

THE SOUTHERN PENNSYLVANIA AREA  
ASSOCIATION OF ROCKETRY

# COUNTDOWN

VOLUME 2

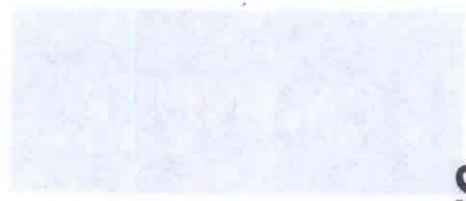
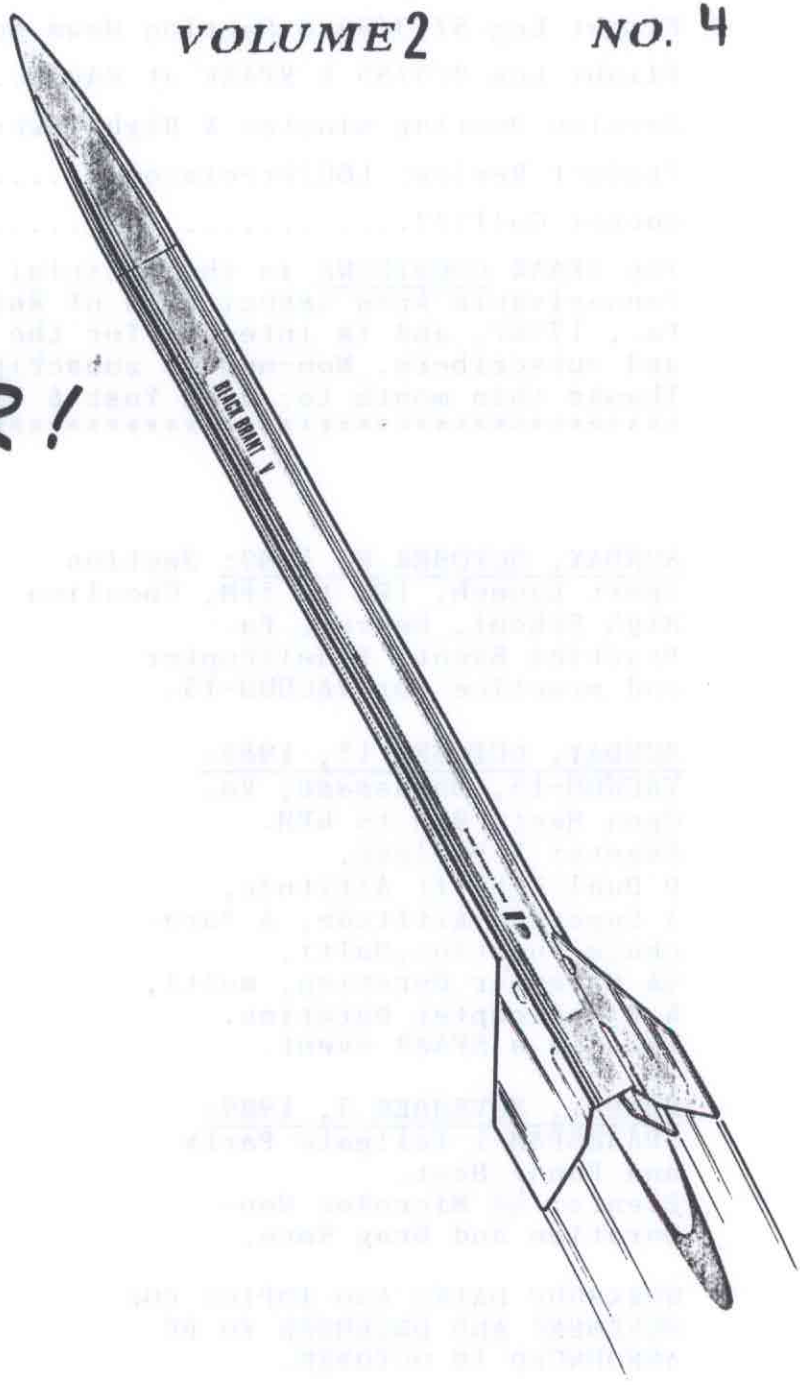
NO. 4

**TURN UP  
THE POWER!**

**LOC/Precision  
Product Review**

**Section News  
&**

**All Of The  
Usual Stuff !!**



Sept. '89

THE SPAAR COUNTDOWN

Volume 2, Issue 4

September, 1989

THIS MONTH:

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The SPAAR COUNTDOWN is the official newsletter of the Southern Pennsylvania Area Association of Rocketry, PO Box 127, Reamstown, Pa., 17567, and is intended for the enjoyment of it's members and subscribers. Non-member subscription rate, \$5.00 per year. Thanks this month to: John Yost & Bill Rhoat.

