

# FLYING LINES



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## NEWS OF NORTHWEST CONTROL LINE MODEL AVIATION

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1073 WINDEMERE DRIVE NW  
SALEM, OREGON 97304

EDITOR: MIKE HAZEL

June

July 1986

# 74

BURIED INSIDE THIS LARGE ISSUE:

- Round & Round by John Thompson
- Complete 1986 Regionals Report!
- Engines Anyone? by Paul Gibeault
- Vancouver, B.C. Contest Reports
- Spanaway Spectacular Report
- ClamBash Report
- Entry Form for the Canned Nats (the last word)
- Wow! photos, photos, & more photos!
- Plus.....The usual statistics 'n' stuff.

(last month a newsletter, this month a magazine)

Subscribers: Please note the issue numbers listed on your mailing sticker. If the last number is circled, then this is your last issue! Please send in renewal promptly to ensure continuous service.

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## COCKPIT CHATTER

NOTES FROM THE EDITORS' DESK

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Ok, FL partners, here it is: a record size issue of 32 pages! This should keep you going for awhile. As you can see by the cover page, this issue will be it until August. That has been the traditional editor's summer respite from newsletter duties. Quite frankly, I'm ready for a break. It's time to get some actual modeling done!

Believe it or not, there were some things that would not fit into this issue, therefore will have to wait until the August issue. One is the letters from the readers segment. After the layup was half completed, it became evident that it just ain't gonna fit. So, we'll catch that up later.

One other item that was ready to go in and was bumped, was an overview of top Regionals performances over the years. One of the non-NW contestants commented that it would be nice to have a separate Regionals record category, since they do not qualify to put their names on our record books. This is not something that will be printed all the time, just at Regionals time. Look for it in the next issue.

Welcome to the Flying Lines staff, Paul Gibeault. As previously mentioned, Paul stepped forward to author an engine column. His first installment comes in this issue. His topic is the general care and feeding of Cox  $\frac{1}{2}$ A engines. I'm sure you will find it interesting and informative.

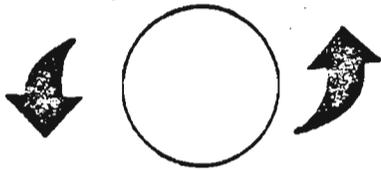
Regarding the Canadian Nationals: You will find the proper entry form and information towards the back of this issue. Those of you who attended the Regionals had opportunity to pick one up. The prior issue of the entry form was not accurate. The enclosed information is for the benefit of those who have missed receiving the proper form. Please note that the deadline for registration (advance) has already rolled on by. If you intend on entering, it is still probably best that you go ahead and send in your money and entry, rather than going through the hassle of trying to enter on the field. According to the instructions, late mail-in entries will not receive an acknowledgement, but you are to go to the registration headquarters, where-ever that is, to check in. Any questions, please call the Controline CD, Chris Sackett. His phone is 604-299-4500. I'll be up there, see you, eh?

Some other loose ends of business: We had some requests recently for issue number 70, but unfortunately were all sold out of that back issue. It turns out that ye olde editor just turned up a few more. So, if you needed that issue, let me know. By the way, the last issue (73) is completely gone. A complete listing of available back issues can be found on the Flea Market page.

Speaking of the Flea Market, a reminder to all FL readers that the placement there is free of charge. The listing this month is a repeat of last month, due to laziness. Normally, a placement will go for two issues, unless otherwise requested longer or shorter.

The three pages of photos in this issue are of Regionals action. If you see a shot you like, you may have the original by sending me your request, and a self addressed stamped envelope. First come, etc. Also watch for photo coverage of the Regionals in an upcoming issue of Model Builder magazine. (about July 30)

I'm going to sign off for now. This page is the very last thing that is done in writing up the newsletter. The workshop beckons.



## ROUND & ROUND

By: John Thompson

### FAREWELL TO PAUL WALLACE, HELPER OF MANY YOUNG FLIERS

Paul Wallace was known to Northwest CL modelers primarily as a racing competitor in the late 1970s and the early 1980s. He also dabbled in 1/2-A Speed and built airplanes for others' use in sport, stunt and 1/2-A Combat flying.

But Paul was known in Cottage Grove, Ore., as a kind, albeit somewhat curmudgeonly man who helped an uncounted number of youngsters both with model airplanes and with life.

Wallace, 67, died June 8 at his mobile home in Cottage Grove. He had been in poor health for a number of years, but remained active in model aviation until the end, building RC pylon racers for several Cottage Grove area fliers.

He was reading a book in bed, surrounded by a house full of model airplanes, when he died.

Wallace was an elementary school custodian until his retirement several years ago. He taught groups of youngsters on CL flying, taking the more interested and talented ones into competition. Some of the youngsters who made names for themselves on the competitive circuit were Jeff Young, Ken Reeves and the late Robbie Hanson. Many more simply enjoyed flying at home and learning the hobby.

Less known was Wallace's willingness to help out boys and young men with personal problems, sometimes opening his home to them for long periods.

His participation in CL modeling was interesting in that, in his later years, an ear problem prevented him from flying himself. He got his CL flying kicks from watching others fly the planes he built. His own piloting was confined to RC sport flying. His CL planes were always unusual but finely crafted.

When he retired from CL flying, Wallace flew RC until health problems interfered, and then continued building for others.

May he be remembered as someone who gave more to the hobby than he took.

## CAROLINA-TAFFINDER

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Northwest CL modelers also were shocked and saddened at the news of the death of Susan McClave, daughter of popular Precision Aerobatics flier Don McClave. Susan was one of the climbers trapped by a sudden storm on Oregon's Mount Hood in early May.

Participants in the Northwest Regional Controline Championships over Memorial Day Weekend were glad to see Don come and participate. It was a somewhat somber Regionals in the wake of that tragedy but as always the contest was brightened by Don's appearance. It's hoped that the outing brightened Don's month a little as well.

Under the leadership of the Seattle Skyraiders, a collection was taken at the Regionals to set up a scholarship in Susan's honor. Details remain to be worked out.

For the record, the Regionals drew 74 individuals for 191 event entries. Turnout was a record 23 fliers in Precision Aerobatics, and it was strong in Navy Carrier, Speed and Combat, about average in Scale and down in Racing.

Down in Racing seems to be the refrain at all contests...it's our prediction that this will continue until two things happen:

1. A national organization is started with a strong newsletter to set up a vital communications network.
2. Rules in the AMA events need to be revised to correct the imbalances that exist. Specifically, Rat Race needs to be reduced to a .21 engine, to reduce the weight and speed to within the physical abilities of normal human beings. Slow Rat needs to be reduced to .21 to match Rat and become a viable racing intermediate class. Goodyear needs to be eliminated as a superfluous and outdated event (it could still be done at local contests in areas where interest remains). There is some chance of the first two changes happening this year, if they are not again beaten down by the few competitors with vested interests in existing equipment who are willing to let their events die rather than change them to make them viable. Time will tell...

SOUR NOTES -- Bill Zimmer reports that the Illinois grapevine has it that Hobbico, the parent company of Tower Hobbies and Great Planes Model Distributors, will not import any CL engines or parts. This is the same company that has refused to supply small CL outlets such as Controline Sales, Motors & Memories, Hubschmidt's Hobby Center, etc. To quote Bill in a perceptive moment: "That sucks."

SPLIT PEA SOUP -- Ed Robbert reports that efforts are being suspended in the quest to split up the CL Contest Board, due to opposition from several quarters, including this one.

RULES MANIA -- Rules proposals for 1988 are beginning to filter in to board members. Remember, the rules-making process is an open democratic activity. All AMA members are urged to contact their district contest board member to give their input on rules ideas. In District XI, it's yours truly, John Thompson. My address is below. My phone number is (503) 942-7324. If you wait until the changes are in the rule book, you've lost your chance to influence the process. Early proposals are:

- \* Require a 5-foot radius pilot's circle for Precision Aerobatics. Purpose is safety in case of pilot wandering. (Proposed by Bill Zimmer.)
- \* Allow abrasive surfaces on combat wing leading edges. Purpose is to equalize balsa airplanes' cutting effectiveness with foam. (Barry Baxter.)
- \* Use FAI starting procedure for AMA combat. Purpose is to increase emphasis on flying, not engine starting. (Baxter.)

Your CLCB member's initial opinion on the above is: Yes to the PA pilot's circle, no to the combat proposals. I agree that the PA circle would increase safety. The combat rules are just fine they way they are. I have an open mind and could change my view on these if I get convincing input from District XI people on these topics.

I'm listening.

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

## **NW COMPETITION RECORDS**

### **RECORD PERFORMANCES ESTABLISHED BETWEEN NORTHWEST MODELERS IN SANCTIONED COMPETITION**

A long-standing Class II Navy Carrier record was beaten and four new racing records established at the Northwest Regional Control Line Championships in Eugene, Ore., over Memorial Day weekend. The list is as follows:

\* Class II Carrier, 324.3 by Wayne Spears, replacing 323.7 by Loren Howard.

\* Goodyear feature race, 9:02 by Clarence Bull, establishes record under 10% nitro rule.

\* Goodyear heat race, 4:22 by Clarence Bull, establishes record under 10% nitro rule.

\* Class I Mouse Race heat, 3:21 by Mike Hazel, establishes record under .010" line rule.

\* Class II Mouse Race heat, 3:40 by Dave Green, establishes record under .010" line rule.

Also claimed in May was a new Northwest Sport Race feature race record, 8:09, by Henry Hajdik, at the Richmond, B.C. racing meet. There was considerable disappointment at the Regionals when Henry was unable to attend and demonstrate how he gets such tremendous performance out of a stock Fox .35 -- a 140-lap, two-pit average of 73.59 mph!

Flying Lines keeps track of the best performances of Northwest control-line fliers in AMA-sanctioned contests (or MAAC-sanctioned contests using AMA rules), and in Northwest regional events.

Here are the complete records as of May 24:

MOUSE RACE I 50-lap: 3:21 (Mike Hazel)	100-lap: ---
MOUSE RACE II 75-lap: 3:40 (Dave Green)	200-lap: ---
GOODYEAR 70-lap: 4:22 (Clarence Bull)	140-lap: 9:02 (Clarence Bull)
SLOW RAT 70-lap: 3:56 (Dave Green)	140-lap: 7:14 (Dave Green)
RAT RACE 70-lap: ---	140-lap: 5:38 (Dick Salter)#
TEAM RACE 100-lap: 3:51 (Knoppi-McCollum)	200-lap: 7:49 (Knoppi-McCollum)
NW SPORT RACE 70-lap: 4:03 (Henry Hajdik)	140-lap: 8:53 (Beers-Cole)
NW SUPER SPORT 70-lap: 3:14 (Dave Green)	140-lap: 7:44 (John Thompson)
HALF-A SPEED: 88.2 mph (Paul Wallace)	FAI SPEED: 158.98 mph (Scott Newkirk)
HALF-A PROTO: 83.63 (Paul Wallace)	FORMULA 21: 79.54 (Rich Salter)
A SPEED: 181.56 (Chris Sackett)	FORMULA 40: 152.28 (Scott Newkirk)
B SPEED: 184.57 (Chris Sackett)	JET SPEED: 194.73 (Chris Sackett)
D SPEED: 170.71* (Mike Hazel)	PROFILE NAVY CARRIER: 232.5 (Bob Parker)
	CLASS I NAVY CARRIER: 311.1 (Rick Wallace)
	CLASS II NAVY CARRIER: 324.3 (Wayne Spears)

\* Speed of 170.55 has been recorded by Loren Howard.

