

# NOVAAR

# FREE

# PRESS



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October-November 1975

Well here we go with another gala issue. As usual we're a little late, due to a screw up in paper availability. (I know that sounds weak but its really really true). Anyway this paper marks a landmark in the history of the **FREE PRESS**. There is mass cooperation in our ranks to get this issue out. Chris Tavares and Don Larson have teamed up to write and print the majority of this issue. Other club members have written articles and yours truly is still putting in his two cents down here in Dog Patch. That's right folks, we're so big we have to print in two locations!!!

At a past meeting the club decided to make our good ole Rag a bi-monthly publication. This will cut our club costs and make for a much more enjoyable newsletter. There are scores of other good reasons for such a change that I won't go into here. This is because you can read them in the newsletters of all the other clubs that have gone bi-monthly. It is just possible that this change is temporary for the dead winter months and that we will resume normal printing in the more active summertime.

This issue has several new columns in it. We also have some new product notes along with our normal super entertaining reading. No plans this month, but then, who are we to suppress individual creativeness. Seriously though, we'll try to get some to you next time. Maybe even two. !!! Now I'll stop running my mouth and get on with it.

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DON'S CORNER..... Don Larson

Ever since NOVAAR moved to McLean we've been having from 12 to 18 at every meeting. It sure looks like we have a very strong club this year. After two section meets NOVAAR has a total of 812 points. NOVAAR decided in July that we would go for the Section National Championships. We have three active age divisions flying this year.

NOVAAR will be flying at the Blue-Gray area meet in Va. somewhere this year. This means that each of us should try very hard to fly in this area meet. Saturday, Nov. 29 is the date to keep in mind. There will be rides to the meet and I'll have the applications to the meet on the Oct. 7-21 meetings.

NOVAAR has three National Champions and there are many others that are willing and able to help you design and fly rockets and gliders. Ask us questions and you will see the difference in flying and fun you'll have with your hobby.

For those of you that are interested in sport flying, why not come to the meetings and tell us of your sport flying. We've had underwater launches and rocket cars so far.

For the last few meetings we've talked mostly about competition flying. This includes glider flying, design, rocket design, and events that we will be flying this year.

We're all still looking for June, July, August, and September MODEL ROCKETEERS. I do know that June and July got to the mailing house early in Sept. but what happened to Aug. & Sept? I do have high hopes that the NAR will have a good, on time magazine soon.

At the Nov. 3 NOVAAR meeting I'm going to give a talk on "WHAT GLUES TO USE AND WHEN" and "WHAT PAINTS TO USE AND HOW". I hope others will give talks to.

Believe it or not there was a party at Denis Dean's home on Sept. 16. Seven of us had a very nice time playing pool.

In closing, I'd just like to say that NOVAAR meetings will be held from 7:30 to 9:00 P.M. from now till next summer. This is because our younger members can't stay out too late.

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\*\*\*\*NOVAAR Members point standings\*\*\*\*

A division	W*	points	*	B division	W*	points
David Alexander.....	2.....	77	*	Eddie Cheris.....	1.....	20
Michael Alexander.....	2.....	80	*	James LeCroy.....	2.....	88
Robert D'Antonio.....	2.....	26	*	Brian Kilgore.....	1.....	16
Denis Dean.....	2.....	07	*	Sam Jaskilka.....	1.....	50
Mark Friedlander.....	2.....	42	*	C division		
Joel Kenny.....	1.....	22	*	Randy Thompson.....	2.....	79
Joseph Nieroski.....	1.....	04	*	Paul Shelton.....	2.....	92
Arturo Solano.....	1.....	04	*	Daniel Winings.....	1.....	31
Sean O'Malie.....	1.....	21	*	Chris Tavares.....	2.....	70
Brian O'Malie.....	1.....	03	*	Howard Kuhn.....	1.....	36
Robert Vogel.....	1.....	24	*	Brett Lawler.....	1.....	30
			*	NOVAAR.....	2.....	812

\*weighting factor points that you have used up. You have 12 to use.  
(section meet- 1 point, area- 2 points, and regional- 3 points)

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Perhaps the most interesting substance that can be used for tracking powder is gunpowder. Not only is your rocket highly visible at apogee; it always ejects. Unfortunately there are still a few bugs to work out.....

By 9:45am the range was open for competition with 11 contestants at our large flying field near Manassas, Va. The wind wasn't too bad but it was blowing across the fence and road into the flower and corn field. The tracking was very good with only one, no close, the entire day. We all watched the Swift B/G's fly away with the Sparrow's. The weather was very nice and cool in the morning. Some of the B/G's just wouldn't stay on their pods at the rails. As a result the pods went up without the gliders.

As a club we ended up with 344 points. So NOVAAR now has a total of 812 points. I must say that all of you have done very well indeed.

