

FLYING LINES

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Oct. 1980 NEWS OF NORTHWEST CONTROL LINE MODEL AVIATION Number 18

SUN SHINES ON THE DRIZZLE CIRCUIT

The 1980-81 Northwest Sport Race Drizzle Circuit is shaping up as the best ever!

How good?

Well, how does this sound: Flying Lines has just sent off to Duke Fox an order for 44 -- yes, 44 -- Fox .35 engines, ordered by FL readers through our NWSR engine bargain offer. Fox agreed to supply an unlimited number of .35 stunt engines to help get the new Fox-powered NWSR off the ground, and by the looks of the orders, it's up and flying. Indications are that most of the engines will go straight into sport race for the most competitive racing season ever.

In addition, competitors are beginning to register their airplane names and numbers for the racing events. Among the entries will be such titles as "Clockwork Orange," "Miss Take," "Kamikaze Express," and "Seahawker."

Each contest will have a secondary event that will change with the site. Secondary events will start at 9 a.m. Northwest Sport Race will start at 11 a.m., followed by Northwest Super Sport Race, at each contest. The sport racing events will be run by the same procedures -- two heats for each entry and the top-scoring entries to the final in each event (three-plane finals in NWSS, four in NWSR). According to a championship scoring system, entrants will amass points leading to season-ending trophies in both events.

All the contest dates are at least tentatively confirmed at this point. The full, firm schedule will be published in November's Flying Lines issue. However, it's going to look something like this:

Dec. 14 -- Delta Park, Portland, Ore., NWSR, NWSS, Mouse Race.

Jan. 11 -- Carkeek Park, Seattle, Wash., NWSR, NWSS, Slow Combat

Feb. 8 -- Camp Rilea, Astoria, Ore., NWSR, NWSS, $\frac{1}{2}$ A Combat

March 8 -- Valley Mall, Yakima, Wash., NWSR, NWSS, Precision Aerobatics

April 12 -- Airport, Eugene, Ore., NWSR, NWSS, Goodyear

A note for those who haven't been paying attention: Starting with the December Drizzle Circuit contest, all Northwest Sport Race planes will be powered by Fox .35 engines. The new NW Super Sport Race will allow the old sport race engines (plain bearing .36 max, single bypass ports) with relaxed rules on airplanes and engine rework. Rules for both are available from FL, or see the July, 1980 edition.

About the registration -- it's totally optional, but a way, suggested by and promoted by DC participants, to add some spice and color to the circuit. Everybody interested should send a post card to FL with the name of their plane or planes, and we'll register it. We'll also notify you of your planes' numbers. Numbers are based on last year's placing, or on a first-come basis for those who didn't compete last year.

The drizzle circuit was initiated by the Eugene Propspinners in the winter of 1978-79, growing out of an idea by Gary Stevens of Seattle, Wash. The idea was to keep flying activity alive during the winter, and to put the emphasis on lots of flying. Based on what's shaping up so far, the 1980-81 circuit (for the second year organized and sponsored by Flying Lines) will have the most flying -- and the best competition -- of the circuit's history.

See you on the circle Dec. 14!

LATE NEWS FLASH! **BIG STUNT UNCONTEST SET!!!**

The Portland Aeroliners (which are rumored to be re-forming with vim and vigor) have announced the scheduling of "STUNTATHON '80", a non-sanctioned stunt contest and seminar, at Portland's fine Delta Park flying site, Oct. 19.

Yes, that's coming right up, so dust off your stunt machines and head for the Columbia River.

Spokesman Don McClave, one of the aerobatic aces who organized the bash, says the contest will be broken into as many PAMPA (Precision Aerobatics Model Pilots Association) classes as the entrants seem to feel a need for. Judging will be by expert Dave Gardner, and several Nats-class stunt fliers will be on hand to give advice, assistance and general help.

Beginners, pre-beginners, experts and has-beens are invited to come out for a day of flying that will start at 10 a.m. and go till 4 p.m. There will be no entry fee and no prizes.

NORTHWEST TROOP MAKES MERCED TRIP

Contest Report: Western States Racing Championships, August 30-31

This meet held in Merced, California, over the Labor Day weekend was one of the biggies of the year. There were two days of speed, racing and combat under that warm and dry California sky. Only three Northwest people made it down: Norm McFadden of Lynnwood, Wash., Jim Cameron of Seaside, Ore., and Mike Hazel of Salem, Ore. Here are some highlights of the Northwesterners' part in the competition:

Hazel managed to grab a third place in Saturday's Class I mouse race event, with Cameron placing lower. However, Cameron picked up third in Class II mouse. Mike's Class I time was 6:16. Cameron turned a 14:56 in Class II. Most interesting were the Class II entries of the Ascher team. They were sporting full-pan "mini-rat" inverted designs with full house gadgetry.

Also flown on the first day was goodyear. Both Hazel and Cameron had their Cox-powered Rickey Rat designs entered. Cameron's entry broke during a fast catch in the pits, and Mike's was just too slow, so no trophies came home to the Northwest from that event.

The Northwesterners had their moment in Northwest Sport Race. Hazel turned an 8:48, and Cameron followed with a 9:40, but these were only good enough for second and third places. Californian Vic Garner broke through for a first place with a good 8:22 time. Northwest Sport Race was one of the highest entry events there. It was interesting to watch all the locals trying it out.

Later, in the speed circle, Hazel put up a 153-miles per hour flight in Class B, a new Northwest record and a second place at the meet.

The next day saw a lot more action, including combat. The Northwest's McFadden entered fast, but did not make it up to the final rounds. Hazel reports watching a lot of mid-air collisions, especially in AMA fast combat.

In the speed circle, Hazel kept busy trying to put up flights. He also managed to put in a real nice shaft run with his brand new D Speed job. Sunday was also rat race day. Mike did not have either one of his regular Nitroholic pit men in attendance, so it was recruit time. Area local Gary Crawford hand-



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MERCED, continued

led the ground chores after a quick practice session. The final time was only 5:26, but good enough for second place as there were only three entries.

The last highlight of the day was some action with FAI team race. There were only two entries but both of top-notch caliber. Kusik-McCollum had an ultra-featherweight entry and Gillott-Hollfelder fielded their "Gossamer Tortoise" design. It's always fun to watch this event that we do not see much of in the Northwest.

A great contest!

EVENT WINNERS:

AMA combat: Mike Petri. Slow combat: Larry Driscoll. FAI team race: Kusik-McCollum (8:39.14). Goodyear: Tim Gillott (6:03.77). Northwest Sport Race: Vic Garner (8:22). Class II mouse: Aaron Ascher (9:39.71). Jr.-Sr. Class I mouse: Aaron Ascher (6:10.31). Open mouse: Bob Kampmann (5:53.22). Slow rat: Vic Garner (5:51.32). AMA rat: Tim Gillott (4:45). $\frac{1}{2}$ A profile proto: Bob Anderson (59.03 mph). A Speed: Margarido & Margarido team (169.26). B Speed: Frank Hunt (167). D Speed: M&M team (189.40). FAI Speed: Luke Roy (159). Formula 40: Mike Hazel (135.39).

STUNT SCENE

by paul walker

(EDITOR'S NOTE: Flying Lines is pleased to present a second regular column on the topic of precision aerobatics. Now, besides Rich Schaper's "Schaper on Stunt," we will regularly offer the observations of Paul Walker, of Kent Wash., a stunt flier of national stature. One glance at Paul's magnificent "Seahawk" will convince the unbelieving. Without further ado, here's Paul.)