# Temporary -- established in solo heat.

# THE FLYING FLEA MARKET

BUY, SELL, TRADE

**WANTED:** Midwest "Aries" control line stunt kit, vintage mid 60's. Tom Lowe, 823 Kingston Lane, Crystal Lake, IL 60014

**WANTED:** Need needle valve assembly and venturi pipe. (Forster 29 rear intake glow, SN# 6539, Year 49/50) Paul Karr, 751 Gold Coast Drive, Fairfield, CA 94533

**WANTED:** Full size plan for Jim VanHoit's "Carousel" UC stunter, March 1961 American Modeler and Harold Price's Tempest (date unknown) Ken Thompson, 220 E. 95th Street, New York City, NY 10028

**FOR SALE:** K&B 40 RC w/ perry carb and pump, new in box \$58. K&B 3.5 UC/FF, new in box \$44 Mike Hazel % Flying Lines

**FOR SALE:** Spread the word by wearing your official Flying Lines T-Shirt! Only \$8.00. Specify size and color.

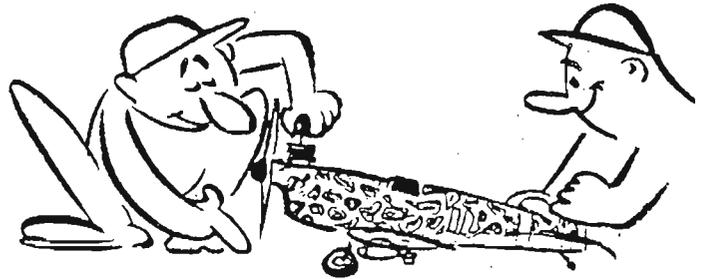
**WANTED:** Old combat kits: Guillow Reactor and Galaxy, Fox Rumble, Midwest Hornet and Half-fast, etc. Also have for sale old combat plans; full size Renegade, T-Square, Orbit Ace, Quicker, etc. Barry Baxter, 10116 Cabo, Westminster, CA 92683 (714) 531-7270

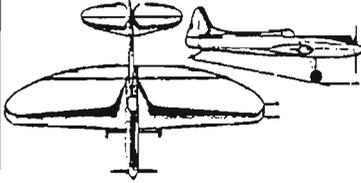
**FOR SALE:** Flying Lines back issues. Fill in the gaps in your FL library. singles \$1 each. Four or more @ 50¢ each. Issues available:

4	6	11	12	13	14
16	17	18	22	23	26
29	30	32	33	35	36
37	38	39	41	43	44
45	46	47	48	49	50
51	52	53	54	57	59
60	61	62	63	64	65
66	67	68	69	70	71
72					

**FOR SALE:** K&B 5.8 engines, from a Spokane area hobby shop. Contact Orin Humphries if interested. N. 5208 Elgin, Spokane, WA 99205 phone (509) 325-9773

**WANTED:** Control line kits old and new, will pay fair price. Interested in anything, will buy outright or trade. Would also like to hear from specialty shops, basement hobby shops, and kit collectors. Send a list of what you have or call. Mark St. George, 43 Summit Ave Westwood, NJ 07675 phone (201) 664-4602





Tom Dixon  
Suite 401  
1938 Peachtree Road  
Atlanta, Georgia 30309

**CLASSIC REPLICA CL PLANS**  
**BOLLY COMPOSITE PROPS**  
**MERCO, FOX, K&B ENGINES**  
**STUNT ENGINE REWORK**

----- 1986 NORTHWEST REGIONAL CONTROL LINE CHAMPS -----

The Memorial Day weekend in Eugene, Oregon was once again the time and place for the annual CL happening in the region. The three day event came off in superlative fashion, owing to the hard work of the officials, organizers, supporters, and of course the contestants.

It would first be most appropriate in this report, to acknowledge the Regionals workers. As always, it is difficult to acknowledge all of those who pitched in to just help a little. Everyone in that category is certainly appreciated, as well. The following list is by memory, so please let us know if someone was left out. The event directors are marked = ED.

PRECISION AEROBATICS: Dave Gardner (ED), Jim Parsons, Bob Parker, Pete bergstrom, Marie Bergstrom, Alice Gardner

COMBAT: Dave Childs (ED), David and Lisa Robb, Bruce Guenzler, Pat Owen

CARRIER: Wayne Spears, Roy Beers (co-EDs), Jim Levins, and others.

SCALE: Earle Moorhead (ED), Mel Marcum

PROFILE SCALE: Mel Marcum (ED), Gerald Schamp

OLD TIME STUNT: Gerald Schamp (ED), Dave Gardner

RACING: Dick Peterson, Dick Salter, Dave Green, Mike Hazel

SPEED: Mike Hazel (ED), Dave Robinson, Jeff Shelby, and many others.

BALLOON BUST: Dave Mullens (ED), and the Seattle Skyraiders.

FIELD PREPARATION, COORDINATION, AIRPORT LIASON, CONCESSIONS, ETC. ETC.: The Eugene Prop Spinners, including Mel Marcum, Gary Rolley, Walter Sweet, Jim Levins, Jeff Shelby, Pat Owen, Bruce Guenzler, and others.

REGISTRATION: Delores Marcum.

Oh!, and let's not forget our Contest Director, John Thompson. Thanks to all for a job well done.

TROPHY SPONSORS: Eugene Toy & Hobby, Trump's Hobbies, Marty's Hobbies, Easwood Hobby, Albany Hobby Center, Dark Ages Racing Equipment, Mullens Marine, Seattle Skyraiders, Obie St. Clair, Jeff & Theresa Shelby, Dave & Alice Gardner, Gerald Schamp, Delores & Mel Marcum.

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If you haven't already, be sure to pass on a word of thanks to the sponsors of your awards.

The Weatherman sponsored good climate throughout the weekend. On Friday it was a bit cloudy, but quite pleasant. On Saturday the clouds broke up and the temperatures shot up. This continued on through Sunday. A couple of NW people people were observed praying for rain, which no doubt dismayed participants from the warmer climes. The weather also seemed to know when the contest was supposed to end. On Sunday at 5:00 (almost to the minute!) the wind began to really blow, and the contestants putting in flights during the last half hour had to contend with some strong gusts.

Following are the complete results;

Results: 1986 NW Regionals, May 23-25, Eugene, Oregon

PROFILE NAVY CARRIER (13 entries)

- 1) Bob Parker, Renton, Washington 226.3 points; G-S Bearcat, 30 ounces, balsa/Monokote, K&B Superpoxy, .015 lines, J-Roberts handle, K&B 5.8, Rev-Up 9x7 prop, Fox idle-bar glow plug, Sheldon's 40% nitro fuel, 3½ ounce suction tank, O.S. 4BK carb.
- 2) Dave Green, Astoria, Oregon; 222 points
- 3) Orin Humphries, Spokane, Washington, 213.4 points
- 4) Raymond Popowich, San Leandro, California, 193.3 points

CLASS I NAVY CARRIER (8 entries)

- 1) Orin Humphries, Spokane, Washington, 293.4 points; S03C-2C Seagull- own plans, 31.5 inch span, 34.5 ounces, balsa construction, K&B epoxy finish, slab wing with Humphries line slider, .015 lines, Sturdi-Built handle, OS FP 35, Master Airscrew 9x6, Fox long RC glow plug, Sig 25% nitro fuel, 4 ounce suction uniflow suction tank- made by self, OS carb.
- 2) David Shrum, Roseburg, Oregon, 272.5 points
- 3) Terry Miller, Roseburg, Oregon, 264.2 points
- 4) Richard Wallace, Sequim, Washington, 204.4 points

CLASS II NAVY CARRIER (4 entries)

- 1) Wayne Spears, Portland, Oregon, 324.3 points; Sterling Guardian, 36 inch span, 48 ounces, balsa construction, Hobbypoxy finish, Ailerons added, engine mounts enlarged, .018 lines, G-S Products handle, HB 61PDP, Winsor Master Airscrew 11x7.5 prop, Fox idle-bar glowplug, ST 60 Perry pumper carb, use Robart pump, Veco 5 ounce tank.
- 2) Orin Humphries, Spokane, Washington, 311.5 points
- 3) Roy Beers, Vancouver, Washington, 217.2 points
- 4) Richard Wallace, Sequim, Washington, 155.7 points

FAST COMBAT (12 entries)

- 1) John Salvin, Orinda, California; own design Aeolus, 45½ inch span, 19½ ounces, balsa and foam, FasCal covering, .021 lines, Hot rock handle, Fox 36 Combat special, reworked by self, Top Flite 7-7/8 x 6½ wood prop, Long reach Full Command glowplug, Sheldon's 40% nitro fuel, bladder tank with regulator, pit crew- Ed Clausen.
- 2) Michael Petri, Redwood City, California
- 3) Jim Booker, Bothell, Washington
- 4) Mike Rule, Bothell, Washington

SLOW COMBAT (6 entries)

- 1) Gary Byerley, Spanaway, Washington; own design Slow Pro, 46-3/4 inch span, 21 ounces, foam and balsa, Solarfilm covering, .018 lines, Fox Mk IV Combat Special, reworked by Norm McFadden, D-W Airscrew 9x6 prop, Fox glowplug, engine features ABC P/L, own 25% nitro fuel, Triangle Hobbies 4.75 ounce uniflow tank.
- 2) Mel Lyne, Garibaldi Highlands, British Columbia
- 3) Glenn Salter, Seattle, Washington
- 4) John Salvin, Orinda, California

FAI COMBAT (4 entries)

- 1) P.T. Granderson, Portland, Oregon (no data available)
- 2) John Salvin, Orinda, California
- 3) Gary Byerley, Spanaway, Washington
- 4) Mel Lyne, Garibaldi Highlands, British Columbia

½A COMBAT (9 entries)

- 1) John Salvin, Orinda, California; Sly-Sir, Steve Hill desing, 31 inch span, 5-3/4 ounces, balsa and foam, FasCal covering, .012 lines, reworked Cox TD 049, Top Flite nylon 5x3 prop, Cox high compression head, Sheldon's 40% nitro fuel, bladder tank, pit crew- Ed Clausen
- 2) Bill Varner, Astoria, Oregon
- 3) Barry Baxter, Westminster, California
- 4) Lloyd Birch, Everett, Washington

½A SPEED (7 entries)

- 1) Roy Andrassy, Vancouver, British Columbia, 80.54 mph
- 2) Bob Boling, Richmond, California 79.90 mph
- 3) Paul Gibeault, Calgary, Alberta 77.52 mph
- 4) Bob Danielson, Bothell, Washington attempt

A SPEED (5 entries)

- 1) Frank Hunt, Merced, California, 166.29 mph (no data available)
- 2) M & M Team, Fremont, California 165.68 mph
- 3) Jim Rhoades, Salt Lake City, Utah 158.53 mph
- 4) Ron Salo, Vancouver, British Columbia 119.24 mph

B SPEED (3 entries)

- 1) Frank Hunt, Merced, California, 187.87 mph (no data available)
- 2) Greg Beers, Vancouver, Washington 143.15 mph
- 3) Don Chandler, Redwood City, California 138.77 mph

D SPEED (3 entries)

- 1) Loren Howard, Vancouver, Washington, 169.42 mph (no data avail.)
- 2) Joe Armstead, Redwood City, California 155.24 mph
- 3) M & M Team, Fremont, California attempt

JET SPEED (4 entries)

- 1) Jerry Thomas, Puyallup, Washington, 192.44 mph; own Hummer design, 18 inch inboard wing, 30 ounces, constructed from aluminum, .031 wire single wire, Thomas handle, Dyna-Jet reworked by Thomas, extended head, suction tank, 50/50 fuel from nitro & propylene oxide, pilot- Fred Margarido.
- 2) Frank Hunt, Merced, California, 173.68 mph
- 3) Loren Howard, Vancouver, Washington, 162.54 mph
- 4) Mike Hazel, Salem, Oregon, attempt

MOUSE RACE CLASS I -JUNIOR (no entries)

FORMULA 40 SPEED (9 entries)

- 1) Dick Peterson, Renton, Washington, 151.71 mph; The Move, Mike Hazel design, 24 inch span, 26 ounces, balsa, hardwood, speed pan, fiberglass, K&B epoxy finish, .018 single strand lines, Salter racing handle, K&B 6.5 FI reworked by Dick Peterson, 8x8-7/8 fiberglass prop by Dave Green, McCoy racing glowplug, contest supplied 40% fuel, Taffinder uniflow pressure tank, pilot- Mike Hazel.
- 2) Dave Green, Astoria, Oregon, 145.69 mph
- 3) Loren Howard, Vancouver, Washington, 145.10 mph
- 4) Paul Gibeault, Calgary, Alberta, 142.91 mph.