DAVID ALEXANDER.....37  
MICHAEL ALEXANDER...50  
ROBERT D'ANTONIO.... 9  
DENIS DEAN..... 7  
MARK FRIEDLANDER....21  
JOEL KENNY.....22

EDDIE CHERIS.....20  
JAMES LECROY.....43  
PAUL SHELTON.....63  
RANDY THOMPSON....35  
CHRIS TAVARES.....37

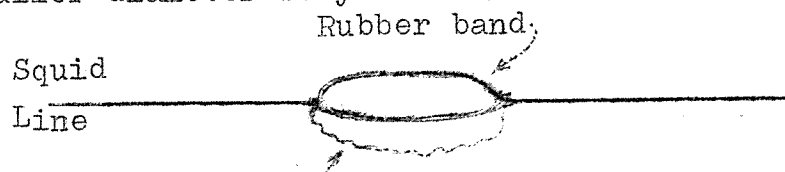
\*A-division won at NOVAAR-17 with 146 points. B-division had 2 flyers for a total of 63 points and C-division had 3 flyers for 135 points.

Again from the SPOTTER, it looks like we might have a spot for NARAM-18. And it looks like that spot is Center Valley. Carl Warner will be proposed for contest director. Cl. O P/D, PeeWee Payload, and Robin Egglof', NARAM standards, are being stayed away from.

THOR and SPEAR are handling the meet and SPEAR is constructing a computerized tracking system for use there. Let it suffice to say that it is fast. It will some kind of speed up tracking events.

### CONSTRUCTION    TECHNIQUE

Here is an idea for a small, light weight shock cord~~x~~ used for the smaller diameter body tubes.



Allow enough slack line to get a good "stretch" into the band before the slack runs out.

### CONTEST

### CALENDAR

November 29, 1975 - BLUE\* GREY, Area meet

EVENTS: Hornet R/G, Sparrow B/G, Open S/L, CL 00 P/D, CL 1 S/D, Gnat B/G, CL 0 ALT., CL 0 S/D, Design Efficiency.

December 14, 1975 - NOVAAR - 19, Section meet at Manassas.

EVENTS: Predicted altitude, Robin E/L, Single P/L, Pigeon E/L, CL 0 Altitude, Design efficiency, Fat 1 Altitude\*\*\*

\*Fat 1 Altitude uses only large diameter "A" engines (18mm dia.).

NOTICE: was held on Aug. 20 with 20 contestants, some flying for their first time in NAR competition. There are just a few changes in the results of the meet. Dan Meyer should have read Joseph Nieroski w/ 4 points. Denis Dean and Simon Salano had 0 points. The meet started on time at 11 a.m. with some rain during the day. It went as good as it could with 20 contestants flying from one six rail rack. This meet was sure a good start and I hope that we can keep it up. Here is a point breakdown by age division: 11 A division members got 164 points, 3 B division members got 111 points, and 6 C division members got 197 points for a total of 472 points.

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Here is a current listing of NAR members holding U.S. records.  
A division, Payload by Sam Jaskilka w/ 192 meters.  
A division, CL 1 altitude by Sam Jaskilka w/ 235 meters.  
B division, CL 3 S/D by Daniel Wininga w/ 111 sec.  
B division, CL 1 S/D by Brian Milgore w/ 63 sec.  
B division, Single payload by Dan Wininga w/ 428 meters.  
C division, CL 00 P/D by Brett London w/ 323 sec.  
C division, CL 00 S/D by Gloria Weaver at 59 sec.  
C division, CL 0 S/D by Larsen, Coffey team at 88 sec.  
C division, Hornet B/G by BS&E team w/ 344 sec.

At each meeting you may apply for a record simply by telling me.

Don Larson  
Record Subcommittee Chairman  
P.O. Box 157, Fairfax, Va. 22030  
(703) 591-3629

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#### Club and Group Area Meet

This meet will be flown on Sat., Nov., 20. It will be a one day meet with 9 events, which are Hornet B/G, Hornet B/G, Cnat B/G, CL 00 P/D, CL 0 S/D, CL 1 S/D, CL 0 Alt., Design E&E, and Open S/L. I'll have the entry forms for this meet as soon as possible. The club voted to fly at it, so let's go and get 'em fellas!!! We need riders, cars, and flyers. This is a full day meet for sure. You could fly this meet with one rocket and glider. The location of this meet is not known yet, but maybe Camp A.P. Hill, Va. You have two months to build and get ready for the meet. I hope they start the meet before 11:00 am, with 9 events, and 17 flights boys!!