A little background. I started flying 14 years ago, and got involved in stunt thanks to the help of a much more experienced flier who took the time to help. This led to my first contest in 1970. I had a Nobler with a Fox .35 and couldn't even do an entire pattern. I have also flown slow combat, slow rat and carrier, but the beautiful stunt planes really turned me on. It has been stunt ever since. I entered my first Nationals in 1977, just after getting out of college (B.S. in aerospace engineering), finishing 14th.

In 1978, I had an unfortunate accident with a tar strip. It threw one blade off and then proceeded to vibrate the plane to pieces. I still managed to finish 17th thanks to Hot Stuff. In 1979, I monkeyed with a stabilator and monkeyed myself into not qualifying. In 1980, I had a plane that flew fantastic (The Seahawk) but when the motor mounts broke loose and got fuel in that joint it was all over. I missed qualifying by 8 points in 1970. I learned a lot of lessons in the '80 nats that will be written about later.

Now a review of the 1980 Nats...

1980 should be known as the year of the crash. More planes went in this year than the last three combined. First, Paula Bauer (senior) stuck her Nobler into the pavement during practice Monday afternoon. The plane was totally destroyed. Two flights after hers, I was flying (low) trying to avoid lightning bolts when the ground reached up and touched my outboard gear. It hit so hard that the 1/8" piano wire broke where it entered the landing gear block support and proceeded to rotate through the wing. Tuesday saw Jim Casale plant his Spectrum because of a stabilizer breaking off. Fortunately, he brought a spare plane. Wednesday after official flights, Gene Martine stuffed his Conquers winner (most beautiful stunt plane award) because of a failed kwik-link. Thursday, with the wind blowing hard, John Poynter and Remel Cooper made full-power inverted landings. Remel didn't qualify but John did so he had repairs to make. The rudder and fin were broken off, the nose, canopy, and tips were scraped badly, but when the engine was also replaced he was in business again. Friday, Robert McDonald threw a crankshaft through the case and tore the nose off his plane. And if this wasn't enough, on Saturday morning while practicing for the top five finals, Ted Fancher stuffed his Excitation. This was due to a failed Kwik-Link. This type of failure is hard to accept (as the plane's owner) at a national championship level.

The weather at the Ohio Nats almost cooperated with the fliers. Monday's weather was nice until about 4 p.m when the sky opened up and let all heck fly. The winds were so strong the portable outhouses were overturned. That night the lightning was really something. It seemed that the sky was constantly lit the whole night. Tuesday was a very nice day with temperatures of about 80-85 degrees and humidity at about 50-60 percent -- almost comfortable. Wednesday saw near perfect flying weather, gentle breezes and moderate temperatures and humidity with an overcast sky. Thursday started out nice but at about 9:30 the winds picked up. There was a 10-15 mph breeze, but it was very choppy and rough, not conducive to precision flying.

STUNT SCENE, continued

After you see the scores in PAMPA's Stunt News, you will see a distinct lack of good scores after the middle of the first round, for Thursday. Friday's weather was about as miserable as you could hope for. It was raining in dead calm air, and cold. The top five really earned their way to Saturday's Walker Cup flyoff. Saturday was very nice except for that rough wind again.

The final results were:

1. Les McDonald . . . Stiletto . . . K&B .40
2. Bob Hunt Genesis. . . . OS .40FSR
3. Bill Werwage . . . USA-1. OS .40FSR
4. Bob Baron. Avanti OS .40FSR
5. Ted Fancher. Imitation. . . ST .46

So, until next time, keep those corners tight.

--Paul Walker, 1611 W. James Lane, H-5, Kent, WA, 98037.

WHO'S WHO AT FLYING LINES

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

Flying Lines is your link with the rest of the Northwest's control-line modelers. Help keep it alive by spreading the word. The price is \$7 for 12 issues.

Here's the staff:

Publisher.....Mike Hazel	Aerobatics.....Rich Schaper	Beginners.....John Thompson
Editor.....John Thompson	Paul Walker	Speed.....Mike Hazel
Photo Editor...Chris Genna	Sport.....Chris Genna	Scale.....Dave Haught
Racing.....Mike Hazel	Combat.....Gene Pape	Carrier...Orin Humphrie



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CONTROL LINE FLYING

EVENT	GLOBEE RECOMMENDED BY CHAMPIONS
Speed	1L - 1S - 4L - 4S
Racing	1L - 1S - 4L - 4S
1/2A Speed	5P - 5R
1/2A Racing	5P
Carrier	2L - 2S
Combat	1L - 4L
Slow Combat	3L - 3S
Endurance	2L - 2S
Stunt	2L - 2S - 3L - 3S
1/2A Stunt	5P
Sport Flying	3L - 3S
F.A.I. Speed	1S - 3S

RADIO CONTROL FLYING (R/C)

EVENT	GLOBEE RECOMMENDED BY CHAMPIONS
Pattern Flying with Tuned Pipe	2L
Pattern Flying with Muffler	2L
Formula 1 Racing	4L - 4S - 1L - 1S
Quarter Midget Racing	3L - 3S
1/2A Racing	5P
1/2A Pattern	5P
1/2A Sport	5P
Quickie 500	3L - 3S - 1L - 1S
Scale Flying	2L - 2S

RADIO CONTROL FLYING (R/C)

EVENT	GLOBEE RECOMMENDED BY CHAMPIONS
1/4 Scale Flying	2L - 3L
Combat	2L - 2S
1/2A Ducted Fan	5P
.21 Ducted Fan with or without Tuned Pipe	2L - 4L
.40 Ducted Fan with or without Tuned Pipe	1L - 4L
.60 Ducted Fan with or without Tuned Pipe	4L
Sport	2L - 2S
F.A.I. Racing	3L - 3S
R/C Free Flight (Std. Fuel)	2L - 2S
R/C Free Flight (Open Fuel Event)	1L - 2S - 4L - 4S
Four Cycle Free Flight	3L
Wankel Free Flight	3L

FREE FLIGHT FLYING

EVENT	GLOBEE RECOMMENDED BY CHAMPIONS
1/2A - All Events	5P - 5R
F.A.I.	3L - 3S
Scale	3L - 3S
A - B - C - D (High Nitro Fuel)	1L - 1S - 4L - 4S
A - B - C - D (Low Nitro Fuel)	3L - 3S
Four Cycle	3L
Wankel	3L

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AMA PRESIDENTIAL CANDIDATE SPEAKS

(EDITOR'S NOTE: Recently Flying Lines received some campaign literature from John Grigg of Lockport, N.Y., a candidate for president of the Academy of Model Aeronautics. Rather than run the stock campaign speech, we asked Grigg to address a number of specific questions relating to control-line modeling. Here is his response.

(It should be noted that FL is not at this time endorsing any candidate for AMA office. Statements from any candidate are welcome.)

The role of control-line, free-flight, indoor, the less wide-spread activities in modeling, the less publicized activities in modeling, is equally important to model aviation, and, therefore, AMA as any of the more glamourized activities in the radio-control circles (no pun intended). The beginning modeler learns basic building skills and techniques through constructing what to us is the more simple rubber-powered free flight model. He learns about aerodynamics and trimming for flight, techniques basic to all free flight, and even control-line and RC. The beginning modeler who starts out in control-line activities learns techniques of engine tuning, prop selection, airfoil selection for various effects he desires. In short, each facet of aeromodeling contributes to the overall. One cannot survive and flourish without the other.

