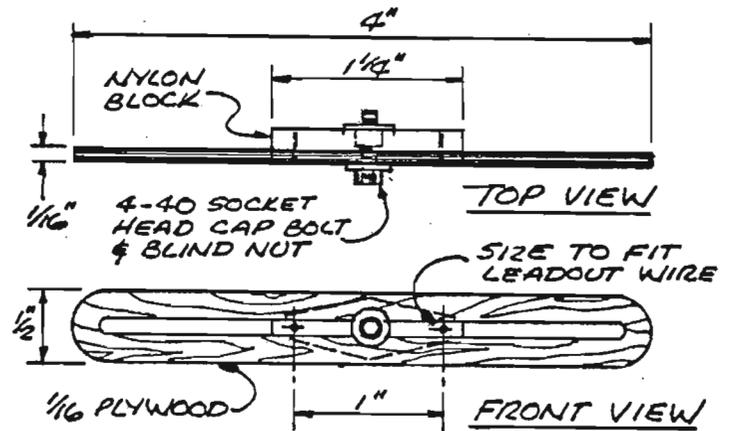
- Northwest CL model aviators.
- Northwest hobby shops.
- National hobby industry sources.
- Northwest lodging.
- National CL model aviation press.

Information about lodging and other contributions to the list can be sent on a postcard to: John Thompson, 1145 Birch Ave., Cottage Grove, OR 97424.

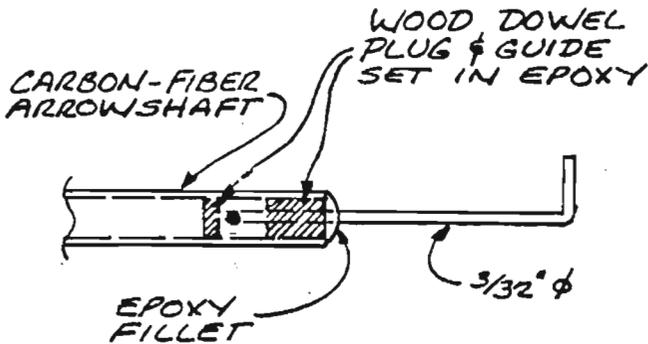
STUNT AIRCRAFT COMPONENT CONSTRUCTION TECH TIPS:



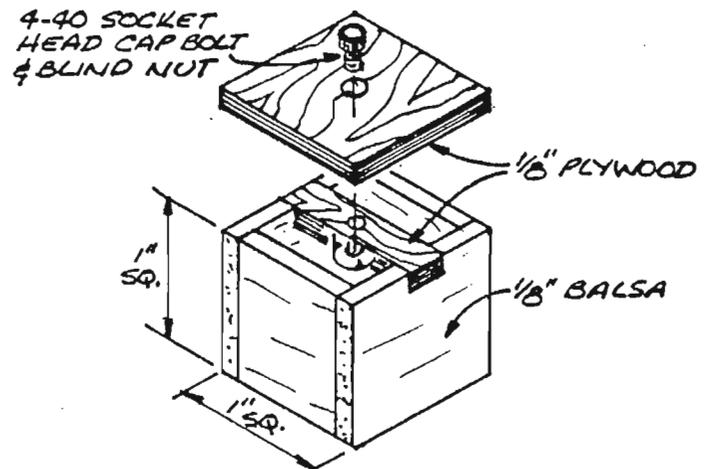
BELLCRANK



ADJUSTABLE LEADOUT GUIDE



PUSHROD



ADJUSTABLE TIP WEIGHT BOX

WING LOADING

Wing Loading is a design parameter that takes into account the wing area with respect to the total weight of the model. It is expressed in ounces (of model weight) per square feet (of model wing area).

$$\frac{\text{Model Weight (oz.)}}{\text{Wing Area (sq. ft.)}} = \text{Wing Loading (oz./sq.ft.)}$$

To calculate wing loading you must first convert wing area from square inches to square feet and weight of model from pounds to ounces.

The following is a typical example of a wing loading calculation:

$$\text{Wing Area} = \frac{650}{144} = 4.51 \text{ sq.ft.}$$

$$\text{Wing Loading} = \frac{50 \text{ oz.}}{4.51 \text{ sq. ft.}} = 11 \text{ oz./sq.ft.}$$

The top stunt flyers usually have a plane with about an 11 oz. wing loading but many top contests have been won with planes having a loading of 12.5 oz.

