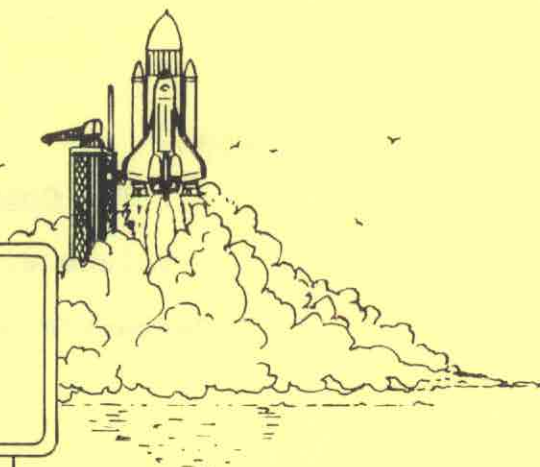


COUNTDOWN



OFFICIAL NEWSLETTER OF
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

VOLUME 6, ISSUE 1 JANUARY/FEBRUARY 1993

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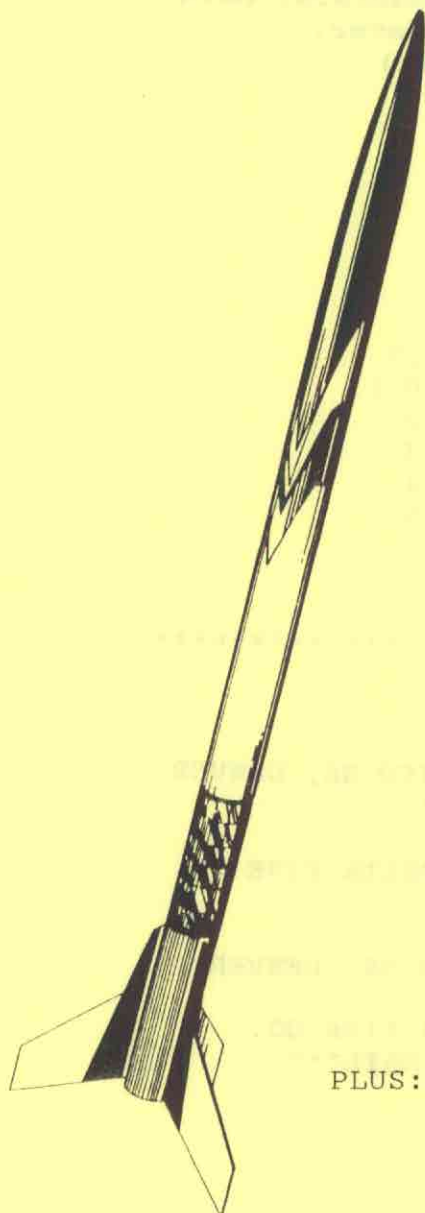
The ORI "Das Blue Max"

and

The Estes "Maxi-Force"

Regular Features

PLUS: Plans For B Eggloft Altitude & A Payload



The Countdown

Volume 6, Issue 1

January/February 1993

The Countdown is the newsletter of SPAAR, the Southern Pennsylvania Area Association Of Rocketry, NAR Section #503, PO Box 127, Reamstown, PA 17567. Non-member subscription rate, \$6 per year, six issues. Please make all submissions to address above. Material may be used with proper credit.

Cover Logo: **Bob Stott** Jacket Design: **Bruce Canino** Editor: **George Beever**

Thanks this time to: Dale Greene, John Yost, Art Babiarz, Mark Snyder, & SPAAR's newest member, Erin Arisa Beever.
(Her father is the editor; he can do that)



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CALENDAR

SATURDAY, FEBRUARY 13: SPORT LAUNCH, 1PM-5PM, COCALICO HS, DENVER.
*****NOTE: THIS IS A SATURDAY LAUNCH*****

SATURDAY, FEBRUARY 27: MEETING/WORKSHOP, 9AM-1PM, DELTA FIRE CO.
*****PLEASE NOTE DATE CHANGE!!*****

SATURDAY, MARCH 13: SPORT LAUNCH, 1PM-5PM, COCALICO HS, DENVER.

SATURDAY, MARCH 20: MEETING/AUCTION, 9AM-1PM, DELTA FIRE CO.
*****LOOK FOR MORE INFO ON THE AUCTION IN THE MAIL*****

JUST SOME THOUGHTS.....

Aha! Got you, didn't I? You thought that this was going to be the annual plea for newsletter submissions, didn't you? Well, that just goes without saying; we can always use them. No, this is about something else. You see, this would be the perfect place to say, "I told you so".....

Back in November of 1989, I wrote here that, in my opinion, our future use of Cocalico High School was cloudy at best, and that we needed to look for a new launch site.

At that time, we were being squeezed by softballers and youth soccer leagues who had laid claim to the north side of the school, where we flew. Beginning in 1990, we started flying on the south, or "short" side of the school. In a way, this may have actually worked to our advantage for a number of reasons. First, no one, except for a stray R/C flyer or two, was there to bother us, and vice-versa. In addition, if models left the feild, the prevailing west-east breeze took them into the cornfield across the street. Despite all of the jokes, this wasn't all that bad except for the months of August & September.

All of this may be changing, however. The bulldozers have arrived.