You ask how could AMA better serve control-line modelers, which makes me suspect you have missed a most valuable point. AMA is the modeler, be his interest in CL, FF, indoor, RC, or all the categories. AMA, as represented by the Executive Council and our headquarters function, can coordinate matters of interest to any specialty group. The council of 1979-80 had members who represented all interest groups. And so it should be. It is the members who must be supported by the council, not the types of aircraft flown. However, on issues at council which involve special categories of modeling we must be responsive to the majority of those modelers involved in that category. The services due and entitled any specific category cannot be infringed by other groups, regardless of the size of that other group.

You are right that several major issues face solution in the very near future, plus some issues which can never be fully resolved and must be considered on an item-by-item basis.

1. The most serious, in my judgement, is flying sites. We now have a flying site representative at headquarters, but we must get him more involved and known by the clubs who can utilize his services. After all, without flying sites we have no hobby.

2. The dues must be held as low as practical to enhance the growth of the Academy. I do not support the concept of separate rates for different categories of modeling as it would restrict a modeler from trying other forms of our hobby. Full membership for all is the simplest and best method.

3. A permanent headquarters location, owned by AMA, is a high priority issue. We simply must become masters of our own destiny through the elimination of ever-escalating rentals. I do not agree that the headquarters site should be at a location suitable for use as a permanent Nats site also. The Nats must be moved around the country to better afford all members a chance to attend and compete.

4. The magazine is probably the hottest potato confronting us at this time. Many want it optional so they can exercise their right to receive it or not receive it. Others don't want it in any form. Many feel it should be a benefit of membership. Presently, I represent District 2 as vice president, and this district wants the right to choose, emphatically! I supported this solution at council. However, I personally feel the magazine can be a great benefit to the membership through its profits and should therefore be a part of the dues package. This is the position I will support if elected.

5. You suggest that competition vs. sport may be a major issue. I don't see this as an issue at all, for without competition there would be no development for the sport flier and without the sport flier there would be no mass production which keeps prices within reach for all. It's really a cooperative system where each depends, in part at least, on the other.

The political in-fighting within the council is a cancer which can destroy all we have worked to build. It must be ended in a manner which will not destroy us. My position in this problem has been virtually that of middle-man. My column in MA will bear this out as I have never put into print arguments from either side. Actually, I can see good points on each part. The basic problem is one of two conflicting personalities, (executive director) John "worth and (president) Earl Witt. John, prior to Earl's election, was given a very free hand to operate AMA as he saw fit. Earl sought only to exercise all of his presidential prerogatives as granted by the bylaws. It caused a conflict which has continued to grow, now to the point of being incapable of resolution. The most gross problem of this conflict is that they both "went public" with their arguments instead of discussing and working them out. My wife said this very succinctly at the August council meeting, as you can read in the secretary-treasurer's column of the November issue of Model Aviation. I can, and will, end the public airing of internal problems. I believe that difference of opinion is healthy and necessary. Conflict is not. We must work out our differences between ourselves and reach equitable, negotiated solutions.

GRIGG, continued

Your question about AMA help in resolving the problem of ever-dwindling supply for control-line activities is difficult to answer. AMA is a non-profit organization with no ability to direct manufacturers in their product structure. The manufacturer is motivated by profit, and cannot market a losing product. Unfortunately, the CL market is relatively small, as is FF, when compared to the vast numbers of RC fliers. Yet, products are available strictly for these areas. Control lines, handles, speed pans, props, stooges, are just a few that come readily to mind. The days of the Hornet, McCoy, and Dooling are unfortunately gone with bar-stock seeming to be the best way for speed today. It truly is a shame, yet we can't blame the manufacturer for the small amount of sales which would result from trying to market a high cost item. The hands of AMA are not tied, but restricted to suggestions and requests of these manufacturers. We can try.

I hope the foregoing answers some of your questions and gives you some insight into my candidacy, my position on issues, and my integrity. There is no doubt in my mind that I can be a good president for AMA and guide us back to a forward-looking organization void of the recent public display of unrest.

By the way, on September 28 I will be flying my rather antiquated deBolt Continental at the Kodak Aeromodelers CL contest in Rochester, N.Y. Even though my present primary interest is in RC sailplanes I still "keep my hand in other forms of modeling. Even have an old McCoy .049-powered $\frac{1}{2}$ A "Hell-Razor" hanging on my shop wall.

Yours for fun in modeling,
John C. Grigg, Vice President, AMA District 2, 6387 Badger Drive,
Lockport, N.Y. 14094

(EDITOR'S ADDENDUM: Grigg's other campaign literature (available from us on demand, SASE please) says he is 47, with a wife and two grown daughters, and one granddaughter. He is manager of the design, drafting and reproduction departments of a major electronics firm engaged in development of radar, telemetry and air navigation equipment. He began modeling at age 11 and joined AMA in 1947. He has flown freeflight, control-line stunt and speed, and has flown radio control since 1953. In the past decade he has been a sport and quarter-midget pylon racer and presently competes in soaring.

(Our thanks to candidate Grigg for his thoughtful essay for Flying Lines readers -- another FL exclusive.)

THAT OLD FAMILIAR KEYBOARD

"Old Clacker," FL's ancient Underwood typewriter, is back from the repair shop's intensive care ward, good as new, almost, at a cost of \$44.50. And you wonder why FL's publishers are always crying the greenback blues?

But this brings us to another timely reminder. Don't forget to circle November 23 on your model aviation calendar. That's the day of the second annual Flying Lines Turkey Contest, in Eugene, Ore. First prize is a genuine Thanksgiving turkey. Other prizes, too.

Events are Northwest Sport Race (Fox .35 rules), Northwest Super Sport Race, and Northwest Sport Combat. The turkey goes to the best overall competitor. Proceeds from the \$10 entry fee go to keep Flying Lines one step ahead of the creditors.

See the contest calendar for details.

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SPEED SCOOP

by mike hazel

In this installment I am going to briefly describe the various fuel systems used in speed flying. The main item of importance in speed flying may be the engine, but it can only be as good as the fuel system. Without a reliable fuel system, your consistency will suffer.

Way back in the Cro-Magnon era of speed, somebody came up with an improvement over the standard suction tank. This was the pen bladder tank. With this tank, a much more consistent engine setting was to be had throughout the run. Also, the venturi opening could be enlarged for more fuel and power, as the carb did not have to draw the fuel because it was being force fed.

A real big plus for this system is that the tank placement relative to the carburetor is not critical. The method of putting together a pen bladder tank is virtually the same now as it was back then. Nowadays, many people prefer to use bladder tanks made of surgical tubing, as it is cheaper and somewhat more available. The only large common source of genuine pen bladders I know of is Tatone Products.

The main disadvantage of a standard bladder system is that they are prone to break eventually, and the needle must be reset for every flight. And, they are not really suitable as is for tuned pipe engines. The usage of a bladder tank is mostly found in the non-piped events, such as Formula 40, $\frac{1}{2}$ A proto (the light weight helps acceleration, too!), and Class D.

The starting procedure varies slightly according to personal preference. Here are some methods:

The most common method is to simply insert spinner into starter and slowly open needle until the engine starts crackling and adjust from there. Another is to give the engine a prime and quickly open the needle as the engine fires up. Another one is to have a small length of the fuel line routed just outside the fuselage to be pinched off, and with the needle set close to the proper setting, the line is released after the engine starts on a prime (just like combat).

With a proper needle setting most bladder systems will deliver a short burst of extra fuel at the end for a desirable rich cooling down.

A metal tank, or "hard tank" as speed folk call it, can be used in two different modes, pressure or suction. A hard tank under pressure feed from the crankcase is like a bladder in the respect that is generally used in the non-piped events. The big advantage of a hard tank is of course that it will not pop like a bladder. Also, the needle can be left from the previous flight, which can make finding the ultimate setting a little easier.