FAI SPEED (3 entries)

- 1) Chuck Schuette, Vancouver, Washington, 157.87 mph; APII design by Schuette and Bob Spahr, 26.37 inch single wing, 17 ounces, aluminum wing, fiberglass fuselage with wood, .016 single strand lines, own handle, Rossi .15 reworked by self, Rossi #3 glow plug, Fiberglass 3.1 radius x 5.5 single blade prop by Bob Spahr, contest supplied no-nitro fuel, bladder tank with regulator.
- 2) Paul Gibeault, Calgary, Alberta, 145.73 mph.
- 3) Greg Beers, Vancouver, Washington, attempt

RAT RACE (2 entries)

- 1) Paul Gibeault, Calgary, Alberta; 6:31; Gillott design Shark, modified by Scott Newkirk, 36 inch span, 32 ounces, balsa-maple-ply-fiberglass, mag pan, graphite wing spar, epoxy finish, .018 single strand lines, own handle, OS Max 40 RSR- 1976 version, Kelly 8x7 fiberglass prop, K&B long glow plug, contest supplied 10% fuel, Gibeault made carb with K&B needle assembly, Gillott shutoff, Gillott 4 ounce pressure tank, pilot- Roy Andrassy.
- 2) Joe Armstead, Redwood City, California, 27 laps

SLOW RAT RACE (3 entries)

- 1) Joe Armstead, Redwood City, California, 7:23; Snake design by Dick Lambert, 37 inch span, 48 ounces, balsa-spruce-maple, Hobbyoxy finish, .018 single strand lines, Fox handle, OS 36 reworked by Vic Garner, GloBee 1-L glowplug, 8.8x7.5 glass prop by Vic Garner, contest supplied 10% fuel, 4 ounce inboard suction tank with outboard hopper, .312 carb bore, fastfill, shutoff, hot glove, pilot- Mike Petri.
- 2) John Boles, Salt Lake City, Utah, 12:58
- 3) Dave Green, Astoria, Oregon, score unavailable

GOODYEAR (6 entries)

- 1) Paul Gibeault, Calgary, Alberta, 7:55; Midget Mustang design by John Ballard, 26 1/4 inch span, 24.5 ounces, balsa-ply-maple-fiberglass cloth-aluminum, epoxy finish, aluminum landing gear, .014 single strand lines, own handle, Nelson .15, Gillott graphite prop, K&B long glow plug, contest supplied 10% fuel, .375 carb, fastfill, shutoff, Taffinder 3 ounce tank, pilot- Roy Andrassy
- 2) Randy Tychkowsy, Edmonton, Alberta, 8:52
- 3) Clarence Bull, Eugene, Oregon, 9:02
- 4) Bob Boling, Richmond, California 4:52 heat

CLASS I MOUSE RACE, SENIOR-OPEN (9 entries)

- 1) Bob Boling, Richmond, California, 4:52; own design Ignatz 1B, 20 inch span, 7 ounces, basswood, balsa, aluminum, epoxy finish, features molded balsa fuselage, .010 single strand lines, own handle, Cox 049 reworked by self, Cox 4½x4 prop, Cox TD glowhead, Sheldon 50% nitro fuel, carb drill to #42 size, fastfill, uniflow vent, spring starter, pilot- Fred Margarido.
- 2) Paul Gibeault, Calgary, Alberta, 5:42
- 3) Joe Armstead, Redwood City, California 6:16
- 4) Roy Andrassy, Vancouver, British Columbia 2:38 heat

CLASS II MOUSE RACE (6 entries)

- 1) Bob Boling, Richmond, California, 10:52; same information as Class I except: pit crew- Frank Hunt, pilot- self
- 2) Paul Gibeault, Calgary, Alberta, 11:28
- 3) Dave Green, Astoria, Oregon, 4 laps

NW SPORT RACE- JUNIOR (1 entry)

- 1) Corina Byerley, Spanaway, Washington, 16:40; Sterling Ringmaster, 28 ounces, Dope-Monocoate finish, .018 lines, Fox Stunt 35, Taipan 9x6 prop, Fox long plug, 10% nitro fuel, Super Tigre needle valve assembly, 2 ounce suction tank by Gary Byerley, pit crew- Gary Byerley.

NW SPORT RACE- SENIOR OPEN (10 entries)

- 1) Mel Lyne, Garibaldi Highlands, British Columbia; 9:06  
no data available.
- 2) S&S Team, Seattle, Washington, 9:11
- 3) Dick Peterson, Seattle, Washington 9:16
- 4) John Hall, Sumner, Washington 4:50 heat

NW SUPER SPORT RACE (7 entries)

- 1) S&S Team, Seattle, Washington, 8:05; Clockwork Orange- Tom Knoppi design, balsa-spruce-plywood, Monokote covering, Salter racing handle, K&B 35, McCollum fiberglass racing prop, Fastfill, shutoff, hot gove, TKO suction tank, pilot- Rich Salter, pit crew- Dick Salter
- 2) Dave Green, Astoria, Oregon, 9:36
- 3) Glenn Salter, Seattle, Washington, 9:54
- 4) Joe Armstead, Redwood City, California, 4:24 heat

PRECISION SCALE (3 entries)

- 1) Orin Humphries, Spokane, Washington, 462 points; T-34C, own plans, 50 inch span, 96 ounces, foam-glass-epoxy, K&B epoxy finish, .015 x 70 stranded lines, Sturdi-Built handle, K&B 40, Perry carb., Top Flite 10x6 wood prop, Fox RC glowplug, Sig 10% nitro fuel, own 4 ounce suction tank.
- 2) Dave Mullens, Seattle, Washington, 453 points
- 3) Bob Danielson, Bothell, Washington, 346 points

PROFILE SCALE (5 entries)

- 1) Dave Mullens, Seattle, Washington, 160.5 points;  
no data available
- 2) Don Chandler, Redwood City, California, 152.5 points
- 3) Bob Danielson, Bothell, Washington, 151 points
- 4) Randy Schultz, Seattle, Washington, 148.5 points

BEGINNER PRECISION AEROBATICS (4 entries)

- 1) Jack Pitcher, Gresham, Oregon, 341 points; Modified Sig Twister, 48 inch span, 34 ounces, Monokote and poly-U finish, .015 x60 lines, Aldrich handle, Fox 35, Top Flite 10x6 maple prop, K&B Glowplug, RedMax 10% nitro with 25% castor fuel, KK Universal needle valve assembly, Du-Bro 4 ounce clunk tank-suction.
- 2) Dave Royer, Portland, Oregon, 203 points
- 3) Joel Ferguson, Federal Way, Washington, 117.5 points
- 4) Don Chandler, Redwood City, California, 59 points

INTERMEDIATE PRECISION AEROBATICS (6 entries)

- 1) Bryan Porter, Fresno, California, 427 points; Imitation- Ted Fancher design, 63 inch span, 50 ounces, balsa-foam wings, Monokote finish, .015 x 64 lines, Rob Nelson custom handle, Fox 40 reworked by Tom Dixon, Rev-Up 11x6EW wood prop, Fox RC long glowplug, RedMax 10% nitro fuel, own hopper type uniflow 5 ounce tank, muffler pressure.
- 2) Terry Miller, Roseburg, Oregon, 324.6 points
- 3) Gerald Schamp, Lebanon, Oregon, 313.3 points
- 4) David Shrum, Roseburg, Oregon, 291.7 points

ADVANCED PRECISION AEROBATICS (5 entries)

- 1) Bob Ellis, Fresno, California, 466 points; Imitation- Fancher design, 60 inch span, foam-wood, Monokote-Formula U finish, design modified to sidemount engine, .018 x 62 lines, EZ Just handle, Super Tigre 46, Rev-Up 11x6EW wood prop, Fox RC long glow plug, RedMax 15% nitro fuel, Taffinder 6 ounce uniflow tank.
- 2) Randy Powell, Nampa, Idaho, 432.7 points
- 3) Dave Mullens, Seattle, Washington, 420.3 points
- 4) John Hall, Sumner, Washington, 409.3 points

EXPERT PRECISION AEROBATICS (9 entries)

- 1) Paul Walker, Kent, Washington, 539.7 points; own design Bad News, 61 inch span, 58 ounces, balsa, Sig dope finish, features fully adjustable control system, .018x70 lines, own handle, Super Tigre 60 reworked by Vic Garner, Zinger 11.3x6 prop cut from 12 inches, Thunderbolt RC long glowplug, RedMax 10% nitro fuel, own 8 ounce uniflow tank, muffler pressure. This plane won the 1984 Nationals.

OLD TIME STUNT (7 entries)

- 1) Randy Schultz, Renton, Washington, 268.5 points; no data avail.
- 2) John Hall, Sumner, Washington, 251 points
- 3) Bob Danielson, Bothell, Washington, 210 points
- 4) Terry Miller, Roseburg, Oregon, 170.5 points

JUNIOR BALLOON BUST (4 entries)

- 1) Corina Byerley, Spanaway, Washington, 1240.8 points; Sterling Ringmaster, .018x60 lines, Fox Stunt 35, Taipan 9x6 prop, Byerley 2 ounce suction tank, 10% nitro fuel
- 2) Teresa Byerley, Spanaway, Washington, 112.46 points
- 3) Shawn Mullens, Seattle, Washington, 32 seconds
- 4) Wesley Mullens, Seattle, Washington, 35 seconds

SENIOR OPEN BALLOON BUST (14 entries)

- 1) Dave Green, Astoria, Oregon, 559.72 points; Goldberg Buster, 42 inch span, 33 ounces, features humongous landing gear, .018 x 60 lines, Fox handle, Fox 35, Grish 10x4 nylon prop, K&B Glowplug, Cool Power 10% nitro fuel, Fox 3 ounce suction tank, special note: plane is 12 years old.
- 2) Dick Salter, Seattle, Washington, 429.6 points
- 3) Dick Peterson, Seattle, Washington, 316.8 points
- 4) Rich Salter, Seattle, Washington 229.8 points

GRAND CHAMPIONS (based upon placings in all events)

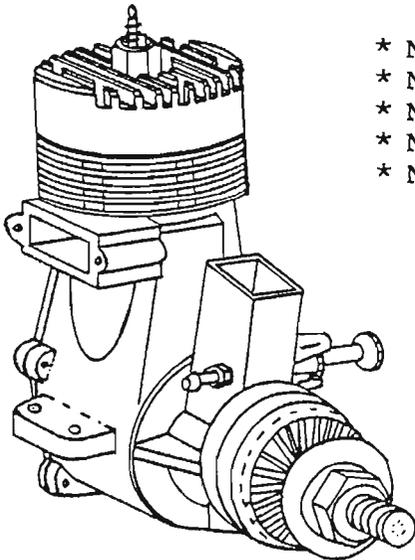
- 1) Paul Gibeault, Calgary, Alberta
- 2) Dave Green, Astoria, Oregon
- 3) Orin Humphries, Spokane, Washington

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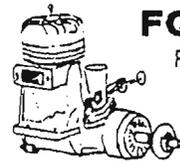
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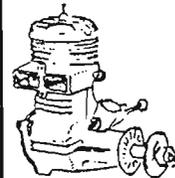
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# NORTHWEST COMPETITION STANDINGS

Standings in every competition category were revised as a result of the contests in Spanaway, Wash., Eugene, Ore., and Richmond, B.C. since the last report.

Flying Lines keeps track of the performances of Northwest Control-Line model aviators in sanctioned AMA/MAAC Northwest competitive events. Information about the scoring system and printouts of complete standings are available from FL.