The following chart shows wing loading on planes from 650 to 750 sq.in. and weights from 44 to 60 oz.

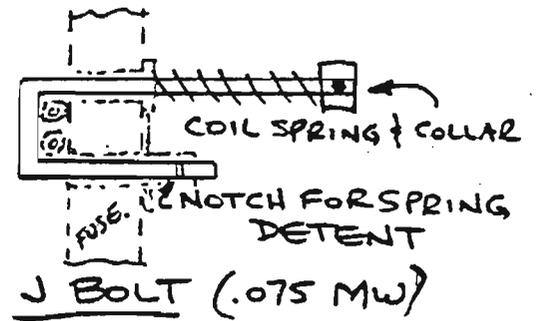
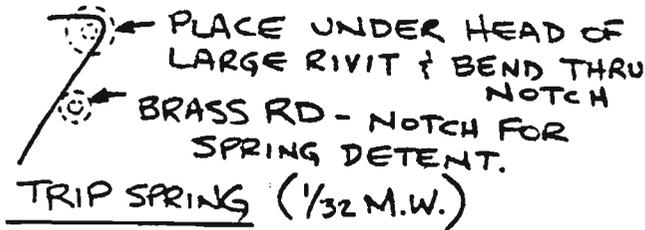
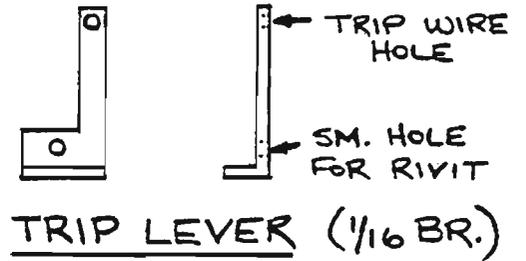
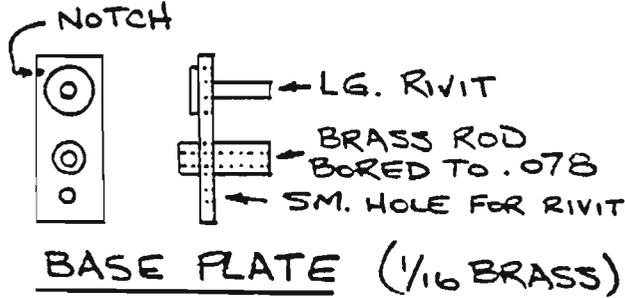
Model Weight oz	44	46	48	50	52	54	56	58	60
Wing area sq in. (sq.ft.)	Wing Loading: ounces per square feet								
650 (4.51)	9.75	10.2	10.6	11.0	11.5	12.0	12.4	12.9	13.3
660 (4.58)	9.60	10.0	10.5	10.9	11.3	11.8	12.2	12.7	13.1
670 (4.65)	9.50	9.9	10.3	10.8	11.2	11.6	12.0	12.5	12.9
680 (4.72)	9.30	9.8	10.2	10.6	11.0	11.4	11.9	12.3	12.7
690 (4.79)	9.20	9.6	10.0	10.4	10.9	11.3	11.7	12.1	12.5
700 (4.86)	9.00	9.5	9.9	10.3	10.7	11.1	11.5	11.9	12.3
710 (4.93)		9.3	9.7	10.1	10.5	11.0	11.4	11.8	12.2
720 (5.00)		9.2	9.6	10.0	10.4	10.8	11.2	11.6	12.0
730 (5.06)		9.1	9.5	9.9	10.3	10.7	11.0	11.5	11.9
740 (5.13)		9.0	9.4	9.7	10.1	10.5	10.9	11.3	11.7
750 (5.20)			9.2	9.6	10.0	10.4	10.8	11.2	11.5

TECH TIPS: FUEL SHUTOFFS FOR RACING PLANES.

