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**NEWS OF NORTHWEST CONTROL-LINE MODEL AVIATION**

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1073 Windemere Dr. NW, Salem, OR 97304

Editor: Mike Hazel

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AUGUST 1992

ISSUE #100

In this centennial issue.....

- \* Round & Round, by John Thompson
- \* Navy Carrier Notes, by Joe Just
- \* Contest Results: Pacific Aeromodelers Club Annual, July 11/12  
Bladder Grabber XVII, July 18/19.
- \* Oldie Reprint, Bob Palmer's "MARS"
- \* Updated Contest Calendar
- \* And of course, more good stuff!

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To ensure continuous issues, please renew promptly.

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# Cockpit Chatter



Notes from the  
editor's desk

By Mike Hazel

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Seems like its been awhile since our last issue. Actually, I guess it has, since the last one was a two month issue. Effort is being made to get this thing out before the next batch of contests. On August 8/9, we have the NW Speed Champs in B.C., and also the Skyraiders Stuntathon in Kent, Washington. By the way, ten lashes with a wet noodle to you Skyraiders for not providing timely info to FL on your date change!!!!!!

Congratulations to Paul Walker for his win at the Nationals in Precision Aerobatics. This was Paul's 3rd straight, and 5th overall win. Also placing was Don McClave, with third places in Old Time Stunt, and the Nostalgia event. Did we have any other NW CL fliers out there?

The NW Fireballs are planning a Fun Fly/Club picnic event for September 6th. Others are welcome to attend. For more details write: NW Fireballs, 1705 NE 86th Ave., Portland, Oregon 97220.

Good news for you Fox engine fans. They have made a run of about 1,000 of the .15BB engines. The CL version (#11698) is priced at \$74.95, and the RC version (#21698) is \$84.95. They are also now making a new tapered needle valve for the Stunt 35 engine. Order part #13517, price \$2.00. Where's that address, uh, well, just look in any magazine for one of their ads.

If the editor was thinking forward, this issue should have come with fireworks and fanfare. But it's not, perhaps feeling more like a birthday that one decided not to observe. What am I babbling about? This is issue number one hundred of Flying Lines. Perhaps in the next issue we will have some historical overview of what this newsletter is about, when it came, and where we hope to go. Meanwhile, following are some words of thoughtful reflection from our Scale columnist.....

