

FLYING LINES

2456 Quince St., Eugene, OR 97404 JohnT4051@aol.com Editor: John Thompson/Publisher: Mike Hazel

Guys, we're proud of ya!

Northwest fliers scored a sweep at the team selection trials for the 2004 U.S. speed team.

Yep, our own Jim Booker (Arlington, Wash.), Todd Ryan (Pasco, Wash.) and Will Naemura (Portland, Ore.) took the top three spots at the trials and will campaign their exotic equipment for the United States at the 2004 World Championships.

They join Paul Walker of Kent, Wash. (aerobatics) as part of the U.S. combined team. Ryan also is part of the racing team in partnership with Tim Gillott of California.

The strong showing by Northwest fliers on the U. S. team is all the more reason to make plans to attend the control-line World Championships next year, because they're right close by in Muncie, Ind., at the National Aeromodeling Center. The U.S. Nationals for control-line is the following week at the same site.

Plan a two-week trip, and you can see the best in the world at combat, speed, racing and aerobatics, then stay for the Nationals and compete in your own favorite events. A visit to the Academy of Model Aeronautics' fabulous museum there in Muncie is worth the trip all by itself.

Watch *Model Aviation* magazine for all the Nats and World Championship advance details.

We don't usually lift material from other newsletters, but we made an exception in this issue to bring you the report of the speed team trials. See the NASS *Speed Times* report on Page 19.


THE U.S. TEAM



(R to L) Will Naemura, Jim Booker, Todd Ryan
Junior Scott Matson, Alternate Carl Dodge

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Round & Round

The Control-Line
modeler at large

By John Thompson

Modeling thought for the month:

"How sad would be November if we had no knowledge of the spring!"

— Edwin Way Teale

Don't wait 'til next year

Before the last fans have filed out of the stadium after the last game of the World Series, baseball fans are talking about spring training and looking forward next season. (Pitchers and catchers report to camps on Feb. 15, by the way).

So it is with many of us control-line fliers. The drive home from last contest of the season is often where the talking and thinking and anticipating for next year begins.

But winter can be long and a long layoff from anything can make it seem harder to get back into the swing of things when the new season arrives.

I try to keep my enthusiasm up over the winter by doing as much flying as I can. I've gotten to be more a fair-weather flier as I've gotten older, but I still plan on going out to the field on Sundays, weather permitting. If it isn't raining and not blowing hard, weather permits. Planes and engines work as well in the cold as they do any other time, and we can always wear heavier clothes, gloves, etc.

Winter flying can be some of the most fun — no contests impending to make us feel like we have to hurry to get things ready. Take whatever planes you feel like to the field, and fly whatever you like. My own winter flying is mostly stunt practice, but I usually take a combat plane or two in case the grass is dry; sometimes Mike and I get together for a little racing practice. At the field, there's plenty of hobnobbing, sometimes as much talk as flying, but in the winter that's OK.

When not at the field, I enjoy thinking about what next season will bring, and working in the shop toward making it happen.

Here are some of the things I'm looking forward to on this sunny Saturday afternoon, Nov. 1:

- Going flying tomorrow: If the weather is

like this in the morning, it will be one of the most beautiful flying days of the year. I'll need my gloves.

- The Regionals: We're beginning to figure out how to hold this huge contest at the Albany site. We're going to meet pretty soon to iron out some details, but the contest will be bigger and better, we're sure of that.

- COLD days in summer: The Eastern Oregon contest was on hold this year but is coming back in 2004. I'll be there.

- Nats and World Champs: They're in the U.S. this year. Even if I can't go, I'm eager for all the reports on how the contest goes and how our Northwest fliers do.

- Eastern Washington fun fly. Plans are shaping up for a big, fun, casual model airplane weekend. Watch *FL* for details. It should be fun.

- Flying my new stunt plane. The Vector 40 is taking shape. There's always lots of anticipation at this stage, before the paint goes on and wrecks everything.

- Dialing in D/Bat and 80. I had lots of fun flying the low-key combat events this year. Maybe next year I'll add 1/2-A. And all that fast stuff is still hanging there in the shop. Will I come out of retirement? Time will tell ...

- Racing rebounds. It's been a down time for racing, but we hear rumblings of more participation. More fliers means more fun in competition.

- Beginners Boom: The ARF Flite Streak and Nobler are selling like hotcakes. We have to assume we'll be seeing new fliers at the fields. That can only be good. In the racing community, somebody has suggested an ARF Flite Streak race (we assume this is someone who has never tried to shake one of those things down to a hot landing!).

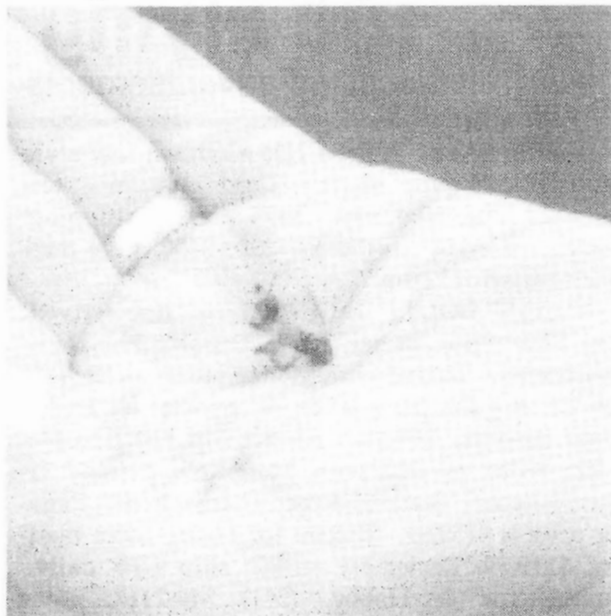
- Stuntathon and other events at Clover Park: The Tacoma site has become a lively contest venue. Combined with the Arlington site, it gives Western Washington a couple of great flying and contest locations.

- Willamette Valley flying: Bill Riegel Field in Salem (I can already taste the barbecue) and Delta Park in Portland undoubtedly will bring us together for some fine activities in 2004.

I hope all of you are having the similar pangs of anticipation for the new season. That'll mean we'll all be together on the field in 2004, making flights, friends and memories.

John Thompson can be contacted by mail c/o Flying Lines, or by e-mail at JohnT4051@aol.com. Web site: <http://members.aol.com/johnT4051/NorthwestCL.html>.

You thought you knew everything that could go wrong?



Here's a good story from stunt circle at the 2003 Regionals. In Ted Fancher's second flight, after about 4 laps of inverted flight, a bee flew into his venturi, causing an instant flameout. Ted managed to land inverted in the grass on the east side of the circle, cause very minor damage to the vertical stabilizer. Here are the pictures of the bee and Ted's model, the final edition before. *Bruce Hunt photos.*

Where the **action** is!

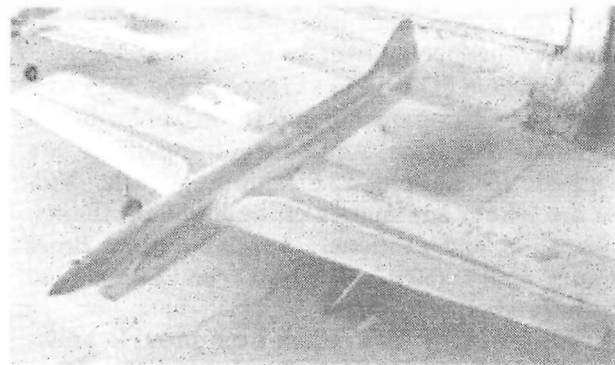
Coming events in Northwest
Control-Line model aviation

Jan. 31-Feb. 1, 2004

Northwest Model Expo, Western Washington Fairgrounds, Puyallup, Wash, 9 a.m. to 5 p.m. Saturday, 9 a.m. to 4 p.m. Sunday. Manufacturers, vendors, exhibitors, model displays, live demos, swap meet. For information, contact Bob Brownell, (253) 847-5721, expoinfo@nwmodelexpo.com. For swap meet reservations, contact Don Sweasy, (253) 445-4763. Sponsored by Mount Rainier RC Society.