You may also fill the tank and let it sit in the pits which is something that is best not done with a bladder. In addition, there is a little more consistency to be had, as the tank will feed the same every flight, unless you change the plumbing or you spring a small leak.

There are some limiting factors, too. Tank placement becomes somewhat critical. It is best that the feed line out of the tank is not more outboard than the venturi. If it is, then there will be a tendency to lean out in the air. With a suction tank, it is also important for the tank to be as close to the venturi as possible, for the best feed. Hard tanks will gradually lean out a little toward the end of the tank. Uniflow venting is an absolute must for a suction tank, to alleviate this tendency.

The suction tank is used pretty exclusively for tuned pipe engines. The reason for this is that the suction system works more on a demand principle which is necessary for the large variance of fuel needed from ground to air and on to "on-pipe" modes. With a bladder or pressure tank it is almost impossible to give the proper feed of fuel to a piped engine from beginning to end; that is without some sort of elaborate fuel switch or regulator system.

Starting procedures:

With a pressure tank, the needle is set right near the optimum when the spinner is engaged in the starter. In some cases the engine may flood, and then it may be necessary to set the needle slightly lean and open it up as the engine starts. A prime is usually not needed, as the pressure fed tank will put some fuel into the carb.

With a suction tank on a piped ship, the needle is left from the previous flight, or is adjusted before starting the engine. To prime, the nose is pointed down and the plane is shaken a couple of times. This will cause the tank to let a few drops of fuel into the carb. For an excellent description of tank and starting technique for suction/pipe systems, read the speed column in Model Aviation a few months back.

Mentioned earlier were regulator systems. I will briefly describe those. Many years ago, after the Cro-Magnon age, the centrifugal fuel switch (CFS) was developed. This device delivers a pre-adjusted increase in fuel flow to the engine as the plane becomes airborne. It was used with piped-pressure

SPEED, continued

tank combinations to handle the setting variance problem of the pipe. Only a few people use this system today, as most piped engines are fed with suction tanks. In theory anyway, the CFS system would give more power as a larger carb can be used than with a suction venturi.

The latest thing is a fuel regulator. It is fed with a bladder tank, and a pressure line from the engine crankcase regulates the fuel flow. As RPM increases, the regulator will deliver more fuel. I have used a regulator in my Formula 40, and found that faster takeoffs are possible as the system will adjust fuel feed during acceleration. Another plus is that the regulator holds back the fuel from the bladder until the engine is actually running, so you may leave your needle set. The needle setting also becomes broader, so that it is easier to more finely tune your power. However, the regulator tends to be fussy at times, until it is properly adjusted, and is prone to picking up a micro-spec of dirt in the fuel and stop working properly. There are a few competitors now using them with piped systems also, so the regulator is versatile. Perhaps, as they are developed and used more, regulators will be more reliable as the bugs are worked out.

Fly fast.

--Mike Hazel, 1040 Windemere Dr. N.W., Salem, Oregon, 97304.

SKYRAIDERS NEWS NOTES

The Seattle Skyraiders have about the best and most regular newsletter in the Northwest. The newsletter covers both control-line and free-flight activities.

Issue No. 21 tells us that Dave Mullens cracked the winners' circle in Class I mouse race at the club's Aug. 17 fun-fly. Second place was Dick McConnell and third was Cecil Swanson. Rich Salter took first in the junior category.

Dan Burdick took first place in Northwest Sport Combat, using a K&B .35 in Skyraiders' modified rules that allowed any plain bearing engines. McConnell was second, Cecil Swanson third, Dick Salter fourth and Dave Mullens fifth.

Burdick again won the first place trophy in novice stunt, with Salter second, Swanson third, M. Bogan fourth, Mullens fifth, McConnell sixth and Dan Cronyn seventh. According to the Skyraiders' newsletter the stunt was flown in a hurricane. M. Bogan wrote that Dan Burdick had "just completed a "Fuller Flip" -- a set of whifferdills, entered into a do-wa-dittie and was in an overhead position when the forebysider inadvertently disengaged from the whatchamacallit. This created a pressure between the rotating cinningham and the thermo-claxon, shearing the franistan -- and the engine quit! Without repeal of the law of gravity, Dan's plan for a controlled descent unfortunately described a vertical line."

Skyraiders newsletter No. 22 announces that a new three-man staff is editing the publication, Max Thue, Dan Cronyn and Mike Bogan replace Al Johnson.

Skyraiders will put on a non-sanctioned stunt meet Saturday, Oct. 11, the day before the Bladder Grabber...Bogan is building a club trainer (Sterling Yak-9)...a series of "How-To" seminars is planned.

A fun-fly Sept. 14 featured Northwest Sport Race and novice stunt. George Mickey won sport race, followed by Dan Burdick and Tom Knoppi. Thue won the stunt event, with Bogan second and Dick McConnell third. Thue won balloon bust, followed by Dick Salter and Dan Cronyn.

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MYSTERIES OF PAMPA CLASSES, OTS UNRAVELED

By Dave Gardner

To answer a couple of questions posed by your readers, I am enclosing a copy of the rules for Old Time Stunt, as originated by the Garden State Circle Burners of New Jersey. As you may note from the list of maneuvers, this is a simpler pattern to fly than novice stunt, except for the inside loop-inverted flight-outside loop sequence.

As far as advancement in the PAMPA categories is concerned, they represent skill levels, not amount of participation.

The point breakdown for categories are:

BEGINNER -- up to 300 points

INTERMEDIATE -- 301 to 400

ADVANCED -- 401 to 500

EXPERT -- over 500

These are averages of recent competitions and are on an honor system. Consequently, any stunt flier not consistently scoring over 400 points is in the beginner-intermediate category until his or her skills improve above that point. Peer pressure is supposed to prevent sandbagging, and it seems to be effective.

The California 500 Stunt Club flies novice pattern for the entry level event and requires a move up after three wins in the novice event.

In addition, at any given contest, the event director or contest director should have the discretion of adjusting the category of any given flier up or down based on the performance of the first flight.

Below are the rules of the Garden State Circle Burners' Old Time Stunt event:

OLD TIME STUNT

OBJECT AND INTENT

1. To perpetuate and preserve the model aircraft designs used during the era in which stunt flying was advancing from the early freestyle events to the precision acrobatic flying of today.

2. To provide an event for the many modelers who like stunt but for one reason or another are not able to build and practice for the AMA precision aerobatic event.

3. It is also felt that for the newcomers to stunt flying, this event will serve as a stepping stone, as it has in the past, to the current AMA precision aerobatic event.

RULES FOR COMPETITION

AIRCRAFT

1. Design must have been available in kit or plan form prior to Dec. 31, 1952.

2. No modifications shall be permitted other than structural changes to strengthen the aircraft.

3. Any modifications which, in the opinion of the judges, significantly change the appearance and or performance of the aircraft as originally designed shall not be allowed.

GENERAL

The 1951-52 AMA rules for precision acrobatic flying shall be used with the following exceptions:

1. All current AMA safety rules (pull test, line diameter, etc.) shall apply and safety thongs must be used on all flights.

2. No appearance points shall be awarded.

3. A bonus of 20 points shall be awarded for use of an aircraft design which does not include operating wing flaps.

4. A bonus of 10 points shall be awarded for use of an operating spark ignition system.

DESIGNS WHICH QUALIFY FOR OLD TIME STUNT

(as originated by the Garden State Circle Burners)

The following list was compiled from advertisements and plans appearing in model aircraft magazines prior to Dec. 31, 1952. Only those aircraft considered capable of performing the 1951-52 AMA pattern are listed and designs for engines under .09 cu. in. displacement have been omitted. We probably missed a few, so your additions will be appreciated provide they are qualified.