For the past year, we have been hearing rumours that the

Cocalico School District had plans to build a bus maintainance/parking facility on the south side of the school. [The word "Cocalico", of course, is Indian for "School District that looks for things to spend money on other than teacher's salaries".] This was needed, they said, because the area previously used for this was being taken up by planned additions to the Middle School up the street. This was caused by a shortage of space in that school, which was brought on by an overflow of students from the District's three elementary schools. This was caused by the closure of a fourth elementary school two years ago. What's that saying about prior planning?.....

In any event, the fact remains that the area that we use for a rangehead will now be, we think, an enclosed parking lot. From what we can see, the entire project should take up anywhere from 1/3 to 1/2 of the entire side of the school.

Is the sky falling, Chicken Little? What does this mean for us as a club? In plain truth, we don't know yet. The one thing that we do know is that there is a lot of truth being the saying, " A rocket club without a place to fly is not a club".

To a certain extent, maybe we've been spoiled a bit over the years. We'd always had a

regular place to meet, and a regular place to fly. Every third Monday, we knew we'd be at the Lancaster Library, and with two exceptions in 5 years, we knew our launches were at Cocalico. I wonder if many sections can claim to have been as fortunate.

Until the construction project at the school is completed, we just won't know how it will effect us. One thing is for certain; things will be different. We may have to rearrange our schedule; we may be forced, due to lack of space, to fly smaller, less powerful models; we may all show up at the appointed time, only to find that all of the available space is taken, and we have to wait or cancel altogether. We may be forced to "go on the road", flying from a different place each time.

The ultimate answer, of course, is locating a new flying field. Over the years, we have discussed this need to death, without result. It is not an easy proposition. Land owners are generally not disposed to lending out their investment to a group of hobbyists, but we must make the effort. If you know of a tract of land that might be suitable, bring it to the attention of the club officers. We can take a look at it, and if it meets our needs, we can approach the owner in a formal, positive manner. Through the NAR, we can even offer sight insurance if needed.

Stay tuned.....

George

SECTION NEWS NOTES

Club officers for 1993: At the December meeting, the following persons were elected:
President: Glenn Feveryear;
Vice-President: Dale Greene;
Secretary/Treasurer: Ed Miller;
Member-at-Large: Bill Rhoat;
Section Advisor: George Beever.

Schedule for '93: Don't forget to take an extra look at your 1993 Schedule when planning your agenda. A number of launches are combined with meetings; meetings will be held at a number of locations; and there will be some Saturday Sport Launches. Until we know otherwise, launches are still scheduled for Cocalico High School.

Help Wanted: SPAAR will be hosting **RAMTEC-1**, an NAR sanctioned Regional Meet, over the weekend of June 12 & 13. The meet will be held at Allentown College near Center Valley, PA. This was the site of two NARAMs, as well as most of the WUBBA Regionals. Any and all help is appreciated. Contact: **Glenn Feveryear, 717-456-5570**. Thanks!

Thanks Dick & Donna!: A huge "Thank You" goes out from everyone to Dick Rhoat & Donna Shrom for hosting the Annual Family Dinner this past Jan. 16. They volunteered to host the dinner when our original plans fell through. The meal was delicious, and the evening was a lot of fun. **THANKS AGAIN!**

SPAAR SPORT LAUNCH

SPAAR held it's final Sport Launch of the year on Sunday, December 27, at Cocalico High School.

The weather was seasonably cold, but there wasn't the stiff wind that we've seen at almost every other launch this year. Nine members attended, which, all things considered, was a very good turnout.

The "Misfire Alley" system was for this launch, which meant that each member brought their own personal systems out for use. This was done due to the cold weather; it's simpler to do this than to lug the club's equipment out when it's freezing!

Just in case there has been some concern about just what Dale Greene would do to replace the late, lamented Big Brute, worry no more! Dale brought out it's replacement in the form of an ORI "Das Blue Max", which he called his "Das Not Yet Blue..." In other words, it's not yet painted blue, just the white primer. But hey, you can't have everything. This kit is an enlarged, 4" diameter scale-up of the old Estes "Der Red Max" kit. With an Aerotech G64-7 RMS for power, it turned in the most impressive flight of the day, if not the loudest.

Ed Miller had a real heartbreaker. A couple of years ago, Ed built a North Coast ASAT-21X that crashed due to a

faulty 'chute deployment. He eventually built a replacement, and was going to fly it at this sport launch. Unfortunately, the Aerotech G80 CATO'd upon ignition, causing severe damage to the motor/fin mount system. However, Ed did get some nice flights out of his Estes Warp II, MPL Big Bird, and his scratchbuilt UFO-24.

The Feveryear kids flew some of their Estes kits, and dad Glenn flew his home-made replica of the Estes 3-engine cluster Ranger. Fred Hoke brought out a Christmas present - an Estes "CATO". This is the model that is actually designed to come apart in the air [gee, some of mine do that anyway!]. Unfortunately, Fred got into the early running for the '93 "Rocketlok Award" by forgetting to remove the tape from the model, which meant that it came apart alright - but when it hit the ground. Don't worry, Fred; we've all done that sort of thing!

Your editor managed to hit a parked bulldozer with a Quest Nike-Smoke [Heavy Equipment Spot Landing?] and broke a fin, but had better luck with the maiden flight of an Estes Maxi-Force on three D12-7's. Where is Karl Fehrenbach when you need him? I thought all of those D12's would bring him running. Rick Hackman flew his XR-55, the rocket/plane that rolls. It suffered a little damage, but fixable at least.