May 28-29-30

Northwest Control-Line Regionals, Albany Municipal Airport, Albany, Ore. Full slate of AMA and Northwest CL competitive categories in the 33rd annual running of the West's biggest CL contest. For info, contact *Flying Lines*.



Oops! The end is near ...

We know our model airplanes have a limited lifespan — have to renew the fleet every now and then. So it is with *Flying Lines*. Watch your mailing label for your renewal date. The issue number on your label shows your last one. The following expire with this issue:

Jim Booker, Jerry Eichten, Joe Just, Richard Lee, Jim Rhoades, Mike Rule, Richard Scherer, Chuck Schuette, Rory Tennison, Rick Wallace.

The Flying Flea Market

Classified advertisements — FREE for *FL* subscribers

FOR SALE: Nelson N36 Combat; new style with 1/4x28 prop shaft. Used only in a few matches, still like new. \$175 plus \$5 shipping. Gary Harris, (503) 324-3450, e-mail harisgaris@aol.com.

CONTROL-LINE SUPPLIES: Just arrived: Top Flite Flite Streak ARF: Durable balsa/ply construction covered with MonoKote — a classic is reborn. Regular price is \$89.99. Special for *Flying Lines* readers, \$69.99. Also: Top Flite Nobler ARF: Wood covered with MonoKote, painted fiberglass cowl, leadout already installed!! Regular price is \$139.99. Special for *Flying Lines* readers, \$119.99. Remember — We ship UPS daily. Eugene Toy & Hobby, (541) 344-2117, www.eugenetoyandhobby.com.

COMBAT SHUTOFF: H&R MKIII Combat Fuel Shutoff now available. Sliding bellcrank design. CNC milled 7075 anodized and hard coated aluminum. Brass bushing and line buttons. 3" for Fast and 80MPH, all new 2" for F2D and 1/2A. \$25 plus \$5 S&H. Contact Jeffrey Rein at jeffrey.a.rein@boeing.com, or (425) 823-6053.

VIDEOS FOR SALE: Videos of the 2003 Vintage Stunt Championship and the 2003 Northwest Regionals Precision Aerobatics competition are available for \$15 plus \$3.85 shipping, each. Videos are 2-hour summaries of the highlight flights, with stills and captions. Available from Bruce Hunt. Call (503) 361-7491 or e-mail at bhunt@swbell.net

DBAT HELP OFFERED: I can provide assistance and advice on Diesel Combat engines, planes and equipment. Mel Lyne, (604) 898-5581 e-mail: mlyne@sea-to-sky.net.

SPEED INTEREST GROUP: Join the North American Speed Society. USA and Canada dues are \$25 annually, membership includes "Speed Times" newsletter. Write to: NASS, P.O. Box 371, Fenton, MI 48430.

WANTED: New Magnum .65 GP plain bearing engine. contact Rick Wallace, (360) 683-9860, or preferably by e-mail, toolman50@prodigy.net.

FOR SALE: Cyclon Top 3 engine, \$130. (New price is \$165.) This one has about 3 minutes of running time. E-mail Tom Strom at TStrom@aol.com.

WANTED: K&B 4.9 engines and parts.

Craig Bartlett, (541) 745-2025.

FREE: Old model magazines, in lots of five. Free plus cost of shipping, unless I deliver them to you at a contest, then free. Contact John Thompson, JohnT4051@aol.com

FASCAL: Back by popular demand. The ultimate combat plane covering, good over open frame or foam. Available in full 27"x150' rolls. Contact me for price and availability info. John Thompson, JohnT4051@aol.com.

AEROBATICS INTEREST GROUP: Right now — as in **TODAY** — is the very best time to join PAMPA! Your \$25.00 will see a full year's worth of the world's best CL-specific magazine (at 100-plus pages we no longer call it a newsletter!) dropped in your mailbox. Send check or money order to: Shareen Fancher, 158 Flying Cloud Isle, Foster City, CA 94404.

COMBAT INTEREST GROUP: Miniature Aircraft Combat Association offers national newsletter with technical articles, organizes national events, keeps national combat standings, and much more. Send \$15 dues to MACA, c/o Gene Berry, 4610 89th St., Lubbock, TX 79424.

NAVY CARRIER INTEREST GROUP: Navy Carrier Society offers newsletter with technical articles, organizes national events, keeps national standings and more. Contact NCS, c/o Bill Bischoff, 2609 Harris, Garland, TX 75041. Online: President Bill Calkins at clflyer@tbcnet.com.

RACING INTEREST GROUP: National Control Line Racing Association offers newsletter with technical articles, organizes national events, keeps national standings and more. To Join, send dues of \$10 U.S. (\$12 international) to NCLRA, c/o Mike MacCarthy, 4704 Hillsboro Ct., Santa Rosa, CA 95405. Online: <http://www.NCLRA.org>.

YOUR AD HERE: Remember, classified ads are free to *Flying Lines* subscribers. Send yours in today for publication in the next edition.



NORTHWEST



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ON THE CONTEST TRAIL

RESULTS OF NORTHWEST CONTROL-LINE COMPETITION

Fall Follies

Salem, Ore., Oct. 11-12

Well, the law of averages caught up with the Fall Follies in its 17th annual running. The contest usually has enjoyed the pleasant, crisp fall air of the Oregon Indian Summer, the last days of beautiful weather in the Willamette Valley. This year, real fall weather arrived about a week earlier than usual, and the Follies were conducted under less than ideal weather conditions.

But you can't stop those hearty control-line fliers; the contest went off with some adjustments to the schedule, but all the events were completed.

Saturday's racing events were conducted amid showers, but finished up nearly on time. By about 1 p.m., when it was time to start Classic Stunt, the wind was beginning to really howl across Bill Riegel Field. The decision was made to postpone the Classic and P-40 events until Sunday.

Most of the fliers adjourned to Bruce Hunt's home for an afternoon and evening of fellowship and fantastic barbecue food.

We were back at the field at 8 a.m. Sunday for an early start, and Classic was flown, followed by Precision Aerobatics, with the informal P-40 event finishing up the day. It ranged from breezy to windy all day, but there were no serious crashes or other mishaps. Several fliers did opt not to fly, however.

In the end, a good time was had by all. If the weather had been a bit more friendly, an even better time would have been had, and there may have been a few more entries. Wait until next year, when we go back to our usual ideal conditions!

Here are the results (Northwest standings points in parentheses):

NORTHWEST SPORT RACE (4 entries)

1. Todd Ryan, Pasco, Wash. (4) 7:58.38
(Northwest record)
2. Mark Conner, Othello, Wash. (3) 9:11.7

3. Nitroholics Team, Oregon (2) 5:06.93 heat
4. Dave Shrum, Roseburg, Ore (1) 63 lap heat

NORTHWEST SUPER SPORT RACE (1 entry)

Race scratched

FLYING CLOWN RACE (5 entries)

(7.5-minute heats, 15-minute feature)

1. Todd Ryan (5) 289
2. Mark Conner, Othello, Wash. (4) 244
3. Nitroholics Racing Team (3) 221
4. Mac Ryan, Pasco, Wash. (2) 135 heat
5. Allan Hoffmann, Greenville, Calif. 117 heat

CLASSIC STUNT (5 entries)

1. Bruce Hunt, Salem, Ore. (5) 529.5/533.5
2. Don McClave, Portland, Ore. (4) 528.5/525.5
3. Scott Riese, Portland, Ore. (3) 498.5
4. Bick Brannen, Bellevue, Wash. (2) 428

One entry did not fly

P-40 STUNT EXPERT (3 entries)

1. Jerry Eichten, Dundee, Ore. (3) 421/489.5
2. Bob Smiley, Kingston, Wash. (2) 464/481.5
3. Scott Riese (1) 415

P-40 STUNT SPORTSMAN (2 entries)

1. Bick Brannen (2) 371

One entry did not fly

BEGINNER PRECISION AERO. (2 entries)

1. Joe Just, Waitsburg, Wash. (2) 108.5/92

One entry did not fly

INTERMEDIATE PRECISION AERO. (1 entry)

The single entry did not fly

ADVANCED PRECISION AERO. (6 entries)

1. Bob Smiley (6) 473/460
2. Dave Royer, Portland, Ore. (5) 465
3. John Thompson, Eugene, Ore. (4) 442.5/458
4. Mark Conner (3) 390

Two entries did not fly

EXPERT PRECISION AEROBATICS (4 entries)

1. Scott Riese (6) 460/504.5
2. Bruce Hunt (4.5) 494.5/445.5
3. Jerry Eichten (3) 485.5/488.5
4. Keith Varley, Vancouver, B.C. (1.5) 233

D/Bat Fun Fly

Arlington, Wash., Sept. 27, 2003

By Mel Lyne

This was the "Pumpkin D/Bat" as Robert Smith brought a load of pumpkins for all of us who didn't have to take them into Canada. (Customs confiscates lots of pumpkins). Mariah Johansen, 5, won one heavier than her!

