

# COUNTDOWN

THE NEWSLETTER OF THE SOUTHERN PENNSYLVANIA AREA  
ASSOCIATION OF ROCKETRY, NAR SECTION #503



## A DOG DAY AFTERNOON



Glenn Feveryear's Sounding Rocket 'Dog



John Yost's Grumpy Martian 'Dog

The August 4 Sport Launch was to be our "Dog Day Afternoon", and it lived up to all expectations!

Weather-wise, it was definitely a "Dog Day" - hot, very hot in fact. Dog-wise, the Grumpy Dogs built by members were flying all over the place. 'Dogs were flown by Jim Cox, Dale Jacobs, Ivan Barnsely, Glenn Feveryear, John Yost and

George Beaver. Most were "stock" 'Dogs—and then there were those with a little more "kick", like Ivan's "3-Legged Dog" [guess what the "legs" were?].

Some other entertaining flights were Joe Skitka's Alpha, powered by a D12-7; Dale Jacob's Fat Boy on an E9-6, and Tony Rossi's Video

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Rocket, which he flew on a variety of motors.

Thanks to all who attended, and who set up, worked, and then took down the range. Without you, we couldn't fly!

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**COUNTDOWN**

Volume 14, Issue 5  
September/October 2002

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Thanks this time to:

Mark Kamide  
Glenn Feveryear  
Mick "Mailing Labels" Spencer  
Tony "We'll Figure This Out" Rossi

SPAAR  
PO Box 127  
Reamstown, PA 17567

Visit the SPAAR Website:

[www.spaar.org](http://www.spaar.org)

**"LET'S ROLL"**

## A SPECIAL MESSAGE FROM THE SECTION ADVISOR -Glenn Feveryear

**MADROC**

The largest concentration of competitors has typically been in the Northeast. Any that have competed at RAMTEC over the past ten years have gone up against more nationally ranked competitors at one time than at any other meet with the exception of NARAM. Although this may seem a daunting task for a new competitor, there is no better preparation and opportunity for learning than to compete against this level of experience.

At one time there was primarily the NOVAAR and NARHAMS sections offering regular contest launches. SPAAR expanded that offering by taking over the WUBBA series from Art and Janet Rose, establishing RAMTEC as a model for regional contests. In 2001, Pittsburgh Space Command expressed interest in expanding the regional contest offerings to the Western part of the Commonwealth. With four sections within a few driving hours of each other it was becoming increasingly obvious that the sections needed to collaborate in scheduling these activities, supporting each others events and at the same time providing opportunities for their more local oriented competitors.

With the apparent loss of our flying field in Center Valley, the time was right for the four sections to organize. At RAMTEC-10 in the waning hours of the afternoon, in the back parking lot of the residence hall, MADROC was born. Although I can't recall exactly what MADROC stands for, I will suffice it to say, something like, Mid-Atlantic Division of Rocketry Competition.

MADROC is a collaboration of PSC, NOVAAR, SPAAR and NARHAMS with the goal of providing three NAR sanctioned regional meets each contest year. The idea being that with regularly scheduled contests, members of the different sections will have plenty of time to build and prepare for each meet. Also, it is expected that each section would commit to supporting the other sections meets, thus helping to ensure a sizable turnout and a successful meet.

With there being 4 sections and only three regionals, the responsibility for each section to host a meet will rotate each year. Since SPAAR could not guarantee a site for June of 2003, we stood down this year, leaving PSC, NARHAMS and NOVAAR to host the first rotation of meets. Along with the union comes another opportunity to be recognized as a big time competitor. As the season moves along, contest points earned at each meet will be accumulated and the competitors with the most points at the end of the contest year, in each age division, will be awarded the MADROC Championship.

PSC has already held the first meet of this season. It was Steel City Smoke Trails-2 in October. The next event is ECRM-30, hosted by NARHAMS in Middletown, MD on May 17-18, 2003. The events are Peanut Sport Scale, 1/4A Boost Glider Duration, A Helicopter Duration, Set Altitude (150 meters), Random Altitude (must be flown before Set Altitude), Open Spot Landing. NOVAAR will complete the contest year with a MARS regional on June 14-15 in The Plains, VA, events to be announced.

The best way to prepare for these events will be to participate in the winter workshop series on "competition rocketry" that SPAAR is hosting during the months of January, February and March. This will be your opportunity to ask questions of the BTC of SPAAR, to hear the tricks and tactics of flying competitively in the Northeast.