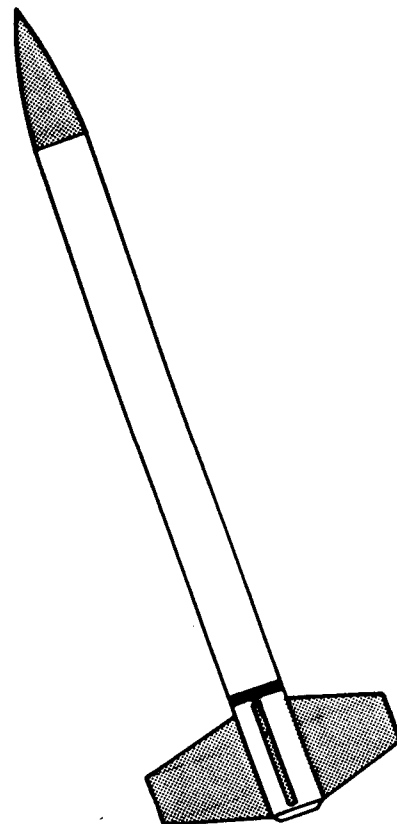
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SUNDAY, OCTOBER 8, 1989: Section Sport Launch, 1PM to 5PM, Cocalico High School, Denver, Pa. Practice Event: B Helicopter and practice for VACUUM-15.

SUNDAY, OCTOBER 15, 1989: VACUUM-15, Manassass, Va. Open Meet, 9AM to 6PM. Events: B Payload, D Dual Eggloft Altitude, A Superroc Altitude, A Parachute Duration, Multi, 1/2A Streamer Duration, multi, & B Helicopter Duration. This is a SPAAR event.

SUNDAY, NOVEMBER 5, 1989: SPAARSPAM-1 Tailgate Party and Funny Meet. Events: 1/2A MicroRoc Non-Duration and Drag Race.

WORKSHOP DATES AND TOPICS FOR NOVEMBER AND DECEMBER TO BE ANNOUNCED IN OCTOBER.



**CALENDAR**

This message concerns itself with what you are reading at this moment, namely, the September issue of the COUNTDOWN.

Those of you who were original members of what has become SPAAR know how this newsletter has evolved over the past 16 months.

The first "issue", so to speak, was a single page letter, mailed to all those who attended the first meeting of our club, back in May, 1988. The purpose of that one page letter was the same as the COUNTDOWN of today; to help keep the membership of SPAAR informed and up to date with the activities of the club, and hopefully, with model rocketry in general.

The August, 1988 issue was the first that "looked" like a newsletter; the following month, the 7 page, monthly format was settled upon. SPAAR members and subscribers to the COUNTDOWN have received their newsletters every month, month in and month out, since that time.

The appearance has changed a little, mainly in the way the cover looks; and whereas at one time yours truly wrote almost all of the contents, a regular stream of contributions have been coming in. Feature articles, sport plans, competition plans, manufacturer and product reviews, and the like regularly appear in these pages.

A subscription to the COUNTDOWN has always been a part of the membership dues paid to SPAAR. Recently, subscriptions to non-members have been made available, at \$5.00 per year. As of this writing, upwards of 40 copies of the COUNTDOWN are mailed out to members, subscribers, and other NAR sections on a monthly basis.

Now, here's the kicker....

There was never a "master plan" for this newsletter. It just "sort of happened".

I took on the job of putting out a newsletter during the early stages of SPAAR's existence, mainly because I wanted to do it, and I felt that a newsletter of this type was essential to the continued growth of the club. I still enjoy putting out this newsletter, and would like to continue doing so.

Recently, however, myself and several other members of SPAAR have begun to take a harder look at the newsletter, and how it is done. I have had the opportunity to see and read a large number of the newsletters published by other sections. They are all very, very good. After looking them all over, however, I can honestly say that the content of the COUNTDOWN is second to none. That is something that we can all be proud of. On the debit side of the ledger is the fact that most all of the other publications look better than ours.

The first SPAAR newsletter was done on my own typewriter. Why? because that's all there was, that's why! It's still the same today. I haven't felt that the expenditure of club funds on professional printing was warranted, given the fact that we as a club were just starting out and needed to make other capital purchases, such as launching equipment and the like.

The monthly format has also come into question. It is not an easy proposition to churn a newsletter out every month. The question has been raised, "should we go to 10 issues a year? 8 issues? 6 issues?" Would it be better, insofar as quality goes, to come out with 10 nine page newsletters per year, instead of 12 seven page newsletters?

These are questions that you, the members of SPAAR, will have to answer, because the COUNTDOWN can only be what you want it to be. In the coming weeks, all of you will be asked to provide your opinions and suggestions on the future of this newsletter. After all, we don't want this to become a "total loss".