Top fliers in events in which standings have changed since publication of issue No. 73, computed as of May 27, are:

### NORTHWEST SPORT RACE (8 contests, 59 entries)

1. S&S Racing Team	Seattle, Wash.	44
2. Dave Green	Astoria, Ore.	35
3. Glenn Salter	Seattle, Wash.	23
4. Beers-Cole Racing	Vancouver/Portland	17
5. Wayne Drake	Troutdale, Ore	15
Dick Peterson	Renton, Wash.	15
7. Mel Lyne	Grblldi Hghlnds, B.C.	10
8. Henry Hajdik	Vancouver, B.C.	9
9. John Hall	Puyallup, Wash.	7
10. Frank Boden	Vancouver, B.C.	6

### NORTHWEST SUPER SPORT RACE (5 contests, 36 entries)

1. Dave Green	Astoria, Ore.	31
2. John Thompson	Cottage Grove, Ore.	23
3. John Hall	Puyallup, Wash.	13
S&S Racing Team	Seattle, Wash.	13
5. Dick Peterson	Renton, Wash.	11
6. Dick McConnell	Seattle, Wash.	8
7. Beers-Cole Racing	Vancouver/Portland	6
8. Glenn Salter	Seattle, Wash.	5

## Virginia Craftsman, Inc.

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### Miscellaneous Items For Sale:

- One- Super Tigre .60 for Stunt, special .280 ID sprinkler type venturi. Lightweight custom made mini-muffler. New! \$120
- Three- Super Tigre S-36. All new, in box. \$50 each
- One- Super Tigre X-15, About 1 ounce removed from case and fins. Special head insert and venturi. Bench run only-strong. \$75
- One- Rossi .15 Old style with 10½ MM crank. All new insides, has not been run. Special made head insert, venturi, and front bearing cover. \$120
- One- OS MAX 40 VR-P Modified for rat race, formula 40, or formula one rc pylon. Exhaust adapters, for K&B mini-pipe or OS mini-pipe (both included) Special made head insert and venturi. Strong engine- bench run only. \$140
- Two- K&B 40 RC #4011 Good for that profile stunt model you've been wanting to build. New in box. \$45 each
- One- Rossi .15 #2 tuned exhaust pipe, new in box \$25
- One- Lil Quickie CL Goodyear ship, not completed. Wing parts have been glued up, but not shaped for airfoil. Internal circular bellcrank with internal lead-outs. Fuselage has wing, stab, tank and engine mounting slots cut on milling machine. Complex machined engine mount made from 6061-T6 aluminum for old style Rossi .15 which also incorporates a shut-off. Stabilizer and rudder parts glued up but not sanded to shape. \$35

Note: Please add \$5.00 for postage and insurance on engines, and model. Add \$2.50 for tuned pipe.

SLOW RAT RACE (2 contests, 6 entries)

1. Dave Green	Astoria, Ore.	4
2. Dick McConnell	Seattle, Wash.	2
3. Glenn Salter	Seattle, Wash.	1

RAT RACE (2 contests, 4 entries)

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

GOODYEAR (1 contest, 6 entries)

1. Clarence Bull	Eugene, Ore.	4
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CLASS I MOUSE RACE (2 contests, 9 entries)

No Northwest entries placed.

CLASS II MOUSE RACE (1 contests, 6 entries)

1. Dave Green	Astoria, Ore.	4
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OVERALL RACING (19 contests, 123 entries)

1. Dave Green	Astoria, Ore.	75
2. S&S Racing Team	Seattle, Wash.	57
3. Glenn Salter	Seattle, Wash.	29
4. Dick Peterson	Renton, Wash.	26
5. Beers-Cole Racing	Portland/Vancouver	23
John Thompson	Cottage Grove, Ore.	23
7. John Hall	Puyallup, Wash.	20
8. Wayne Drake	Troutdale, Ore.	15
9. Dick McConnell	Seattle, Wash.	10
Mel Lyne	Garibaldi Hghlnds, B.C.	10

PROFILE NAVY CARRIER (2 contests, 19 entries)

1. Bob Parker	Renton, Wash.	17
2. Dave Green	Astoria, Ore.	12
3. Orin Humphries	Spokane, Wash.	11
4. John Hall	Puyallup, Wash.	6
5. Rick Humphries (J)	Spokane, Wash.	5
6. Darrell Rupnow	Federal Way, Wash.	3

CLASS I NAVY CARRIER (2 contests, 11 entries)

1. Orin Humphries	Spokane, Wash.	8
2. David Shrum	Roseburg, Ore.	7
3. Terry Miller	Roseburg, Ore.	6
4. Rick Wallace	Sequim, Wash.	5

CLASS II NAVY CARRIER (2 contests, 5 entries)

1. Wayne Spears	Portland, Ore.	4
Orin Humphries	Spokane, Wash.	4
3. Roy Beers	Vancouver, Wash.	2
4. Rick Wallace	Sequim, Wash.	1

OVERALL NAVY CARRIER (6 contests, 35 entries) \*

1. Orin Humphries	Spokane, Wash.	23
2. Bob Parker	Renton, Wash.	17
3. Dave Green	Astoria, Ore.	12
4. David Shrum	Roseburg, Ore.	7
5. John Hall	Puyallup, Wash.	6
Terry Miller	Roseburg, Ore.	6
Rick Wallace	Sequim, Wash.	6
8. Rick Humphries (J)	Spokane, Wash.	5
9. Wayne Spears	Portland, Ore.	4
10. Darrell Rupnow	Federal Way, Wash.	3

HALF-A COMBAT (3 contests, 23 entries)

1. Bill Varner	Astoria, Ore.	11
2. Rich Salter (S)	Seattle, Wash.	10
3. Jason Howell (J)	Tacoma, Wash.	9
4. Richard Birch	Everett, Wash.	8
5. Glenn Birch	Everett, Wash.	7
6. Lloyd Birch	Everett Wash.,	6
7. Dick Salter	Seattle, Wash.	5
8. Glenn Salter	Seattle, Wash.	2

NW SPORT/MACA (FOXDOG) COMBAT (2 contests, 8 entries)

1. Rich Salter (S)	Seattle, Wash.	12
2. Dave Mullens	Seattle, Wash.	7
3. Jason Howell (J)	Tacoma, Wash.	6
4. Frank Boden	Vancouver, B.C.	5
Glenn Salter	Seattle, Wash.	5
6. Dick Salter	Seattle, Wash.	3
7. Dick McConnell	Seattle, Wash.	2

FAI COMBAT (2 contests, 6 entries)

1. Phil Granderson	Portland, Ore.	4
2. Mel Lyne	Grblidi Hghlnds, B.C.	3
3. Gary Byerley	Spanaway, Wash.	2
4. Frank Boden	Vancouver, B.C.	1

SLOW COMBAT (2 contests, 6 entries)

1. Glenn Salter	Seattle, Wash.	10
2. Mel Lyne	Grblidi Hghlnds, B.C.	9
3. Dick Salter	Seattle, Wash.	7
4. Gary Byerley	Spanaway, Wash.	6
5. Jason Howell (J)	Tacoma, Wash.	5

AMA COMBAT (2 contests, 24 entries)

1. Mike Rule	Bothell, Wash.	20
2. Mel Lyne	Grblidi Highlnds, B.C.	12
3. Dick Salter	Seattle, Wash.	10
Jim Booker	Bothell, Wash.	10
5. Norm McFadden	Lynnwood, Wash.	9

OVERALL COMBAT (11 contests, 79 entries) \*

1. Dick Salter	Seattle, Wash.	25
2. Mel Lyne	Grblidi Highlnds, B.C.	23
3. Rich Salter (S)	Seattle, Wash.	22
4. Jason Howell (J)	Tacoma, Wash.	20
Mike Rule	Bothell, Wash.	20
6. Glenn Salter	Seattle, Wash.	18
7. Bill Varner	Astoria, Ore.	11
8. Jim Booker	Bothell, Wash.	10
9. Norm McFadden	Lynnwood, Wash.	9
10. Richard Birch	Everett, Wash.	8
Gary Byerley	Spanaway, Wash.	8

PRECISION AEROBATICS (8 contests, 30 entries)		
1. Paul Walker	Kent, Wash.	21
2. Don McClave	Portland, Ore.	16.5
3. Randy Schultz	Seattle, Wash.	13.5
4. Dave Mullens	Seattle, Wash.	9
5. Randy Powell	Nampa, Idaho	6
6. Terry Miller	Roseburg, Ore.	5
7. Jack Pitcher	Gresham, Ore.	4
Gerald Schamp	Albany, Ore.	4
9. Alan Resinger	Delta, B.C.	3
Dave Gardner	Renton, Wash.	3
Dave Royer	Portland, Ore.	3
John Hall	Puyallup, Wash.	3
David Shrum	Roseburg, Ore.	3

OLD-TIME STUNT (2 contests, 14 entries)		
1. Randy Schultz	Seattle, Wash.	14
2. John Hall	Puyallup, Wash.	10
3. Dave Gardner	Renton, Wash.	6
4. Don McClave	Portland, Ore.	5
Bob Danielson	Bothell, Wash.	5
6. Terry Miller	Roseburg, Ore.	4

PRECISION SCALE (1 contest, 3 entries)		
1. Orin Humphries	Spokane, Wash.	3
2. Dave Mullens	Seattle, Wash.	2
3. Bob Danielson	Bothell, Wash.	1

SPORT/PROFILE SCALE (2 contests, 8 entries)		
1. Dave Mullens	Seattle, Wash.	6
2. Randy Schultz	Seattle, Wash.	5
Bob Danielson	Bothell, Wash.	5

OVERALL SCALE (3 contests, 11 entries) *		
1. Dave Mullens	Seattle, Wash.	8
2. Bob Danielson	Bothell, Wash.	6
3. Randy Schultz	Seattle, Wash.	5
4. Orin Humphries	Spokane, Wash.	3

BALLOON BUST (4 contests, 34 entries)		
1. Dick Salter	Seattle, Wash.	34
2. Dave Green	Astoria, Ore.	14
3. John Hall	Puyallup, Wash.	12
Dick Peterson	Renton, Wash.	12
5. Rich Salter (S)	Seattle, Wash.	11
6. Glenn Salter	Seattle, Wash.	10
7. Mel Lyne	Grblidi Hginds, B.C.	9
8. Wesley Mullens (J)	Seattle, Wash.	5
Shawn Mullens (J)	Seattle, Wash.	5
Teresa Byerley (J)	Spanaway, Wash.	5
Corina Byerley (J)	Spanaway, Wash.	5

#### JUNIOR OVERALL COMPETITION STANDINGS

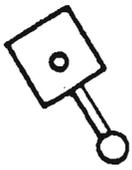
1. Jason Howell	Tacoma, Wash.	20
2. Corina Byerley	Spanaway, Wash.	6
3. Rick Humphries	Spokane, Wash.	5
Wesley Mullens	Seattle, Wash.	5
Shawn Mullens	Seattle, Wash.	5
Teresa Byerley	Spanaway, Wash.	5

SPEED (All classes combined) (7 contests, 34 entries)		
1. Loren Howard	Vancouver, Wash.	12
2. Dick Peterson	Renton, Wash.	9
3. Dave Green	Astoria, Ore.	8
4. Jerry Thomas	Puyallup, Wash.	4
Bob Danielson	Bothell, Wash.	4
6. Chuck Schuette	Vancouver, Wash.	3
Greg Beers	Vancouver, Wash.	3
8. Ron Salo	Burnaby, B.C.	2
9. Mike Hazel	Salem, Ore.	1

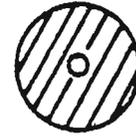
#### CONTESTS COUNTED

These standings include scores from the following contests. If an eligible contest has been held that is not listed here, the results have not been received by the statistician. Send results through FOURTH place and the number of entries in each event to John Thompson, 1505 Ash Ave., Cottage Grove, Ore. 97424.