Remember, for MADROC to succeed, we need to support all of the participating sections with our attendance. These will be great opportunities to meet the members of the other sections, talk rocketry and test your skills against some of the best in the NAR.

## **SPAAR WINTER WORKSHOPS: An Introduction To Competition Rocketry**

For the past 12 years, we have held Winter Workshops on Saturday mornings in January, February and March. For the first few years, these workshops were on specific topics, such as Basic Construction and Finishing Methods, Competition, High Power, and Advanced Finishing Techniques.

For 2003, the Workshops will be held on January 11, February 15, and March 8. These are all Saturdays. Our monthly meetings will start at 9:00AM, with the Workshops after the business is taken care of. For 2003, our program will again focus on competition rocketry. This is an area of our hobby that most of us have heard about, and some of us have dabbled in. IN SPAAR, we have a number of flyers who have more than just "dabbled" in it - Glenn Feveryear, John Yost, Dale Greene, and Dave O'Neal have flown in contests for years; Glenn was the NAR C Division National Champion for a year in the late 90's. Talk about a great resource!

What the program will focus on is an introduction to competition, for those of us who want to try it out. We will be building two models - one that can fly in both the Streamer Duration and Parachute Duration events powered by 1/2A or A motors, and a Boost/Glider suitable for the 1/2A and A B/G events. These two kits will be purchased from Qualified Competition Rockets in Springfield, VA. Ken Brown, a long-time NOVAAR member and an old friend of SPAAR, runs QCR. Ken started QCR around 1990, to cater to those just getting started in competition. Even though that are simple designs, QCR kits have consistently placed in NAR contests from club meets to NARAM.

The club has decided to purchase these kits [\$14 for the pair] and make them available to participants for free. Now there's a deal you can't pass up! What's the "catch"? Not much, really. Participants are asked to make it to the workshops to build the models as part of the program, and to fly them in a club-sponsored contest later on during 2003. Partici-

pants will have to provide their own construction supplies, such as glue, sandpaper, a modeling knife and straight edge. The rules for each event, as defined by the NAR Pink Book, will be presented as well as flying strategies. You will also have to provide your own motors.

We will need a head count on the number of members who want to participate, so that we will know how many kits to order. As of this writing [late October], a total of seven members have committed to the program. How about you? Please let me know by December 1, so that the order can be placed for arrival in January. You can contact me at parrothead@dejazzd.com, or 733-4170.