# SPORT LAUNCHES ...

Aug. 13

Sept. 3

The days leading up to the August 13 Sport Launch made a number of SPAAR members fearful that the weather would at last cause a cancellation. As a matter of fact, the sky on the morning of the 13th looked rather wet and gloomy. The diehards showed up, however, and as the afternoon wore on, the skies cleared and the breeze dropped, allowing for the launch to take place.

The big news of the day, of course, was the return from NARAM-31 of SPAAR members John Yost, Daniel Yost, Dale Greene, and Ed Miller. Not only did they have many stories to tell, but they all sported sharp looking NARAM-31 T-shirts.

When the flying finally got under way at about 2 PM, it became somewhat evident that this launch was going to feature something a bit different: HIGH POWER!

Dale Greene caught everyone by surprise by launching an Estes RTF Minuteman with an Aerotech D21... and got it back! A new SPAAR member, Robert Balogh, quickly showed just where his area of interest was. Robert launched a series of models powered by D, E, F, and G motors. All were very exciting to watch, unfortunately including the CATO of an Aerotech F41 late in the day. He reports, however, that the model sustained little damage. Ed Miller even got into the composite motor act, by flying his "Air Mail" with an E15, for a very exciting flight.

Fred Hoke was there with another one of his "Plus" series of models. Fred enjoys making single stage D powered models from Estes Kits into two stage models. This time it was a two stage Phoenix, with the lower set of fins becoming a first stage powered by a D12-0, and the upper stage having a D12-3. Flew pretty good, too! Rick Hackman flew another batch of his X-series rockets; he's up to "XR-51" and counting. Dale Greene set out to prove G. Harry Stine's theory on "long distance" staging techniques, and did quite well, thank you. Not that anyone would doubt NAR #2, anyway!

After the weather related concerns of August 13, the conditions which existed on September 3 allowed everyone to breath a sigh of relief. The weather couldn't have been nicer!! To prove it, the number of flights put up that day were a record for a non-contest launch, 76 in all.

The practice events of the day were B Eggloft Duration and C Superroc Duration. The best in B ELD was Mark Snyder's 69.22 seconds, using a B6-2 in a homemade design using Apogee parts. Dick Rhoat took C Superroc, with 533.42 points over Mark's 487.84, even though his flight duration was all but 60 seconds less than Mark's flight. The answer, of course, is that his static points maxed out due to the overall length of the model. In all fairness to Mark, he was flying his B Superroc.

Besides the competition flights, there was a lot of high powered stuff going on again. One of the more impressive flights being Robert Balogh's Estes V-2 flown with an E6-4, which has a 7.2 second burn time. Or how about Fred Hoke, with his Super Big Bertha Plus? Not one, not two, but three stages!! A separation at the end of the flight damaged the model, but it was still neat to watch.

George Beever got at least one model to work right on that day, when he got a nice flight out of a LOC/Precision Viper III, when all 3 D12-5's ignited on cue. Can't say the same thing for his NCR Corporal, though. Ever see an E "Smokey Sam" composite powered model get hung on the rod?

The winner of the "Fire and Smoke" derby, black powder division, was Ed Miller, hands down. Ed flew an NCR Mini-Katana with the following combination: 1 D12-7, 3 B8-5's, and 3 C5-3's! All ignited for a very loud, not to mention successful, flight.

A real thriller was Glenn Fever-year's RotaRoc, flown first with a B4-2 and then with a C6-3. The B motor turned in a great 61.87 second flight. The C powered flight, however, failed to flip over, but it was still a qualified flight. The time was 44.6 seconds.

And then there was Ed's "SPT"; the "Skinny Pink Thing", flown on an F7-6....