FLIGHT LOG

27 December 1992

<u>FL#</u>	<u>NAME</u>	<u>MODEL</u>	<u>MANUF.</u>	<u>MOTOR(S)</u>	<u>RESULTS</u>
1	G. Beever	Maverick	FSI	E C5-3	Good Flight
2	G. Beever	Nike-Smoke	Quest	E B6-4	Good Flight
3	G. Beever	Maxi-Force	Estes	E D12-7[3]	Good Flight
4	G. Beever	Solar Probe	Estes	E B6-4	Good Flight
5	G. Beever	Omega	SB	E D12-0/Q A6-4	Good Flight
6	D. Greene	Blue Max	ORI	AT G64-7RMS	Good Flight
7	R. Hackmn	XR-55	SB	E C5-3	Good Flight
8	R. Hackmn	Ramjet Int.	SB	E D12-5	Good Flight
9	R. Hackmn	XR-49	SB	E B4-4	Good Flight
10	F. Hoke	CATO	E	E B6-0	Oops!
11	D. Fevryr	Gnome	E	E 1/2A3-4	Good Flight
12	D. Fevryr	America	E	E B6-4	Good Flight
13	R. Fevryr	Rainmaker	E	E B4-4	Good Flight
14	R. Fevryr	Alpha	E	E A8-3	Good Flight
15	Glenn F.	Phaser	E	E B4-6	Good Flight
16	Glenn F.	Ranger	SB	E B6-4[3]	Good Flight
17	E. Miller	Warp II	E	E B6-0/A8-5	Good Flight
18	E. Miller	UFO 24	SB	AT E18-4RMS	Good Flight
19	E. Miller	Big Bird	MPL	E C6-0	Good Flight
20	E. Miller	ASAT-21X	NCR	AT G80-4T	CATO

Models Flown

Scratchbuilt = 5 Estes = 9 FSI = 1 NCR = 1

MPL = 1 Original Rockets, Inc = 1

Motor Usage

Black Powder = 23 Composite = 3 [2 RMS, 1 Single Use]

Estes = 22 Quest = 1

Motor Failures: 1 [CATO of an AT G80-4T on #20]

Successful Flights: 19, 95%

Thanks, Fred: In the last issue of The Countdown, we forgot to mention that Fred Williams, who had edited the MIVARS newsletter Apogee, was moving from Ohio to Utah. Apogee was, without a doubt, one of the top club newsletters in the country. Fred always had timely news, as in the case of RMS controversy, as well as good scale data. It appears that the remaining MIVARS members will now join the other section in Ohio, CSAR.

Good luck in Utah, Fred, and thanks for all of the good work!

Kit Review:

DAS BLUE MAX

[Original Rockets, Inc.]

by Dale Greene

Original Rockets was founded by Randy Gilbert of Port Huron, MI. to provide high quality kits for sport flyers. The name **Original Rockets**, Randy points out, is a paradox, since his designs are clones of old kits and none are original. **DAS BLUE MAX**, the flagship of his fleet, is an upscale version of the Estes Der Red Max of a few years back.

The kit features high quality components and very detailed instructions. One interesting feature of my kit was a camouflage pattern on the parachute. Having spent many an afternoon searching the cornfields of Cocalico for rockets, I fail to see the logic in this color scheme. Also, the kit is advertised as having "massive two-color decals". They are massive - two 11" X 17" sheets - and they are two colors. Black and white.

The design of this rocket is very basic with one exception the **CAP-TAIN** baffle system. Incorporated into the motor mount, this includes a capped motor tube and a third centering ring which serves as an ejection baffle. Vents are cut into the motor mount tube between the second centering ring and the baffle ring, and the entire affair is coated with epoxy for strength. It works perfectly, but I do

wonder about the long-term durability under Aerotech ejection charges.

I made two modifications to the rocket. The kit included 3/8" launch lugs. This struck me as an oddball size, and since I don't have a launch rod of this size I substituted 1/2" lugs. The other change was to the fins - ORI instructs you to surface mount them. Knowing I'd never be able to face Ed Miller again with such an arrangement, I slotted the tube and cut through-the-wall tabs.

Total construction time, from start to finish, was approximately 13 months. At least a year of this was due to the fact that when I moved last year I packed the motor mount in a separate box and only recently found it. A normal rocketeer [an oxy-moron if I ever heard one] should be able to build it in 2 afternoons.

The maiden flight of **DAS MAX** [it wasn't blue yet] was on Dec. 27 at Cocalico HS with a G64-7RMS. Despite moderate winds it has a perfectly straight flight. The 24" 'chute proved to be too small, however, and a rough landing slightly cracked 2 fin fillets.

LIKES: Impressive size, quality parts.

DISLIKES: Surface mount fins.

Kit Review:

The Estes Maxi-Force

by George Beever

During the latter part of the summer of 1991, Estes Industries announced the release of the "Pro Series" kits. These kits were to be Estes entry into the higher-power, "adult" type of rocketry market. Because of the lack of an Estes-made composite motor, the line would be designed to fly on clusters of the venerable Estes D12 black powder motors. The "Impulse" uses a 2-motor cluster, the "Maxi-Force" uses 3, and the 1/5-scale Patriot, 4. However, delays in the introduction of the accompanying ground support equipment meant that the Pro Series were generally not available until the summer of 1992. In fact, I ordered the Maxi-Force through a local hobby shop in May, and it only arrived in late September.