- Northwest Sport Race Drizzle Circuit Contest 2, Jan. 12.
- Northwest Sport Race Drizzle Circuit Contest 3, Feb. 9.
- Northwest Sport Race Drizzle Circuit Contest 4, March 9.
- VGMC Sport Race, April 6.
- Northwest Sport Race Drizzle Circuit Contest 5, April 13.
- Spanaway Spring Tune-Up, April 26-27.
- Richmond Spring Ukje Meet, May 4.
- Northwest Regional Controline Championships, May 23-25.



# ENGINES ANYONE???



by: PAUL GIBEAULT

Hello Flying Lines Readers;

I've recently volunteered to fill the previously vacant engine column. However, since I'm new to this, it may take me a while to get right into the swing of things. Not only that, but I may even drift off into props, tanks, and fuels, as these topics are also very important to well running engines.

There is something you FL readers out there can do though, to help me out. That is, ask me your questions and queries! Give me a topic of your concern and I'll go from there, OK?

Oh, and by the way, I'm not afraid of divulging any of my so-called "secrets", as for the most part I haven't any. I have however, amassed a fair bit of engine know-how and experience. This I would be more than willing to impart to anyone who asks. So.....ask!

## GETTING THE MOST OUT OF YOUR COX T.D. ENGINE; HELPFUL HINTS BY PAUL

A) Cleanliness: This is a priority with the  $\frac{1}{2}$ A engines, as their tiny fuel jets plug easily. To avoid this: 1) Use a ground sheet when working on your models outdoors so that dust and dirt are kept away from the workings. 2) Have plenty of clean rags available when flying. 3) Filter your fuel. Those tiny Hi Johnson in line fuel filters work well and are light. Use a Coleman lantern fuel filter when pouring fuel into your separate flying fuel container.

B) Fuel: The higher the nitro, the better. After initial break-in (about 30 minutes), the minimum contest fuel should be Sig 35% racing fuel. Sheldon's 40 and 60% are even better. My personal standard  $\frac{1}{2}$ A fuel is Sheldon's 40%, as it contains 5% castor and 15% synthetic oil which is ideal for  $\frac{1}{2}$ A use. The castor oil helps to keep the ball/socket joint intact and also offers a bit more overlean protection. This is very helpful as most  $\frac{1}{2}$ A's have no fuel shutoff.

C) Props: In all cases balance before use! Balance as follows:  
1) Trim off any molding flash. 2) Measure blade lengths and make sure they are identical. 3) Trace R/H blade outline on paper and make sure L/H blade matches this. 4) To balance, remove material (sand or file) off the top side of the heavy blade only.

For Mouse II a Tornado 5x4 nylon with diameter cut to 4-3/4 inch is a good place to start. There is much left unsaid about  $\frac{1}{2}$ A props. But perhaps in a later article.

Your stock TD 049/051 is designed to deliver its maximum power at about 24,000 RPM. This equals about 22,000 RPM on the ground. This means TD's are happiest when they are allowed to unwind. I am unaware of any stock  $\frac{1}{2}$ A prop made that allows the TD 049 to turn at its most efficient RPM! They all must be trimmed either in diameter or width or thickness or all three.

I will digress just for a moment though and say that the Top Flite 5 $\frac{1}{4}$ x3 nylon and Cox 5x3 black nylon with square tips; turn up well. However, they are not "fast" (airspeed) props for say mouse or speed use. They do work out well for certain combat or FF uses though.

D) Glow Plugs: For Cox TD's the best running and performance characteristics are obtained using the Cox high compression head. (PN #1702). This can be distinguished by the knurling on top of the head, and also by the price tag!

## Engines- continued

I lap mine over a glass plate with 400 grit wet/dry paper and penetrating oil such as WD-40. A little lapping alternating between circular and figure-eight motion insures a true surface. Clean plug with lacquer thinner or acetone being careful not to dirty the element.

Lastly, make sure the plug element coil is centered in the plug chamber and not off to one side. Straighten offset element with a T-pin if necessary.

A bad batch of Cox plugs got out in 1984 and are still being sold in some places. Under a microscope they can easily be identified by the bad spot weld. This inferior process nearly crushed the very fine element wire to half its thickness or less. Consequently, the element would prematurely fail at that point. Sometimes, after only a run or two. If you have such plugs, your best bet is to return them to Cox.

Glo-Bees: These can work well, but they can also be inconsistent. In any case, Glo-Bees must be lapped flat prior to installation, as in stock form they are prone to leak.

The Glo-Bee sport works fine as is, but the racing plug runs very cold. The racing plug can be made to work by using 50 - 70% nitro fuels, but it does require experimenting. I have heard that the racing plugs higher compression causes other unwanted problems, up to and including conrod failure, but haven't used any myself.

In any case, you must re-torque  $\frac{1}{2}$ A glowheads before every flight as they are notoriously bad for coming loose. A loose head causes an over-lean run, with related bad consequences, so don't forget.

By the way, I neglected to mention that I start out using three copper head gaskets initially and remove one or two if the engine still runs steady and I need more power. With high nitro, high RPM, I have used up to five gaskets in order to avoid being overcompressed, but this was under unusual conditions. If in doubt, too many is better than not enough.

### POWER MODIFICATIONS FOR T.D. 049's.

To obtain increased performance you must use a pressurized fuel system. The easiest way is to either run a pen bladder tank, or obtain a KK (Kustom Kraftsmanship) backplate with pressure fitting installed.

The extra power (200 to 1000 RPM depending on your set-up), comes by opening up your venturi to .140 I.D. (KK custom venturi is .150) If you don't have the proper reamer (#25, .1495 I.D.) you may drill it out on a drill press. Use several sized drill bits to gradually arrive at what you want. The idea is to keep a smooth internal finish.

I always use cutting oil (Relton A-9) for this and finish the job with 400 and 600 wet/dry paper (with oil) rolled up on a small piece of 1/16 inch music wire or drill bit.

With a pressure tank set-up, it is a good idea to use a KK fine-thread needle valve assembly. (editor's note: other quality units also on the market).

Piston/Liner sets must be clean (free of varnish) and the ball socket joint must be slop free. KK and Cox (and others) sell rod reset tools. I find that it's essential to have the piston on a heavy, dense flat surface (flat steel or heavy glass plate) during the re-set procedure to prevent the piston crown from deforming.

Don't allow your engine to become varnished up. Varnish causes the piston to stick, and thus robs the engine of a great deal of power. To de-glaze, wrap a bit of 000 grade steel wool around a 1/8 inch dowel and using WD-rp for a lubricant (never do this dry) run it up and down the cylinder bore. Also, clean off the top of the piston while you're at it. Wash parts thoroughly in soap and water or solvent, and re-assemble.

Lastly, after a couple of runs, pull the backplate and inspect for crankpin scratches or gouges. If badly scratched, sand the backplate over a flat glass plate. Start with WD-40 and 240 paper and finish up with 400 and 600. Emory paper will give you a mirror finish if desired.

Check that the bottom of the piston skirt is not hitting the top of the backplate on the bottom of its stroke. If it does, file a clearance flat on the top of the backplate.

During periods of un-use and after every flying session keep your TD clean and well lubed with WD-40, LPS, or your favorite after-run engine oil.

SYNOPSIS: My observations of competition flyers and hot engine performances bring forth the following comments.

1) Reliability first, performance second! You will enjoy a contest so much more if you have reliable equipment. A top modeler with a standard engine will beat a lesser modeler with a "custom" engine nine times out of ten. Therefore: know your equipment, don't expect too much from a new engine right away, but strive for consistency!

2) However, if you have a reliable airplane/tank/fuel setup, a modified engine can certainly give you an edge over the competition.

..... Paul Gibeault , 33 Bermuda Way NW, Calgary, Alberta, T3K 1H1

COMBAT

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COMBAT  
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CIPOLLA COMBAT .36 ABC-RE \$89.95  
Intro-"SALE" Price...\$69.95

Weight: 195 grams (6.96 Oz.)

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MASTER COMBAT 2.5 AAC-SE \$79.95  
"SALE" PRICE...\$59.95

Technical features	
Stroke	14 mm.
Bore	15 mm.
Swept volume	2.48 CC.
Weight	165 g.
Power (COMBAT)	0.7 HP at 27.500 rpm

AL Kelly COMBAT PROPS  
RUSSIAN or ENGLISH... \$4.25  
AMA-(FAST)...\$4.50  
SLOW (coming soon!)

Std. Plug insert  
(Combat) \$3.95

Hi-Nitro  
Racing Head  
\$5.95  
(for std. plug)

combat plug  
\$1.49

Needle & assy. complete-\$2.99

V.G.M.C. SPORT RACE, April 6th, Richmond, B.C.

We had a almost perfect spring day last sunday for our first Sport Race of the season, in fact too perfect as it seemed a lot of the regulars had other things to do (Vancouver's 100th birthday party celebrations) Anyway we had five teams go at it and we had some very decent times in the feature. In the preliminary heats dirt problems really screwed up the 'Pink Panther' team having to pull the needle and flush the spray bar. Paul DRANFIELD and Mel Lyne had respectable times of 4:31 and 4:51, HAJDIK did just scrape into the feature with a horrible 5:30. However both HAJDIK and DRANFIELD had a real good shootout in the final with both guys slipping under the existing NW record. Hank went 8:30 with a less than perfect race and Paul cranked 8:49 also with the odd problem. Frank BODEN truged to a 10:46 and poor Ron Salo had to do major service on his Fox due to dirt in the fuel system to limp home at 14:02. This was the first sport race for this team and with their new ship underway they will be competitive in the upcoming races. In typical NW fasion the guys have taken on team 'names' as is shown in the results below.

	HEAT 1A	HEAT 1B	FEATURE
Henry HAJDIK, 'PINK PANTHERS'	5:30	DNF	8:30
Paul DRANFIELD, 'IRON MEN'	4:49	4:31	8:49
Frank BODEN, 'BURNABY BURNOUTS'	6:20	6:23	10:46
Ron SALO. 'EH TEAM'	5:36	DNF	14:02
Mel LYNE, 'MELVIDO EXPRESS'	4:51	DNF	--

SPRING UKIE MEET , May 4th Richmond B.C.

After a solid month of rain in April we were greeted to a wonderful day of bright sunshine for the May 4th warm up meet. I guess the day was too nice as many of the regulars failed to show. Excuses like the opening of EXPO 86 and the like was heard in the pits but really all you ukie guys should try and support these meets or the organizers will soon be tired of staging them. Anyway there was some excitement as HENRY HAJDIK zoomed to a crisp 8:09 in the Northwest Sport Race 140 lap feature for yet another pending NW record. Henry has worked hard recently in coming up with the optimum prop for his airplane. The one that really makes this 89 MPH Sportracer move is a REV-UP pylon racing prop of 8 3/4-8 1/2 trimmed one eighth at the tips to come out as a 8 1/2-8 1/2. Try that prop on your ship , with a decent free engine it should really move! In 33 1/3 six guys fought it out with an assortment of creations. Judge DICK SHAW handled the event well and the deserving winner was DAVE BREDEFELD with his pretty Giseke NOBLER. Robert SCOTLAND with a Martin MAULER took second and newcomer Ken WRIGHT grabbed third with a COSMIC WIND. We need more ORIGINAL designs in this event.