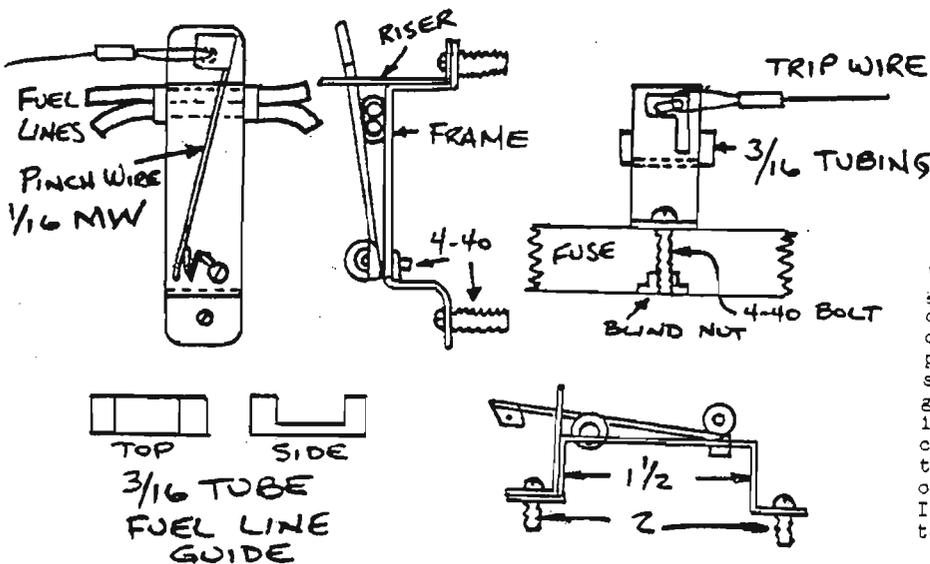
The top schematic is for a class II Mouse racer, with the fuel shutoff components constructed through the fuselage. The basic arrangement could also be used with a larger profile style fuselage.

The lower drawing is for a shutoff to be attached to the profile fuselage, right behind the engine.

TECH TIPS



GEORGE CALDWELL'S 1/2 A, CLASS II SHUTOFF



THE WIZARD'S SHUT OFF
BY LARRY DZIAK

We've seen quite a few people get shot down when a shut-off either fails to operate or busts - resulting in puked engines & aircraft & screaming by pitman regarding the ability of pilots ingeneral. This particular design has not yet to fail us after 2 1/2 yrs of use - others have! It takes about an hour to cobble-up & is foolproof.

NAVY CARRIER NOTES, by Joe Just

While attending the Nats in Chicopee, I had the opportunity of trying out my new camcorder. During a lull in action at the Carrier circle, I used it to interview several well known Carrier flyers on how they would answer questions coming from beginners concerning how to get started in Carrier flying. The following is their words as transcribed from the original video. Taking the time to answer questions are: Bill Calkins, Pete Mazur, Roy Ward, Glen Umholtz, and Steve Dinerman.

J.J.: While we are at a lull in activity and waiting for the circle to close at this years Nats, let's take a few minutes to ask a few questions and have a small symposium on Carrier flying, as it might relate to a beginner. We'll start with Bill Calkins, who has been fairly successful in the Midwest. Bill, what's the main point of info a beginner should know about Carrier, what would you recommend?

Bill Calkins..... First get an airplane that flies. A Ringmaster, a Sig Skyray, put a bellcrank in it and fly it.

J.J.: Why the Skyray? Why not scratch build an airplane?

Bill Calkins..... The Skyray is readily available and I know it flies.

J.J.: You definitely recommend a beginner starts in Profile or Sportsman. What would you say when a beginner says he would like to try .15 Carrier?

Bill Calkins..... You really want me to say this? .15 is a nice laid back event but getting a .15 to run reliably can be tough. Then if you get good, then you've got to go out and buy a Rossi.

J.J.: Up next is Roy Ward. Roy, you heard the questions, Do you have any advice for a beginner who might like to try Carrier flying.

Roy Ward I have two boys that fly Stunt and fly my Carrier planes. Right now we're working on a Sterling Mustang with an O.S. Max 35 FP. That's as easy as it gets.

J.J.: A lot of beginners that I've talked to have said, "I really don't want to try Carrier because of all this complex wire works called a slider." Roy, do you have an idea to recommend in that case?

Roy Ward I wouldn't recommend a slider for a beginner, at least a Junior or Senior flyer.

J.J.: Roy, you mentioned a FP .35, any other engine that they might use?

Roy Ward Any stock RC engine would probably work fine.

J.J.: Next is Pete Mazur. Pete, you heard the questions we've thrown out. If a rank beginner came up to you and said, "Pete, I'd like to try this", what would you recommend his first step be?