George Beever

## **MONOCOPTER PLANS**

### **SPORT PLAN**

**BY MARK KAMIDE**

Pages 4 and 5

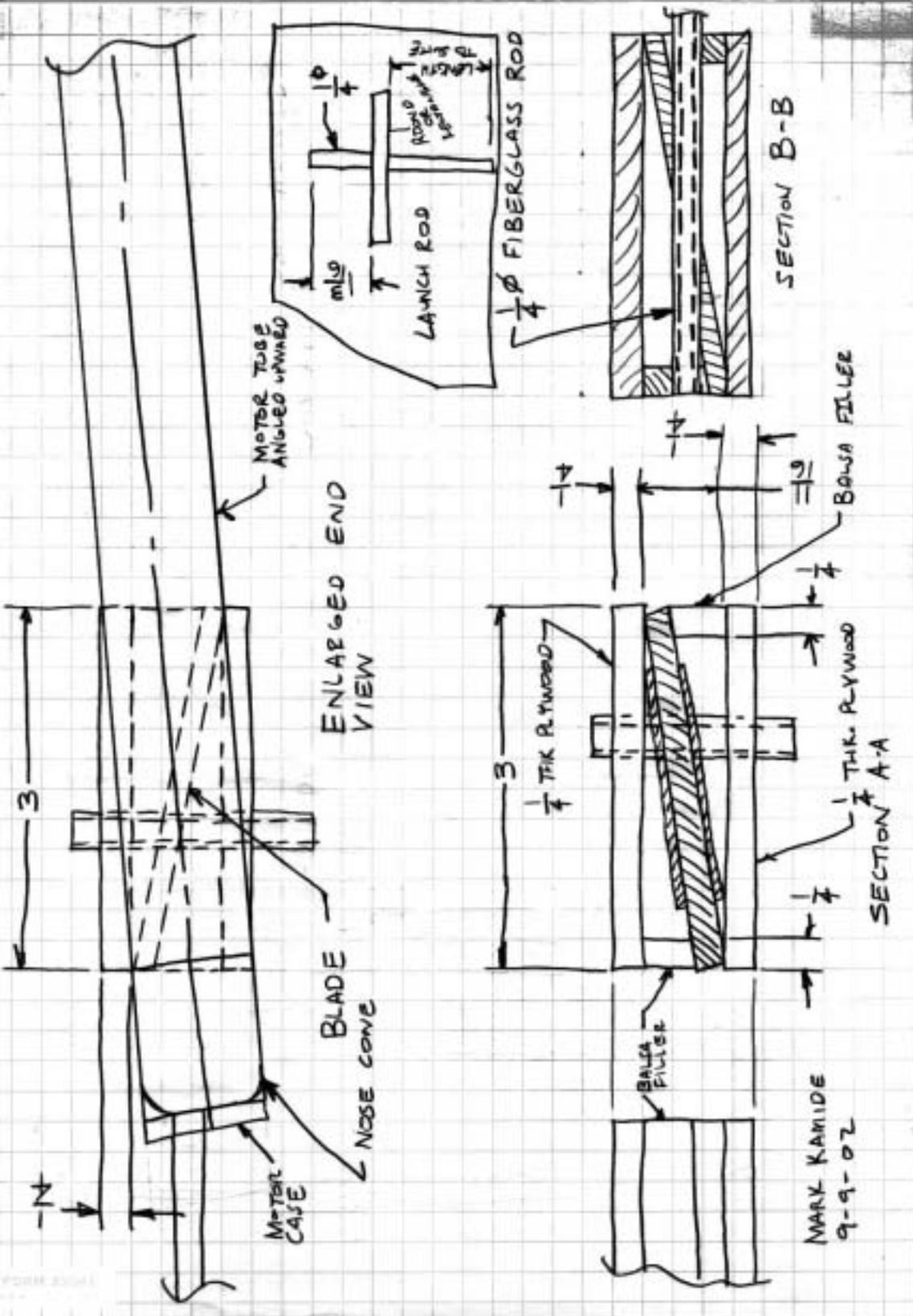
Mark Kamide has provided us with construction plans for his version of a rocket-powered Monocopter, seen on the following pages.

Mark designed and built the model after seeing several of Ed Miller's designs launched at SPAAR launches.

The biggest, most obvious difference between Mark's design and most other Monocopter designs in this power range is the inclusion of a parachute recovery system. The parachute is carried in a separate section of 29mm body tube, with ports cut in both it and the motor mount tube to allow for the passage of the ejection charge gasses. Many designs feature nothing more than the good old "tumble" recovery, often resulting in broken wings and other assorted parts. Standard mid- to high-power rocketry construction techniques are used throughout. It is recommended that you have experience in these techniques and with flying mid- to high-power rockets before you attempt this project. Enjoy!