33 1/3

1st	DAVE BREDEFELD	80 points
2nd	ROBERT SCOTLAND	76 points
3rd	KEN WRIGHT	67 points

NW SPORT RACE

1st	HENRY HAJDIK	8:09 *	* New VGMC record and pending NW record.
2nd	FRANK BODEN	10:18	
3rd	DEWNIS MATTHEWS	DNF	
4th	RON SALO	DNF	



## Spanaway Spring Tune-Up

What would happen if you scheduled a major contest and the weather was nasty, rainy, blowing, cold and miserable? Well, in the case of the Spanaway Spring Tune Up for 1988 it meant a record number of contestants. April 26 and 27 at the Spricker Park Recreation Center saw 36 contestants brave Mother Nature's worst to kick off the 1988 contest schedule. Gary Eyerley did a masterful job of co-ordinating the show with more than the usual glitches. The contest site had to be changed from Bethel Junior High. The grounds keeper threatened Gary with his life if he killed or soiled his grass on the infield of the track. Gary and the crew monitored the contestants to make sure puddle pads were used while fueling. Lots of people helped out to make this contest a success. Fast Combat was run by Glenn Salter. Paul Rogers ran the show on 1/2 A. Dick Salter ran FAI combat. Bruce, Jerry and Rick deserve a big thank you. These were the hard working pull testers and kill counters and timers for the combat matches. They are non-flying officials, just helping out. Pete Bergstrom ran the old time stunt and precision aero events with Jim Parsons judging old time with Pete. Jim Parsons and Bob Parker judged precision aero on Sunday. Bob Parker deserves a special award. After a thirteen hour flight from Korea on Saturday morning, Bob came out and helped run Carrier, flew carrier and came back on Sunday to help judge stunt.

Dave Mullens provided all the balloon bust gear and began to run it, but due to flying in various events handed off the officiating to Dan Cronyn and John Hall. Dan and John did a good job of getting everyone up and flying. Margaret Eyerley helped out with the award presentation and Carolyn Mullens served as the tabulator for the precision aero scores.

Old time stunt had seven entries, including a new plane that was built and flown by Dave Gardner. That's right, no mis-print, Mr. Gardner actually built an airplane and it flew quite well for a brand new bird. Combined scale was actually a sorta-scale event. All three entries were profile planes with their creators forgetting to bring any documentation. I don't know how to say this, since I've had to say it so many times, Randy Schultz and his well used ME-109 won. Bob Danielson had to convince the judges that he was actually flying a P-51 in English markings and not a Spitfire, to place second and Dave Mullens came up third with his Beech Staggerwing.

Old time stunt had seven entries with Randy Schultz coming in first with Dave Gardner and his new Barnstormer second and Don McClave third.

1/2 A combat was won by Jason Howell with the Birch family, Richard and Glenn cleaning up second and third. Slow combat had seven entries with Dick Salter slicing his way to a win over Glenn Salter in second and Jason Howell in third. Fast combat had twelve entries with Mel Lyne coming in first with Mike Rule second and Dick Sasalter third. Fox-Doo combat had eight entries with neophyte combat fliers Bruce Howell, Randy Schultz and Dave Mullens flying against the young hot shots Rich Salter and Jason Howell and combat ace Mel Lyne. Rich Sasalter won with Dave Mullens second and Jason Howell third. If you'll pardon a small editorial here: This was my first real combat experience. I had a ball, learned a lot and enjoyed the attitude of the combat fliers. Dick Salter, Paul Rogers and Randy Schultz went out of their way to help me out. I was prepared to go one round and no one was more surprised than me to find me in the final round. Gary and the officials were very patient in explaining the rules and allowing for glitches that novices were apt to make. Thanks guys, I take back all those smart-- remarks I've made about combat fliers. (Well, most of them anyway).

Profile Carrier had six entries with John Hall coming in first with Rick Humphries second, Bob Parker third and newcomer Darrel Rupner fourth with a pretty model that he scratch built. Class I carrier had three entries but no official flights and Class II carrier had one entry with Orin Humphries placing. It was good to see Bob Danielson back in action on the carrier deck.

Balloon Bust had 12 entries in the open class and four junior entries. John Hall won with a score of 350 with Dick Salter second, Glenn Salter third and Mel Lyne fourth. Evidently the B-busters are practicing because everyone was popping balloons at a terrific rate. Wesley Mullens finally got close enough to the ground to pop the balloons and win the Jr. class with his brother Shawn knocking off a few for second. Theresa Eyerley flew her first contest for third. Theresa's sister Corina also flew. Corina and Theresa were flying 1/2 A flips in a real gale. They both displayed great flying ability just to keep the little birds in the air. Theresa hit the ten point balloon head on and the flip just bounced. Balloon Bust had 12 entries in the open class and four junior entries. John Hall won with a score of 350 with Dick Salter second, Glenn Salter third and Mel Lyne fourth. Evidently the B-busters are practicing because everyone was popping balloons at a terrific rate. Wesley Mullens finally got close enough to the ground to pop the balloons and win the Jr. class with his brother Shawn knocking off a few for second. Theresa Eyerley flew her first contest for third. Theresa's sister Corina also flew. Corina and Theresa were flying 1/2 A flips in a real gale. They both displayed great flying ability just to keep the little birds in the air. Theresa hit the ten point balloon head on and the flip just bounced off. We started to score bounces for the 1/2 A's.

Only eleven entries in precision aerobatics. Expert had five entries with Paul Walker hitting a 548.5 to win with Don McClave second and Randy Schultz third. Dave Mullens edged past Dave Gardner and Dan Cronyn in Advanced. Bob Danielson posted a respectable 311.5 in Intermediate to come in ahead of Glenn Salter and Rich Salter had no competition in beginner. Rich's plane was a diesel with an exhaust bladder.

## Spanaway Results

AMA Fast Combat\*12 entries  
1st- Mel Lyne 2nd- Mike Rule  
3rd- Dick Salter

Slow Combat \* 7 entries  
1st- Dick Salter 2nd- Glenn Salter  
3rd- Jason Howell

FAI Combat \* 2 entries  
1st- Mel Lyne 2nd- Frank Boden

1/A Combat \*9 entries  
1st- Jason Howell 2- Richard Birch  
3rd- Glenn Birch

FoxDoo Combat\*9 entries  
1st- Rich Salter 2nd- Dave Mullens  
3rd- Jason Howell

Profile Carrier\*6 entries  
1st- John Hall 2nd- Rick Humphries  
3rd- Bob Parker 4th- darrell Rupner

Class I Carrier\* 3 entries  
No Official Flights

Class II Carrier\*1 entry  
Orin Humphries

Balloon Bust Jr.\*4 entries  
1st- Wesley Mullens  
2nd- Shawn Mullens  
3rd- Theresa Eyerley  
4th- Corina Eyerley  
Combined Scale\* 3 entries  
1st- Randy Schultz  
2nd- Bob Danielson  
3rd- Dave Mullens

Old Time Stunt\* 7 entries  
1st- Randy Schultz 252.5 216  
2nd- Dave Gardner 173.75 259.5  
3rd- Don McClave 245.5 170.25  
4th- John Hall 185.75 225.25  
5th- Bob Emmett 201.5 204.0  
6th- Bob Danielson pass 193.0  
7th- Glenn Sasalter 138.0 165.0

Precision Aerobatics  
Expert\* 5 entries  
1st- Paul Walker 548.5 532.5  
2nd- Don McClave 492.5 531.0  
3rd- Randy Schultz 489.5 482.5  
4th- Alan Resinger 475.5 483.0  
5th- Pete Bergstrom 419.5 115.0

Advanced\* 3 entries  
1st- Dave Mullens 402.5 282.0  
2nd- Dave Gardner 353.5 400.5  
3rd- Dan Cronyn 299.0 pass

Intermediate\* 2 entries  
1st- Bob Danielson pass 311.5  
2nd- Glenn Salter 173.5 241.0

Beginner\* 1 entry  
1st- Rich Salter.

JUNE 21-22 ----RICHMOND, BRITISH COLUMBIA---  
NW Control Line Speed Championships  
Events: All speed events flown Site:  
Richmond field. CD: Henry Hajdik  
(604) 526-9554

JUNE 28-29 ----REDMOND, WASHINGTON-----  
Bladder Grabber XI  
Event: AMA Fast Combat flown triple  
elimination. Awards worth thousands  
of dollars. Site: Marymoor Park  
Contact: Howard Rush, 8817 NE 137th,  
Kirkland, WA 98033 (206) 823-6018  
CD: John Salvin (415) 254-7720

JUNE 28-29 ----KENT, WASHINGTON-----  
Boeing Air Fair Stuntathon  
Events: Precision Aerobatics flown in  
three PAMPA classes, Old Time Stunt,  
Junior Novice Stunt. Plus Stunt clinic  
Site: Boeing Space Center- Kent  
CD: Bob Emmett, 17972 W Spring Lake Dr,  
Renton, WA 98055

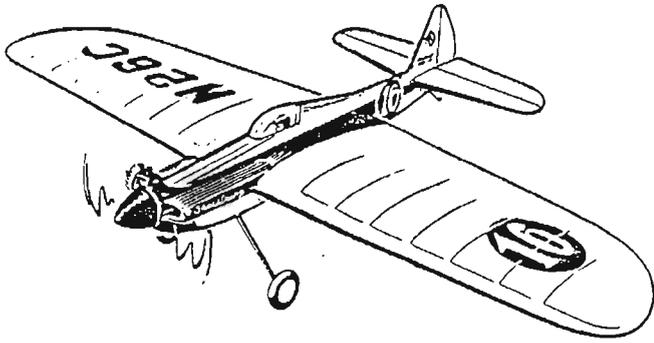
JULY 20-26 ----VANCOUVER , BRITISH COLUMBIA--  
1986 Canadian Nationals  
Events: Most all Control Line Events,  
plus FF and RC. Contact: Mr. Brian  
Dalling, 4214-W. 15 Ave, Vancouver, BC  
Canada V6R 3A6

AUGUST 30-31 --RICHMOND, BRITISH COLUMBIA---  
V.G.M.C. Internats----- Tentative

SEPT 13-14 ----KENT, WASHINGTON-----  
Raider Roundup/Washington State Champs  
Events: RACING: NW Sport Race, NW Super  
Sport Race, Mouse I, Mouse II, Rat Race,  
Sport Goodyear; COMBAT: 1/A, Slow, Fast;  
CARRIER: Class I, Class II, Profile;  
Precision Aerobatics- four PAMPA classes,  
Balloon Bust; AMA Sport Scale, Profile  
Scale; Formula 40 Speed, Record Ratio  
Speed. Site: Boeing Space Center  
CD: Dave Gardner, 17210 109th PL SE,  
Renton, WA 98055 (206) 226-9667

OCT 5 ----- RICHMOND, BRITISH COLUMBIA---  
Vancouver Gas Model Club Racing Series  
Event: NW Sport Race Site: Richmond  
field CD: Chris Sackett (604) 299-4500

NOV 9 ----- RICHMOND, BRITISH COLUMBIA---  
Vancouver Gas Model Club Racing Series  
Event: NW Sport Race Site: Richmond  
field CD: Chris Sackett (604)299-4500



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BALSA SHEETS	36" 48" 30"	BALSA STICKS	36" 48"
1/16 x 2	.33	1/16 x 1/4	.09
3/32 x 2	.40	1/16 x 3/8	.10
1/8 x 2	.43	1/16 x 1/2	.14
3/16 x 2	.49	3/32 x 1/4	.10
1/4 x 2	.56	3/32 x 3/8	.12
1/2 x 2	.77	3/32 x 1/2	.16
1/2 x 3	.77	1/8 x 1/8	.08
1/2 x 3	.77	1/8 x 1/4	.11
1/2 x 3	.77	1/8 x 3/8	.12
1/2 x 3	.77	1/8 x 1/2	.14
1/2 x 3	.77	3/16 x 3/16	.11
1/2 x 3	.77	3/16 x 3/8	.17
1/2 x 3	.77	3/16 x 1/2	.22
1/2 x 3	.77	1/4 x 1/4	.16
1/2 x 3	.77	1/4 x 3/8	.19
1/2 x 3	.77	1/4 x 1/2	.21
1/2 x 3	.77	1/4 x 3/4	.34
1/2 x 3	.77	1/4 x 1	.40
1/2 x 3	.77	5/16 x 5/16	.21
1/2 x 3	.77	3/8 x 3/8	.27
1/2 x 3	.77	3/8 x 1/2	.32
1/2 x 3	.77	3/8 x 3/4	.42
1/2 x 3	.77	3/8 x 1	.52
1/2 x 3	.77	1/2 x 1/2	.36
1/2 x 3	.77	1/2 x 3/4	.46
1/2 x 3	.77	1/2 x 1	.58
1/2 x 3	.77	5/8 x 5/8	.48
1/2 x 3	.77	3/4 x 3/4	.67