KITS

Super Zilch 52", Lil Zilch 36", Pee Wee Zilch 32", Super Duper Zilch 52", Lil Duper Zilch 42", Wee Duper Zilch 34" Sky Box Trainer 38", Sky Box Stunt 42", Super Sky Box Stunt 47", Box Car 38", Box Car Chief 42", Dilly 39", Dinky Box Car Jr., Drone Navion, Drone Hot Rock 38", Stunt Ace 40", Super Cinch, Madman, Tuckette 38", Sportwing 36", Super Bipe 28", New Bipe 22".

Stunt Wagon 58", Stunt Wagon 30-44", Flying Clown 28", New Era 28", Secret Weapon 38", Kingpin 28", Big Cut-Up 48", Little Cut-Up 36", Stuntmaster

40", Little Bandit 42", The Bandit 57", Dynamic 26", Kenhi Wildcat 39", Kenhi Bobcat 39", Kenhi Cougar (orig. version) 51", Kenhi Mustang 48", Fireball, Chief 51" (orig. version), Squaw 39" (orig. version), Warrior 36", Brave 36".

OLD TIME STUNT, continued

Papoose 32" (orig. version), Barnstormer 47" (without movable flaps), Trixter Invert Jr. 40", Profile Trixter A-B 32", Profile Trixter B-C 38", Testors Junior 40", Testors Senior 39", All American Stunt 36", All American Sr. 51", Combat Sky Box 36", Vampire 40", Viking 51", Sharpy 47", Sterling Yak-9 40", Sterling F-51 38", Sterling Ringmaster 42", Flip-It, Super Clown 38", Guided Star 34", P.D.Q. F-51 Mustang, Di-Doe 28", Trixter Twin Profile 47", Brown Stunt Trainer, Veco Mustang 48".

PLANS

MODEL AIRPLANE NEWS: Gyrator (10/52), Mars (8/52), Nobler (original version, 6/52), Hotter 'n' That (4/52), El Diablo (3/52), Ringmaster (10/51), Snappy Stuff (5/51), Wee Duper Zilch (4/51), Flapjack (8/50), Curtis Swift (5/50), Ginger Snap (8/49), Fury Screwball (12/48), Hot Rock (3/48).

FLYING MODELS: Venus (10/52), Little Missile (6/50), Stunt Streak (2/50), Flip Flop (12/48), Defender (6/48), Super Looper (6/48), Yankee Clipper (2/52), FM Stunt Trainer (12/49).

CAL SMITH ON MODEL BUILDING (Fawcett, 1952): Frisky Pete, Fireball Bipe.

HANDBOOK FOR MODEL BUILDERS (Fawcett, 1950): Stunt King.

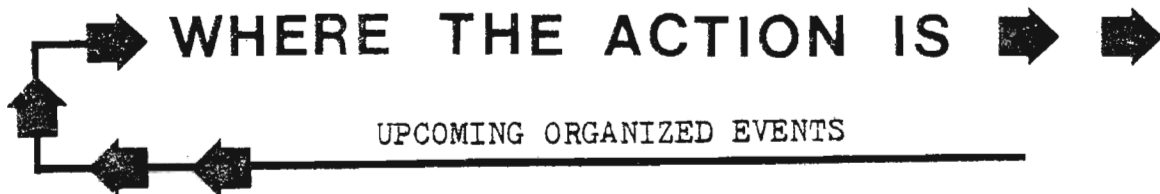
AIR TRAILS: Lethal Lucy (12/52), Smoothie (8/52), Galloping Comedian (5/52), Stuka (4/52), Combateer (2/52), Stunt Rocket (7/51), International Stunt Winner (1/51), Loopy (8/50), Guided Whistle (5/50), Zippy (1/50), Triumphant (12/49), Topsy Junior (10/49), Tucker "903" (9/48), Upstart (5/48), Double Whammy (1952 Annual), Easy (1951 Annual), Checkala Roma (1946 or 1947).

OLD TIME STUNT PATTERN (Per GSCB)

Starting, take-off, level flight (2 laps), climb, dive, wing-over, inside loops (5), outside loops (5), inverted flight (2 laps), horizontal eights (3), vertical eights (3), overhead eights (3), square loop, landing, pattern points, no-flaps bonus and ignition bonus.

(EDITOR'S NOTE: Copies of rules and stunt score sheet available on request from Flying Lines. SASE, please.)

--Dave Gardner, 17870 Shasta Trail, Tualatin, Ore., 97062 (503) 638-4334.



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

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

October 12....REDMOND, Wash. -- The Bladder Grabber, for AMA combat. Double-elimination combat contest begins at 9 a.m., with first match. Stereo equipment valued at \$2,700 for prizes. Site: Marymoor Park. For information contact Howard Rush, 8817 N.E. 137th, Kirkland, WA 98033. (206) 823-6018. (Note: we understand there will be unsanctioned stunt and an FAI combat contest at Marymoor Saturday, Oct. 11. Contact Rush for details on combat and Seattle Skyraiders for info on stunt.)

Oct. 19.....PORTLAND, Ore. -- "Stuntathon '80" non-sanctioned stunt contest. Precision aerobatics, starting at 10 a.m., in as many PAMPA classes as participants decide. Nats-class judges and advisors on hand. No fees, no prizes. Site: Delta Park. Contact Don McClave, 7719 SE 28th Ave., Portland, OR 97202, (503) 771-8453.

November 23...EUGENE, Ore. -- Second Annual Flying Lines Benefit Turkey Contest. Grant prize for this contest is a large frozen turkey of the edible variety, to be awarded to the flier with the best combined placing in three events. Northwest Sport Race (Fox .35 only), Northwest Super Sport Race, Northwest Sport Combat. Also merchandise and certificate prizes. All proceeds from \$10 entry fee for Flying Lines' financial benefit. Contact FL for copies of new-event rules. Site: Mahlon Sweet Airport. NWSR at 10 a.m., followed by NWSS and NWSC. Contest Director Mike Hazel, 1040 Windemere Dr. N.W., Salem, OR (503) 364-8593.

ACTION, continued

- December 14...PORTLAND, Ore. -- Northwest Sport Race Drizzle Circuit Contest #1. 9 a.m. $\frac{1}{2}$ A Mouse Race Class I. 10 a.m. $\frac{1}{2}$ A Mouse Race Class II. 11 a.m. Northwest Sport Race. Northwest Super Sport Race immediately following NWSR. (Be on time -- All events will start on schedule!) Site: Delta Park. Entry fee \$3 for one event, \$2 for each additional. Prizes: Merchandise for Mouse, points only for NWSR, NWSS. Contact Flying Lines for details.
- January 11....SEATTLE, Wash. -- Northwest Sport Race Drizzle Circuit Contest #2. 9 a.m. slow combat. 11 a.m. NWSR. NWSS immediately follows NWSR. Site: Carkeek Park. Entry fee, \$2 per event. Trophies. Contact Flying Lines for details.
- February 8....ASTORIA, Ore. -- Northwest Sport Race Drizzle Circuit Contest #3. 9 a.m. $\frac{1}{2}$ A combat. 11 a.m. NWSR. NWSS immediately follows NWSR. Site: Camp Wilea. Contact Flying Lines for details.
- March 8.....YAKIMA, Wash. -- Northwest Sport Race Drizzle Circuit Contest #4. 9 a.m. precision aerobatics, 2 PAMPA classes. 11 a.m. NWSR, followed by NWSS. Site: Valley Mall. Entry fee, \$5. Contact Flying Lines for details.
- April 12.....EUGENE, Ore. -- Northwest Sport Race Drizzle Circuit Contest #5. 9 a.m. Goodyear. 11 a.m. NWSR, followed by NWSS. Site: Mahlon Sweet Airport. Entry fee \$3 for one event, \$2 each additional event. Merchandise prizes. Circuit-championship trophies awarded. Contact Flying Lines for details.