Date: 13 August 1989  
 Weather: Cloudy, warm, humid

Site: Cocalico HS  
 LCO: John Yost

SECTION NEWS NOTES

FLIGHT #	NAME	MODEL	MOTOR	EVENT	TIME	MISC
1	W. Rhoat	Birdie	1/2A3-2	Sport	unkown	GF
2	D. Bender	Tornado	1/2A6-2	"	9.5	GF
3	D. Greene	Sport/Payload	B4-6	"	64.22	GF
4	E. Miller	Bandit	C6-5	"	39.31	GF
5	R. Hackman	XR-38	A3-4	"	28.06	GF
6	D. Bender	Thunderhawk	B6-4	"	27.75	GF
7	E. Miller	Phoenix	D12-3	"	14.79	GF
8	D. Greene	D-Streamer	D12-7	D SD	52.35	GF
9	W. Rhoat	Phoenix	D12-3	Sport	19.76	GF
10	R. Balogh	Renegade	D12-5	"	58.78	GF
11	R. Balogh	Goblin	D12-5	"	43.30	GF
12	R. Hackman	XR-45	B4-6	"	13.10	GF
13	E. Miller	Air Mail	E15-4	"	55.25	GF
14	R. Hackman	XR-46	1/2A6-2	"	unknown	unk
15	D. Greene	Sport	C6-7	C PD	128.25	GF
16	R. Balogh	LaserSonic 1350	E10-8	Sport/E SD	41.84	GF
17	R. Hackman	XR-47	A8-3	Sport	14.16	GF
18	G. Beever	Yankee Clipper	A8-3	"/ESP	24.34	GF
19	D. Bender	Birdie	1/2A3-4	Sport	4.52	GF
20	F. Hoke	Super Big Bertha	D12-0/D12-5	"	48.87	GF
21	R. Hackman	XR-49	1/2A6-2	"	3.93	unk.
22	E. Miller	Explorer Aquarius	C5-3	"	13.00	GF
23	Chris McCann	Big Bertha	B4-2	"	21.41	GF
24	D. Greene	DR-3	A10-0/A3-6	"	74.5	GF
25	E. Miller	V-2	C5-3	"	10.09	GF
26	F. Hoke	Der V-3+	D12-0/D12-3	"	80.50	GF
27	R. Hackman	XR-50	B4-2	"	16.00	GF
28	F. Hoke	Phoenix +	D12-0/D12-3	"	32.00	GF
29	R. Balogh	Nike-Ram 2	F25-9	"	55.44	GF
30	D. Bender	Interceptor 2	B6-4	"	10.84	GF
31	C. McCann	AstroBee	B4-2	"	21.03	GF
32	R. Hackman	?	B6-4	Pred. Dur.	37.46	GF
33	R. Hackman	?	B6-4	Sport	34.69	GF
34	E. Miller	SuperNova	B6-0/A8-5	"	51.60	GF
35	G. Beever	Drifter	A3-4	A B/G	40.12	GF
36	R. Hackman	XR-51	A8-3	Sport	12.66	GF
37	C. McCann	Orion	A8-3	"	12.97	GF
38	R. Balogh	Honest John	C6-5	"	64.97	GF
39	R. Balogh	Honest John	C6-5	"	54.19	GF
40	G. Beever	DART	B6-4	"	21.90	GF
41	W. Rhoat	Hercules	B6-0/A8-3	"	43.30	GF
42	D. Greene	Honest John	B6-6	"	28.6	GF
43	R. Balogh	V-2	D12-3	"	46.5	GF
44	R. Balogh	V-2	D12-5	"	67.3	GF
45	R. Balogh	V-2	D12-3	"	27.97	?
46	R. Hackman	XR-52	1/2A3-2	"	10.30	GF
47	E. Miller	Sidewinder	D12-7	"	46.22	GF
48	C. McCann	Cobra 1500	B6-6	"	?	GF
49	F. Hoke	SR-71	C6-3	"	55.76	GF
50	D. Bender	Interceptor	C6-5	"	49.85	GF
51	G. Beever	Mini RotaRoc	1/2A3-2	1/2A HD	12.85	ND
52	G. Beever	Mini RotaRoc	A3-4	A HD	42.62	GF
53	F. Hoke	SS Columbia	C6-3	Sport	35.37	GF
54	E. Miller	Gone	D12-7	"	38.47	GF
55	R. Hackman	Ramjet Int.	D12-3	"	28.19	GF
56	C. McCann	Star Speeder	B4-2	"	30.78	GF
57	F. Hoke	Mosquito	1/2A3-2	"	?	GF
58	D. Bender	Tornado	A8-5	"	17.50	GF
59	R. Balogh	Nike-Ram 2	G40-7	"	138.42	GF
60	R. Balogh	Nike-Ram 2	F41-9	"	??????	CATO
61	G. Beever	Beaker	1/2A6-2	1/2A B/G	13.1	GF
62	G. Beever	Beaker	A8-3	A B/G	14.44	RB

Welcome to Michael Angell, 102 Coventry Ct., Palmyra, Pa., our newest member. Michael is 24 and has been involved in model rocketry for 10 years. That was Mike's Mean Machine you may have seen flying around at the last sport launch.

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At the meeting on Sept. 18, the suggestion was made that in order to help out with record keeping, a flyer who wishes to make a SPAAR record attempt should indicate this on his/her flight card. In addition, some information about the type of recovery system, the model's name, and so forth, would be helpful.

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It's always great to see the wives and families of SPAAR members at our launches. It reinforces the notion that model rocketry is a family activity. In particular, it was nice to see Deb Yost with John and the boys. We even have it on film!

As a matter of fact, there is one shot of Rita Fever-year, Deb Yost, and Teresa Beever, all with their respective children; the caption could even read, "SPAAR... The Next Generation". BOOOO!!!

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COMING NOVEMBER 5: SPAARSPAM - 1!!!

You're probably asking yourself, "just what is SPAARSPAM-1?" It stands for SPAAR Super Picnic And Meet. Ok, Ok, it was the best we could come up with.

Since we weren't able to have a picnic during the summer months, why not steal a page from the college football fans, and have a tailgate party? Mix in a little rocketry, and POOF!! SPAARSPAM!! The "events" will be: 1/2A MicroRoc NonDuration & Drag Race.