The Maxi-Force is 50" tall, 2.5" in diameter, and weighs in at 348g [12.3oz]. The list price is \$54.99. As stated above, it is powered by a cluster of 3-24mm motors.

The first thing one notices about this kit, after the overcoming the "sticker shock", is the packaging. The Maxi-Force is shipped in an Aerotech-type box, only bigger. The components are not secured within, but it is colorful, to say the least.

The Maxi-Force consists of 3 sections of 2.5" body tube. The

longest of these holds the motor mount assembly. This motor mount is interesting in and of itself. It is much like the Aerotech "Fin-Lok" set-up, whereby tabs on the fins interlock with the motor mount centering rings. This is designed to distribute the power loading and associated stresses. In the Estes version, the individual parts are made entirely of wood, and you have to build it. Kind of neat, actually. What is not neat is the centering ring set-up. They are made from stamped thin plywood, and each ring is a composite made of two rings. A lot of sanding was required to get these rings to accept the motor mount tubes, and then to fit into the main airframe. One piece, pre-cut plywood, like those offered by LOC, North Coast, etc. would have been much nicer.

The fins are an interesting feature, too. They are of a "cranked" shape, somewhat like the Estes Calypso kit of a few years back. Each fin is made up of two parts, of 3/16" balsa. Very strong, high grade balsa, but balsa none the less. The leading, trailing and side edges of the bottom portion of each fin is made up of a strip of spruce. The fins are thru-the-wall for strength, a good idea.

The shock cord is high-quality elastic, and it's mount is

another novel feature. Made of stamped plywood, it has a shape like an hour-glass; the screw eye is in the middle, and the entire thing is held in place at the point where two sections of body tube are joined by a coupler [and lots of epoxy].

The nose cone is of a standard polyvinyl type; recovery system is an 18", pre-assembled nylon parachute.

The airframe tubing is thick-wall, industry standard type.

The color scheme illustrated in the box is eye-catching, and the decals included with the kit are of the [all together now] self-adhesive type. The prisma-trim was easy to work with; not so with the larger roll pattern. This is made of a thinner material, much like MonoKote trim. A nightmare.

Total construction time for the Maxi-Force was about 12 hours. Much of this time was consumed in the motor mount assembly. [Sand, sand, sand.]

The suggested power for this model is a cluster of three Estes D12-7s, which should come as no surprise. Would Estes really recommend that you fly one of their designs with anybody else's motors?

I finally got the chance to fly the Maxi-Force at our December 27 Sport Launch. The design showed itself to be very stable; the boost was perfectly straight. The seven second delay was just right for this

model, too. I was concerned that those cranked fins might get damaged upon landing, with only an 18" chute. The thru-the-wall design showed it's advantages, and there was no damage.

In my opinion, the Maxi-Force is a neat looking rocket. Let's face it, that is what grabs the attention of many rocket modelers in the first place. I like the motor mount/fin mount assembly, but the centering rings were a pain. The fins proved to be sturdy, but I can't help thinking that plywood would be better. No complaints whatsoever about the tubing or nose cone, and we'll see about that shock cord mount. It is right in the flow of the ejection charge. This a big rocket; the 18" chute might be a bit small. I think I'll put in a 24-incher for the next flight.

With D12's, the Maxi-Force flew great. Gee, I wonder how it would do with some E15s.....

Oh yes, the price. I got mine at a discount, but this is still an expensive kit. Too expensive, when one considers that \$25 - \$35 will get you a similar LOC, THOY, or NCR kit. Estes may want to re-evaluate their pricing.

Likes: Design, tubing, motor mount, and the fact that Estes decided to produce such a kit.

Dislikes: Instructions, centering rings, price. Go the discount route!

THE SPAAR ALMANAC

-or-

The Department of Useless Statistics Strikes Again

Cumulative Flight Log, 1988 - 1992

	<u>1988</u>	10-14-90	103
		11-4-90	89
<u>Date</u>	<u># of Flights</u>	<u>Total:</u>	<u>792</u>
6-5-88	20	<u>1991</u>	
7-3-88	42		
8-14-88	60	2-3-91	43
10-9-88	61	4-28-91	26
10-30-88	26	5-5-91	42
12-4-88	26	5-26-91	52
12-18-88	8	6-9-91	78
Total:	243	6-30-91	23
		7-21-91	29
<u>1989</u>		8-11-91	50
		9-1-91	61
3-12-89	2	9-15-91	76
4-16-89	50	10-13-91	47
5-7-89	38	11-3-91	55
5-28-89	51	Total:	582
6-11-89	46	<u>1992</u>	
7-2-89	57		
7-23-89	111	1-18-92	9
8-13-89	62	2-2-92	10
9-3-89	76	3-1-92	11
9-24-89	54	3-29-92	4
10-8-89	49	5-3-92	10
11-5-89	65	5-10-92	35
Total:	661	5-24-92	14
		6-21-92	71
<u>1990</u>		7-17-92	60
		8-30-92	12
4-1-90	39	9-13-92	64
4-22-90	48	10-11-92	29
5-27-90	68	11-8-92	21
6-10-90	53	12-27-92	20
7-1-90	46	Total:	370
7-22-90	92		
8-12-90	60	TOTAL FOR 5 YEARS: 2648	
9-2-90	86		
9-16-90	85		
9-23-90	23		

Cumulative Averages

<u>Year</u>	<u># of Flights</u>	<u># of Days</u>	<u>Average</u>
1988	243	7	34.7
1989	661	12	55.08
1990	792	12	66.0
1991	582	12	48.5
1992	370	14	26.4
TOTAL	2648	57	46.45