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TOPS FORM 2504

# FLIGHT LOG

August 4, 2002

Fl#	Name	Model		Motors	Result
1	Ivan Barnsley	Scratch	3-Legged Dog	Estes D12-0[2]/C11-3	Good Flight
2	Ivan Barnsley	Scratch	3-Legged Dog	Estes D12-0[2]/D12-5	Good Flight
3	Ivan Barnsley	Scratch	Party Favor	Aerotech F20-7WL	Good Flight
4	Ivan Barnsley	Scratch	Party Favor	Estes D12-3	Good Flight
5	Ivan Barnsley	Scratch	3-Legged Dog	Estes D12-0/D12-3	Good Flight
6	Ivan Barnsley	Scratch	Flying Jenny	Estes A8-3	Good Flight
7	Ivan Barnsley	Scratch	Hummer	Estes D12-0/C6-7	Good Flight
8	Ivan Barnsley	Scratch	Up-Scale Spaceman	Estes C6-3	Good Flight
9	Ivan Barnsley	Scratch	Gyroc 1.33X	Estes A8-3	Good Flight
10	George Beever	Scratch	Orbital Transport	Estes C6-5	Good Flight
11	George Beever	Scratch	Grumpy Dog	Estes D12-0/D12-3	Good Flight
12	LeRoy Bonawitz	MSH	V-2 [2.6]	Estes D12-3	Good Flight
13	LeRoy Bonawitz	Estes	Cheshire Comet	Estes D12-3	Good Flight
14	Chris Cox	Custom	Ion Pulsar	Estes B6-4	Good Flight
15	Chris Cox	Scratch	Rotaroc	Estes B6-2	Good Flight
16	Chris Cox	Scratch	Spaceship	Estes 1/4A3-4	Good Flight
17	Chris Cox	Scratch	Big Bertha	Estes D12-0/D12-5	Good Flight
18	Chris Cox	Custom	Satellite	Estes A8-3	Good Flight
19	Jim Cox	Scratch	Grumpy Dog	Estes D12-0/D12-5	Good Flight
20	Jim Cox	Scratch	Mini-Dactyl	Estes A10-3	Good Flight
21	Glenn Feveryear	Scratch	Grumpy Dog	Estes D12-0/D12-3	Good Flight
22	Glenn Feveryear	Scratch	Grumpy Dog	Estes D12-0/D12-3	Good Flight
23	Glenn Feveryear	Estes	Big Bertha	Estes B6-4	Good Flight
24	Rick Hackman	Scratch	Orbital Lab	Estes A8-3	Good Flight
25	Rick Hackman	Scratch	Kamikaze Baka	Estes A8-3	Heads Up
26	Rick Hackman	Scratch	Sprint	Estes A8-3	Unstable
27	Rick Hackman	Scratch	Roc-A-Chute	Estes A8-3	Good Flight
28	Rick Hackman	Scratch	Scorpion	Estes B6-4	Good Flight
29	Rick Hackman	Scratch	Gigantic-Roc 2A	Estes D12-3	Unknown
30	Dale Jacobs	Estes	Fat Boy	Estes E9-6	Unknown
31	Dale Jacobs	Scratch	Grumpy Dog	Estes D12-0/D12-3	Good Flight
32	Dale Jacobs	Edmonds	Deltie BG	Estes A3-4	Good Flight
33	Steven Luzeski	Aerotech	Initiator	Aerotech E15-4WL	Good Flight
34	Steven Luzeski	Estes	Super Big Bertha	Estes D12-3	Good Flight
35	Steven Luzeski	Pratt Hobbies	Positron	Estes 1/2A6-2	Good Flight
36	Steven Luzeski	Estes	Baby Bertha	Estes B6-4	Good Flight
37	Tony Rossi	Scratch	Video Rocket	Aerotech E18-4RMS	Good Flight
38	Tony Rossi	Scratch	Video Rocket	Aerotech E18-4RMS	No Chute
39	Tony Rossi	Scratch	Video Rocket	Estes D12-3	Good Flight
40	Joe Skitka	Estes	Star Dart	Estes B6-6	Good Flight

41 Joe Skitka	Estes	Alpha	Estes	D12-7	Good Flight
42 Joe Skitka	Estes	Comanche-3	Estes	D12-0/C6-7	Good Flight
43 Joe Skitka	Estes	V-2 [100mm]	Estes	E9-6	Good Flight
44 John Yost	Scratch	Grumpy Dog	Estes	D12-0/D12-3	Good Flight
45 John Yost	Scratch	Grumpy Martian Dog	Estes	D12-0/D12-3	Good Flight



Left: The "Grumpy Dog" decal, created by Ed Miller, adorns George Beever's 'Dog; Tony Rossi approaches his Video Rocket—gee, could it be to replace yet another "Crapper Head" igniter??

Below: Steve Luzeski's Initiator lift's-off under E15 power



Right: The "Big Pineapple" himself, Dole Jacobs, with his 'Dog. Dole's was by far the best paint scheme seen on a Grumpy Dog that day. Far Right: George's scratch-built Estes *Orbital Transport* clone; just after he built it from plans downloaded from Jim Z's website, and finished it with a decal set from Tango Papa, Estes re-released it as a "Classic Kit". Nice timing, Beev.





Kit Review:

## Estes MERCURY REDSTONE

- by George Beever

This particular incarnation of the 2.1" diameter Mercury Redstone was released by Estes in 2000. It has quite a pedigree—but more on that later.

First, however, a bit about the subject—the Mercury Redstone launch vehicle itself.

The Redstone Inter-Mediate Range Ballistic Missile {IRBM} was developed

As for the model, Estes released a version designed around the 1.6" diameter BT-60 in 1969, and competitor Centuri followed suit in 1971 with a larger version designed around their 2.1" diameter tube. The current Estes release is a direct descendant of the Centuri 1971 release. The original Centuri model featured a molded plastic Mercury capsule and escape tower—it is the same one used today on the new Estes version.