A really nice group of fliers with family members showed up on an incredible heat wave day for a relaxed pace vintage diesel combat with Ralph Simonds running the matches aided by Steve Helmick and Alex Simonds. Bernie came along to cheer on John Morrow, and Kenny Johansen (first ever contest) had five kids along in the cheering section. Jeff and Deanna Riechel came by to cheer, and Terry and Zack Van Dyke helped out and got in some practice. There were a number of practice circles going, even a stunt flier, as Arlington has loads of room for more circles.

Kenny vs. Mel got the rounds going in a relaxed-paced match with some easy flying and a cut for Kenny. He won it. Off to a good start. Next it was a barn burner with Robert Smith vs Paul Dranfield, both planes hammering around, with Robert getting three cuts to Paul's one in a full 5 minutes of streamer chasing. Then Bob Carver, in his "second combat life," took on John Morrow in an interesting match between fliers with very different flying styles. Bob likes to go inverted a lot and John likes a vertical "S" maneuver to get in position. There were a lot of close calls and then the only mid air (a minor one) of the day. Bob got taped up and was up again quickly and just came away with the win.

Robert Smith had won just about all the D/Bats this year, so the rest of us were really gunning for him to stop the sweep. But Robert was flying hard and skillfully and put away John in round 2. Next came Bob Carver vs. Mel. Bob was now in the "groove" and a full 5 minutes of following combat left both fliers exhausted with even cuts and only 20 seconds of ground time giving a sweat-drenched win to Mel. Paul and Kenny had a good match going with Paul's experience the difference giving him the win 2 cuts to 1 and ground time.

It was already hot so a long leisurely lunch break was used for beginner flying after which

three more rounds were flown. Bob Carver proceeded to tromp all comers as his matches got better and better, even putting away Robert Smith. At the end of five rounds Bob Carver and Mel Lyne were out front with Robert in third and Paul in fourth. Bob and Mel flew a deciding final match. It was very, very close again with even cuts but Bob collecting a little more ground time but generally both planes following each other all over the sky. Very hot work! Mel just barely squeaked out the win. Bob and Mel both really liked watching the many close following "pursuit" matches as well as flying in them. This is what D/Bat is all about.

There were no spectacular midairs, so the "Best Crash" trophy went to Kenny Johansen who "Loosened Up" all three models in dorks. The ground still needed rain to soften it up some. The majority of models were Warlords with a Buzzard, an Orcrist and an Ironmonger also used. Motors were PAW .15BRs with Paul using a bushed PAW .15 VTR.

A very pleasant day of fun combat for all. And great entertainment.

The quality of many matches was exceptional. Thanks again to all the helpers, especially to Ralph, Steve and Alex for scoring all the matches.

Here are the results (Northwest standings points in parentheses):

1. Mel Lyne, Garibaldi Highlands, B.C. (6) 5-1
2. Bob Carver, Snohomish, Wash. (5) 4-2
3. Robert Smith, Roy, Wash. (4) 3-2
4. Paul Dranfield, Mission, B.C. (3) 2-3
5. John Morrow, Bellevue, Wash.

Kenny Johansen Stanwood, Wash.

Be a part of the Northwest's control-line communications network!

You can enhance your enjoyment of CL model aviation — and those of your fellow modelers — through the exchange of information and ideas via the pages of *Flying Lines*.

FL is a cooperative venture — everybody's a part of it.

Send in club news, technical articles, calendar items, flying activity reports, letters to the editor, technical questions, photos, "Favorite Plane" articles, "Unsung Heroes" articles — or whatever you think worthwhile!

The Scoreboard

Northwest control-line
competition standings.

Points championship races settled for 2003

Most competition for the year is finished, so the latest standings most likely will be the final standings. The Fall Follies in October in Salem was the last major event on the schedule, as far as we know.

See the contest reports in this issue for details, which show how many points were scored by each flier in each event.

The standings below will be final unless there is something else scheduled. For events not updated below, the final standings will be those last published.

Contests counted to date: March 29, Arlington, Wash.; April 12, Arlington; May 23-25, Albany, Ore.; June 14-15, Tacoma, Wash.; June 21, Arlington, Wash.; July 12, Arlington; July 19-20, Arlington; July 26, Richmond, B.C.; July 27, Richmond, B.C.; Aug. 1-3, Snohomish, Wash.; Aug. 1-3, Coquitlam, B.C.; Aug. 23, Tacoma; Aug. 30-31, Portland, Ore.; Sept. 6-7, Salem, Ore.; Sept. 13-14, Tacoma; Sept. 27, Arlington; Oct. 11-12, Salem.

Following are standings for updated events:

2003 STANDINGS

PRECISION AEROBATICS

- | | |
|----------------------------------|------|
| 1. Paul Walker, Kent, Wash. | 42 |
| 2. Keith Varley, Vancouver, B.C. | 32.5 |
| 3. Chris Cox, Delta, B.C. | 30 |
| 4. Pat Johnston, Meridian, Idaho | 27 |
| 5. Bruce Hunt, Salem, Ore. | 24 |

CLASSIC STUNT

- | | |
|-----------------------------------|----|
| 1. Don McClave, Portland, Ore. | 31 |
| 2. Bruce Hunt | 16 |
| 3. Dan Rutherford, Bothell, Wash. | 11 |

- | | |
|--------------------------------------|---|
| 4. Randy Powell, Port Orchard, Wash. | 8 |
| 5. Rich McConnell, Seattle, Wash. | 8 |

P-40 STUNT

- | | |
|--------------------------------|----|
| 1. Bob Smiley, Kingston, Wash. | 10 |
| 2. Mike Haverly, Auburn, Wash. | 5 |
| Rich McConnell, Seattle, Wash. | 5 |
| 4. Dan Rutherford | 3 |
| Jerry Eichten, Dundee, Ore. | 3 |

OVERALL STUNT

- | | |
|------------------------------------|------|
| 1. Dan Rutherford | 63.5 |
| 2. Keith Varley | 56.5 |
| 3. Paul Walker | 42 |
| 4. Bruce Hunt | 40 |
| 5. Don McClave | 39 |
| 6. Chris Cox | 36 |
| 7. Mike Conner, Pitt Meadows, B.C. | 33 |
| Bob Smiley | 33 |
| 9. Pat Johnston | 27 |
| 10. Dave Royer, Portland, Ore. | 24 |

NORTHWEST SPORT RACE

- | | |
|--|----|
| 1. Mel Lyne, Garibaldi Highlands, B.C. | 18 |
| 2. Todd Ryan, Pasco, Wash. | 11 |
| 3. S&S Racing Team, Seattle, Wash. | 8 |
| 4. Henry Hajdik, New Westminster, B.C. | 7 |
| 5. Jim Booker, Arlington, Wash. | 6 |

FLYING CLOWN RACE

- | | |
|--------------------------------|-----|
| 1. Mac Ryan, Pasco, Wash. | 12 |
| 2. Todd Ryan | 9.5 |
| 3. Nitroholics Racing Team | 7 |
| 4. S&S Racing Team | 4.5 |
| 5. Mark Conner, Othello, Wash. | 4 |