1992 LAUNCH STATISTICS

-or-

What we fly, and what we use to power it

# of launches: 14	# of flights: 370 [Sport Flights]	
Scratchbuilt: 74	Estes: 175	Aerotech: 16
Centuri: 12	North Coast: 10	FSI: 6
THOY: 6	Quest: 6	MRC: 5
Cox: 5	QCR: 2	AAA: 2
MPC: 1	Custom: 1	LARS: 1
Apogee: 1	US Rockets: 1	ORI: 1
MPL: 1		

MOTORS USED - 1992

Estes: 328	Apogee/Estes: 19	FSI: 12
Aerotech Single Use: 41	Aerotech RMS: 26	MRC: 3
Apogee/Aerotech: 1	Quest: 7	

BLACK POWDER: 369 [84.5%] COMPOSITE: 68 [15.5%]**TOTAL NUMBER OF MOTORS FIRED: 437**

As you can see from the numbers above, the vast majority of the models flown were Estes kits, powered by Estes motors. Scratchbuilt models were the second most numerous; it may also be interesting to note that the third most popular manufacturer of kits was Centuri..... which went out of business over 10 years ago. The 15.5% figure that composite motors attained in 1992 may be a bit misleading, when you consider that in 1988 there were none used at all. As for what all of this means.....you've got me beat!

EVENTS CALENDAR

Upcoming events and contests

P.A.C.T. III

Philadelphia Area Convention
and Trials

23-25 April 1993

Location to be determined

Host: PARA

Contact:

David K. Klouser

PO Box 1427

Southampton, PA 18966-1427

NICE - 15

Open Meet

Sat, 8 May 1993

Host: NOVAAR

Manassas, VA.

Events:

- B Rocket Glide [M]
- B Helicopter
- 1/4A Boost/Glide [M]
- Precision Duration
- Sport Scale

Contact:

Ken Brown

7021 Forest View Dr.
Springfield, VA 22150

SPAARSEC - VIII

Section Meet [SPAAR]

30 May 1993

9AM - 5PM

Cocalico HS

Events:

- A Helicopter Duration
- B Eggloft Altitude
- 1/2A Rocket Glide [M]
- 1/2A Superroc Altitude

Contact:

Glenn Feveryear

RD#1 Box 1-C

Delta, PA 17314

[717] 456-5570

RAMTEC -1

Regional Meet

12-13 June 1993

Host: SPAAR

Allentown College
Center Valley, PA
[Former WUBBA site]

Events:

- B HD [M], B RG
- 1/2A SD [M], 1/2A PD [M]
- D DELD, A B/G

Contact:

Glenn Feveryear

RD#1 Box 1-C

Delta, PA 17314

[717] 456-5570

NARAM - 35

The 35th National Association of Rocketry Annual Meet, NARAM-35, will be hosted this year by the NARHAMS Section.

DATE; August 1-7, 1993

PLACE: Middletown Recreational Park, Middletown, MD.

EVENTS:

1/2A Parachute Duration, MR	1/2A Streamer Duration, MR
B Helicopter Duration	B Rocket Glide
A Payload	C Super Roc Altitude
D Dual Eggloft Duration*	1/2A Cluster Altitude*
Sport Scale	Research & Development

* - Provisional Events, rules published in the July/August 1991 issue of American Spacemodeling, pages 44 & 45.

FUN FLY TOPICS: There will be a daily "FUN" topic for the sport flying range. These are not events and no results from these will be kept track of. These are strictly for fun and for those who want to have grudge matches. The topics are:

Flotation Duration - landing and floating rocket in pond.
 Peanut Spot Landing - for the younger crowd, 8 years & less.
 R/C BG - for all of those new kits available.
 Oddball/Unscale - display those weird & baffling designs.

FAA WAIVER WILL BE APPLIED FOR!

The Middletown Park site has been known to support "H" motors. The park is rectangular in shape; the dimensions are approx. 1600' X 3100'. The park is surrounded by a tree line, with farm fields to the north and east, high school athletic field to the west, school complex and housing development to the south. There are 130 parking spaces on asphalt adjacent to the launch site.

HOTEL INFORMATION:

Holiday Inn/Ft. Detrick
 999 West Patrick St. [Rt. 40 & Rt. 15]
 Frederick, MD 21702
 Phone #: 301-662-5141
 Room Rate: \$42 double per room [2 to 4 to a room]
 You will be responsible for making your own reservations.
 Deadline for making reservations is July 15, 1993. The Awards Banquet will be in the \$15 - \$17 range, and will be held in the motel. The distance from the hotel to the launch site is less than 7 miles.

LOOK FOR MORE INFO FROM NARHAMS SOON

SECTION MEETINGS**December 21, 1993**

Present: Glenn, Rita, Rene, & Gary Feveryear; E. Miller, R. Dwyer, D. Greene, D. Weinhold, R. Hackman, D. Rhoat, G. Beever.

Treasurer: Ed Miller reported that there are 35 members; balance at the end of the last meeting was \$129.97. Income: \$15 in dues, \$6 newsletter subscription. Expense: \$2.90 in postage. Current balance: \$148.07.

Newsletter: G. Beever reported that 60 copies of the Nov/Dec newsletter were made and distributed; thanked all those who helped with copying.

Section Advisor: G. Beever reported that the Section charter was up for renewal.