At the US Army's Redstone Arsenal in Huntsville, Alabama in the early to mid-1950's by Werner Von Braun's team of scientists. These German technicians had developed the infamous V-2 for the German Army during World War II, and had elected to come to the United States at the close of hostilities. A number of features of the V-2 were incorporated into the Redstone, including the steering vanes attached to the fins.

The Redstone was also used as a space launch vehicle, forming the basis for the famous "Jupiter-C" that launch the United States' first satellite, Explorer 1, in January 1958.

With the advent of Project Mercury, the United States' effort at putting a man into orbit, a launch vehicle was sought that had the power to orbit the Mercury spacecraft. The Air Force's Atlas ICBM was chosen, but was still suffering teething problems—it had a nasty habit of blowing up. With the launch of Vostock 1 by the Soviet Union in April 1961, the USSR had beaten the US into the field of manned space flight. Not willing to wait until 1962 for the Atlas, NASA elected to use the reliable Redstone to launch the first two Mercury missions on sub-orbital flights—suborbital since the Redstone lacked the power to place the Mercury spacecraft in orbit. Freedom 7, with Alan Shepard aboard, launched on May, 1961, and Gus Grissom followed on Liberty Bell 7 on July 21.

In the early 1980's, Estes released the old Centuri kit under their brand name, after the two companies had merged. This kit retained the built-up balsa fins. In effect, it was an exact clone.

This new version does away with the wooden fins, and replaces them with plastic units. Another change are the self-adhesive decals, which incorporate the upper body roll pattern, as well as the black/white scheme of the fin unit. The launch lugs are also through-the-wall plastic units. In short, Estes has "dumbed-down" the kit, aiming for the beginner market. The body tubes are even coated with white paper, which with the addition of the self-adhesive decals, allegedly does away with the need for painting the Redstone portion of the model.

I have read a review of the this kit that describes the capsule/escape tower assembly as being made of "well-fitting" parts. PUHLEASE!! I know of first marriages that were better fits! But I jump ahead of myself here.....

### Estes MERCURY-REDSTONE kit review, cont.

Last year, I purchased two of these kits, one for my son Mark [then 12] and one for me. The idea was for us to build them side-by-side, and see what would happen. Besides, Mark has a “thing” for the Mercury Redstone vehicle—it’s his favorite space booster.

The motor mount uses plastic centering rings, to which the fins are attached in through-the-wall fashion. Even though I grumble at so much plastic, this feature does ensure exact location of the fins, and does add a bit of structural strength.

The fins themselves appear well-molded, and they do eliminate the need for sanding the unique wedge-shape of the Redstone fins. The weird thing is, what you wind up with is a plastic version of the same mistake made by Centuri years ago—the fins are too big and for their size lack much of the detail that even the old, smaller Estes kit had. OK, OK, I’ll knock it off....

One of the problems with the earlier incarnations of this kit was the shifting of the CG/CP mojo as the parachutes slid down the body tube at lift-off—a condition that even those over-sized fins couldn’t correct. This resulted in more than one instance of the fins wanting to come around and meet the capsule. To help correct this, I had Mark install common toothpicks in a cross-wise fashion halfway down the body tube, to keep the chutes from going rearward to far.

We were both rocking right along with the kits until we came to that capsule assembly. Here’s where we cheated a bit—after watching him fumble around with the pieces and start to become frustrated, I got out the trusty Exacto knife and did some trimming on the parts, in order to obtain a better fit. That, and some masking tape [what would we do without it?] to hold the thing together as the glue dried, did the trick.

As for the finishing on Mark’s model, I just could not bear to allow him to put those stickers, I mean self-adhesive decals [!] on an unpainted tube, white or not.

Out came the Krylon gloss white [he didn’t want to bother with primer], and after two or three coats, Dad felt better. Then came problem #2. The instructions have you place parts of the aft roll pattern on the model prior to gluing on the fins—which means we he could not have painted it. But, with some cutting and trimming, he got it right. Next came the capsule. Again, with Estes going for the beginner, the instructions have you gluing the escape tower to the capsule prior to painting—which will result in a mess if you plan to use spray paints. He opted to spray the capsule black, then glue on the tower and hand-paint it red. It came out OK [I guess, grumble grumble]. The parachutes in our kits were pre-assembled [ever wonder what those Chinese folks are thinking about us while they are putting these together?].