BALSA TRIANGLES	36"
1/4 x 1/4	.25
3/8 x 3/8	.30
1/2 x 1/2	.46
3/4 x 3/4	.58
1" x 1"	.58

LIGHT 4-6 LB. WOOD	36"
1/32 x 3	.49
1/20 x 3	.49
1/16 x 3	.49
3/32 x 3	.58
1/8 x 3	.67
3/16 x 3	.78
1/4 x 3	.85
3/8 x 3	1.15
1/2 x 3	1.29
3/4 x 3	2.20
1" x 3	3.00
1 1/4 x 3	.78
1 1/2 x 3	1.60
1 1/2 x 4	2.25
2 x 2	1.00
2 x 3	1.17
2 x 4	1.38
3 x 3	2.07
3 x 4	2.82

BALSA WOOD	48"
3/16 x 3/16	.26
3/16 x 1/4	.30
3/16 x 3/8	.38
3/16 x 1/2	.48
1/4 x 1/4	.42
1/4 x 3/8	.49
1/4 x 1/2	.50
3/8 x 3/8	.60
3/8 x 1/2	.70
3/8 x 3/4	.90
1/2 x 1/2	.90
1/2 x 3/4	1.00

PINE STICKS	36" 48"
1/8 x 1/8	.13
1/8 x 1/4	.16
1/8 x 3/8	.20
3/16 x 3/16	.17
3/16 x 3/8	.23
3/16 x 1/2	.30
1/4 x 1/4	.30
1/4 x 3/8	.26
1/4 x 1/2	.30
3/8 x 3/8	.37

HARD MAPLE	18"
1/4 x 3/8	.40
3/8 x 3/8	.46
3/8 x 1/2	.50
3/8 x 3/4	.58
1/2 x 3/4	.64

BALSA PLANKS	36"
1 x 1	.85
1 x 2	1.50
1 x 3	2.00
1 x 4	2.80
1 1/2 x 3	2.75
1 1/2 x 4	3.60
2 x 2	2.25
2 x 3	3.25
2 x 4	4.35
3 x 3	4.95
3 x 4	6.88

TAPERED SHEETS	36"
1/4 x 2	.65
1/4 x 3	.85
3/8 x 2	.68
3/8 x 3	.98
1/2 x 3	1.20

TRAILING EDGE	36"
1/4 x 1"	.32
5/16 x 1 1/4	.39
3/8 x 1 1/2	.46
1/2 x 2"	.70

BUNDLE DEALS	
20-1/8 x 3 x 36	6.85
20-1/16 x 4 x 36	10.20
20-3/32 x 3 x 36	8.41
15-3/32 x 4 x 36	9.55
15-1/8 x 3 x 36	7.15
10-1/8 x 4 x 36	6.75
15-3/16 x 3 x 36	9.00
10-3/16 x 4 x 36	8.10
10-1/4 x 3 x 36	6.30
10-1/4 x 4 x 36	6.90
10-3/8 x 2 x 36	6.50
5-3/8 x 4 x 36	6.25
5-1/2 x 3 x 36	5.40
5-1/2 x 4 x 36	5.55
10-3/32 x 4 x 48	8.45
5-1/8 x 4 x 48	4.85
5-3/16 x 4 x 48	5.85
5-1/4 x 4 x 48	6.25

3 PLY BIRCH	48"
1/64 x 12	5.25
1/32 x 12	4.25
1/16 x 12	4.35
1/8 x 12	4.50

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INSTANT GLUE	
1 oz. Thick	2.98
1 oz. Thin	2.98
2 oz. Thick	5.50
2 oz. Thin	5.50

5 PLY BIRCH	48"
3/32 x 12	5.70
1/8 x 12	5.85
3/16 x 12	5.85
1/4 x 12	6.00

GROOVED L.G. MOUNTS	12 inches
3/8 x 3/4 (1/8)	.40
3/8 x 3/4 (5/32)	.40
1/2 x 3/4 (3/16)	.45

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23 entrants made the trek to the domain of the Clams for ClamBash '86. The weather was good, the field was dry, for once, and everyone seemed to enjoy themselves. The turnout was a bit low compared to previous ClamBashes, but good nonetheless.

A drawing was held for all the Junior entries for a kit donated by Bill Skelton. The winner was Corina Byerley, Congratulations!

It was good to see stunt grunt Randy Schultz flying  $\frac{1}{2}$ A Combat. Quite a change from stunt. Also like to welcome Heather Hawley to the world of CL Competition. She flew  $\frac{1}{2}$ A combat for, I assume, the first time at ClamBash.

As usual there are always a lot of people to thank. This contest was no exception. I would like to say thank you to Don McClave who drove down from Portland to judge Stunt. Thanks a lot, Don!

Thanks must also go to Bob Parker for handling Carrier in his usual smooth fashion. I couldn't do it without you.

If I missed someone, I apologize. The mind is the second thing to go, you know.

I almost forgot the most important awards of all. The coveted Dumb-S\*\*\* award and the outstanding Crowd Pleaser award. This year the D-S award, which needs no explanation, went to last years recipient. Seems he forgot to bring it back. I bet he won't forget it next year, will you Dave Mullens?

The Outstanding Crowd Pleaser award, which this year featured a bashed clam, went to a man who has the uncanny knack of making more little pieces out of few airplanes than anyone we know. He also has his own special way of whipping a sport racer left handed. This years recipient is none other than than renowned guru of combat, Norm McFadden. Congratulations, Norm.

I knew I would forget to thank someone. I also want to thank Dick Peterson for donating some \$66 worth of prizes to our contest. Dick is one of those types who is always there to help any he can. Thanks!

JUNIOR NOVICE STUNT (4 entries)

- 1) 99 points, Corina Byerley
- 2) 86 points, Shawn Mullens
- 3) 77 points, Wesley Mullens
- 4) 66 points, Teresa Byerley

BEGINNERS STUNT (1 entry)

- 1) 309 points, Mel Marcum

INT\*ADV STUNT (4 entries)

- 1) 408 points, Jack Pitcher
- 2) 402 points, John Hall
- 3) 396 points, Gerald Schamp

EXPERT STUNT (3 entries)

- 1) 545 points, Paul Walker
- 2) 495 points, Randy Schultz
- 3) 409 points, Dave Mullens

CLAM SCALE (3 entries)

- 1) Randy Schultz
- 2) Dave Mullens ; 3) Darrel Rupnow

$\frac{1}{2}$ A COMBAT (7 entries)

- 1) Jim Cameron
- 2) Norm McFadden

PROFILE CARRIER (3 entries)

- 1) 193.9 points, John Hall
- 2) 123.9 points, Bob Parker
- 3) 74.1 points, Darrel Rupnow

CLASS I CARRIER (2 entries) no flights

CLASS II CARRIER (2 entries)

- 1) 257.7 points, Wayne Spears
- 2) 223.4 points, Rick Wallace

NORTHWEST SPORT RACE (5 entries)

- 1) 9:02, S&S Team
- 2) 10:21, Gary Byerley
- 3) 10:55, Jim Cameron
- 4) 11:32, John Hall

NORTHWEST SUPER SPORT (3 entries)

- 1) 10:08, Glenn Salter
- 2) 10:27, John Hall
- 3) 10:30, S&S Team

AMA FAST COMBAT (4 entries)

- 1) Howard Rush
- 2) Norm McFadden
- 3) Gary Byerley
- 4) Dick Salter

- 3) Glenn Salter
- 4) ?

1986 CANADIAN NATIONALS CONTROL LINE INFORMATION

LAST MINUTE NOTE: MANY OF THE LOCAL MODELERS WILL BE OPENING THEIR HOMES TO TAKE IN A GUEST OR TWO. LODGING IS AT A PREMIUM WITH THE EXPO GOING!

- \* Age grouping as per MAAC rules , eg. JUNIOR up to 18 yrs of age . OPEN 19yrs and over.
- \* Muffler rule will be waived to accommodate certain specified exhaust classes . All classes will have option to use a muffler or not. It should be noted that the use of mufflers is encouraged as much as possible .
- \* Because approx. 90% of entry will be from U.S. and because many MAAC rules are out of date or unpublished the NATS control line events will only use AMA rules as needed.
- SPEED; MAAC RULES (Identical to U.S.) The record Ratio portion will be based on current U.S speed records according to age group.
- CARRIER: AMA rules ( Allows both Canadian and U.S. modelers to compete)
- SCALE: Current AMA Sport Scale rules ( 15' standoff)
- PRECISION AEROBATICS: MAAC rules (Identical to U.S.)
- RACING EVENTS; AMA RULES! This standardizes all racing classes with modern rules.
- NORTHWEST SPORT RACE; This event will follow the very popular rules devised in The Pacific Northwest; Basically a unmodified FOX 35 motor in a commercially manufactured profile kit model of at least 300 sq. in. of wing area. Races will be conducted in standard racing fashion except 70 lap preliminary heats require one pit stop and feature requires only TWO pit stops for the 140 lap final. Specific detail rules available from C.D.
- C/L SLOW COMBAT; AMA rules . Aircraft very similar to Sport Racing type with profile fuselage, 300 sq. in wings. Double elimination bouts
- FAI COMBAT as per FAI rules.
- FAST COMBAT: Full AMA rules with double elimination matches.

FREE FLIGHT SCHEDULE

SUNDAY JULY 20th	MONDAY JULY 21st	TUESDAY JULY 22nd	WEDNESDAY JULY 23rd	THURS JULY 24	FRIDAY JULY 25
REGISTRATION	-CLASS III POWER -P-30 -COUPE A1	-NORDIC A2 -UNLIMITED RUBBER -CLASS POWER	-WAKEFIELD -CLASS I POWER	-FAI POWER -HLG -NOSTALGIA GAS -(SCALE JUDGING)	-RUBBER SCALE -GAS SCALE -020 REPLICA

SUNDAY JULY 20th	MONDAY JULY 21st	TUESDAY JULY 22nd	WEDNESDAY JULY 23rd	THUR JULY 24th
REGISTRATION	-RECORD RATIO SPD. -FORMULA 40 SPD. -A & B SPEED -O & JET SPEED	-NW SPORT RACE -GOODYEAR A&B -RAT RACE -FAI TEAM RACE -MOUSE RACE 1-11	-SPORT SCALE -PROFILE CARRIER -CLASS 1-11 CARRIER -FAI COMBAT - SLOW COMBAT	-JUNIOR STUNT -OPEN STUNT -FAST COMBAT

FREE FLIGHT CONTEST DIRECTOR : BILL GIFFEN (604) 580-5198

CONTROL LINE CONTEST DIRECTOR : CHRIS SACKETT (604) 299-4500

7.

# CANADIAN NATIONAL MODEL AIRPLANE CHAMPIONSHIPS

## FREE FLIGHT

- CLASS I POWER JUNIOR
- CLASS I POWER OPEN
- CLASS II POWER
- CLASS III POWER
- NORDIC A/2
- WAKEFIELD
- FAI POWER
- UNLIMITED RUBBER
- COUPE/A1 COMBO
- HAND LAUNCH GLIDER JUNIOR
- HAND LAUNCH GLIDER OPEN
- NOSTALGIA GAS (NFFS Rules)
- RUBBER SCALE
- GAS SCALE
- .020 REPLICA (SAM Rules)
- P-30 JUNIOR
- P-30 OPEN

## CONTROL LINE

- A & B SPEED
- D & JET SPEED
- FORMULA 40 SPEED
- RECORD RATIO SPEED
- GOODYEAR A & B
- RAT RACE
- FAI TEAM RACE
- MOUSE RACE I & II
- NORTHWEST SPORT RACE
- PROFILE CARRIER
- CLASS I-II CARRIER
- FAI COMBAT
- SLOW COMBAT
- FAST COMBAT
- JUNIOR STUNT
- OPEN STUNT
- SPORT SCALE

FREE FLIGHT SITE at 5112 Gladwin road, Matsqui, B.C. approx. 45 miles east from downtown Vancouver near Abbotsford

CONTROL LINE SITE at #5 and Steveston highway, Richmond B.C. 15 miles south of Vancouver.