More details and rules for these events in the October COUNTDOWN.

Date: 3 September 1989  
 Weather: Hot, mild NW breeze

Site: Cocalico HS  
 LCO: Glenn Feveryear,  
 John Yost,  
 Dale Greene

SPAAR

AT  
 NARAM

FLIGHT #	NAME	MODEL	MOTOR	EVENT	TIME	MISC
1	M. Snyder	Penetrator	B8-5	Sport	15.00	PRG
2	D. Greene	DR-3	A10-0/1/3A3-4	"	28.09	GF
3	J. Yost	Maxi-Alpha	D12-5	Sport/D PD	54.12	GF
4	M. Snyder	Defender	B6-4	Sport	26.09	GF
5	D. Bender	Wizard	B6-4	"	32.91	GF
6	R. Balogh	Honest John	C6-5	"	40.22	GF
7	M. Angell	Mean Machine	D12-5	"	56.06	GF
8	Derek Yost	Big Ben	B6-4	Sport/B SRD	19.85	GF
9	W. Rhoat	Onyx	D12-3	Sport	11.03	GF
10	D. Bender	Ramjet	A8-3	"	7.53	GF
11	G. Feveryear	1/3A SD	1/3A3-4	1/3A SD	72.25	GF
12	E. Miller	Warp Drive	D20-7	Sport	51.0	GF
13	R. Balogh	Goblin	D12-5	"	40.72	GF
14	R. Balogh	Renegade	D12-5	"	63.75	GF
15	D. Bender	Longshot	C6-5	"	45.50	GF
16	G. Beever	Stealth	C6-5	"	24.34	CHU
17	J. Lytle	SR-71	B4-2	"	14.25	GF
18	M. Snyder	Marauder	B6-4	"	28.18	GF
19	S. Lytle	Ninja	1/3A3-2	Sport/1/3A SD	16.25	GF
20	E. Miller	SPT	D12-0/D12-7	Sport	????	GF
21	W. Rhoat	Sentinel	C6-5	"	35.53	GF
22	G. Beever	Rascal	1/3A3-2	Sport/1/3A RG	XXXXX	HNG
23	M. Angell	Mean Machine	D12-5	Sport	47.46	GF
24	R. Balogh	V-2	E6-4	"	104.75	GF
25	D. Bender	Tornado	1/3A6-2	"	XXXXXX	??
26	W. Rhoat	Dragonfly	1/3A3-2	NARTREK	5.81	RB
27	E. Miller	Blackthing	F7-6	Sport	XXXXX	lost
28	E. Marcella	Stinger	A8-3	"	16.75	GF
29	E. Marcella	Stinger	A8-5	"	16.87	GF
30	E. Marcella	Stinger	C6-5	"	60.38	GF
31	S. Lytle	Zipper	?	"	11.00	GF
32	S. Lytle	Zipper	B6-2	"	?	GF
33	G. Feveryear	RotaRoc B	B4-2	B HD	61.87	GF
34	J. Lytle	GEO SAT LV	C6-3	Sport	26.94	GF
35	D. Greene	C Payloader	B4-6	"	208.47	GF LOST
36	R. Balogh	Aerobee-HI	F25-9	"	59.59	GF
37	J. Lytle	Astrocac-110	B8-5	"	11.43	GF
38	J. Lytle	Astrocac-110	C6-3	"	??	GF
39	W. Rhoat	DS-6	B4-6	B SD	??	SEP
40	G. Beever	Corporal	E12-5	Sport	XXXX	HNG
41	F. Hoke	Crusader S/W	C6-3	"	34.91	GF
42	M. Snyder	V-2	D12-5	"	58.81	GF
43	D. Rhoat	B SD	B6-4	B SD	66.30	GF
44	R. Fuld	Starbrite	A8-3	Sport	22.85	GF
45	R. Fuld	Starbrite	C6-5	"	79.80	GF
46	J. Lytle	DragonFly	1/3A3-2	"	27.25	GF
47	E. Miller	Hercules	F100-6	" / F PD	49.85	GF
48	F. Hoke	SR-71	C6-3	"	45.25	GF
49	G. Feveryear	Grumpy Dog	D12-0/D12-3	"	65.62	GF
50	R. Balogh	Nike-Ram 2	G25-10	"	58.29	GF
51	G. Beever	Viper III	(3) D12-5	Sport	45.00	GF
52	F. Hoke	Super Big Bertha 3	D12-0/D12-0/D12-5	Sport	XXXXXX	SEP
53	R. Fuld	Viking	A8-3	Sport	16.88	GF
54	R. Fuld	Viking	C6-5	"	49.71	GF
55	G. Beever	Super Big Bertha	D12-5	"	31.44	GF
56	M. Snyder	Phoenix	D12-5	"	28.38	GF
57	G. Beever	Hercules	F100-8	"	32.85	CHU
58	G. Feveryear	RotaRoc-C	C6-3	" / C HD	44.6	GF
59	R. Balogh	LaserSonic	G80-13	"	103.62	GF
60	G. Beever	Space Shuttle	C6-3	Sport	16.44	CHU
61	E. Marcella	Eggspress	B6-4	"	15.15	GF
62	E. Marcella	Eggspress	A8-3	"	11.44	GF
63	E. Marcella	Eggspress	C6-5	"	66.44	GF
64	E. Miller	Mini-Katana	(1)D12-7	"	35.56	GF
		(3) C5-3, (3) B8-5				
65	G. Beever	Der V-3	D12-7	"	31.05	CHU
66	E. Miller	Lance Beta	F60-6	"	43.4	GF
67	M. Snyder	C SRD	C6-5	C SRD	93.84S/487.84pts	GF
68	D. Rhoat	C SRD	C6-3	C SRD	33.42S/533.42pts	GF
69	M. Snyder	B ELD	B6-2	B ELD	69.22	GF
70	G. Feveryear	B ELD	B6-2	B ELD	46.08	GF
71	D. Rhoat	B ELD	?	B ELD	26.50	GF
72	D. Greene	B ELD	B6-2	B ELD	20.06	GF
73	G. Beever	B ELD	B6-2	B ELD	16.55	GF
74	G. Beever	B ELD	B6-2	B ELD	19.69	GF
75	J. Yost	B8-5	B8-5	B ELD	15.25	EGG
76	D. Rhoat	B6-2	B6-2	B ELD	8.41	DQ