OVERALL RACING

- | | |
|--|------|
| 1. Todd Ryan | 36.5 |
| 2. S&S Racing Team | 22.5 |
| 3. Mel Lyne | 18 |
| 4. Nitroholics Racing Team | 16 |
| 5. Mac Ryan | 12 |
| 6. Henry Hajdik, New Westminster, B.C. | 7 |
| 7. Jim Booker, Arlington, Wash. | 6 |
| 8. Milissa Huber, Stanwood, Wash. | 5 |
| 9. Dave Shrum, Roseburg, Ore. | 4 |
| Mark Conner | 4 |

VINTAGE DIESEL COMBAT

- | | |
|-------------------------------------|------|
| 1. Bob Smith, Roy, Wash. | 26.5 |
| 2. Cayce Rule, Black Diamond, Wash. | 15 |
| 3. John Thompson, Eugene, Ore. | 14 |
| 4. Paul Dranfield, Mission, B.C. | 11 |
| 5. Paul Vallins, Bothell, Wash. | 10 |

OVERALL COMBAT

- | | |
|--------------|----|
| 1. Bob Smith | 36 |
|--------------|----|

- 2. Mel Lyne, Garibaldi Highlands, B.C. 29
- 3. Milissa Huber, Stanwood, Wash. 27.5
- 4. Cayce Rule 19
- 5. Paul Dranfield 18.5
- 6. Tony Huber, Renton, Wash. 18
- 7. John Thompson 14
- 8. Mike Rule, Black Diamond, Wash. 11
- 9. Paul Vallins 10
- 10. John Morrow, Bellevue, Wash. 9
- Burt Brokaw, Pullman, Wash. 9
- Dave Baxter, St. Helens, Ore. 9

Flying Lines keeps track of standings in all AMA rulebook and Northwest official events, in all Northwest sanctioned contests.

Your *FL* editors do their best to keep up with the results, but contest directors can help keep the standings up to date by making sure to send the results to *FL* immediately after the contest. If you spot errors, please let us know.

Results must include the placing in each event through fourth place and the report also must list the number of contestants in the event, in order for the point standings to be counted accurately.

Also, please include in your report the hometown of the contestants, and note which contestants are juniors. Only Northwest residents are counted in the standings (AMA Dist. XI and British Columbia). The score of each contestant also should be listed for general reporting purposes and for checking against the Northwest records.

If you flew in a contest that doesn't appear to be counted, contact the contest director or *Flying Lines*.

Special notes: Precision aerobatics expert fliers' scores are multiplied by a factor of 1.5. When an individual is allowed more than one entry in a single event, only the highest-placing score shall be counted. Events run by nonstandard rules will be counted only in the overall standings for the category.

Send contest results, corrections and other correspondence regarding Northwest Competition Standings to John Thompson, 2456 Quince St., Eugene, OR 97404, e-mail JohnT4051@aol.com. For a printed copy of complete standings for any event, or for a copy of the rules for any Northwest event, send a self-addressed, stamped envelope.

Info sought on old model airplane club

By Steve Helmick

Daughter Kelsey found a medal in an inlaid wooden sewing box that belonged to my mother, Esther (Stahl) Helmick.

The medal was in a small cardboard box that had "CMAC" written in pencil on the back, no doubt short for "Corvallis Model Aero/Airplane Club." If any of you Albany/Corvallis guys know anything about Corvallis Model Aero Club, I'd be interested.

I am pretty certain that this medal would have been won in the late 1920s, perhaps for a fabled flight made with a rubber powered model that landed in Great Grandfather Leonhard A. Stahl's Orchard near Corvallis.

The story of this flight was that it was 16 minutes, I believe, and would have been a National record at the time. The medal was awarded to my father, Paul Franklin Helmick, who was born in Robinette, Ore., but raised in Corvallis, and graduated from high school and Oregon State College in Corvallis.

In the box, there was also an envelope addressed to my Grandmother Anna Noeller Stahl in 1938. The address was 2305 "B" St., near as I can make out. This may have been the house that was said to be the eventual site of the OSC Stadium, or not. Any info on this address would be of interest, particularly if the original house is still there.

Steve Helmick can be contacted at sbasser@yahoo.com.

Clip this out and give it to a new CL flying friend!

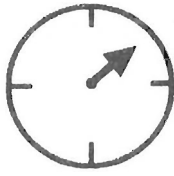
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Northwest Competition Records

Best performances established between Northwest CL modelers in sanctioned competition

A "perfect storm" hit Northwest Sport Race at the Fall Follies, allowing for an incredible feature race by the team of Todd and Mac Ryan, knocking down a longstanding record and going below 8 minutes for the first time. Good air, smooth traffic and perfect pits resulted in a time of 7:58!

| | | | | |
|-------------------------------|-------------|------------------|-----------------|--------------------|
| 1/2 A Speed | 132.56 | Chuck Schuette | 9-21-02 | Salem, Ore. |
| A Speed | 187.23 | Paul Gibeault | 12-2-01 | El Monte, Calif. |
| B Speed | 161.37 | Ken Kortness | 5-25-02 | Albany, Ore. |
| D Speed | 171.20 | Craig Bartlett | 9-7-03 | Salem, Ore. |
| Jet Speed | 168.62 | Loren Howard | 5/23/03 | Albany, Ore. |
| Formula 40 Speed | 159.58 | Ken Kortness | 5-25-02 | Albany, Ore. |
| 21 Sport Speed | 153.78 | Loren Howard | 9-18-99 | Salem, Ore. |
| FAI Speed | 183.52 | Will Naemura | 9-19-99 | El Monte, Calif. |
| 1/2 A Profile Proto | 106.78 | Chuck Schuette | 6-20-99 | Tacoma, Wash. |
| 21 Proto Speed | 133.03 | Chris Sackett | 5-25-97 | Roseburg, Ore. |
| NW Sport Jet Speed | 153.78 | Mike Hazel | 8-3-03 | Coquiltam, B.C. |
| Mouse Race I - 50-lap | 2:14.35 | Todd Ryan | 7-13-01 | Muncie, Ind. |
| Mouse Race I - 100-lap | 4:22 | Paul Gibeault | 7-15-99 | Muncie, Ind. |
| Mouse Race II - 70-lap | 3:01.02 | S&S Racing Team | 5-24-02 | Albany, Ore. |
| Mouse Race II - 140-lap | 6:31.41 | S&S Racing Team | 5-24-02 | Albany, Ore. |
| AMA Scale Race-70-lap | 2:53 | Todd Ryan | 7-00 | Muncie, Ind. |
| AMA Scale Race - 140-lap | 5:51 | Todd Ryan | 5-25-03 | Albany, Ore. |
| NW Goodyear - 70-lap | 3:42.22 | Todd Ryan | 5-24-02 | Roseburg, Ore. |
| NW Goodyear - 140-lap | 8:01 | Julie Rice | 5-27-95 | Eugene, Ore. |
| Slow Rat Race - 70-lap | 2:41 | Todd Ryan | 7-00 | Muncie, Ind. |
| Slow Rat Race - 140-lap | 5:49 | Todd Ryan | 7-16-98 | Muncie, Ind. |
| AMA Rat Race - 70-lap | 2:24.21 | Todd Ryan | 5-25-02 | Albany, Ore. |
| AMA Rat Race - 140-lap | 5:38 | Todd Ryan | 5-24-98 | Roseburg, Ore. |
| FAI Team Race 100-lap | 3:28.49 | Ryan/Gillott | 7/12/03 | Muncie, Ind. |
| 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, B.C. |
| NW Sport Race -140-lap | 7:58 | Todd Ryan | 10-11-03 | Salem, Ore. |
| NW Super Sport - 70-lap | 3:12 | Todd Ryan | 5-27-01 | Roseburg, Ore. |
| NW Super Sport - 140-lap | 6:38 | Todd Ryan | 5-28-00 | Roseburg, Ore. |
| Quickie Rat - 70-lap | 3:05 | Todd Ryan | 5-26-01 | Roseburg, Ore. |
| Quickie Rat - 140-lap | 68 laps | Todd Ryan | 5-26-01 | Roseburg, Ore. |
| Flying Clown Race, Laps: | 319 | Todd Ryan | 8-4-00 | Coquiltam, B.C. |
| Class I Carrier | 370 | Todd Ryan | 8-6-00 | Richmond, B.C. |
| Class II Carrier | 330.25 | Orin Humphries | 9-19-87 | Kent, Wash. |
| Profile Carrier | 330.17 | Mike Potter | 5-23-03 | Albany, Ore. |
| .15 Carrier | 244.7 | Todd Ryan | 5-26-01 | Roseburg, Ore. |
| AMA Endurance | 39:56 | Mark Hansen | 7-12-98 | Salem, Ore. |