Pete Mazur Learn how to fly control line is the first step. Any kind of control line, .35 typical stuff. A Sig Skyray like Bill says is an excellent choice. They fly well, and build well and they can fly well in Carrier. They fly the Skyray event in the Midwest. It is very successful, the scores are remarkably good. You can learn to do "hanging", the same thing all the big guys are doing, and it's easy with the Skyray. I would, however, recommend a line slider. Yeah, it's tricky, but a well built line slider works, and when it works all the time, it makes the flight much easier, more reliable and pleasant, and the airplane lasts a lot longer.

J.J.: Pete, if they are going to go with a slider, would you recommend they go with external controls with their first plane?

Pete Mazur Not necessarily. I don't think that's necessary. On my Profile which I fly in serious competition, the controls are all external. It's an MO-1 with a high wing, so there's lots of room to put the controls underneath. If people are able to scratch build, have the experience and time to scratch build a plane or a kit like that, would be an excellent choice. A plane like that flies well and having the controls external, you can fiddle with the slider to get it right and when you do get it right you are going to like it because it really does help the airplane fly.

J.J.: What about engines? A beginner might hear that in order to get into Carrier, he needs a K&B 5.8, or a TWA, or a Tune-Hill. What would you recommend for a beginners engine in Profile Carrier?

Pete Mazur If he can get one of these engines, that's fine, because most of them behave quite well. My Tune-Hills are well behaved engines. The 5.8's are reasonably well behaved, but these engines are not necessary. The emphasis is on slow speed, and even at the Nats you don't have to have a blazing high speed to be extremely competitive. So many of the good engines that are coming out for R/C use the .32 to .36 sizes, are very effective.

J.J.: Are they effective "out of the box"?

Pete Mazur Out of the box, yes!

J.J.: From up in God's country in the Adirondachs in New York, is Glen Umholtz. Glen, you and I have talked on the phone a few times, and you have had some really frustrating times trying to get into Carrier without any help at all. Is there anything a beginner in particular should look out for in your mind?

Glen Umholtz Basically, a beginner should keep it simple and try to fight the feeling of trying to get too far in advance too quickly. That's basically what I did, I tried to jump in a little too much and got into too many mechanisms in the aircraft, which caused too many frustrations when I got to the meets. Things didn't work properly, or were not tested enough!

..... Editor's note: More of Joe's interviews will be in the next issue.

----- THE FLYING FLEA MARKET -----

WANTED: "Frog" 350 or 500 glow motor. Hope to find one in usable shape for an Old Time Stunt project. Any info or pictures would be appreciated. (509) 663-3929 days. David Thompson, Po Box 1652, Wenatchee, WA 98807

FOR SALE: Quality fiberglass props for competition. New Schuettie 21 Mk II now available. Coming soon is an all new "D" speed prop, and a 40 bench prop. Send for list. Mike Hazel, 1073 Windemere Drive NW, Salem, Oregon 97304.

FOR SALE: Back issues of FLYING LINES. Many issues available with lots of valuable technical data, and lots of nostalgia. Write to FL for a list.

FLYING LINES subscribers: This space is for you! Unlimited ads in section for paid-up (the only kind) subscribers. Unless otherwise requested, your ad will be run twice. Change it, or submit new ad at any time.

CONTEST RESULTS: Richland, Washington, August 30th

MOUSE RACE CLASS I (5 entries)

1) Joe Rice 6:15
2) Todd Ryan 7:02
3) Joe Campbell 63 laps
4) Ron Hale 4:07 heat

NW SPORT RACE (4 entries)

1) Ron Hale 10:52
2) Joe Rice DQ
Todd Ryan DQ
4) Kevin Magnuson DQ heat

NW SUPER SPORT (5 entries)

1) Ron Hale 13:57
2) Todd Ryan 64 laps
3) Joe Rice 55 laps
4) Kevin Magnuson 6:21 heat

NW GOODYEAR (4 entries)

1) Joe Rice 10:33
2) Bill Fisher 10:42
3) Todd Ryan DNF
4) Kevin Magnuson heat time na

CONTEST RESULTS: Richland, Washington, October 3 & 4

MOUSE RACE CLASS I (6 entries)