NARAM-31 was held August 7-13, 1989, at the Mannassas Battlefield Park, in Mannassas, Va. The host section was NOVAAR, the Northern Virginia Area Assoc. of Rocketry. It was the third time that the National Championships were held there.

SPAAR members Dale Greene, John & Daniel Yost, along with Ed Miller and his wife, made the trip.

Daniel Yost did quite well for himself, taking fourth place in 1/2A Parachute Duration, A Division. Daniel used a "Perihelion" with a 26" chute to win fourth place and a nice trophy. Daniel's two flights totaled over 225 seconds. John Yost picked up over 200 contest points for his efforts. He also did more than his share of range duties, in particular a tour of duty in the range-head area. John's pretty good behind a video camera, too, as witnessed by the excellent video tape that he brought home with him. John captured a good deal of the flying on the last day of the meet, with footage of C Scale Altitude and Plastic Model Conversion, as well as some flights involved in the Old Rocketeers' Reunion. This is a "Must

See" video. He even has footage of Vern Estes flying the original Big Bertha model! Speaking of which, Ed Miller met, and had his photo taken with, none other than G. Harry Stine, NAR#2, and Vern Estes. Good Job!!

SECTION MEETING MINUTES

PROPOSED HIGH POWER SAFETY  
GUIDELINES FOR SPAAR EVENTS

SPAAR held it's monthly meeting on Sept. 18, 1989, at the Lancaster Co. Library. Members present: John Yost, G. Beever, E. Miller, R. Hackman, Daniel Yost, Derek Yost, W. Rhoat, D. Rhoat, & G. Feveryear. The meeting began at 7PM.

I. Old Business: The membership cards have been received from the printer, and turned over to Sec./Tres. Ed Miller. A list of dates for workshops for the fall and winter of 89-90 were given to Glenn Feveryear, for submission to the Delta Fire Co.

II. New Business:

SECTION ADVISOR'S REPORT: John Yost passed out the kits received from the Estes Build-Up Program, along with instructions on their construction and return to Estes.

COMPETITION COMM.: Glenn Feveryear read the results of the practice events flown Sept. 3, with Dick Rhoat winning C SRD and Mark Snyder taking B ELD. He also presented a computerized listing of all club performance records. This list can be quickly updated, and will be on hand at club launches for reference.

The practice event for 9/23 is 1/2 A Streamer Duration, and for 10/8, B Helicopter Duration.

TREASURER'S REPORT: Ed Miller reports a balance of \$157.66, with 31 paid members, including one new member.

NEWSLETTER: George Beever advised that we have received a copy of the "Kosmonaut", the newsletter of KOSMO; they will be placed on the newsletter exchange list. In addition, a subscription was received from Bob Sanford of Las Vegas, NV.

III. Other New Business: George Beever read to the members present a letter that SPAAR had received from Mr. Dan Domina, past NAR champion, concerning future contests. The members were polled concerning the club's reply.

A set of safety guidelines concerning high powered launches at SPAAR events was introduced by George Beever and discussed. It was decided that the proposal would be printed in the COUNTDOWN for member comment. If adopted, it would be added to the SPAAR SOP regarding launch operations. The meeting ended at 8:45PM.