NW COMPETITION RECORDS

RECORD PERFORMANCES ESTABLISHED BETWEEN NORTHWEST
MODELERS IN SANCTIONED COMPETITION

HAZEL UPS NW B SPEED MARK

Mike Hazel of Salem, Ore., came back from the Western States Racing Championships in Merced, Calif., Aug. 31 with a new Northwest B Speed record in hand. Hazel turned a 153 mph flight, good for second place in the contest. It replaced his old record in B Speed of 149.67.

Flying Lines keeps track of competition "bests" by Northwest model fliers. Record performances can be counted from any AMA-sanctioned contests, provided the performance was under AMA or official Northwest rules. Some documentation is required for out-of-area contests.

Here are the complete records as of Oct. 2, 1980:

$\frac{1}{2}$ A MOUSE CLASS I	50-lap: 2:48 (Bill Varner)	100-lap: 5:50 (Bill Varner)
$\frac{1}{2}$ A MOUSE CLASS II	75-lap: 3:54 (John Thompson)	200-lap: 10:24 (John Thompson)
GOODYEAR	70-lap: 3:28 (Dave Green)	140-lap: 7:42 (John Thompson)
SLOW RAT	70-lap: --	140-lap: 10:41 (Dick Salter)
RAT RACE	70-lap: 2:29 (Mike Hazel)	140-lap: 4:53 (Mike Hazel)
FAI TEAM RACE	100-lap: --	200-lap: --
NW SPORT RACE	70-lap: 3:51 (John Thompson)	140-lap: 7:40 (John Thompson)
$\frac{1}{2}$ A SPEED: 80.33 mph (Wallace-Young)		JET SPEED: 165.83 mph (Mike Hazel)
A SPEED: 125.82 (Mike Hazel)		FAI SPEED: 88.05 (anonymous)
B SPEED: 153 (Mike Hazel)		FORMULA 40: 144.75 (Scott Newkirk)
D SPEED: --	PROFILE NAVY CARRIER: 208.9 (Marty Phillips)	
$\frac{1}{2}$ A PROTO: 71.97 (Jeff Bell)	CLASS I NAVY CARRIER: 268.98 (Terry Miller)	
	CLASS II NAVY CARRIER: 319.65 (Orin Humphries)	

THE FLYING FLEA MARKET

FOR SALE OR TRADE: Kits, complete in box: Ringmaster, old style, \$10. Flite Streak, \$10. Nobler, \$15. Sterling P-38 (profile for two .15s), \$5. Midwest Skyraider 35, \$15. Midwest P-63 (.15), \$8. Also have Sig Ryan (72") partially built. Kit complete except for wing, \$25. Accessories, J-Roberts 3-line handle, line sets (.008 x 35), (.012x60), (.015x60), (.018x70)... Make offer. Engines: K&B Series 75 new in box, \$25. Testors .35, \$5. Fox .45, PB RC with tuned pipe, \$40. Four-bolt case Fox .35 (2) from early 1960s, \$15 each. Cox TD .15, \$10. Dave Gardner, 17870 Shasta Trail, Tualatin, OR 97062 (503) 638-4224.

FCR SALE: One new ST X-15 rear intake and rear exhaust speed engine, complete with mini-pipe. Never used. \$65. Bruce Chisholm, 519 Locust St., Owensboro, KY 42301, (502) 684-9891.

FCR SALE: One OS .40 SR new, \$55. Four K&B 6.5 RR, new, \$70 each. One K&B 4OS, Garner ring and piston, new, \$75. Two 10 $\frac{1}{2}$ mm Rossi cranks, \$16.67 each. Five bushed Rossi rods, \$6.50 each. Plus a full list of K&B parts at 30 percent off retail, and lots more too numerous to mention. Scott Newkirk, 9543 Interlake N., Seattle, WA, 98103. (206) 522-2231.



RANDOM TIPS AND RIBS FROM THE FL WORKSHOP FLOOR

====Rumors are afoot that the missing Portland Aeroliners are back in action. The club is reforming, soon to have a new name, and Pat Webb as president, our source reports. Welcome back, Aeroliners! The club's first event is Stuntathon '80, an all-stunt funfly. See elsewhere in the newsletter for details.

====A combat Drizzle Circuit? Well, maybe. Gene Cape of Eugene is thinking about a winter circuit of two or three combat contests. Details may be forthcoming.

====Twenty pit stops? Oh, my aching flippin' arm! That's the rule, 20 pit stops, in the 100-mile rat race contest at a September contest of the Edmonton, Alberta, Birds of a Tether.

====Another rumor is that our district's Homer Smith may be a candidate for AMA president. It's also rumored that Homer may do a little "campaigning" on the Drizzle Circuit this year? What say, Homer? LATE NEWS ITEM: Model Aviation magazine reports that Homer is indeed a candidate for AMA president. Since he is our region's "man in Washington," FL will invite Homer to make a statement for publication next month.

AD RATES

Advertisements in Flying Lines cost \$5 per issue for a half page, \$3 per issue for a quarter page, \$10 a year for a Hobby Shop Directory listing, and \$1 per five lines of classified ads. Political ads pay full rate. Write FL, address on masthead.

By the way, every FL reader who is interested in keeping the newsletter alive is hereby deputized as an ad salesman. Take this issue of FL to your hobby shop, etc., and sell an ad. Every person selling an ad or subscription to FL will receive one official "Attaboy."

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AIR MAIL

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



DEAR FL:

We received your letter and we're very interested in your raffle ideas. I've gone ahead and taken the liberty of forwarding a Fireplug and Charger to you. We would like to exchange it for advertising.

Please let us know the results of the raffle, as we're always interested in what's going on in the field.

Thank you for your personal support as well as the support of Flying Lines.

--M. Douglas Winn, Public Relations, GloBee Division, Twinn-K International, Inc., P.O. Box 31228, Indianapolis, Ind., 46231.

(EDITOR'S NOTE: Many thanks to Twinn-K for making our current raffle prize available, and for giving a hoot about what happens to control-line modelers.)

DEAR FL:

Boy would I like to have a GolBee Fireplug! We don't have a dog, but I could use it to start the Fox .35 on the Tutor + had to buy to replace the one I didn't win (in the last FL raffle). Be sure to wrap it good before you mail it. I'd hate to have it damaged in transit. Keep sending the newsletter even if I don't get the Fireplug.

--Raymond Lefrancois, 465 Chinquapin Trail, Christiansburg, VA 24073

DEAR FL:

(This is an excerpt from a letter from Dave Green, president of the North Coast (Oregon) Control-Line Aeromodelers' Society (CLAMS). Dave reports on, among other things, a demonstration flown in a city park at the Seaside, Ore., Lewis & Clark Festival. The demo was Sunday, Sept. 21. --Editor.)

Bill Varner and I flew, and Chris Genna, Niels Madsen, Tom Leach and Tom Tetlow helped and answered questions from the crowd. We suffered from a lack of a public address system but everything went fairly well. We had good crowd response and several interested people.

I flew Jim Cameron's three-line stunter and my Twister. Bill flew two flights with a fast combat. It's a real crowd pleaser.