Records as of 10/20/03

Updated records in boldface

Northwest Rules Discussion Corner

Information and
exchange of views on
regional rules

Northwest Sport Jet Speed rules proposal

By Mike Hazel

This event has been a popular class among the Northwest speedsters for at least five years now. It is currently under the "provisional" status, meaning that it has not gone through our process of modelers in the region voting on the rules particulars. In the last issue of *Flying Lines*, it was pointed out that this event should be modified to better fit the safety parameters of the AMA speed rules. So right now would be a good time to look at this event, and considering giving it "official" status as a Northwest region event. I believe that most speed participants in this region would favor this version over the NASS. sport jet event, which features additional engine restrictions and the use of rope-thickness flying wires.

A complete copy of the proposed Northwest Sport Jet Speed rules is in this issue. This document is an exact copy of the provisional rules, with the proposed changes underlined. Following is the rationale for the proposed changes.

Rule 1.2 changes the pull test for the engine and mounts from 30 to 35 pounds. This matches the specification that was in the rule book for decades before our modern rules. The 35 pound specification is plenty adequate for the speeds we go.

Rule 1.4 changes the 40 ounce maximum weight from a "dry" measure, to one that technically includes the fuel weight. According to the rule book in-flight load formula, this would be necessary to retain the .018 wire diameter size. Very importantly, the 40 ounce total figure will not eliminate any of the current planes competing. Most planes weigh in dry at 31 to 33 ounces, with the heaviest so far at 35 ounces. The typical sport jet plane has a fuel tank capacity of 5-1/2 to 6 ounces (nominally 180 cc). The jet fuel formula of 80/20 methanol and propylene oxide weighs 23.5 grams per fluid ounce. This means that a fuel load of 6 fluid ounces weighs only 5 ounces. This, of course,

defies the conventional thinking that a fluid ounce weighs one ounce, but it's true.

Rule 2.1 changes the line length from 60 to 70 feet. This will greatly decrease the "G" force, which again is a necessary component in the formulas to retain the .018 wire size. Advantages include a reduced rotational speed, which should make flying the event a cakewalk for even the most casual speed flier. Top end speed will be reduced, due to the increased drag of the longer wire. Experiments flying rat racers on 70 foot wire decades ago showed about a 8 mph decrease. This would put the typical sport jet plane in the 135 to 140 mph range. Also eliminated, would be the constant confusion of going back and forth from 6 and 7 laps for jet timing. All jets flown in the Northwest would be 6 laps, period. The only possible downside would be that the 60 foot length helped ensure getting the planes off easily. However, there doesn't seem to have been any real problems here, so 70 feet should be OK. Also consider that .018 x70 was the rulebook size for two-wire jets for decades before the modern rules, and we aren't flying "modern" planes in this event.

Rule 2.2 changes the pull test from 32 C's to a flat 75 pound pull for all entries. The idea here is to make life just a little more simple. The stunters and racers have standard pull tests, and so long as the numbers work out, why not? And here are the numbers: The 75 pound figure is calculated with a maximum weight (40 ounce) at 30G's. The 30G figure is good for up to 154.30 mph, which we are not real likely to surpass on the long wires. Also note that the 75 pound pull works out to just an equivalent of a 40G pull test on a featherweight 30 ounce (with fuel) plane, which is not excessive.

Rule 5.1 changes the the timing from 7 laps to 6 laps, which is still the standard half mile.

Summary: Proposed rule changes would only make a new set of wires necessary to compete. The pull test and timing changes will not negatively affect how we do business at the speed circle. The Northwest record would be obsolete, but no planes currently in use would be obsolete!

NORTHWEST SPORT JET SPEED

All A.M.A. rules from the control line general and control line speed sections shall be applicable, except as follows:

1) AIRFRAME:

1.1 Any design configuration and construction method is permissible so long as the contest management considers the model to be safe and sound.

1.2 The engine and engine mounts shall receive a 35 pound pull test.

1.3 The control system must be mounted external to the normal aircraft contours. This includes the bellcrank, leadouts or control lines, pushrod, and elevator horn. No more than one inch of the leadouts or control lines can be enclosed by the leadout guides.

1.4 The maximum weight of the aircraft in ready-to-fly condition, including fuel shall be 40 ounces.

2) LINES & PULL TEST:

2.1 The model must be flown on two single strand steel control lines of .018 minimum diameter. The distance between the centerline of the fuselage and the center of the control handle grip shall be a minimum of 70 feet.

2.2 The model and entire control system, lines and handle shall receive a 75 pound pull test.

3) ENGINE:

3.1 The allowed jet engines are the Dyna-Jet, Bailey Sport Jet, and the O.S. II.

3.2 It is required that the engine shall be in stock condition internally. No material may be removed or added to the engine, except as follows:

a. Engine head: Part or all of the head fins may be removed. Holes may be drilled into the head for purposes of engine mounting. Valve face may be lapped as needed for routine maintenance. Engine cowling is permitted, but the front of the cowl must be behind the intake throat.

b. Flowjector: Fuel feed holes may be drilled out to larger size, or filled and re-drilled. (holes allowed in original location only). A short piece of metal tubing may be installed into the tire pump connection to facilitate quick removal of the air supply hose. Alternatively, the threads on the tire pump connection may be filed off, or filled in so as to make a smooth surface to facilitate quick removal of the air supply hose.

c. Metering jet: Any metering jet may be used, and may be located anywhere between the tank and the flowjector.

d. Tailpipe: A stock tailpipe with ignition plug in place must be used. (starting ignition may be by means of a starting probe). Repaired tailpipes are permissible, provided stock dimensions have been faithfully adhered to. The front surface of the tailpipe (combustion chamber screw ring) and the lock ring may be lapped.

e. Reed valve: Any commercially available valve may be used.

3.3 Interchanging of parts between the above listed engines is permissible.

3.4 Fuel delivery to the engine shall be by suction, no pressure feed is allowed.

4) FUEL:

4.1 Fuel used shall be the A.M.A. formula: 80% methanol & 20% propylene oxide.

5) OTHER:

5.1 Timing will be for 1/2 mile (6 laps).

5.2 All other general rules for control line speed flying (attempts, number of models, competition flying from pylon, timing of flights, etc.) shall be applicable.

5.3 Builder of the model rule is not applicable to this event.

5.4 Entrant of the model shall either be the pilot, or shall start the engine.

SPECIAL PROJECTS

By Orin Humphries

July 2003

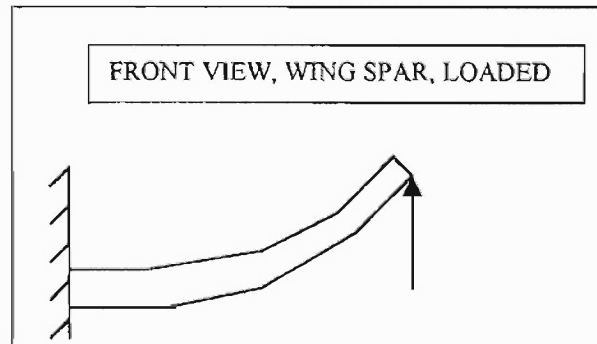
THE BEST SPAR I EVER SAW, PART 1

It has been a long time, friends. Life takes unexpected turns. When last I wrote for this column, the series was leading up to a good spar design. This summer I would like to conclude that train of thought. Before I can trot out the spar, you need to understand what's going on in an I-beam just short of failure. Part 1, then, deals with this, and Part 2 will lay out the simple construction.