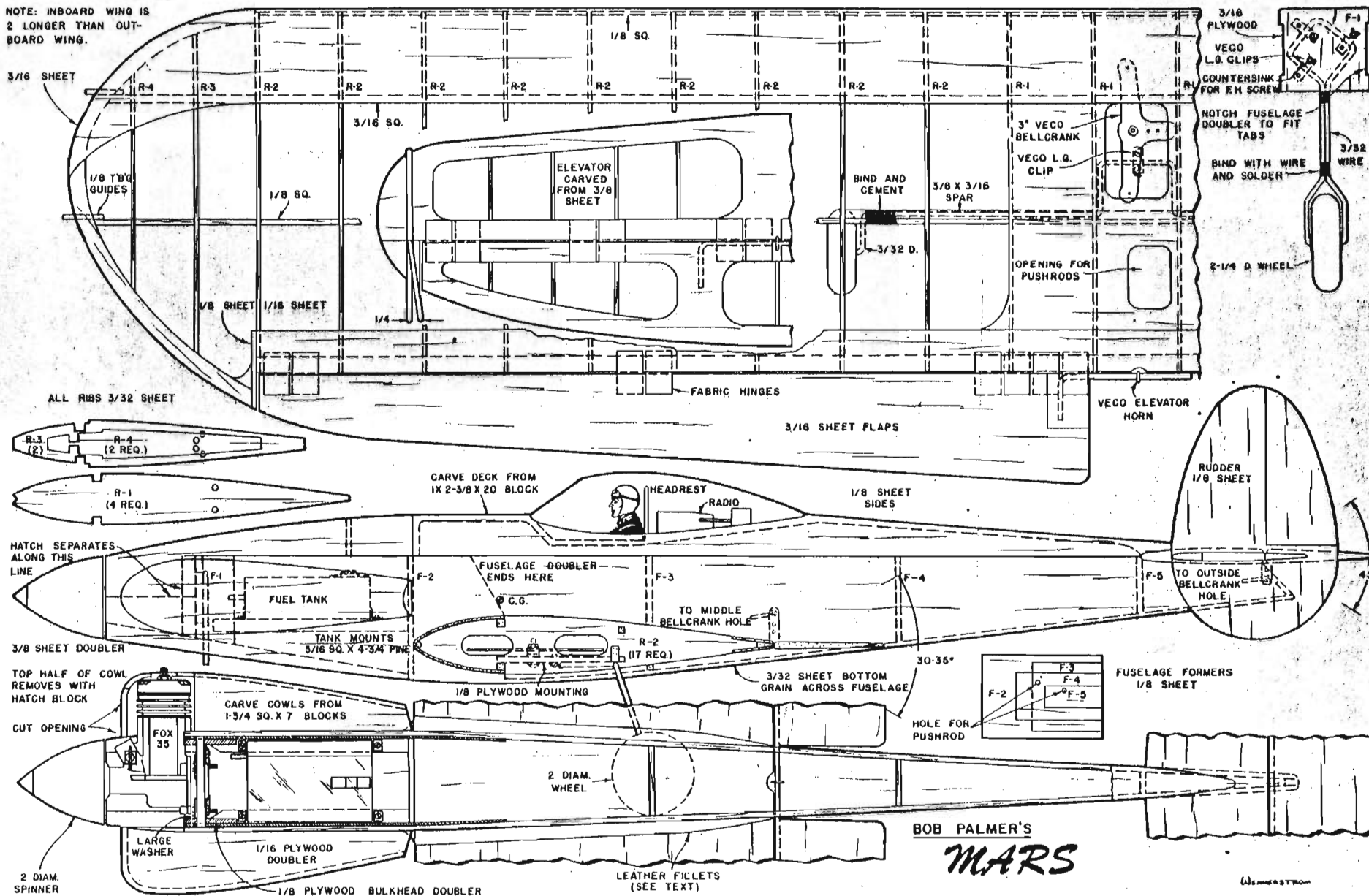
Reflecting upon these many years of FLYNG LINES brings a large sense of collective accomplishment. Many of its articles were reprinted, "lifted", as many as three times into other newsletters. The presence of the newsletter, which drew acclaim from the highest levels of the hobby in the country and from around the world, built the sense of presence and strength in Northwest model aviation. This wide perception built upon the strength when such was flagging in some other parts of the country. Merely the knowledge, the monthly reminder, that there were others out there, nearby, who were hard at it encouraged many to stay in the hobby or get back in. It also provided easy access to the front runners who were dealing with local aviation topics. Help was just a phone call or quick note away. The columnists were sure to be at contests where questions were answered and help offered. The present and future tenses of these statements bring a warm feeling of optimism and anticipation. See you at the next one, friend!!! orin humphries

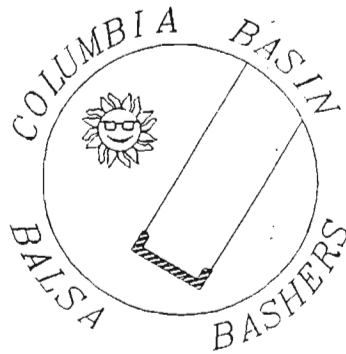
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We have quite a few FL readers who have let their subscriptions expire, and won't be receiving this issue. If you see these folks, give them a friendly reminder for us here.

Expirations: Glenn Birch, John Clemans, Bob Emmett, Dave Gardner, Paul Gibeault, Loren Howard, Frank Macy, Fred Mondin, Bob Parker, Jack Pitcher, Alan Resinger, Howard Rush, Ron Salo, Steve Scott, Mike Slessor, Tom Strom, Jim Welch, William Naemura, Eugene Bartel, David Bushell, Jim Sofra, Joe Dill.

NOTE: INBOARD WING IS 2 LONGER THAN OUTBOARD WING.