1) Joe Rice 7:12
2) Todd Ryan 9:46
3) Kevin Magnuson 10:49
4) Ron Hale 4:36 heat

NW FLYING CLOWN RACE (7 entries)

1) Joe Rice 243 laps
2) Todd Ryan 197
3) Kevin Magnuson 180
4) Ron Hale 176 heat

NW SUPER SPORT (4 entries)

1) Joe Rice 8:23
2) Todd Ryan 10:20
3) Bill Fisher 103 laps
4) Ron Hale 33 laps heat

CARRIER I & II combined (2 entries)

1) John Hall 204.52
2) Bill Darkow 177.00

PROFILE CARRIER (5 entries)

1) John Hall 236.29
2) Orin Humphries 211.06
3) Todd Ryan 201.30
4) Bill Darkow 165.79

.15 CARRIER (6 entries)

1) John Hall 192.23
2) Todd Ryan 171.94
3) Joe Rice 171.68
4) Orin Humphries 93.96

OLD TIME STUNT (6 entries)

1) Todd Ryan 249
2) Ron Hale 235
3) Richard Thompson 232
4) Joe Just 215

Ah, fall. The cool breezes. The turning of the leaves into a myriad of bright hues, the sweet aroma of nitromethane in the air... Nitromethane? Yes, it's time for the third annual...

REALLY RACING!

1992

A complete day of control-line model aviation racing, featuring:

Mouse Race Class I

Mouse Race Class II

Northwest Goodyear

AMA Goodyear

Slow Rat Race

Rat Race

Northwest Sport Race

Northwest Super Sport Race

And...a Pit Stop Championship!

The details...

Date: Saturday, Oct 17, 1992

Place: Eugene Airport, Eugene, Ore.

Prizes: Trophies through third place

Entry fees: \$5 per event

Contest Director:

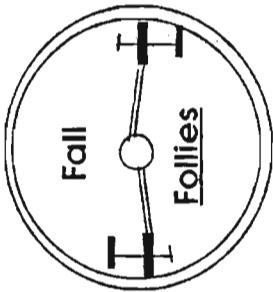
John Thompson, 1145 Birch Ave.

Cottage Grove, OR 97424

Contest sponsored by the Eugene Prop Spinners

Academy of Model Aeronautics membership required

The Eugene Prop Spinners invite you to the sixth annual Prop Spinners ...



A pleasant autumn afternoon of control-line competition flying

The events...

to be flown in this order, starting at 9 a.m.:

Precision aerobatics

In four skill classes:

BEGINNER — Using AMA beginner pattern

INTERMEDIATE ADVANCED

EXPERT

Fox .35 combat

Fox .35 stunt engine required, stock except for needle valve/spray bar
Any airplane, any fuel system OK — two airplanes per contestant for the day
.018x60" lines. 30-second pre-match starting period.

All other rules per AMA fast combat.

The details...

Date: Sunday, Oct 18, 1992

Place: Eugene Airport, Eugene, Ore.

Prizes: Trophies through third place

Entry fees: \$5 per event

Contest Director:

John Thompson, 1145 Birch Ave.