As for my kit, I primed and painted as I normally would, but I opted to use a water-slide decal set for this model produced by Tango-Papa. A little tricky to use, but much more pleasing to the eye than those stickers...oh, alright, those SELF ADHESIVE “decals”. I went with the flat finish, Mark with the glossy. A matter of preference.

The kit packaging suggests using B6-4 or C6-3 motors when flying the Mercury Redstone. However, the only motor I would use in this model is the C6-3. Unless, of course you’ve done as some did with earlier versions and converted it to fly with 24mm D12’s— but watch that CG/CP thingee if you do!

The result is a nice first scale-like model for young beginner’s like Mark. He thoroughly enjoyed the build, ignoring Dad’s fussing about this and that. It’s a fun flyer, and all in all, worth the money.

## **SPAAR NEWS & NOTES.....**

Contest Information, courtesy of Glenn Feveryear.....

**April 12, 2003: OPOSSUM-7** (Only Possible Open Strategically Shackled Uproarious Meet) will be held as an Open Meet at Middletown, MD. Events are not currently set. Contact Information Khim Bittle - 301-293-2399

**May 17-18, 2003:** ECRM-30 will be held as a Regional Meet at Middletown, MD. Events are: Peanut Sport Scale, 1/4A Boost Glider Duration, A Helicopter Duration, Set Altitude (150 meters), Random Altitude (must be flown before Set Altitude), Open Spot Landing. No electronics may be used for deployment on the altitude events. Altitude will be measured to apogee, not ejection. Contestant fees: \$10 for A/B Division, \$15 for C Division, \$20 per team for Team Division. There will be a meet hotel located somewhere in Middletown or Frederick. We are still investigating which hotel to use, but we expect a decision later in November. Awards will be presented at approximately 2:30 pm on Sunday. Picnic follows the awards ceremony, with a \$5 fee to cover the cost of food. Contact Information—Jim Filler - 301-371-3365

**June 14-15, 2003:** MARS Regional, The Plains, VA., Host: NOVAAR Events: TBA

From Dale Greene....

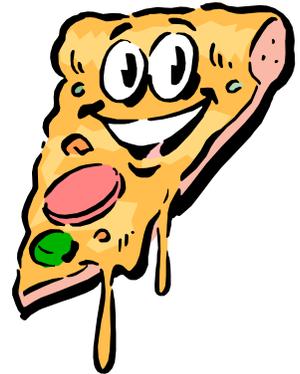
Launch Crue, NAR Section #519, is happy to announce NARAM-45!  
Location: Evansville, Indiana (about 1/2 NE of the NARAM-38 site)  
Contest Director: Lila Schmaker  
Dates: August 1-8, 2003

Official Events: 1/4A Boost Glider Duration, A Helicopter Duration, A Altitude, B Parachute Duration (Multi-Round), C Super-Roc Altitude, E Streamer Duration, F Dual Egg Lofting Duration, Open Spot Landing, Peanut Sport Scale, Plastic Model Conversion.

Several special events.

Field supports high power and has had numerous 10k waivers.

More details to come.....



Mr. And Mrs. Simon have volunteered to host the 2003 SPAAR Family Dinner. It is tentatively planned for April 26, somewhere in the York area.....the video camera that Tony Rossi has been flying is featured in one those annoying pop-up Internet ads. Maybe if we work on Tony long enough he'll publish plans on how he converted it for flight. Hint, hint, hint.....Rumor has it that a hobby shop is opening soon in the new shopping center on Rt. 501 near the Lancaster Airport....Volunteers are still needed for the Team America Challenge launch, over the Mother's Day weekend, May 10 & 11, in Northern Virginia. If you can help, contact Trip Barber through the NOVAAR website, which is linked to ours.... If you plan to attend the National Sport Launch, to be held over the Memorial Day Weekend in May, 2003 near Scranton, PA, you are advised to make your hotel reservations NOW. Go to the NAR website and follow the links.... Don't forget, the nominations for SPAAR officers will take place at the November meeting, with the elections tallied up at the December meeting. As an added attraction to attend the December meeting, it will be pizza night on the club [bring the checkbook, Larry!]