Competition: Glenn discussed the RAMTEC-1 Regional, scheduled for June; asked for assistance from any and all members for same.

At this point, my handy-dandy tape recorder crapped out again, and I didn't notice it. I'm sure we talked about all kinds of neat stuff. However, if you wish, you can simply fill in the rest of this column with all of the things that you'd really like to see happen at a SPAAR meeting. You can also be comforted to know that if you are really reading this, you are a die-hard rocket nut, just the kind of folks we're looking for. Next column:

January 23, 1993

Present: Glenn, Rita, Rene, Daniel, & Gary Feveryear; R. Dwyer, Sr & Jr; A. Babiarz, B. Rhoat, M. Snyder, G & M Beever.

Treasurer: Ed Miller reported that there were 31 current members; balance at the end of last meeting was \$148.07. Income: \$102.50 in dues, \$5 for a video, & .57 in interest. Expenses: \$26 in postage, \$40 section charter renewal. Current balance: \$190.14.

Newsletter: Should be out by early February.

Section Advisor: G. Beever read a letter from PARA concerning PACT-III. Also discussed the current condition of the launch area at Cocalico HS.

Competition: Glenn discussed RAMTEC-1 and NICE-15.

HPR: Ed Miller reported that Ross Dunton of Magnum Hobbies told him that he expected to hear something "within 2 weeks" on the RMS situation.

Old Business: the purchase of an additional stopwatch was approved.

New Business: Mark Snyder spoke about the Cub Scout launch, May 23, in Harford County, MD. The committees were reappointed for 1993. **Operations:** D. Greene; **HPR:** E. Miller; **Contest & Records:** Glenn F. **Newsletter:** G. Beever; **Education:** Ed Miller.

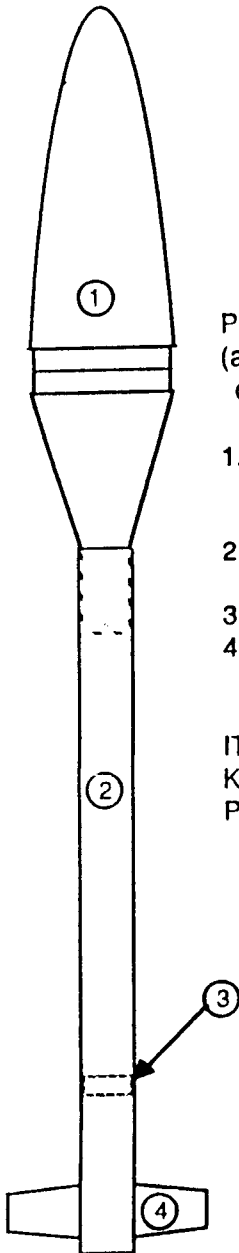
THIS 'N THAT

Stuff That Just Doesn't Fit Anywhere Else

Please take note of the schedule change concerning the February Workshop. It was originally scheduled for the 20th, but due to a scheduling conflict with the Fire Co. it will be moved to **Saturday, February 27**.....you can't really say enough about the great job that Dick Rhoat and Donna Shrom did with the Family Dinner on January 16....Glenn Feveryear recently spoke with **Ed LaCroix of Apogee Components**. According to Ed, the tower launcher that was advertised in the latest issue of American Spacemodeling **will not be a stocked catalog item**. Rather, when Ed receives enough interest, he'll have the towers made up in batches of around 50. The price of the tower is expected to be in the \$80 range....the **Estes Honest John Collector's Edition kit** is out and available. Despite some plans that Estes had to strengthen the model by using plywood centering rings and reinforced fins, the kit is essentially the same one that was introduced in 1975. Still, this is a nice model, and one can only hope that similar offerings are on the horizon. How about the **Pershing II, V-2, and Saturn 1B?**.....the "Andy Rooney Meets Model Rocketry" Dept: Don't 'ya just hate it when people don't answer mail? We recently sent sample issues of this newsletter to certain NAR Sections in Florida and Massachusetts, offering to exchange with them. What we got in response was zilch. That's OK, really, no problem. I can understand that some clubs don't want to exchange, or just didn't like the sample. But a little post card saying "Thanks but no thanks" would have been all that was needed. So much for "networking"....Has anyone else used those new **Estes Ignitor Plugs** for clusters? I've used them on 2X18mm, 3X18mm, 4X18mm, and 3X24mm clusters [all Estes motors], and they've all worked great. I think they've got a winner there....Is **MRC** still in the rocket business?....**Rocket R&D has moved**. The new address is: 308 E. Elm St., Urbana, IL 61801, ph# 217-344-2449....The **P.A.C.T. III Convention/Record Trials** planned by PARA for this coming April will be the first Record Trials held in the Mid-Atlantic Region since our SPART-1 in July 1990....There have apparently been some complaints about the size of the field for **NARAM-35**; some of the high-power enthusiasts think that this will make the National Sport Launch less than interesting. Well, I'm a high-power fan myself, but if you think that NARAM/NSL should only be held at a location that can support the most powerful motors and/or the largest rockets, you've just eliminated much of the east coast....**A note on the plans on page 16**: these plans are part of my collection, and were from one of the newsletters that we exchange with. Unfortunately, I no longer have any idea just which newsletter they came from, or who designed them. **Thanks a ton, whoever you are!** They are included in this issue because B ELA will be flown at **SPAARSEC-8**, and A Payload at **NARAM-35**.