Don Larson

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#### \*\*\*NEW PRODUCTS\*\*\*

Centuri has released a new line of sport rockets. Called SUPER KITS, the line consists of three new large, futuristic rockets. All three have great eye appeal and should be very impressive for those "attract new member" demonstrations. The first of these is a 30" alien flying saucer called the U.F.O. Invader. Next is a flying laboratory, the E.S.S. Raven, and rounding up the line the U.S.C. America, described as a presidential command post. Its colorful red, white, and blue decor should be perfect for 1976 demos.

The Sept./Oct. EPSTET brings us feelings of great joy in the form of some new engine releases. AVI is introducing Microjets. 3/4" 5 engines with dimensions of - get this! - 9mm x 1.25" (9mm equals 38 calibre equals BT-3). And you thought you had trouble getting a parachute out of a BT-5! Next is a D12 (23mm x 2.75"), an E12 (23mm x 4"), and a D6.5 (possibly 18mm). YAYYYYYY!!

## RELIABLE ROCKETRY

"Do I have to return ALL the pieces?"

This series will consist of a lot of disjoint tips on how to make your flights more reliable. Some of them involve trade-offs; some of them even conflict with others. They are here for your reference -- you decide which ones you feel are worth applying to your models.

This month we're going to beat on recovery systems. This is the single most probable place to experience DQ's, poor flights, etc.

### Recovery System Attachment

Don't mount your shock cord on the body tube. Ejection gases can't help but be hot, and sooner or later whatever you're using for a shock cord must burn through. Mount the cord on a fin. Pull it through the fin-body joint about 1/3 of the way down with a needle. On small models, you may lay the end along the joint and put an epoxy fillet over it. On gliders and larger models, you can tie it to itself in a loop, and epoxy the knot; or just make a knot, epoxy it, and pull it against the hole. The latter methods facilitate replacing the shock cord if for some reason you have to. Disadvantages: Using this method on pop-pod pylons may increase the likelihood of "Red Barons". Exceptions: events where neatness or drag are EVERYTHING, such as Scale, Altitude Efficiency, etc. But it is worth it for Eggloft, Payload, etc.

Use a back-up system for your shock cord. A good method to use is a "bung", where a continuous rigid cord (squid line, or other) connects the pieces, and two ends of a rubber band are tied to two points on the cord in such a way that there is a slack loop of cord between the knots when the rubber band is unextended. (See illustration.) If the rubber band breaks, the cord is still there to hold the parts together. And since you can't stretch the rubber band tighter than the slack in the cord will allow, it will break less often. Disadvantages: When using RB50 and like-sized tubes, take care that the whole kaboodle doesn't "bind up" and block the tube at ejection time, because the rubber band has a tendency to "grab onto" the walls of the tube.

Make sure your cord is long enough to let your recovery system out. If your shock cord starts tightening up before your chute or streamer is out, the chute or streamer will probably get burned, rip, or separate, or your shock cord could break, or any combination of the above. Disadvantages: Long shock cords have a greater likelihood of causing a glider to "Red Baron".

Use a relatively burn-resistant cord like squid line, and use rubber bands or sewing-store elastic fabric (like on Jockey shorts) for elasticity, depending on the size of your model and the strength required. If you don't need elasticity, don't use it. Example: A glider pod with a small streamer, using a CMR

nose cone. All those parts are virtually weightless and inertialess -- squid line will be sufficient.

### Recovery Devices

Don't use a parachute on a glider, because it makes a dandy "catcher's mitt" to trap the nose and cause a "Red Baron".

Don't use a streamer on a glider, because it's extra length will wrap around the glider, causing a "Red Baron". (I told you some of these would conflict!)

A good compromise is: Use a minimal-size streamer on a pod, preferably made of mylar. Mylar hasn't really got the friction to hold a glider long unless it knots. In any case, it's more fool-proof than crepe.

Don't "spike" your parachute. A carefully folded parachute not only opens better and sets less often, but goes in and out of the body tube smoother, and usually takes up about 70% less space! I prefer to fold my chutes by the "S" method: Fold in half to make a semicircle, then fold in thirds by folding one end TOWARD you, and the other AWAY from you. Do this until you can't handle it anymore, then fold lengthwise in half if it will fit, else in thirds. This method of folding makes a very "unstable" package; the chute will take any excuse to open up. Of course, when deployment time comes, that's the type of behavior you want!

Don't wrap shroud lines tightly around a chute or streamer. Wrap loosely if you must wrap at all. I prefer to put the lines in loosely after the chute or streamer is in, or to fold the lines inside the final fold of the chute whenever possible. First, a pull on the lines will help the chute to open; but mainly, the lines will have more protection between them and the ejection gases.

Don't start rolling a streamer from the end. If your streamer doesn't deploy fully, you can be DQ'ed. Fold the streamer in half repeatedly (once forward, once back, to give the same effect as an "S" fold) until it is less than two feet long. Then roll it tightly, making sure that the free end is on the "outer side" of the roll.