Let's recap the series, first, since so very many years have passed. First was the pop can example. You know you can gingerly stand on a pop can so long as it has no wrinkles. Just the slightest tap on a side of the can will cause its instant collapse. The lesson is that structures are strong so long as they hold their shape. A lot of the detail work you see on railroad trestle beams is there to restrict deformation up to the design load limit. Generally, also, you need three times the cross-sectional area in a structural member that is loaded in compression, compared with one that is in tension. The extra beef is to combat the tendency to buckle. Another crucial lesson is that a strong member, added to a model wing tip to tip and lying very near the chord plane, is mostly an anchor. It contributes very little to the actual bending strength and make the plane fly like a wet donut from the weight. The strength increase that comes from enlarging an I-beam, space permitting, is the biggest gain from this whole series. If you scale up the everything about the cross section of an I-beam, that is, the separation of the chords as well as the width of the chords, the stiffness goes up by the square of the square of the percentage change. Two squared is four. Four squared is 16. The new, larger spar will be 16 times the percentage increase stiffer. A spar 1.125 times bigger all around is 60% stiffer. Recall, finally, that engineers call the caps on an I-beam "chords" and the stem of the I is the "web".

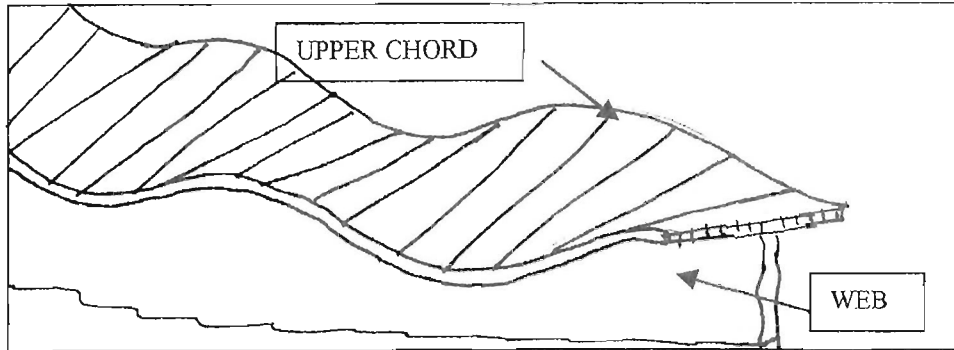
Let's take a close up look at the chords of an I-beam that is near failure in bending. The actual relative displacement is much smaller than what I exaggerate here for easier visualization.

Say you are making the corner on an inside square loop. For a moment the Spar is going to approach this shape.

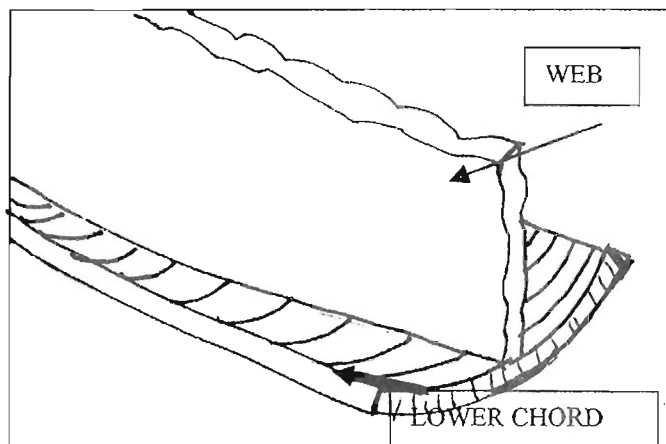


The upper chord of the spar is going to be in compression, and the lower chord is in tension.

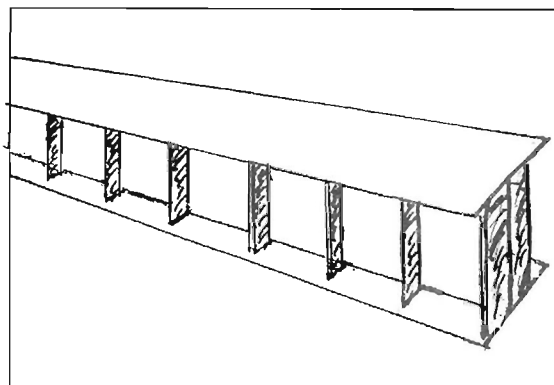
Taking a closer look at a section of the beam from a nearly end-on perspective, we see waves on one edge of the upper chord. Note that the waves on the other edge of the chord are exactly out of phase with these.



Meanwhile, the chord that is in tension may look a lot like this:



From this you can see why the web stiffeners are in trestle beams. For us, the stiffeners are simply our wing ribs.



Next time, we will see an elegant way to resist warping with little weight.

Combat Cornucopia

Combat news and views by Mel Lyne

Fox .36X Combat Engines, Keeping Them Alive (Part 5)

The piston must smoothly fit the bore, sealing from the top of the exhaust port upwards, with a snug fit at TDC (Top Dead Center). Running on pressure, a piston/cylinder with a poor seal below the ports barely affects performance. But if you want to run on suction, you need a good seal throughout the stroke to get decent performance.

Fitting the piston/cylinder requires patience and a fine touch. If the piston is binding before TDC, something is wrong. Try putting the piston in upside down from the bottom and rotating it. If the motor was a runner, and the piston/cylinder have not been bent by a crash, you should be able to get the piston/cylinder back into running shape. If you are fitting a different piston to the cylinder, you may need to lap them together. Use fine polishing compound or toothpaste with the piston in upside down initially. Use a figure-eight motion in and out. Clean all the parts in thinners, then carefully try a dry test fit. Don't insert the piston further than where it starts to tighten. You want the piston to go about 1/8" above the Fox cylinder exhaust top-edge before it tightens up. When you achieve this fit you are ready to run and break-in the new piston/cylinder.

If the dry piston gets stuck in the bore, use a wood peg to tap it down. Keep test-fitting and re-lapping the new piston in the bore until it will go 1/8" above the exhaust before it tightens up. This fit is now ready for break-in.

Now carefully look at the wrist pin fit in the piston. With all parts cleaned, there should be very little up and down in the wrist pin when you work the connecting rod up and down. With the roll pin system there is very little wear in the piston wrist pin hole, so this fit doesn't usually loosen up. The con-rod top end(stock Fox has no bushing) can wear significantly. If you have a lot of slop here it's best to change the rod.

A rod bushed at both ends is best, but stock Fox rods are o.k. if you run lots of castor oil. Remember the 9% castor we add to the fuel?

To change the rod you have to remove the roll pin, and this is the trickiest operation you will perform. Here is how you make a tool and do the operation;

If you look carefully at the Fox piston you will notice that the 2 holes in the piston for the roll pin are different. The hole on the left side(transfer port side) appears larger in diameter. It is actually a tapered hole. This is the side we remove and reinsert the roll pin.

The roll pin is .063" diameter. Take a 1 1/2" long piece of .058" dia music wire (anywhere from .055" to .061" will work fine) and file the end square. Then remove any burr. This is our removal tool. Clamp it in your vise with 3/4" protruding. Now clean the piston roll pin area and give it a shot of WD-40 to help loosen things up. Slip the right side (smaller hole on exhaust side) roll pin hole over the removal pin, grab the piston firmly with both hands(using thumbs and fingertips) and try pushing on the pin to slide the roll pin out. Some come out easily, others are tougher.

Be careful not to break pieces out of the piston.

If you have a really stubborn one, try heating it with a hair dryer.

As a final resort when all else has failed to loosen the pin, wrap the piston in cardboard so that the roll pin holes are still showing, then hold it in a pipe holder clamp in the vice. Be very careful you don't over-tighten the vice or you will damage the piston. Now try tapping the tool (inserted in the right side smaller hole) to push out the roll pin.