ALTITUDE PLANS

EGGLOFT ALTITUDE



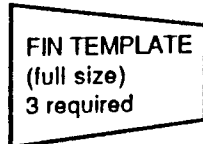
PARTS LIST

(all parts Apogee unless otherwise specified)

1. EGG CAPSULE - ENC18 or CMR capsule or Easter Egg capsule
2. BODY TUBE - 9" of PT18 or Estes BT-20
3. ENGINE BLOCK - EB-18
4. FINS - Make from GBS15 fin stock.

ITEMS NOT SHOWN

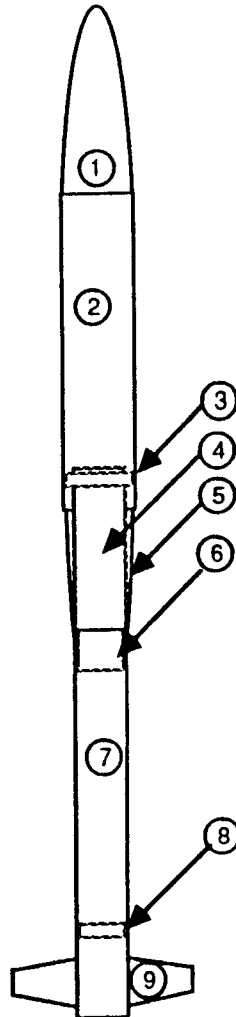
Kevlar Shock Cord - KSL-100
Parachute



CONSTRUCTION NOTES

1. Attach Kevlar shock cord to engine block by looping around and knotting. Bend block at point where cord is so that it may be inserted into body tube.
2. Launch from tower or use 3/16" rod and pop lug.
3. Examine cord after each flight for burning.

A PAYLOAD



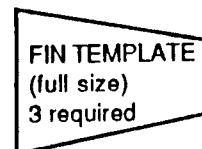
PARTS LIST

(all parts from Apogee Components unless otherwise specified)

1. NOSE CONE, WNC-19
2. BODY TUBE - 3.4" length of TT-19
3. CENTERING RING - CR1318
4. BODY TUBE - 1.575 length of Estes BT-5
5. TRANSITION - AT-1318
6. SHOULDER - Use end piece from a PNC13
7. BODY TUBE - 4.5" of PT-13 or Estes BT-5
8. ENGINE BLOCK - EB-13
9. FIN - Make from GBS15 or GBS10 fin stock

ITEMS NOT SHOWN

Kevlar Shock Cord - KSL-100
Parachute - 12"



CONSTRUCTION NOTES:

1. The centering ring must be built up with a cardboard shim or masking tape to fit properly into TT-19.
2. Attach Kevlar shock cord to engine block by looping around and knotting. Bend block at point where cord is so that it may be inserted into body tube.
3. Launch from tower and/or piston.
4. Once payload is inserted into rocket, friction fit nose cone in place with masking tape.
5. Examine cord after each flight for burning.

RARAM7EC-1 **REGIONAL**

**AEROSPACE MEET TO ENCOURAGE
COMPETITION**

**JUNE 12 & 13, 1993
ALLENTOWN COLLEGE
CENTER VALLEY, PA**

EVENTS:

**B HELICOPTER DURATION MULTI
1/2A STREAMER DURATION MULTI
D DUAL EGGLOFT DURATION
B ROCKET GLIDER DURATION
1/2A PARACHUTE DURATION MULTI
A BOOST GLIDER DURATION**

**THIS IS THE SAME SITE AS MANY A PAST WUBBA REGIONAL AND
NARAM. DON'T MISS OUT ON A FINE FLYING SITE. AS IN YEARS
PAST HOUSING WILL BE AVAILABLE ON THE COLLEGE CAMPUS.**

**CONTACT: GLENN FEVEYEAR
RD 1 BOX 1-C
DELTA, PA 17314
PHONE: 717-456-5570**

REGISTRATION FORMS AND INFO ON FEES AND ROOM RATES WILL BE AVAILABLE IN MARCH.

THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

Membership Application

Name _____ Address _____

Phone _____ Age _____ Date of Birth _____

NAR # _____ Tripoli # _____

I have been flying rockets for _____ years. I have not yet flown a model rocket _____.

DUES: 18 years of age or older: \$10 per year.

15,16,17 years of age: \$7 per year.

16 and under: \$5 per year

Family Plan: Oldest member joins at full price, all other family members 1/2 price; one issue of the Countdown per family.

Return this form to: SPAAR, PO Box 127, Reamstown, PA 17567.

Join the National Association of Rocketry!

Find out about launches all over the country; get a full year of American Spacemodeling magazine; join clubs; fly in competition; set US records!

- JUNIOR (ages 15 and under) \$15.00
LEADER (ages 16-20) \$15.00
SENIOR (ages 21 and older) \$25.00
OPTIONAL \$1-MILLION LIABILITY INSURANCE for rocketry activities \$15.00
TOTAL ENCLOSED \$

Name _____

Address _____

City _____ State _____ ZIP _____

Phone () _____

Application Date _____

Date of Birth _____

Rights, privileges, and responsibilities of membership begin upon acceptance of this application by the NAR. Prices and services subject to change without notice.

NAR PO Box 177 Altoona WI 54720

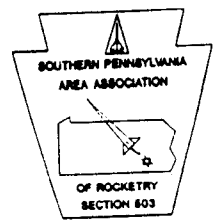
The NAR is the official non-profit national organization for non-professional consumer rocketry. The NAR establishes safety rules, certifies US and world records, publishes technical literature, sponsors launches and competitions, and promotes the hobby.