If you can't blow your recovery system out of your model with your lungs, it is too tight. (Don't inhale - especially not, as someone did last meet, with tracking powder in the bird!)

That's all I had planned for recovery system reliability. The next article will cover reliable ignition, and, if space permits, reliable glider separation.

## WHY DON'T YOU COME ON UP AND SEE US SOMETIME?

This issue of the NFP is being sent to a lot of folks who have never read it before. We'd like to invite all of you to drop in on a club meeting and see what you think about competition flying. NOVAAR has the use of a large (square mile) field in Manassas, where you can fly all those cloud-busters you've been aching to try. We also have an arrangement to hold launches at Cooper School in Langley, a bit smaller, but very convenient. And we have members who can (or will, anyway) answer your every question about the best way to do this, that, or the other thing. (Why just listen to these unsolicited testimonials! Mr. B. L. of Marshall writes: "It was fantastic! I learned more at one NOVAAR meeting than I did in two years of flying independently!" Mr. D. L. of Fairfax exclaims: "You've taught me everything I know!" Mr. J. LeC. of Springfield says: "I no longer stutter, and all my warts are gone!") Even if you just fly for fun, we have a lot to offer you. We have tracking scopes, a complete launch system, the run of two nice fields, and a great newsletter; plus arrangements for 10% discounts at selected hobby stores and from Competition Model Rockets, a major manufacturer of rocketry supplies. We meet every other Tuesday night at 7:30 at Langley School. Next meeting is October 7. Directions:

From the west end of the Beltway going North, take the McLean exit (Route 123 East). Proceed about a mile. The second light is the intersection of 123 and Lewinsville Road. Turn left (north), then take an immediate right onto Balls Hill Road. Pass the police station, and a few hundred feet in you will see the school on your right. Follow the signs to find the right room.

Call Don Larson at 591-3629 for more information. Hope to see you there!

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### COUNTDOWN CALENDAR

Tuesday, Oct. 7	NOVAAR Meeting, Langley School, 7:30. Every two weeks.
Sunday, Oct. 19	NOVAAR-18, Cooper, 9:00. Events above.
Saturday, Nov. 29	Blue/Gray. Hanover/Bowling Green area. Events above. NOVAAR is flying as a club.
Sunday, Dec. 14	NOVAAR-19, Manassas, 9:00. Events above.
April sometime	ECRM. Probably Camp A.P. Hill. No events yet.
Sunday, May 25	NOVAAR-20. Events to be chosen.
June sometime	Virginia Area Competition and Utterly Ultimate Meet (VACUUM-1) Manassas. NOVAAR will sponsor. If you don't like the name, now's the time to complain.

# FINANCIAL SECTION

We received a check for \$1.80 last week from Aerospace Vehicles, Inc., for a year's subscription to the NOVAAR FREE PRESS. NOVAAR thanks AVI for this concrete evidence of their exceptional interest (not to mention good taste), and hereby honors AVI with Paid Subscription #1! (Line forms to the rear, folks!)

And while we're on the subject: our Gift Certificate for \$50 for holding our VanDyke Park Demo arrived from Estes two weeks ago. Thank you, Estes; and rest assured it will be spent wisely (and quickly!)

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"Why 'quickly'?", you say? Because of all those

## UPCOMING MEETS

NOVAAR-18 will be held on October 19, at Cooper School, from 9:00 to 4:00. Events are:

Hornet R/G	Hornet B/G
Class 00 P/D	Class 0 S/D
Gnat B/G	and (what else?) Open Spot Landing!

Blue/Gray will be held (at Hanover Air Park if we can talk the Vikings into it; otherwise) at Camp A.P. Hill on Saturday, November 29. RIDES ARE AVAILABLE FOR THE ASKING! Let's show the national champs that they'll have to work for it this year. The events are:

Sparrow B/G	Gnat B/G
Class 0 Alt.	Hornet R/G
Class 0 S/D	Class 1 S/D
Class 00 P/D	Open Spot Landing
Design Efficiency	

There are too many events to fly unless you come prepped! Don't expect to set up everything when you get there! Bring food and drink, and if we fly at A.P. Hill, bring a tank to ride so you won't break a leg on the permanent tread tracks.

NOVAAR-19 will be held on December 14 in Manassas, and will consist of ALL ALTITUDE EVENTS! (After NOVAAR-17, where the tracking events were marred by only ONE NO-CLOSE and NO LOST TRACKS, we decided that we have it, and we're going to flaunt it!) Launch time is from 9:00 to 4:00. Events are:

Predicted Alt.	Robin Eggloft
Single Payload	Pigeon Eggloft
Class 0 Alt.	Fat 1 Alt.*
Design Efficiency	*(only 18mm A's allowed)

The usual admonitions apply. (Bring food and drink. Also, bring GLOVES.) Don't forget the TRACKING POWDER.