*COLUMBIA BASIN BALSA BASHERS PRESENT...*

*C/L RACING*

*AUGUST 30*

*HORN RAPIDS ATHLETIC COMPLEX*

*Richland, Wa*

*Events included will be:*

<i>CL I Mouse</i>	<i>(JSO)</i>	<i>9 am</i>
<i>N.W. Sport Race</i>	<i>(JSO)</i>	<i>10:30 am</i>
<i>N.W. Super Sport</i>	<i>(JSO)</i>	<i>12 pm</i>
<i>N.W. Goodyear</i>	<i>(JSO)</i>	<i>2 pm</i>

*Trophies to Third Place*

*CD: Paul Rice (509) 627-3142*

*Sponsor: Columbia Basin Balsa Bashers*

*Come fly the friendly skies!*

NORTHWEST CONTEST CALENDAR (as of 8-1-92)

AUGUST 30 -----RICHLAND, WASHINGTON-----

Events: Class I Mouse Race, NW Sport Race, NW Super Sport Race, NW Goodyear.  
Site: Horn Rapids Athletic Complex.  
Contact: Joe Just, 709 Crescent, Sunnyside, WA 98944  
Sponsor: Columbia Basin Balsa Bashers

SEPTEMBER 12/13 -----KENT, WASHINGTON-----

RAIDER ROUNDUP

Events: Old Tim Stunt, Nostalgia Stunt, Precision Aerobatics (four PAMPA classes) Sport Scale, Profile Scale, NW Sport Race NW Super Sport Race, Flying Clown Race, .15 Carrier, Profile Carrier, Class I Carrier, Class II Carrier, other events tentative. Site: Boeing Space Center  
Contact: Joe Dill (206) 631-2367  
Sponsor: Seattle Skyraiders

OCTOBER 3/4 -----RICHLAND, WASHINGTON-----

Events: Old Time Stunt, Profile Carrier, .15 Carrier, Carrier I & II combined, Flying Clown Race, Class I Mouse Race, NW Super Sport Race. Site: Horn Rapids Athletic Complex. Contact: Joe Just, 709 Crescent, Sunnyside, WA 98944 (509) 837-5983 Sponsor: Columbia Basin Balsa Bashers.

OCTOBER 17 -----EUGENE, OREGON-----

REALLY RACING '92

Events: Mouse Race I, Mouse Race II, NW Goodyear, AMA Goodyear, Slow Rat Race, Rat Race, NW Sport Race, NW Super Sport Race, Pit Stop event. Site: Eugene Airport. Contact: John Thompson, 1145 Birch Ave., Cottage Grove, OR 97424  
Sponsor: Eugene Propspinners

OCTOBER 18 -----EUGENE, OREGON-----

FALL FOLLIES

Events: Precision Aerobatics in four PAMPA classes, Fox 35 Combat.  
Site: Eugene Airport. Contact: John Thompson, 1145 Birch Ave., Cottage Grove, OR 97424 Sponsor: Eugene Propspinners.

OCTOBER 24/25 ---RICHMOND, BRITISH COLUMBIA---

VGMC INTERNATIONALS

Events: All classes of Speed & Carrier in record ratio cash bash.  
Site: Rice Mill Road, Contact: Bruce Duncan, Po Box 58037, Station L, Vancouver, B.C. V6P 6C5  
Sponsor: Vancouver Gas Model Club

DECEMBER 6 ---EUGENE, OREGON---

(tentative)

Carrier and Scale events  
details to be announced

Following report on Bladder Grabber from Frank Boden:  
REPORT:

BOB CARVER SAID IT WAS A REALLY GREAT BG. HE WAS PLEASED THAT FLYAWAY PROBLEM HAS BEEN REDUCED. THE REASON FOR THIS WAS THE FACT THAT SEVEN SHUTOFFS WERE USED HE SAID. HE WAS PARTICULARLY PLEASED WITH THE PERFORMANCE OF JOHN THOMPSON'S MODEL, WHICH UYPON BEING CUTAWAY SCREAMED OVER TO THE LINE PIT AND PROMPTLY SHUTOFF, GLIDING DAINITLY TO THE GROUND. KELLEY CROZIE'S MODEL ALSO LINE TANGLED AND CAME SHUTING OFF LIKE AN ORDINARY LANDING.

HE SAID IF WE WANT TO KEEP FAST COMBAT, SHUTOFFS ARE THE WAY TO GO.

HE SAID GET READY FOR BLADDER GRABBER EIGHTEEN NEXT YEAR.