I pledge to conduct all my sport rocketry activities in compliance with the NAR Safety Codes.

Signature (required)



"I LIKE THESE DAY-GLO COLORS, DON'T YOU?"



SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY
1993 Calendar

JANUARY

- SAT 23 - MEETING/WORKSHOP, 9AM-1PM, DCVFD
SUN 31 - SPORT LAUNCH, 1PM-5PM; "GROUND HOG DAY"

FEBRUARY

- SAT 13 - SPORT LAUNCH, 1PM-5PM
SAT 27 - MEETING/WORKSHOP, 9AM-1PM, DCVFD *NOTE DATE CHANGE*

MARCH

- SAT 13 - SPORT LAUNCH, 1PM-5PM
SAT 20 - MEETING/AUCTION, 9AM-1PM, DCVFD

APRIL

- SUN 18 - MEETING AT DICK RHOAT'S HOUSE/SPORT LAUNCH
11AM-5PM **FLYING SAUCER DAY**

MAY

- SAT 8 - MEETING AT EPHRATA NAZERENE CHURCH/SPORT LAUNCH
9AM-2PM **CLUSTER DAY**
SUN 30 - SPAARSEC-VIII SECTION MEET, 9AM-5PM
A HD, B ELA, 1/2A RG [M], 1/2A SRA

JUNE

- SAT 12 & SUN 13 - RAMTEC-1 REGIONAL, CENTER VALLEY, PA
B HD[M], B RG, 1/2A SD[M], 1/2A PD[M], D DELD, A B/G
SUN 20 - MEETING AT GEORGE BEEVER'S HOUSE/SPORT LAUNCH
1-7PM **PATRIOT & SCUD DAY**

JULY

- SUN 11 - MEETING AT ART BABIARZ'/SPORT LAUNCH 1-7PM
SCHUYKILL VALLEY HIGH SCHOOL

AUGUST

- SUN 14 - MEETING AT DICK RHOAT'S HOUSE/SPORT LAUNCH
1PM-7PM **SOUNDING ROCKET/SCALE DAY**

SEPTEMBER

- SUN 5 - SPAARSEC-IX SECTION MEET 9AM-5PM EVENTS TBA
SAT 18 - MEETING AT EPHRATA NAZARENE CHURCH/SPORT LAUNCH
9AM-2PM **MULTI-STAGE DAY**

OCTOBER

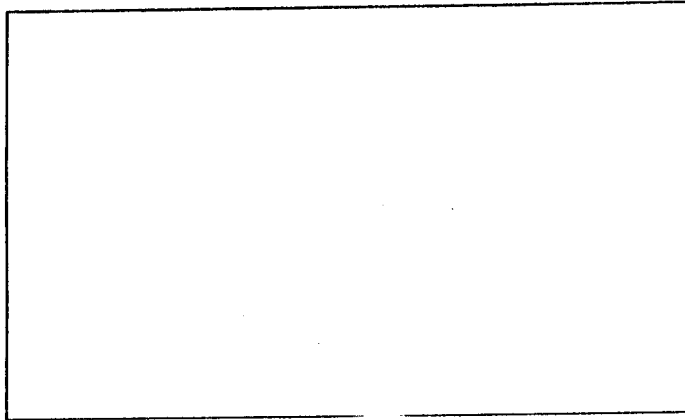
- SAT 9 - MEETING AT EPHRATA NAZARENE CHURCH/SPORT LAUNCH
9AM-2PM **OLDIE BUT GOODIE DAY**
SAT 23 - HALLOWEEN SPORT LAUNCH, 1PM-5PM

NOVEMBER

- SAT 13 - MEETING, LOCATION TBD/SPAARSPAM - 5

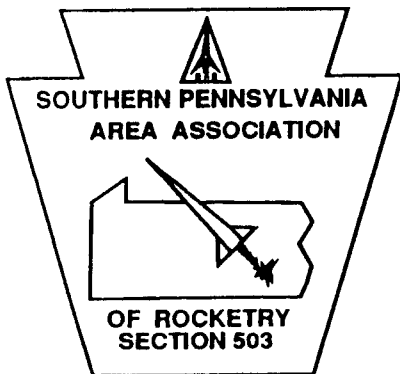
DECEMBER

- SAT 11 - MEETING AT EPHRATA NAZARENE/SPORT LAUNCH 9AM-2PM
SUN 26 - CHRISTMAS SPORT LAUNCH 1PM-5PM



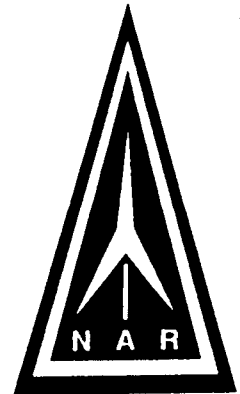
TO:

SPAAR
P.O. Box 127
Reamstown, PA. 17567



**SOUTHERN PENNSYLVANIA
AREA ASSOCIATION
OF ROCKETRY**

PROMOTING SAFE MODEL ROCKETRY
IN SOUTHERN PENNSYLVANIA
AND NORTHERN MARYLAND



*The Southern Pennsylvania Area
Association of Rocketry*

COUNTDOWN

Volume 6 No. 1

JANUARY/FEBRUARY 1993