Incidentally, this is the first time that someone has approached us about flying a demo. Usually it's the other way around. This was done in conjunction with a Lewis and Clark Days promotion in Seaside.

I just read the latest issue of Flying Models and was pleased to see that the CLAMBash '80 made the "With Model Builders" column. They gave Flying Lines a good plug, too. Nice. It was interesting to find out that you and Mike are members of the CLAMS, though. Always nice to pick up new members.

...I'll see you at the first DC. contest...

--Dave Green, 200 W. Franklin, Astoria, OR, 97124.

DEAR FL:

Enclosed is my subscription renewal.

Keep up the good work. Yours is the best newsletter I have had the pleasure of reading. It has been instrumental in learning how to read again after being partially blinded...

--Dave Robinson, 129 Sheridan Rd., Bremerton, WA 98310

DEAR FL:

Just a quick note to lay claim to a name for our racing entry. If not already selected, enter the Mullens entry as "Dizzy." If Dizzy is already spoken for, we'll settle for "Half-Fast." It's looking as if there will be a few more Skyraiders on the circuit this year.

--Dave Mullens, 15559 Palatine Ave. N., Seattle, WA 98133.

DEAR FL:

...Here are the names of planes we will be competing with (in the Drizzle Circuit) this coming year: Jason Just (NWSR) -- "Miss Head." Joe Just (NWSR) -- "Miss Take," or "Miss Alignment."

These names kind of fit into the name I've chosen for my new stunter, "Miss Conception," which has been in the building stage for almost a year -- sure hope the damn thing lasts a full year flying...

--Joe Just, 713 Crescent, Sunnyside, WA 98944.

(Editor's Note: Don't feel bad, Joe, our stunter's been in the works almost two years!)

AIR MAIL, continued

DEAR FL:

I have finally given and decided to build a NWSR plane...As for #s and a name, how about 00 and "Seahawker." Thank you, and we will see you at the races!

--Paul Walker, 1611 W. James Lane H-5, Kent, WA 98031.

DEAR FL:

...My new NWSS racer is named "Clockwork Orange." Hope to have it ready for the first DC meet.

--Tom Knoppi, 5922 35th Ave. SW, Seattle, WA 98126.

DEAR FL:

...You know, I'll have to send Tennison a quarter for that letter. The kid has a keen eye. But seriously, now, that was really nice. Hope to see you guys some time on the Drizzle Circuit.

--Orin Humphries, North 5208 Elgin, Spokane, WA 99208.

DEAR FL:

...If it has not been chosen I would like to name my Northwest Sport Racer the "Kamikaze Express" and, of course, use the numbers "0" on each wing in the form of big red meatballs.

--Rich Porter, 1988 Westown Dr., Stayton, OR 97383.

(Editor's Note: Rich sent us his entry in the GloBee Fireplug raffle scratched on the back of an Eveready battery's label!)

DEAR FL:

...Enter me in that rigged raffle of yours...It will be in your own best interests as well as the hobby's to let me win. For one thing, I didn't win the Tutor. For another thing I really need a new battery. My No. 6 Eveready is past its fourth birthday. The voltage is so low, all I can start is an .049 which I have diabolically mounted on a Q-Tee 2-channel RC (are-sea).

Now I know you wouldn't want me to fly that, and I haven't...yet. But no kidding -- no, don't try to stop me -- I will if I have to.

--Steve McFarland, 2265 Willamette, Albany, OR 97321.

A WEARY EDITOR'S SATURDAY NIGHT RUMINATIONS...

Here we are again putting the finishing touches on the 18th edition of Flying Lines, and one of those awkward little too small, too big spaces appeared. I'm kind of glad it did, because of what just crossed my mind.

With the Bladder Grabber a week away, we're hearing from various people making travel plans. Our own motley combat fleet is more or less ready.

But two years ago, when the FL concept was hatched, we wondered if there would be control-line contests in 1980. Things were definitely on the wane in the Northwest. FL was created to establish an underlying base for control-line modeling, something that would keep us together through communication.

Based on the flood of letters, questions, comments and feedback we get, FL filled a vital need. It's always teetering on the brink of financial ruin, but your faithful subscriptions, ads, raffle money and other assistance has kept us in the air. Your many great articles and letters speak for themselves.

FL, so far, is a success, thanks to all of you who saw the need for a communications network and embraced the FL concept. And C+ model aviation seem to be on the rebound in this region. We can't help but perceive a relationship

HOBBY SHOP DIRECTORY

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HOBBY HOUSE -- Control-line, free-flight and RC supplies. 10011 Holman Road N.W. Owned by Allyn Johnson (206) 782-1609.

HOBBIES, ETC. -- Specializing in control-line, free-flight and RC. Complete stock of engine parts. 16661 Redmond Way, Dept. FL, Redmond, WA 98052. (206) 883-2811.

WIN A FIREPLUG TO FIRE YOUR PLUG

Last chance for entering the Flying Lines GloBee Fireplug raffle!

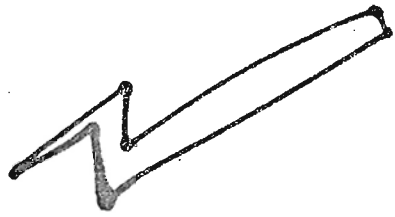
The prize is a GloBee Fireplug battery, with adjustable output and meter to show the glow plug's condition.

The drawing will be held Oct. 20. This is your last chance to take a chance! Price of tickets is 50 cents each, three for \$1, and seven for \$2.

Name _____ Number of tickets _____

Address _____ Amount enclosed _____

FLYING LINES
NEWS FLASH



NOTICE TO FOX 35 BUYERS

FL RECEIVED WORD BY TELEPHONE FROM FOX MANUFACTURING JUST BEFORE GOING TO PRESS (OCT 8) THAT THE ORDER FOR 44 FOX STUNT ENGINES HAD BEEN RECEIVED.