1. For the purposes of this proposal, "High Power" shall refer to model rockets whose engine power fall between 20.01 nt.-sec total impulse (E) and 160.00 nt.-sec total impulse (G).

2. Any and all model rocket motors flown at SPAAR sponsored events shall be NAR Safety Certified. Under no circumstances shall any motor be flown without the above mentioned Safety Certification. In addition, an up-to-date listing of those model rocket motors which have received a Safety Certification shall be kept in the range head area, for use by the RSO or his designee.

3. Any model rocket which falls into the above described criteria shall be launched only with club owned equipment, or by privately owned equipment which meets NAR/HIAA safety requirements, and has been personally inspected by the RSO or his designee.

4. The distance from the range-head and spectators to the model rocket to be launched shall not be less than 50 feet.

5. In regards to safety, the RSO or his designee shall call all flights which fall into the "high power" criteria as "heads up" flights.

The above proposal will be voted on at the next meeting, October 16. If you have an opinion, please attend.  
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SECTION NEWS NOTES

All members are reminded that the nominations and elections for SPAAR Board of Directors is coming up, with nominations due in by the November meeting, so that the elections can be held, as last year, by means of a ballot included in the December issue of the COUNTDOWN.

If you wish to nominate yourself, please do so!

PRODUCT REVIEW:

LOC/Precision

LOC/Precision (Lots-Of-Crafts) entered the rocketry market in 1984, hoping to exploit the growing field of high power rocketry.

Founded by Ron and Deb Schultz, LOC/Precision has already gained a reputation for fast service on mail orders and producing interesting designs and sturdy kits.

The company recently issued it's 1989-90 catalog, which is 20 pages in length, and lists a growing line of kits and accessories.

The following is a sampling of the reactions of two SPAAR members to a few LOC/Precision items:

Bill Rhoat recently built and flew a LOC/Precision Onyx, which is part of LOC's series of kits design for the person getting started in high power rocketry, and who may be on a "budget", if such a thing exists in this hobby! Here are his observations: "After seeing Ed Miller's "Spoilsport" and Fred Hoke's "plus" series of conversions, I was bitten by the high power bug!! So, I borrowed LOC/Precision catalog from Mark Snyder and ordered an Onyx kit. One week later, it was delivered in a beat up box bearing the words, "FRAGILE, DO NOT CRUSH".

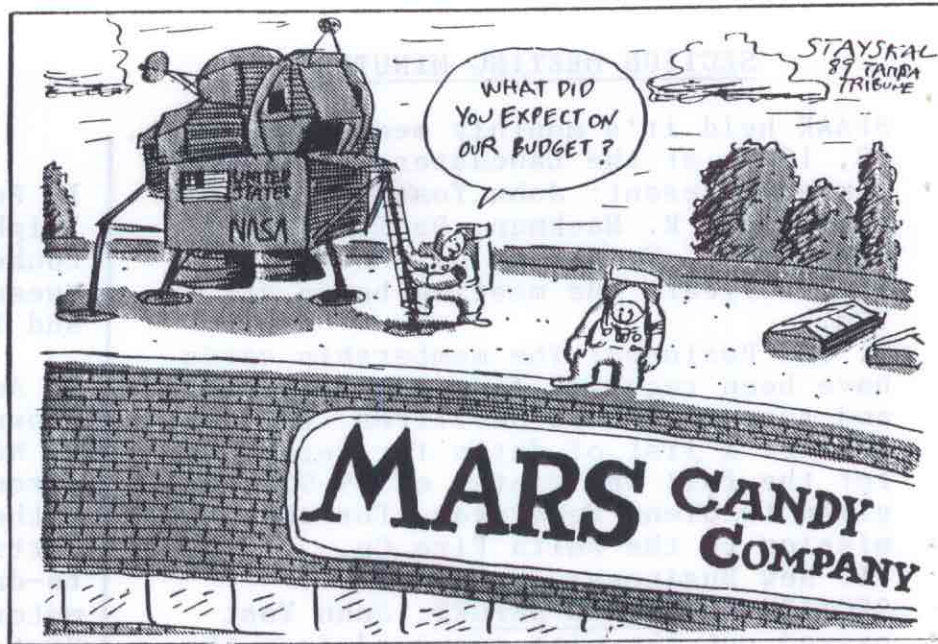
I opened the box and found the Onyx kit undamaged. In the kit bag, I found the following parts: a heavy duty body tube, a nosecone, a motor mount tube which is for 29mm motors, plywood fins and centering rings, a nylon parachute, a shock cord, and a shock cord mount.

The kit was remarkably easy to assemble. The body tube was pre-marked eliminating possible error from a too-small marking guide. I used plenty of epoxy on the fin fillets, and sealed them with Testor's sealer/primer. I painted the model silver, with red fins and a "roll pattern".