**note:** Deadline for pre-entry is received by June 13, 1986. Rule books for all events available from: M.A.A.C., P.O. Box 9, Oakville, Ont. L6J 4Z5  
CAREFULLY FILL IN BOX OPPOSITE EVENT YOU WISH TO ENTER

NAME \_\_\_\_\_ PLEASE PRINT

MAAC/AMA No. \_\_\_\_\_

DOC/FCC No. \_\_\_\_\_

If Junior (Less than 18 years as of 1 Jan. 1986)

DATE OF BIRTH \_\_\_\_\_

### BASIC ENTRY FEES      ALL EVENT FEES

advance	late	
open \$25	\$35	\$5
junior \$15	\$25	\$3
banquet \$20	flat	
basic entry fee .....		\$ _____
event fees for events .....		\$ _____
camping: \$5 per night or \$25 per week .....		\$ _____
total fees enclosed .....		\$ _____

- 1 Read the accompanying entry and registration guide, as well as the general information provided.
- 2 Fill out both sections of the pre-entry form (the form itself and the return label).
- 3 Clearly print your name, address and postal code on the space designated as "return label."
- 4 Send the completed pre-entry form, together with the return label and the appropriate entry fees to:

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

**this is  
your  
return  
label**

PRINT YOUR NAME AND ADDRESS IN THE SPACES BELOW. PLEASE PRINT CLEARLY.  
THIS WILL BE USED ON THE ENVELOPE TO RETURN YOUR PRE-ENTRY RECEIPT.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

\_\_\_\_\_ POSTAL CODE \_\_\_\_\_

# ~SEATTLE SKYRAIDERS~ STUNT-A-THON "86"

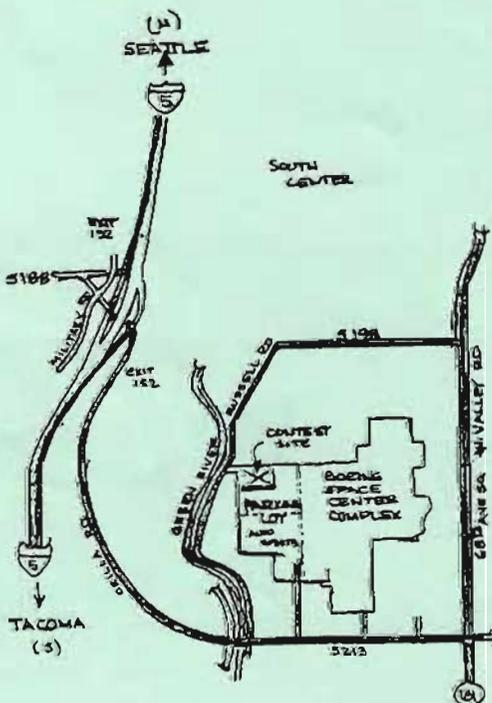
SAT. JUNE 28 & SUN. JUNE 29

1. STUNT CLINIC w  
"BIG ART" ADAMISIN  
for JUDGES & FLYERS
2. NOVICE STUNT  
(JRS. ONLY)  
AMA PROVISIONAL
3. OLD TIME STUNT  
DESIGNS MUST HAVE  
BEEN PUBLISHED OR  
KITED PRIOR TO JAN. '53.  
BURDEN OF PROOF RESTS  
@ CONTESTANT FOR  
OBSCURE DESIGNS.
4. PICNIC~GET-TOGETHER  
FOLLOWING ON-SITE ACTIVITIES.  
SITE T.B.D. DEPENDING ON  
WEATHER. (OUTSIDE IF NICE,  
INSIDE IF SEATTLE-LIKE)

- PRECISION  
AEROBATICS  
PAMPA CLASSES
- EXPERT
  - ADVANCED
  - INTERMEDIATE
  - BEGINNER
- B.O.M. (BUILDER OF MODEL)  
RULE. MODEL MUST HAVE  
BEEN ASSEMBLED AND  
FINISHED BY CONTESTANT  
OR NO APPEARANCE  
POINTS. A SIGNED  
WAIVER WILL BE REQUIRED
- GENERAL INFO:  
ENTRY FEE: 10<sup>00</sup> OPEN  
(PAMPA CLASSES) 5<sup>00</sup> SR.  
0<sup>00</sup> JR.  
O.T. STUNT 6<sup>00</sup>  
NOVICE (JR.) 0<sup>00</sup>

- TROPHIES AWARDED ON  
BASIS OF ENTRY.  
2 ENTRIES → 1 TROPHY (HON. MENT.)  
3 ENTRIES → 1 TROPHY (1<sup>ST</sup> PLACE)  
4 ENTRIES → 2 TROPHIES (1<sup>ST</sup> & 2<sup>ND</sup>)  
6 ENTRIES → 3 TROPHIES (1<sup>ST</sup>, 2<sup>ND</sup>, 3<sup>RD</sup>)

- MERCHANDISE FOR NOVICE EVENT.
- FLYING WILL START AT 10<sup>00</sup> AM  
ON BOTH DAYS. BE THERE AT  
9<sup>30</sup> FOR PILOT'S MEETING  
WHEN AIR IS CLEARED.
  - AMA SANCTIONED~  
LICENSE REQUIRED.



CONTEST SITE -  
BOEING SPACE CTR.  
PARKING LOT

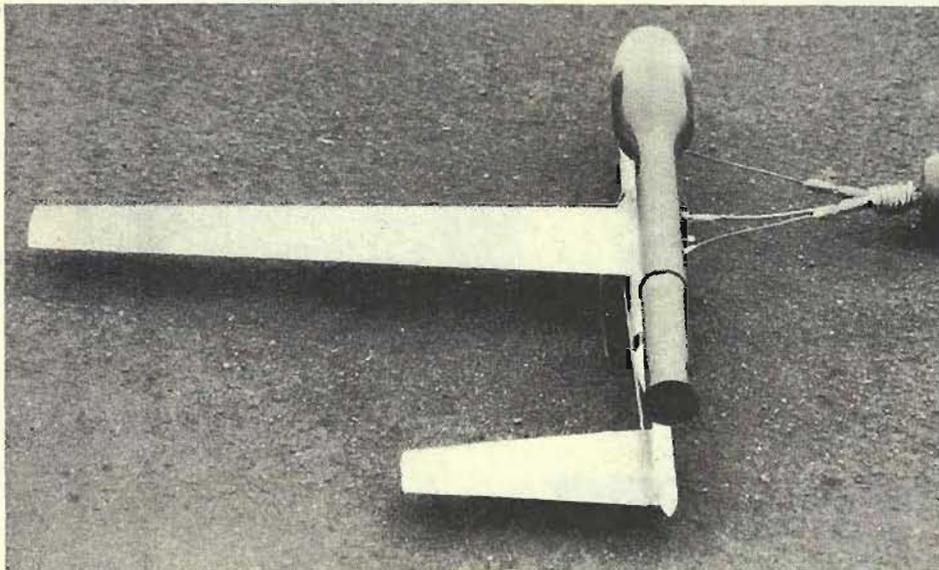
BOB EMMETT, C.D. PH. (206) 432-5808  
17972 N. SPRING LK. DR. S.E.  
RENTON, WA. 98058



John Hall makes some adjustments on Profile Carrier entry. P-51 Mustang with K&B 5.8



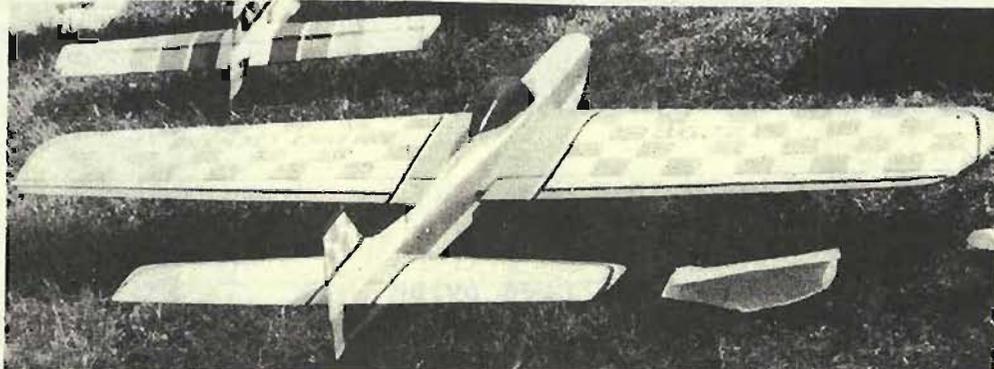
Orin Humphries taxis his T-34C up to the judges. Took first in the Precision class.



Jerry Thomas entered his "Hummer" in Jet Speed. The "sidecar" dolly keeps the asymmetrical design at the end of the wire on takeoff.



Al Resinger doing his thing at the Stunt circle. Note the clockwise direction.



"Oh, de Camptown stunt planes sing this song..." Note the name on wing. Dave Mullens Doo-Dahed his way to third place in Advance Precision Aerobatics.



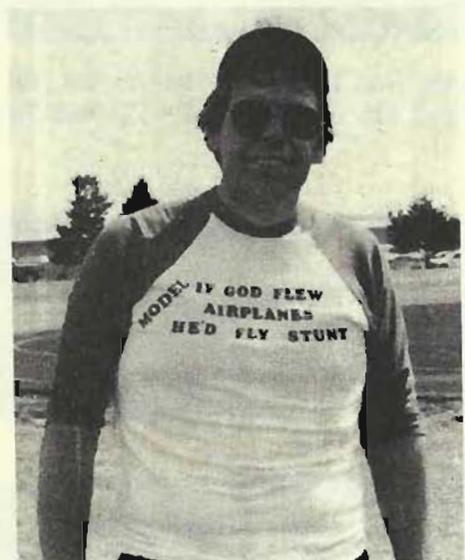
Mullens and Bergstrom exchange Stunt jokes between rounds.



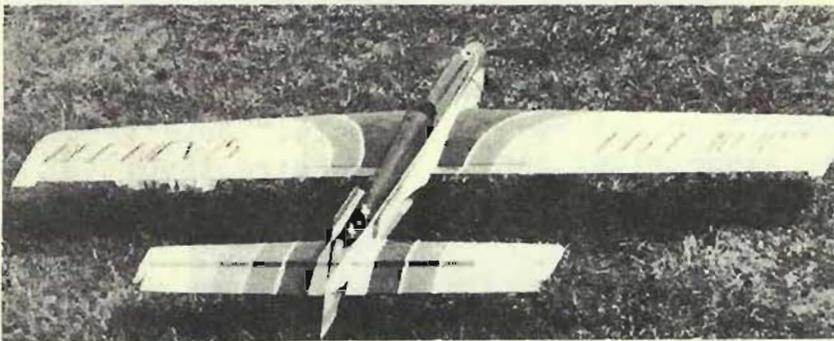
Carrier event director Wayne Spears gives fliers some instructions. Big entry!



Rick Humphries holds onto Pop's Class II Carrier entry. "Tweak-tweak".



"Self-Explanatory" Contents of shirt is Gerald Schamp.



Paul Walker was once again "Bad News" to the other Expert class Stunt pilots.

Don Chandler gets set to enter Speed pylon

.....





Glen Salter tunes up NW Super Sport Race entry.



John Salvin collects one of his three Combat trophies from CD John Thompson



Grand Champion trophy winners: Gibeault, Green, Humphries.



Phil Granderson to Stunt judges Parsons and Parker: "What's my plane doing clear back here?"



Come on down! Dave Green struts up for another award.

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

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