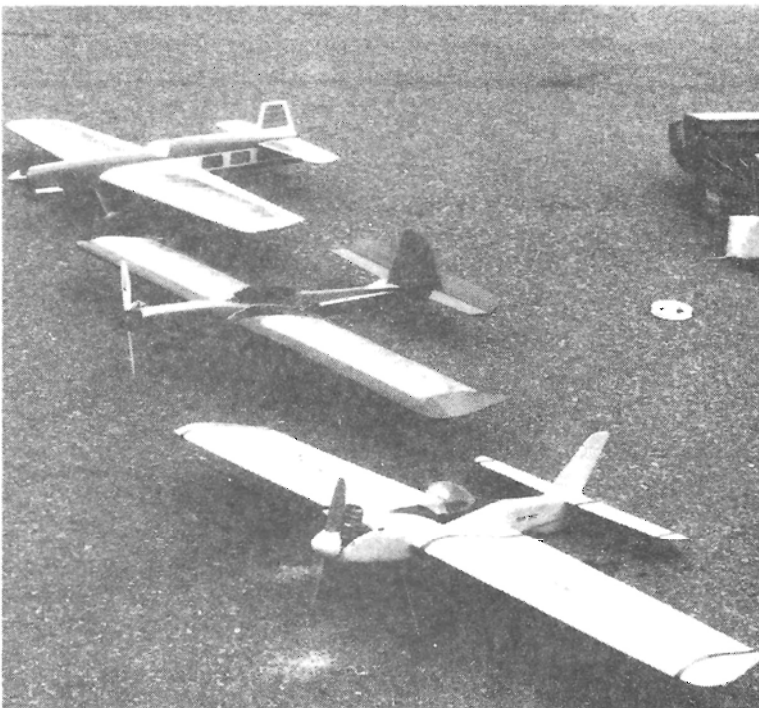
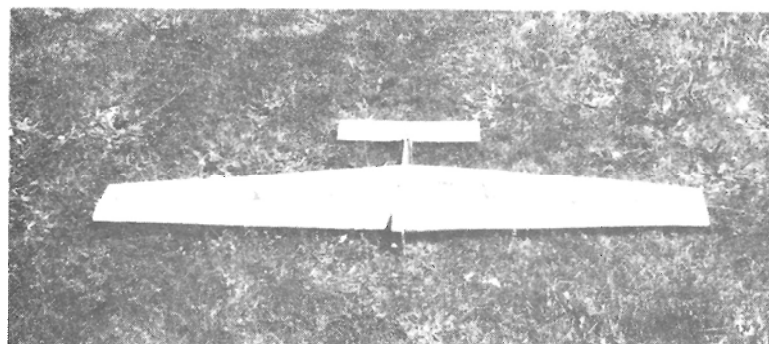
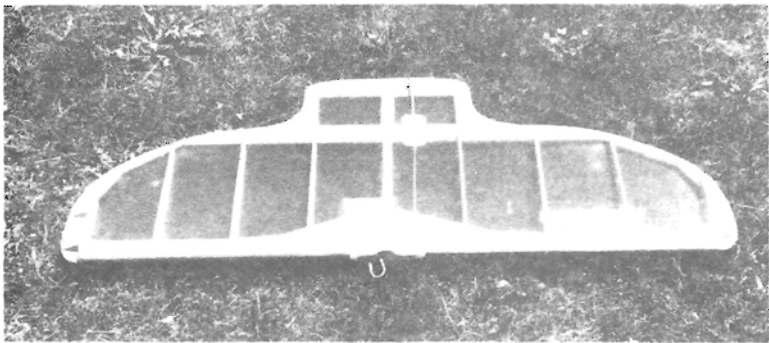
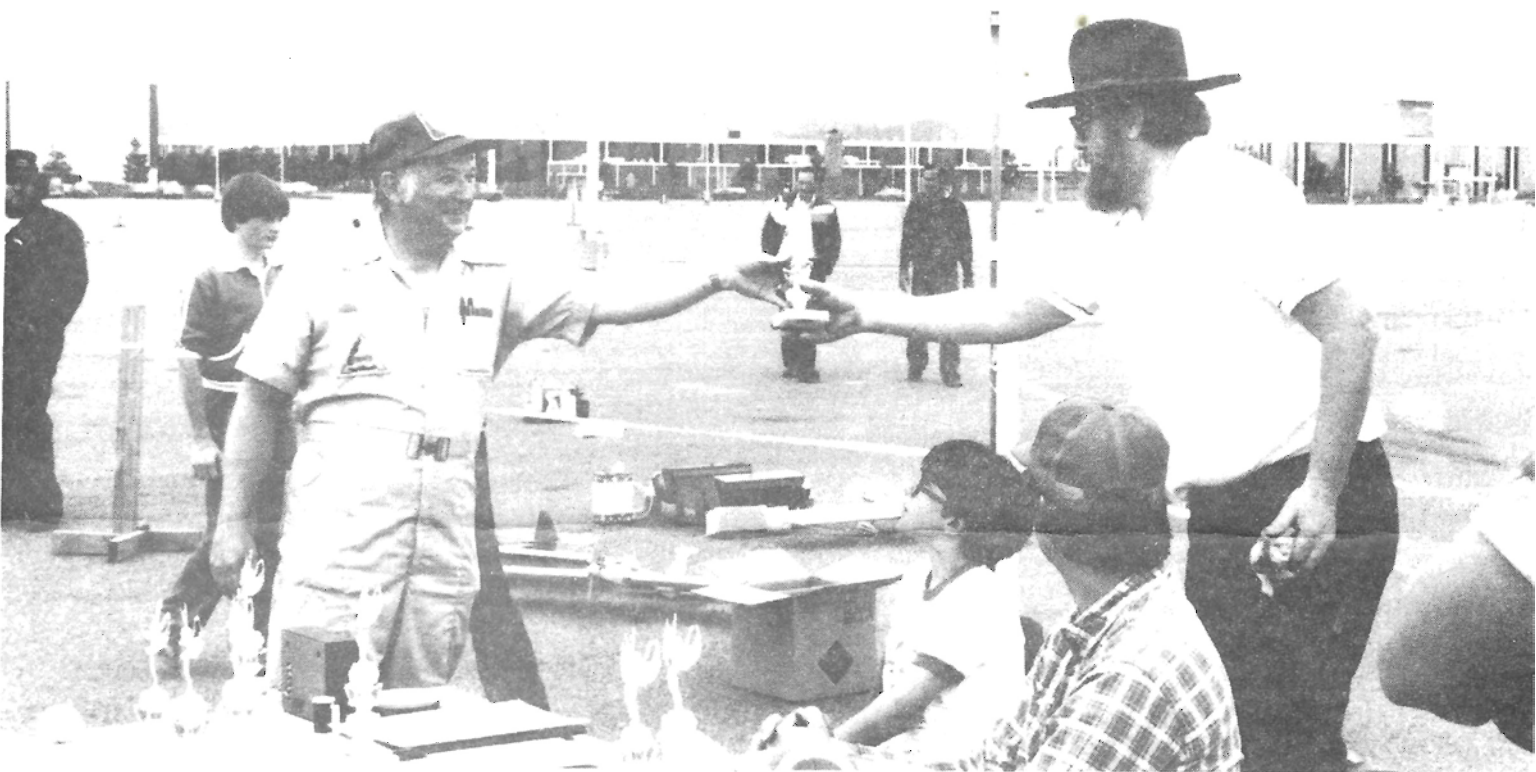
HOWEVER, FOX OFFICIAL KEN GREEN SAID THERE WILL BE A DELAY IN SHIPPING THE ENGINES TO FL. FOX'S STOCK OF ENGINES WAS EXHAUSTED JUST BEFORE THE ORDER ARRIVED. PARTS ARE BEING MADE AT THIS WRITING.

GREEN SAID THE BIRST BATCH OF THE ENGINES WILL BE AVAILABLE WITHIN SIX WEEKS TO SIXTY DAYS. THE FIRST AVAILABLE ENGINES WILL BE SENT TO FL.

THESE NEW ENGINES ARE FOX'S 1981 MODEL. FOX AGREED TO HONOR THE PREVIOUSLY AGREED UPON PRICE.

BASED ON THE ABOVE INFORMATION, WE EXPECT TO RECEIVE THE ENGINES ABOUT DEC FIRST, OR SOONER. WE WILL MAKE PREPARATIONS TO SHIP THE ENGINES TO BUYERS IMMEDIATELY ON THEIR ARRIVAL AT FL'S HEADQUARTERS.

APOLOGIES FOR THE DELAY, BOTH FROM FL AND FROM FOX.



SEATTLE SUMMER SPECTACULARS

Two contests highlighted July in the Seattle area, with the annual Boeing meet and a combat championships two weeks later. Top left, Buzz Wilson, second place in slow combat at Great Northwest Combat Championships. Top right, slow combat action. Center: Joe Just (hat) gets trophy for second place in beginner-intermediate stunt at Boeing Hawks Air Fair, Bob Emmett presents. Bottom, left: The top photo is plane brought back by Phil Granderson from World Championships, belonged to Russian Doroszienko, world champ. Bottom is AMA combat design by Ken Burdick. Bottom right: Lineup of stunters at Boeing. Photos by John Thompson and Ken Burdick.