Cottage Grove, OR 97424

Contest sponsored by the Eugene Prop Spinners

Academy of Model Aeronautics membership required

NW COMPETITION RECORDS

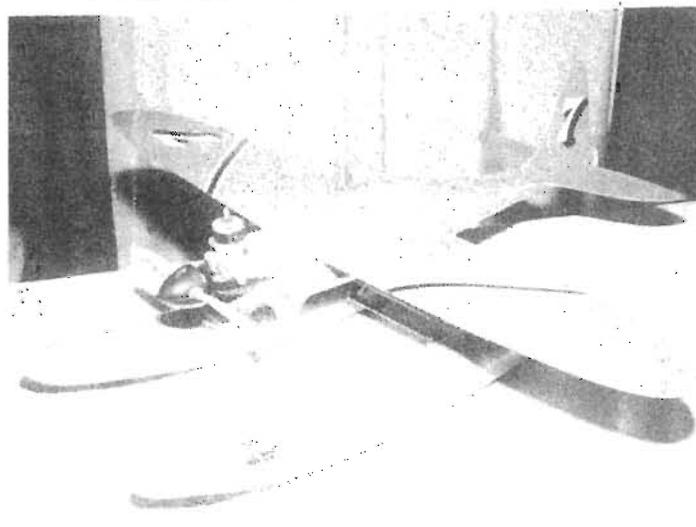
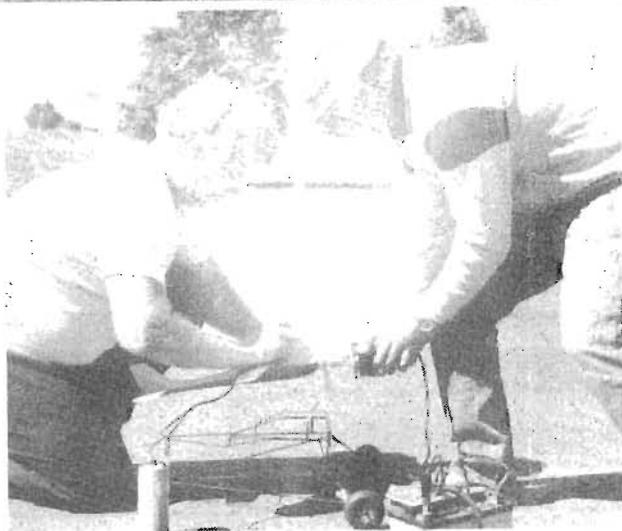
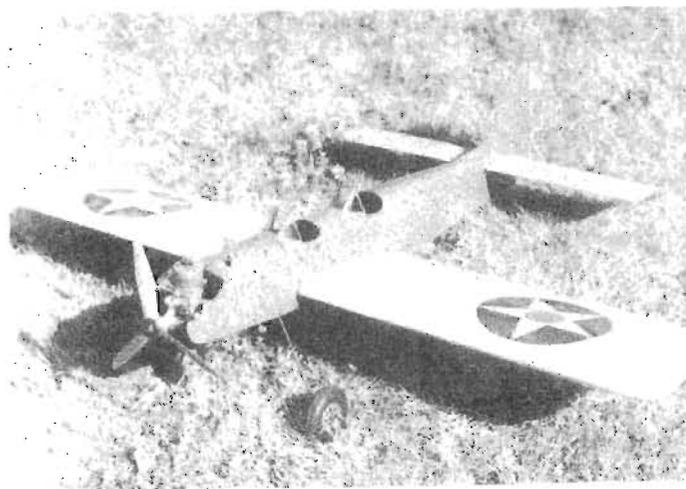
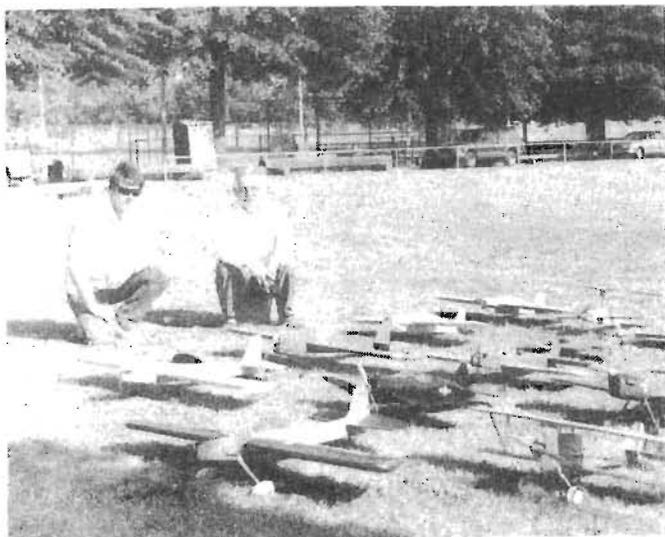
RECORD PERFORMANCES ESTABLISHED BETWEEN NORTHWEST
MODELERS IN SANCTIONED COMPETITION

There have been quite a few new marks set in NW competition since our last records update. Earlier in the summer, Mel Lyne took the NW Sport Race record back to Canada, and away from Ken Bugar. At the NW Speed Champs, Chuck Schuette upped his previous record. In a new category, Joe Rice has set the new standards for prelim and feature length NW Goodyear racing. This took place at the October meet in Richland. In the same contest, Joe shaved two seconds off of Joe Campbell's heat record.