FRANK BODEN

NAVY CARRIER NOTES, by Joe Just

YOUR FIRST CARRIER MEET.....

OK! You've got your carrier plane done, you have put in enough flights to find out that it really flies well, and you have dediced to enter your first carrier contest. What do you have to do to keep from looking totally stupid? First, don't worry, everyone there will have had to go through the same first time as you do. And besides, there has to be at least one or two guys there that you may be friends with, so take it easy.

Get to the contest early. Try to take as much time as you need to get your gear out and ready. Spend as much time as you can in just feeling confident. Don't forget, you will have all day to get in your two official flights, so there really is no hurry. Look over the other planes. Ask permission to look closely. See what the competition has there. Are there any glaring differences with what they have and you have? Find out why. Carrier folks, like most, just love to answer questions about their equipment. It is truly amazing how much you can learn if you just look and listen.

Sign up as early as you can, but don't put your name up for the first flight or two unless you think that the weather is going to get bad. Look at how the others are preparing. Watch them fly and pick out what you think they are doing right and what might seem to be less than top performance. It might be a good idea to ask if anyone needs help with a launch. This is really a great way to observe just what the others are doing in way of getting ready to compete, as well as spreading some goodwill. If you do not have a partner to help you, helping someone else will make it easier for you to ask for help.

And now, you can put it off no longer, it's time to get your plane to the deck, but don't panic. You have five minutes from the time you are call to launch. Move to the deck with all the support equipment that you will need. It really is a good idea to fuel up the tank in the pits in case your engine suddenly gets cranky and won't start quickly. Give yourself the extra possible needed time by fueling up before. You should have confidence that all will go well. After all, you spent some time at home getting the starting procedure for your engine down to a science. (didn't you?) At this time, calmly instruct you helper how you will signal for release. And, be sure he will give you a loud verbal call when you have finished your first seven laps.....You will forget, trust me!

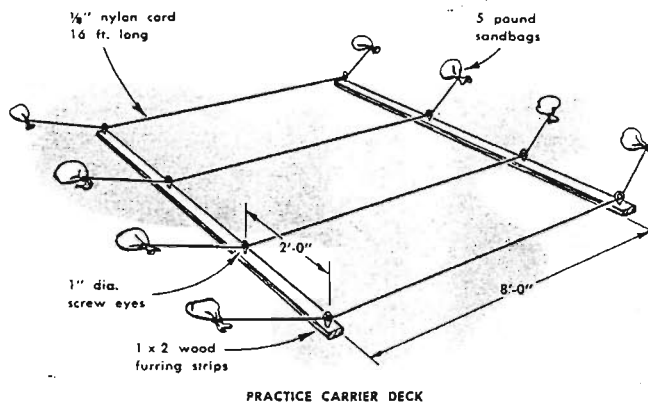
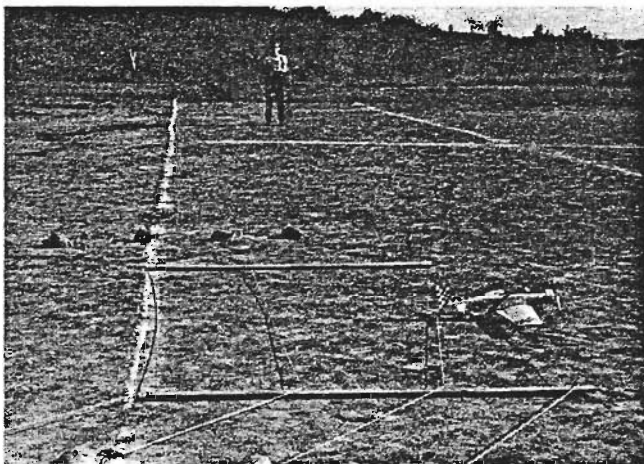
Don't run to the handle, it's a sign of a rookie, or someone that isn't sure. While appearance in carrier is not as important as your overall demeanor would be in Stunt, you want the judge to think you are in command. Get your hand in the safety thong, try out the throttle control once or twice, and signal for release.