Almost all the roll pins snap where they pass through the right edge of the wrist pin. My fix here is to use a shorter roll pin and to only have it engage the piston on the left side. This lets the wrist pin rock a little which is what it seems to need. The original roll pin is 5/16" long. I have cleaned up a broken pin about 1/4" long and reused it successfully. Remember to insert from the left side(larger hole).

The oil holes in the con-rod go to the front. Install the rod in the piston, slide in the wrist pin, then push in the roll pin until it just goes through the wrist pin right side hole. Now clean it all in

lacquer thinners, let it dry, and press red high temp RTV into the roll pin holes and the end on the wrist pin. Wipe off the excess and get a "dished" effect in the RTV so it is lower than the piston surface. Your finger tip does this nicely. Do not put RTV in the left end of the wrist pin. If you do and seal up the pin, then thermal expansion may force the RTV out the end whilst running. Now let it dry 24 hours.

I use Permatex Ultra Copper high temp RTV silicone gasket maker. As long as the parts are really clean it seems to work well. If you are taking apart a RTV'd piston set you'll have to dig out all the RTV before you try to remove the roll pin. Work carefully and remember to use a straight pin to push out the slug of RTV inside the hollow roll pin. A #11 X-Acto blade is a good tool for removing most of the RTV.

So now you have a useable rod/piston assembly which is a smooth fit in the cylinder. For 80 mph use the rod big end can be fairly sloppy on the crank pin. If you want to push the motor with high rpm in Fast, then you want only a small amount of slop in the big end. Excess slop at high rpm causes vibration, noise, and eventually failures.

Assemble the well-oiled piston/rod on the crank pin with the oil holes facing forward, then slide the cleaned and oiled cylinder into the case over the piston. Have the piston up and use a twisting action to let the cylinder slide smoothly over the piston. Once the cylinder is all the way down and oriented with the exhaust matching the case exhaust, put a prop on and slowly rotate the crank whilst holding the cylinder down with your thumb. If it's a previously run piston/cylinder set, then it should flip over easily and be silky smooth. If it is a piston new to this cylinder, then it should still be smooth, but it should tighten up a little above the exhaust ports. If you can feel a "clunk" on the way up, this is the piston contacting the honing ridge at the top of the exhaust port. You should have a piston with the .003" bevel at the top to smooth this transition, as previously outlined.

Assuming all is smooth, take the Fox modified double bubble head button, drop it in the cylinder, and rotate the crank holding the button down with your thumb. If all is well, the piston will not hit the head button. So add the head clamp and screws and progressively tighten each screw in a crisscross pattern until the clamp is

tight. In-between each round of tightening check that the piston is not binding. If it starts to bind when you rotate the crank, then the cylinder top flange is not fitting perfectly flat onto the top of the case. Loosen off the bolts and try the tightening sequence again. If it still binds up, then there is work to do.

Take the cylinder and piston assy out of the case. If you have an old steel cylinder, put some cutting compound or toothpaste on the bottom edge of the flange, slide it into the case, and rotate it with some thumb pressure to work on the top surface of the case. If you only have your good ABC cylinder, then use it. After 30 seconds of "lapping" the cylinder to the case, remove and wash the parts in thinners. Now go through the assembly procedure again and the binding piston problem should be gone or much better. The faster you want to run, the better you need this fit.

... to be continued in Part 6.

Mel Lyne can be contacted in care of Flying Lines.

The Real 'Dirt'

Some tight lines from the bad boy of CL flying, "Dirty Dan" Rutherford

PLASTIC FINISHES: I continue to get more questions — and fewer snide remarks — about the use of plastic wrappings on my Stunt planes. In my case a combination of Micafilm and MonoKote has proven to meet all my needs, less only lengthy stories about how much work, time and skill were required. As "everybody knows," film is easier than paint. Even if not true in all cases, there simply is no fighting against common knowledge.

I use plastic for several reasons: 1. Finished product versus time consumed is reasonable. 2. Film is generally lighter than paint. 3. Weight buildup during finishing is at least predictable, unlike one more coat of color. 4. No fumes. 5. Finishing process can be stopped and started at will. No procedures demand completion *right now*. 6. I have benefited from having an RC Pattern dude, Rick Allison, show me the right way to finish with MonoKote.

The following is how I finish in plastic film. Those wishing more detail can send a couple bucks for copying and mailing expenses. In exchange I'll send a copy of a Stunt News article I

once wrote on the subject.

1. Buy both Top Flite's video and Higley's film-finishing book. Read the instructions Top Flite includes with each roll of MonoKote. Kick yourself for not having done so previously.

2. Purchase the best tools you can afford and learn to use them on scraps or a framed-up model you will never use for anything else. Buy #11 blades in packs of 100. (Can't use each blade for long; first time it drags instead of cuts, replace it. You'll despair at the waste, but there is no better way to dull these blades than cutting paper and/or MonoKote.)

3. Bite the bullet, buy only MonoKote and buy it from a local shop in quantities to easily cover complete model, plus mistakes, plus waste, plus repairs later on. (Unlike previous statements, I have since discovered that MonoKote can — even though it's not normal — vary in color from batch to batch.)

5. Don't select all-black finish. Reference: Nils Norling's Shark 45 and its mottled black garbage bag finish. Resist yellow, it is not quite opaque enough to conceal overlaps.

4. Build neatly, finish sand to a high level. Unlike paint where one can go back and remove holidays, with film you're forever stuck with boogers once film is in place.

5. Optional steps for Micafilm: As this material is best laid on first, MonoKote overlapping *all* edges of Micafilm, cut panels to size. Place on model and mask off the rest of structure. Remove Micafilm. Lightly apply 3M 77 Spray Adhesive. Put Micafilm in place, pressing to surface with hand pressure. It can be lightly ironed down around perimeter. *Do not* attempt to heat-shrink body of panel(s) at this time.

6. Use one of Top Flite's "Woodpecker" tools to poke small holes in *all* structure to be wrapped in MonoKote. If finishing balsa-over-foam pieces, do this *after* next step.

6. Brush on Coverite's "Original Formula" Balsarite thinned 50% with acetone. (If any questions arise, proper Coverite stock number is COVR2510.)

7. Check for boogers raised during preceding steps.

8. Stand back and visualize how this process will best proceed. For example, while painters can go back and fix details down the road, film demands handling these things first, not last. Fillets are the big deal here. They are best done with

two strips, one a simple straight piece, placed common to wing and lower half of fillet. The strip common to fuselage and upper half of fillet is a little trickier, made *much* easier by cutting strip to match the shape of airfoil. This lets it just lay in place, needing only conform to fillet, not bending around the airfoil as well.

Where possible all surfaces to be covered with one panel of film must have the edges "banded" with narrow strips. While this applies to hatches, flaps, elevators, etc., as a simple example imagine finishing the rudder/fin with only two panels of film. What to do along the highly visible edge of this surface? There is simply no way to handle this overlap of materials neatly and unobtrusively without banding. Cut a strip of film about 1/4" wide, more or less depending upon the thickness of the surface. Tack in place at bottom of fin. With a little heat, a little tension on the strip, you will be surprised at how easily the flat strip will readily conform. Run it all the way 'round. Now the flat panels will neatly overlap this band, when trimmed and sealed the overlap will almost disappear.

Don't stop there. Banding takes place at nose ring, cutouts for hatches, clearance slots cut for needle valves and mufflers, the entire area cut out for motor installation in many Classic and OTS models, around the edges of cowls and so on.

Use this sort of thinking whenever preparing to cover a surface. The fiddly stuff *must* be done first. Patches applied later will look like, uh, patches and will not blend in well at all, where full panels over what can be viewed as patches will present a nicely finished surface.

9. You will get the best results, along with reducing frustration levels, if each piece of film is first cut to shape. Patterns made from poster board are handy. Cheap enough to toss in the event of a mistake, (just) durable enough to be used several times.

10. Clean the model. This is your last shot at prepping the surface.

11. Lay film in place. Smooth it with your hands, being very careful to make sure you're actually ready to nail it down.

12. Tack in place around the perimeter using your favorite method and low heat. The technique presented in MonoKote instructions, demonstrated on the video tape, while not intuitively correct, does in fact work best. It wasn't until adopting this technique of tacking the four corners and

halving and quartering at each side that I began to have success with film.