I made my own adapter so I could fly the Onyx with a 24mm D12 motor. LOC does sell an adapter, however. On September 3, I flew the Onyx with a D12-3, the least powerful motor recommended. It didn't go very high, and the motor mount came apart, but at least it held together for one flight. I recommend this kit to those of you who would like to get started in "high power" rocketry, and have already built and flown several D powered models."

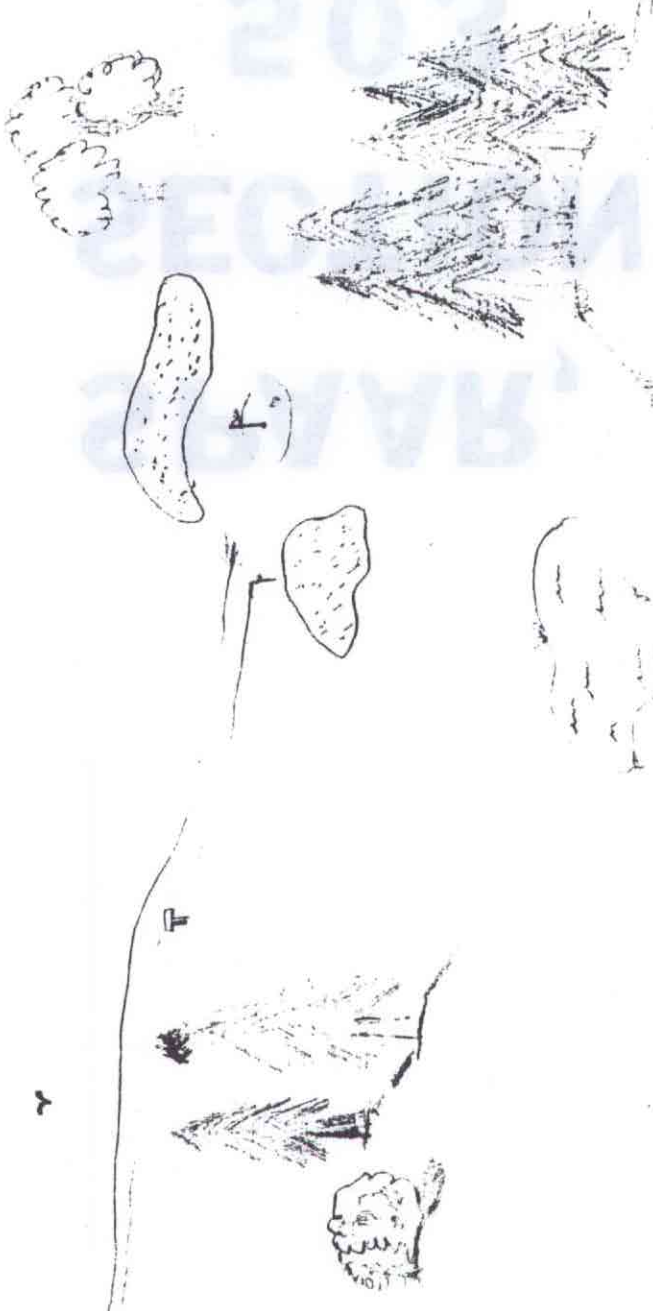
I recently built a LOC Viper III kit, which was my first experience with a LOC/Precision product. I too, was surprised at the relative simplicity of the model. Three 24mm motor tubes, a main body tube, a nose cone, three fins, a parachute, a shock cord and mount and a  $\frac{1}{4}$ " launch lug complete the parts list! I used a 10 minute cure time epoxy throughout, which I had purchased also from LOC. The kit went together like a breeze, and I was impressed with the wooden centering ring, which fit without sanding at all. The kit does not have any engine blocks, to allow for a variety of engine sizes to be flown in the Viper III. I flew the model on three D12-5s on Sept. 3, and it turned the best flight of any model I flew that day. I enjoyed building and flying the Viper III, but I didn't enjoy the \$28.00 price as tag as much.

LOC also has a workshop video on the market, which sells for \$20. The "instructor" is Ron Schultz himself. I've heard the tape referred to as "Mr. Rogers meets model rocketry", however the tape is full of good, useful information on the construction, finishing, and flying of high powered models. I personally feel that it was worth the price.

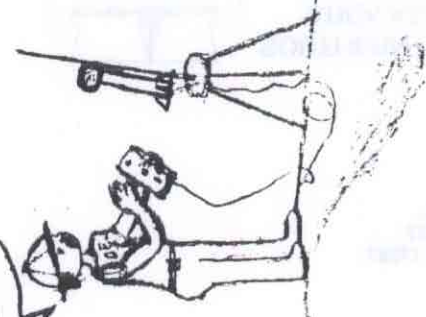




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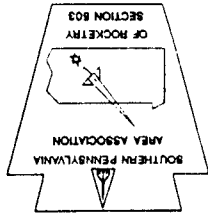
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**TO:**