Fly as level as you can. Keep your rotation as small as you can, it really helps the top speed time. Watch the plane, don't look to the helper, he will let you know when the high speed is over. At his signal, slowly reduce speed and relax for a few laps. Don't rush into the slow speed portion too soon. When you are ready, get the speed down to what you have practiced. When it's there, be sure to signal before crossing the stern of the deck, the seven laps of timed slow speed begin the next time around. Concentrate on each lap. Keep the body rotation as large as you can without exceeding the three foot radius allowed. Don't panic, be consistent in all flight functions. Don't count the laps, your job is to fly. Your helper will call out the finish of your flight. At this signal try to relax some more with a few laps of mind clearing as you think your way toward the landing. Before you line up with the center of the deck, (once again with the help of your pit person) get the hook down if you didn't at the start of the slow speed portion. When you are convinced that you are over the center of the deck, signal before crossing crossing the stern. You must attempt a landing on the next lap.

You have practiced this portion at home and what ever method that has worked for you is the proper one, I will not advise here at this time. With luck, you will then make your first contest arrested landing (Big Time Thrill!), if you miss, don't panic, go around and try again. What ever your result (not score), be sure to thank you helper when the flight is over, and do it loud enough for all to hear. This might seem strange, but believe me, it impresses and does no harm when it comes to needing help again.

Put the plane back into the pits, go get a coke or coffee and spend some time in reviewing your first flight. Figure out where you could do better. Think about what went right so you can repeat it. Relax, and think about delaying your next flight attempt for a time. Oh, and by the way, congratulations! Lastly, don't look at your score for awhile. You really don't need any pressure at this time, and you may either be thrilled or depressed with what you got, so let it go. Trust me on this one!

In closing this report, I would like to invite you to come to the Tri-Cities, Washington in October for two days of carrier flying. This contest is rapidly becoming one of the top Carrier meets of the year.....More on this later.



Now that you have the plane, get some practice on this easily prepared carrier deck. Objective is to catch the first cable.

## A Practice Deck

ACTUAL decks have 11 strings at two-ft. intervals for a total length of 20 ft. The practice deck shown is only six ft. long with four strings. Though harder to hit, this short deck is not too difficult to use. Experience in hitting this deck makes landing on the real one easy. My deck is portable, easy to make, and inexpensive.

To build this practice area, put 1-in. screw eyes two ft. apart in two pieces of 1 x 2" furring strips six ft. long. Make four lengths (about 16 ft. long) of 1/4" nylon cord and tie sandbags to the ends. The bags should weigh about five lbs. each. Mailing sacks are good for the sand bags, or bags can be sewn out of heavy denim or other cloth. Put this assembly down on the field with the wood sticks eight ft. apart, pull the strings taut with the sandbags. It's simple enough to make two decks, or have a buddy make a second one. Two together, or even three, will make a full-size deck. It can be easily carried in a car.

Before a landing, have a helper line the plane up on deck center. Then make slower and slower passes over the arresting gear until power is cut and bang! — the ship is

on the deck, hooked to a line. It all happens in a split-second. Practice is the key.

This practice and knowing the flying characteristics of the plane are essential to success. Use a 9-8 prop for 35 and 40's. Adjust the needle for maximum revs. Because timing for scores begins at release, full power is needed at once. The lean part of the tank run will come during the low-speed portion of the flight when plenty of fuel is running through the engine. Do not run continuous full speed laps toward the end of the flight, because the fuel will be quite lean and could overheat and damage the engine.

Now try low speeds. Set the idle speed screw to stop throttle at the lowest speed at which the engine will continue to run steadily. If the engine has an idle mixture, adjust it for smoothness at this speed. Then check the response to change from high to low and back. If the engine cuts out after a low-speed run followed by quick throttle opening, try a hotter plug. Shielded hot plugs are almost a must.

Once the engine is performing well, try flights. Without throttle it is just a hot, scale C/L. If the engine goes rich or lean on the first laps adjust the needle valve so maximum power is obtained as soon after takeoff as possible.

Takeoff must be smooth for best acceleration. The model should not be forced into

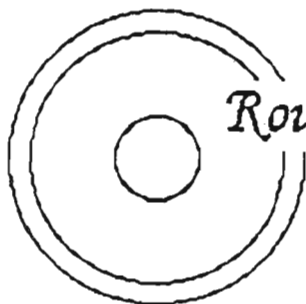
the air. With 24 ft. on the deck, getting airborne is no problem. Try clearing a strip of crepe paper or balsa wood 24 ft. from launch point to see how simple takeoff is.