1/2 A SPEED	83.13	Bruce Duncan	5-24-92	Eugene, OR
A SPEED	151.07	Chuck Schuette	5-24-92	Eugene, OR
B SPEED	137.04	Beers/Beers	5-24-92	Eugene, OR
D SPEED	172.34	Loren Howard	5-24-92	Eugene, OR
JET SPEED	154.58	Jerry Thomas	5-24-92	Eugene, OR
FORMULA 40	---			
21 SPORT SPEED	139.91	Chuck Schuette	8-9-92	Coquitlam, BC
FAI SPEED	179.75	Chris Sackett	9-22-91	Coquitlam, BC
1/2 A PROFILE PROTO	84.04	Jeff Cleaver	5-24-92	Eugene, OR
MOUSE RACE I - 50 Lap	2:43	Joe Rice	10-3-92	Richland, WA
MOUSE RACE I -100 Lap	5:59	Joe Rice	5-23-92	Eugene, OR
MOUSE RACE II -75 Lap	3:40	Dave Green	5-24-86	Eugene, OR
MOUSE RACE II -200 Lap	10:04	Hazel/Thompson	9-19-87	Kent, WA
AMA SCALE RACE -70 Lap	4:22	Clarence Bull	5-24-86	Eugene, OR
AMA SCALE RACE -140 Lap	9:02	Clarence Bull	5-24-86	Eugene, OR
NW GOODYEAR -70 Lap	4:29	Joe Rice	10-3-92	Richland, WA
NW GOODYEAR -140 Lap	10:33	Joe Rice	10-3-92	Richland, WA
SLOW RAT RACE -70 Lap	3:14	Hazel/Thompson	5-23-92	Eugene, OR
SLOW RAT RACE -140 Lap	7:14	Dave Green	4-13-86	Portland, OR
AMA RAT RACE -70 Lap	2:40	Dick Salter	7-22-86	Richmond, BC
AMA RAT RACE -140 Lap	5:46	Dick Salter	7-22-86	Richmond, BC
FAI TEAM RACE -100 Lap	3:36	Knoppi/McCollum	6-84	Shanghai, China
FAI TEAM RACE - 200 Lap	7:40	Knoppi/McCollum	6-84	Shanghai, China
NW SPORT RACE -70 Lap	4:00	Bruce Duncan	5-12-87	Richmond, BC
NW SPORT RACE -70 Lap	8:50	Mel Lyne	7-11-92	Burnaby, BC
NW SUPER SPORT -70 Lap	3:14	Dave Green	4-13-86	Portland, OR
NW SUPER SPORT -140 Lap	7:03	Dave Green	3-8-87	Portland, OR
NW CLOWN RACE -15 Minute	244 laps	Joe Rice	5-2-92	Richland, WA
CLASS I CARRIER	318.30	Roy Beers	9-13-86	Kent, WA
CLASS II CARRIER	330.25	Orin Humphries	9-19-87	Kent, WA
PROFILE CARRIER	238.44	Bob Parker	9-19-87	Kent, WA
.15 CARRIER	193.75	John Hall	9-15-91	Kent, WA
AMA ENDURANCE	18:37	Wesley Mullens	8-15-87	Kent, WA

PEOPLE AND PLANES SEEN THRU THE LENS OF JIM CAMERON

Top left: Dave Royer and Bill Darkow at Portland Fun Fly, right: Bill's Veco Brave.
Center left: Loren Howard pushes his D Speed ship into electric starter held by Roy Beers. Right: R.O.W. anyone? Frank Macy's aquatic style Fireball.
Bottom left: Frank Macy proudly displays his Firecat. Right: Paul Walker and Randy Schultz havin' a good time at Skyraiders club booth at Puyallup show. Roy Nakano looks just a bit weary!



FLYING

LINES

OCT 9 9 22 PM

9073 Windemere Dr. NW
Salem, OR 97304

SALEM, OR
OCT 9 9 22 PM



OCT 9 9 22 PM

FLYING LINES is produced by a dedicated staff of volunteers interested in keeping lines of communication open between Northwest region control line modelers. FLYING LINES is independent of any organization, and depends upon the financial support of its base of subscribers.

FLYING LINES is published nine times per year. Subscription rate for USA is \$14.50, and \$18.00 for Canadian subscriptions. Check or money order may be made payable to FLYING LINES. U.S. funds, please.

RUSH TO:

JOHN THOMPSON

1145 BIRCH AV

COTTAGE GROVE, OR

97424

FIRST CLASS MAIL