13. Having been tacked in place and confirmed as being correct, get aggressive and permanently iron the panel in place around the perimeter. *Less one small area where heated air can escape.*

14. Using a heat gun, begin shrinking film at one end of panel, working your way to open end. Heat only at this stage. No touch!

15. Back at closed end of panel, again with the heat gun, heat a small area of approximately three or four inches square. Get it real hot. Remove heat, quickly wipe this area with a very soft cloth and some pressure. Top Flite sells gloves specifically for this purpose but some oven mitts work well, as do diapers or something equally soft and not likely to scratch the film. Work your way to end of panel. Close open end and trim to band around surface.

This step *must* be practiced on junk. But the result will be MonoKote permanently bonded to wood. The glue on the back of the film, that 50/50 mix of Balsarite and acetone, the jillions of holes letting trapped air escape through — or in cases of blocks, into — the balsa, heat and pressure will all result in film that simply cannot be removed without ruining the balsa.

16. Fuselages can be a challenge, which is why many paint this structure even when using film on flying surfaces. Still, it's not that difficult and I personally think if you're going to use film, why mess up the process with painting, something you're trying to avoid in the first place.

Believe it or not, many fuselages can be finished with two pieces of film. First, using a template cut into a big chunk of film the shape of wing airfoil. Slip this piece over wing and onto fuselage. Trim until you get a nice fit at wing/fuselage area. Once this is satisfactory, cut slot or airfoil shape to accommodate stabilizer.

I like to iron film in place around wing first and use a trim tool. Film is then attached around stabilizer. From there it is a relatively simple matter to pull, tug and heat the film into place using the same methods mentioned above.

Overlaps can be a problem, especially when we will end up with one directly down upper center of the fuselage. Highly visible! When doing first fuselage side run a strip of masking tape where lap will be. Iron film up to and directly onto the tape. With a straight edge and a new

#11, using tape as a guide, cut away excess film. Remove tape, iron edge of film firmly down to structure. (The more skilled will be able to iron film down such that underlying balsa is actually compressed a bit, the result being no "bump" at transition from film to balsa.)

When finishing other fuselage side, repeat masking process leaving an overlap of 1/8" or so. It is possible to do this such that overlap is invisible when standing next to a model placed on the ground. Or one can plan ahead, covering the overlap with a stripe in a contrasting color, totally eliminating finger-pointing opportunities.

There is no shame attached to covering a fuselage in four or more pieces. The temptation to wrap fuselage bottom in one piece frequently overwhelms. Doing the sides well short of fuse top is in some cases a superior technique, especially if running lap-concealing stripes down sides of fuselage. In any event, some fuselages simply cannot be covered with only two pieces of film.

17. Using "Tuff Stuff" spray cleaner, soak model down, wipe clean. This will eliminate finger prints and such; more importantly loose ends overlooked will pop up, yet still be clean and so responsive to getting them ironed down.

18. Noticing that the finish is not perfect — and they never are, whether painted or in film — make some mental notes on where problems arose, how they can be handled more effectively next time.

Because once you manage a film finish that is at least presentable to the wide-ranging body of critics so abundant at CL contests, you'll be committed to the concept, will begin to reverse a trend, making all sorts of snide and derisive comments concerning painted finishes, especially those using dope, a material nearly as quaint and old-fashioned as homemade milk paint.

Dan Rutherford can be contacted in care of Flying Lines.

How can you spread the word about CL flying?

Here are some ideas:

- Donate a subscription to your favorite model magazine or *Flying Lines* to a school.
- Sell a *FL* subscription to your local hobby shop. Let them know that classified ads are free for subscribers.
- Offer to give a flying demo to a school or youth organization.
- Display your models at malls.

U.S. F2A TEAM TRIALS

The F2A team trials were held at Cincinnati, Ohio on September 20 and 21. Model processing took place on Friday night at Tom Brown's house. Tom and his Darlene also fed everyone before processing started. Barry Tippett, Ken Barthel and Bill Lee processed models and all were found to be within the rules. We had nine Open contestants and one Junior.

On Saturday morning, Cincinnati was covered with fog so thick that visibility was about 15 feet. The fog did not clear till around 10:00 AM, the start time of the first round. Bill Lee discovered during setup that morning that the Trans Trace electronic timer was not functioning. This resulted in all times being done with stopwatches.

Former team members Bill Hughes and Tom Brown had mechanical gremlins hold their times down. Tom Brown had the misfortune to have two of his Halman Special .15's blow a rod just days before the trials. This resulted in Tom using replacement engines that he had not had time to tune. Bill Hughes had the ceramic balls in the rear bearing of his fastest engine disintegrate on his first run. The inside of the engine looked as if it had been sand blasted.

Todd Ryan placed third in spite of equipment problems that plagued him all weekend. On his first flight Saturday with his #1 model he refers to as "My Mistress" he turned a time of 12.65. In test flying after the first round he discovered a broken pipe. He replaced the pipe. When he flew this model in round two, he discovered that the controls were fully locked. The model went over the top of the circle twice. He was able to shut it off and save engine and prop by G- Lining it. When the model finally hit the ground both the fuselage and cowl

were broken. He made his 2nd round backup flight with his #2 model he calls "My Bitch". He found during this flight that the model was very tail heavy and he needed to use every inch of the height pole to place a 12.55 flight. During testing Saturday evening the #2 model tripped out of the dolly, had a shaft run and completely destroyed the model and best prop.

After Saturday's practice, Todd with Will Naemura's help, rebuilt his #1 model for Rounds #3 and #4. The rebuilt model turned Todd's two best times of the trials.

Jim Booker lost his #2 model in practice on Friday while shutting it down. His #1 model performed very well for him during the trials. He turned 291.0 in round #2 on Saturday and 291.8 on Sunday for first place.

Carl Dodge lost the use of one of his model when his dog Sandy sat on the wing. Carl said, "Nothing like a little dihedral to make things fun".

Scott Matson made the team as our only junior. His flight in round #1 set a new Junior record in F2A of 271.2 KPH or 168.52 MPH his backup flight was 166.72 MPH.

All of the flyers and NASS thank the Queen City U-Control Club for holding the Trials at their field. Barry Tippett acted as the Event Director and supplied all of the timing watches and pull test gear. Ken Barthel manned the binoculars to call in or out of the pylon. Al Stegens called laps for the timers and timed. Other timers were Dave Cotton and Larry Tenover. Bill Lee acted as the FAI Jurist and used a computer program that he wrote to compile all of the flight data. Bob Taipale did the tabulating and paperwork.

2004 CLWC F2A Team Selection Results

| Overall Place | Jr Place | Score | CompID | Name | Country | Flight1 | Flight2 | Flight3 | Flight4 | |
|---------------|----------|--------|--------|-----------------|---------|---------|---------|---------|---------|-------|
| 1 | | 291.40 | A003 | Booker Jim | | 103 | 286.3 | 291.0 | 291.8 | 0.0 |
| 2 | | 291.40 | A005 | Naemura Will | | 105 | 286.5 | 296.3 | 0.0 | 0.0 |
| 3 | | 290.25 | A006 | Ryan Todd | | 106 | 284.4 | 286.8 | 292.5 | 288.0 |
| 4 | | 286.75 | A008 | Dodge Carl | | 108 | 283.9 | 0.0 | 251.8 | 289.6 |
| 5 | | 285.85 | A001 | Montagino Chris | | 101 | 0.0 | 280.5 | 284.3 | 287.4 |
| 6 | | 284.55 | A007 | Brown Tom | | 107 | 283.4 | 281.3 | 285.7 | 279.8 |
| 7 | | 278.30 | A002 | Van Sant Glen | | 102 | 277.5 | 264.2 | 279.1 | 262.3 |
| 8 | | 277.45 | A004 | Hughes Bill | | 104 | 0.0 | 267.9 | 276.2 | 278.7 |
| 9 | 1 | 269.75 | A009 | Matson Scott | Jr | 109 | 271.2 | 268.3 | 258.7 | 266.2 |

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