Now try low speed. Slow the engine down with the third line and feel the response. As the speed lowers, flight must be a steeper angle to get the needed lift. Keep slowing down. Practice repeated laps at a low speed. If, on reaching the lowest speed of the motor, the model is still flying, set the idle speed lower or the ship will not land. When flying slowly in the wind, speed up slightly going into the wind, so you will fly with taut lines across the wind, then slow down to a minimum as the wind pushes the model out on the lines.

At low speed there is less line tension when needed most for control. If line tension gets slack and control problems develop, several things can be done. An offset rudder or engine is most effective, but will increase line pull at high speed. An engine offset of two washers under the front mounting holes is about right on most profiles.

Once low speed is mastered, come in low and practice landing on a given spot on the field. Cut the throttle and let the model settle down onto the spot. If the angle of attack is right for low speed, a further cut of throttle will let the model drop down onto the carrier deck.





# Round and Round

The Control-Line  
modeler at large

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By John Thompson

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*"Time spent flying model airplanes will not be deducted from your life."*

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Gary Byerley of Seattle has made a specialty of comebacks. His latest comeback, after a couple of years of semi-retirement, has to be the most spectacular.

Byerley made his way through the always formidable field of contestants at the Bladder Grabber to emerge at the end as the winner of The Big One in AMA fast combat.

Steve Stewart of Phoenix, Ariz., was second. Defending champion Allen Deveuve of San Diego, Calif., made it into the money for the second year in a row with a third-place finish.

Past winner Steve Kott of Wayne, Mich., was fourth, and past repeat winner, Phil Granderson of San Francisco, Calif., was fifth.

The Bladder Grabber, the United States' premier fast combat contest, drew 44 entries from four countries. Ed Koslovsky was back from Russia, and the Russian influence was seen in a number of fliers' airplanes.

In addition to the usual array of Fox Combat Specials, there were a growing number of Nelson combat engines, a small number of Russian power plants and one Webra Speed 28!

Possibly the most significant technological advancement was the spread of flyaway shutoffs. A rough estimate indicated that approximately one-third of the contestants' airplanes were equipped with shutoffs.

The shutoffs were demonstrated several times during the contest, preventing several flyaways — in contrast to a couple of non-shutoff planes that

demonstrated spectacular flyaways.

The shutoffs also proved useful in stopping planes that were slack on the lines as a result of collisions or other mishaps, and prevented at least one propless engine from burning itself up.

The most noted "sales pitch" for shutoffs came late on Saturday, as your R&R columnist's Underdog was cut loose right in front of a large group of spectators (the wind was blowing right toward the pit area Saturday afternoon). The plane, which had been heading up, was shut off instantly and hovered over the pits for a few seconds before gliding down like a leaf.

In addition to saving the crowd from the danger of a loose plane, the episode illustrated the other non-safety benefits of shutoffs: The plane was unmarked and ready for immediate use in another match, and it never left the field.

The Dreaded Canadian Contingent's canopy, where McFadden-style fuel dump shutoffs were being sold, reported that every unit on hand sold off in a few minutes after the above-described commercial. More planes had the shutoffs on Sunday!

From a personal perspective, it definitely was more relaxing to be on the sidelines knowing that both of the planes in a particular match had shutoffs.

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The contest season now moves on to the Jim Parsons Memorial Stuntathon in Kent, Aug. 8-9, and the Northwest CL Speed Championships in Coquitlam, B.C. the same weekend. Then it's over to Richland, Wash., on Aug. 30.

We're still looking for some feedback on ideas expressed last issue about a winter racing series. If we don't hear some input by around the first of September, the chances of getting something together



will be pretty slim. The Nitroholics Racing Team willing to do the work to set up the series if we have the impression that people will participate.

Speaking of racing, if you haven't subscribed to the *TR Inquirer* yet, you should think about it. It's serving as the first national racing newsletter since *CL-RPM Racing News* dropped from the scene more than a decade ago. Subscriptions are \$12. Write *TR Inquirer*, c/o Kenn Smith, 521 Jansen Ave., San Dimas, CA 91773.