*We just had to ask.....*

### DO YOU TELL PEOPLE ABOUT YOUR HOBBY? IF NOT, WHY? IF SO, WHY?

Oh, it's much worse than telling my friends and co-workers! I don't seem to have any friends outside of Rocketry. Just kidding. Apparently I still have friends despite my interest in the hobby. Since I'm in field service and really get around to a lot of different places, I get to talk to a whole lot of people. In my previous job I had regular customers and of course we talked about everything. Every now and again I run into these folks and they invariably ask me if I still fly rockets. Besides my good looks, it's the other outstanding thing they seem to remember about me. (If I planted my tongue any firmer, it would poke a hole through my cheek.) Even in this job I'm around some places for an hour or a couple, and if we're done talking about our kids, it turns to other things and for sure I'll steer it to rockets. Sadly, when I mention competition, they usually expect we only see who can go the highest. When I try to explain duration or scale and they don't do any kind of modeling, you can see their eyes glaze over. That's when I change the subject 'cause I know I lost them. -*John Yost*

Yes, I proudly share my interest in model rocketry to anyone I come in contact with...providing the occasion merits me talking about it. However, I don't usually initiate a discussion about model rocketry. When it does come up...I find that people are keenly amazed and intrigued with such a fascinating hobby. Actually, most people never even heard of the hobby...at least not the hobby like we SPAAR members know. I find that most folks have heard about water rockets or air-driven rockets in a sort of "toy" fashion. When I explain about solid fuel motors along with the sound and altitude that is experienced, listeners get wide-eyed and want to hear more. I think if our launches were more broadly publicized we could expect large crowds of observers. Something to think about? -*Larry Gerlach*

I tell everyone about my hobby. Some people associate it with youth - I'm the same height as the average 8th grader, so I'll play the part.. I especially like to tell folks at work, just to keep them on edge.. :) -*Dole Jacobs*

Yes, I tell others at work about rocketry. Usually, questions arise when they see the two Quest MicroMax rockets sitting on top of my monitor. It's interesting how many wax poetic about their youths, when you start talking about rockets. I even have a running rocketry conversation with a salesman who calls on me occasionally. Just can't get him to come launch with us or join the club. Someday. I talk about rocketry because it's a good conversation topic and all the other geeks like it as well. I've even had a couple of my coworkers offer to buy me an M motor when I'm going for a Level 3 cert. Of course, if and when the time comes I can see them choking on the \$\$\$.—*Gregg Martell*

My family asks me once in a while, "do you still fly those rockets like you used to?", which I suppose is a legitimate question, considering I've been at it since 1968. Most of the people I work with are familiar with my hobby, and don't make any smart comments probably out of fear of upsetting the boss. What a laugh *that* is. I do sense that many of us are reluctant to discuss it much because many still look at model rocketry as the weird old uncle to other "aeronautical" hobbies like R/C airplanes. I think that is a result of the marketing strategy that companies like Estes and Quest have adopted over the past 25 years, in going after the "toy" market. But then again, what do I know? -*George Beever*

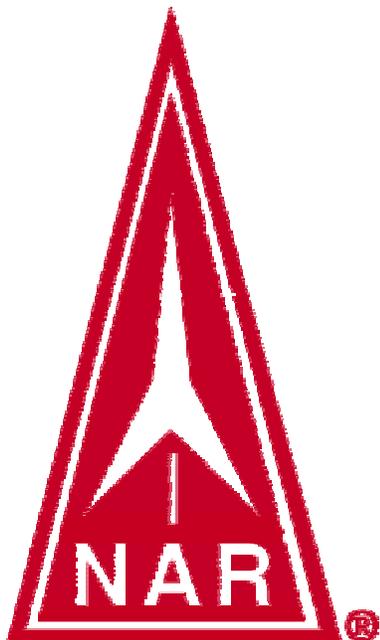
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SPAAR  
PO BOX 127  
REAMSTOWN, PA 17567  
[www.spaar.org](http://www.spaar.org)



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PLEASE MAKE SURE YOUR MEMBER-  
SHIP IS UP TO DATE!



**COMING UP:**

*November 15:* 7PM to 9PM , Meeting at Boys & Girls Club, W. Lemon St., Lancaster

*December 8:* SPAAR SPORT LAUNCH, 1PM to 5PM, Cocalico High School, Denver

*December 20:* 7PM to 9PM, Meeting at Boys & Girls Club, W. Lemon St., Lancaster