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I'd love to make Round & Round a forum for discussion of Northwest CL matters in general...write to John Thompson, 1145 Birch Ave., Cottage Grove, OR 97424.

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## Modeling Tips

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To set idle mixture, pinch off the fuel line and listen to the engine's reaction:

The goal is to set the mixture so that the engine speeds up slightly, then dies.

If it dies immediately, it is too lean.

If it speeds up for several seconds and then dies, it is too rich.

High speed mixture should be set so that momentarily pinching the fuel line causes the engine to speed up two or three hundred RPM. This will be about one click RICH. (Might even make your Super-Thumper last a little longer.)

Try breaking in your ABC engine with a very small prop and very short runs (ten to fifteen seconds, or until very hot), for about a tank, then FLY IT. NEVER, EVER run an ABC engine excessively rich — the oil will build up between the piston and cylinder and cause too close a fit, which will cause excessive heating and power loss! Can DESTROY a good engine!

Biplanes have another entirely different set of trim variations, caused by "decalage", which is the differential angle between the wings. Too much drag on the upper wing will cause the aircraft to nose up (speed-sensitive). One trick is to have the upper wing at slightly negative incidence to reduce the drag. Experimentation is the key to success.

If you build all of your planes to match your transmitter (with all of its switches in "normal"), you may never need that super-fancy GEE-WHIZ computer radio to remember the differences!

Never, yea NEVER fly when you do not feel well; especially if you are taking any kind of cold medication. The average dose of anti-histamine will slow your reaction time by at least 53%.

\*\*\*\*\* THE FLYING FLEA MARKET \*\*\*\*\*

FOR SALE: All American Senior kit. call John Thompson (503) 942-7324

FOR SALE OR TRADE: Old Berkley Bearcat kit for scale/carrier. Fairly priced call Terry Miller (503) 672-0554

FOR SALE; Quality composite competition propellers. Send for list. New sizes available for 1/2A, A, Formula 40, and more. Mike Hazel, 1073 Windemere Drive NW, Salem, Oregon 97304

SUBSCRIBERS: This space is for you.

## Did You Know?

Ernst Mach, the man whose name has become synonymous with high-speed flight, never saw an airplane that travelled much more than one-tenth the speed of sound, for he died in 1916. Mach published the work that resulted in the concept of the "Mach number" in 1887, 15 years before the airplane was ever invented. He didn't have the slightest interest in aircraft and was actually studying the flight of artillery rounds when he did the pioneering work on quantifying the speed of sound - and was doing it largely as an outgrowth of some photography techniques he had developed to study sound wave propagation from meteorites, explosions and projectiles.

How odd that two of the most significant achievements of our life time, both developed in part from the arcane science of ballistics: not only Mach's work on supersonics but the development of computers in the 1940's to create precise artillery firing charts for gun-laying

Nonetheless, Mach wouldn't be pleased that he's universally remembered as a result of that virtually inconsequential experimental dalliance rather than for his work as a psychophysicist, his criticism of classical physics and mechanics or his contributions to Einstein's theory of general relativity.

No! It's "Mach number" that will go down through the ages as the legacy of this stubborn, brilliant, and multi-talented Czech scientist and philosopher. *From the Dec 90/Jan 91 Smithsonian Air & Space Magazine.*

# PAC

## CONTEST RESULTS

July 11 & 12

### .15 Sport Race

- 1. Lyn Murray 8:19.56
- 2. Henry Hadjik 9:35.91
- 3. Chris Cox 10:00.12
- 4. Russ Popel DNF @109 laps
- 5. Larry Bell
- 6. Mike Conner
- 7. Frank Boden

### .35 Sport Race

- 1. Mel Lyne 8:50.09
- 2. Chris Cox 9:08.87
- 3. Henry Hadjik 11:21.88
- 4. Russ Popel 12:17.97
- 5. Frank Boden

### Old Time Stunt

- 1. Al Resinger 259.5
- 2. Bob Emmett 258.0
- 3. Barrie Shandel 253.0
- 4. Chris Cox 226.5
- 5. Mike Conner 198.0
- 6. Frank Boden 82.5

### Precision Stunt

- 1. Al Resinger 542.5
- 2. Bob Parker 533.0
- 3. Bob Emmett 501.5
- 4. Barrie Shandel 380.5
- 5. Henry Hadjik 290.5
- 6. Chris Cox 209.5

### Super Slow Combat

- 1. Mel Lyne
- 2. Russ Popel
- 3. Troy Lyne
- 4. Chris Cox
- 5. Frank Boden
- 6. Greg Davis
- 7. Henry Hadjik

### Novice Stunt

- 1. Stephen Cox 161.0
- 2. James Cox 159.0
- 3. Angela Bell 134.0
- 4. Michelle Hadjik 108.0

### Sport Scale

- 1. Frank Boden

### Novice Balloon Bust

- 1. Angela Bell
- 2. Stephen Cox
- 3. Michelle Hadjik
- 4. Isabelle Hadjik
- 5. Barb Bell (tie)
- 5. James Cox (tie)

CONTEST RESULTS: BLADDER GRABBER XVII, July 18 & 19, 1992  
 Snohomish, Washington

AMA FAST COMBAT (43 entries)

- 1) Gary Byerly
- 2) Steve Stewart
- 3) Allen Deveuve
- 4) Steve Kott
- 5) Phil Granderson

Editor's Note: At the 1992 Model Expo in Puyallup, I saw a rather interesting CL plane being flown in the demo circle. It looked like a large combat plane, but it was flying quite slowly, and quiet, too. That same plane was later displayed at the Skyraiders club booth, and I learned that it belonged to Paul Walker. The heading title of this article appeared on the wing. Sometime later in the year, I asked Paul if he would do a write-up regarding this plane, and what he might have learned from it.

Paul, being the gentleman and contributor to the hobby par excellence, consented to share some words with us. Paul wrote this piece while enroute to the AMA Nationals, where he took first place. Might just be a moral to that story, you other potential newsletter contributors! Now here's Paul.....

..... For years I have been looking for a way to make Stunt planes easier to trim. The flaps seem to be no end of problems with the trim procedures. While In Russia in '88 at the World Champs, I noticed how well the Russian combat planes flew. They seemed to be stable and yet turn very well. That was nice, but I never thought more about it.

Then one day I was at Howard Rush's house talking to him about combat in general. He mentioned how stable the Russian combat planes were in level flight. This brought back my memories of the 88 WC's. Since the 88 WC I started using the tuned-pipe power systems and found them to work well. I then put 2 and 2 together and the idea sprung. I would build a flying wing with a tuned pipe for stunt.

My criteria was to have roughly  $\frac{1}{2}$  the wing loading of a normal stunt plane, and yet the same overall dimensions. I basically used the leading edge of the wing to the hinge line of the stab/elevator dimension of my existing Impact planes, to be the same on the flying wing. Instead of having a void of space inbetween the wing and stab, I filled it in with wing. Thus it looks like a Russian combat plane. Just to try out the theory, I used a profile fuselage. It had to be light so I built up the wing carefully and covered it with 2 rolls of Monokote. It's flying weight is 40 ounces. The wing area is 1000 square inches. It flies on 70' lines at 5.0 to 5.2 seconds a lap. Power is an O.S. 32 with a tuned pipe. The prop is an APC 10 x 4, turning at 12,000 RPM on the ground.

The best way to describe the way it flies is that it produces neutral stability. It goes exactly where you point it, but that is all. A good stunt plane will have a good amount of positive stability. This neutral stability is tolerable except in square maneuvers and level flight. You have to fly it all the time. It's good points are that it is light and goes where you point it well and stays tight on the lines all the time. When most stunt planes have too much tip weight, the wing will stall and then roll outboard when pushed too hard. When this wing has too much weight the only thing that happens when pushed too hard is for it to not turn any faster. When too much weight is there it will only turn so fast no matter what you do. Much better than stalling the wing.

Future plans are to extend the fuselage and put on a typical stab and elevator to see if that will gain the stability.

.....Paul Walker



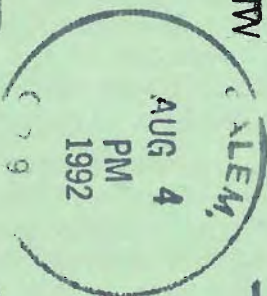


# FLYING LINES

1073 Windemere Dr. NW  
Salem, OR 97304

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

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