

**OFFICIAL NEWSLETTER OF
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY**

VOLUME 8, ISSUE 5 NOVEMBER 1995

IN THIS ISSUE:

- * SPORT LAUNCH COVERAGE

- ** U.S. PERFORMANCE RECORDS

- *** A TRIBUTE TO BIG BERTHA



PLUS

Club News Meeting formation Election Ballot

The Countdown

Volume 8, Issue 5

November 1995

The Countdown is the newsletter of SPAAR, the Southern Pennsylvania Area Association Of Rocketry, NAR Section #503, & Tripoli Susquehanna #71, PO Box 127, Reamstown, PA 17567. Please make all submissions to address above. Material may be used with proper credit. [as if anyone wants to]

Section President: Glenn Feveryear
Tripoli Prefect: Ed Miller
Newsletter Editor: George Beever

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SCHEDULE

SATURDAY, DECEMBER 16: CLUB MEETING AT GLENN FEVERYEAR'S HOUSE. SEE BACK PAGE FOR DETAILS.

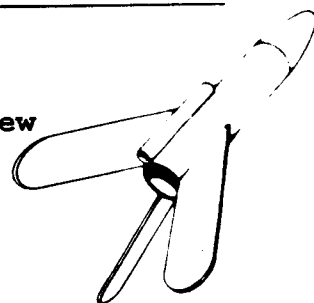
SUNDAY, DECEMBER 17, 1 - 5PM: SPAAR SPORT LAUNCH, COCALICO HIGH SCHOOL, DENVER, PA. BRING YOUR OWN LAUNCH SYSTEM AND BUN WARMERS.

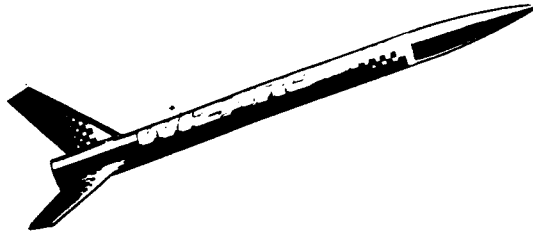
SATURDAY, JANUARY 16, 1996, 6PM: SPAAR FAMILY DINNER, LOCATION TO BE DETERMINED.

In The Next Issue

1996 Schedule... Doug Gardei's Jayhawk Review

Sport Launch coverage





SPAAR SPORT LAUNCH

SPAAR's October 1 Sport Launch was attended by 22 flyers who made a total of 95 flights. Despite competing with youth league soccer games, everyone had a chance to fly as much as they wanted.

One of our younger members, Nate Minnich, got some really nice flights from his fleet of Estes models. Very impressive was his Maxi-Force with 3 D12s.

Gerard Hertzog, with help from his dad, got a couple of nice flights out of their North Coast Phantom 4000, one of three that were flown that day.

Daniel Feveryear flew his Athena 3 times, using his sister's pack of B4-4s. Sorry.

Casey Miller and his dad Andy flew their Estes Twister, Alpha, Phoenix, and Mean Machine, as well as their NCR Patriot. All had good flights.

Rich Good and his son Marcus flew their ever-present Mean Machine, which just keeps on flying. The best flight was on an Aerotech E15-7 White Lightning.

Matt Musselman used C6-7 motors to fly his Estes Nova Payloader and the top stage of the Comanche-3, as well as his scratchbuilt "Mix & Match". Jeff Aughey had some hard luck when one of those "dern C5-3s" CATO'd, severely damaging his

Estes Deep Space Transport. Jeff did get some nice flights from his other models, though.

Rick Hackman had some of the usual ["usual"?] "XR" series, as well as the "TurboTwister", another scratchbuilt, spin-fin design. He also flew one he calls the "Turbo Tiger", which doesn't spin much but sports a wild paint job.

The Mountainside boys, Mark Kamide and George Fetter, were there, too, flying a number of kit prototypes. George's ASP 18mm flew well again, and should be available in kit form soon. Mark's "Titan IIIC" may not. Stability problems still have to be overcome. Go for it, Mark!

Glenn Feveryear flew his LOC Onyx on the motor that he swears was made just for that kit, the Aerotech E15-4WL. It does put on a good show.

George Beever flew an Exocet kit from The Launch Pad, straight into, what else?, the corn. Some very helpful young guys plunged in and recovered the model in one piece. Thanks guys!!

Gary Rubright flew his Estes Rascal, Athena, and Cajun on B motors, for nice flights. Thanks to all who helped out with range duty. You guys really made this a great launch!

FLIGHT LOG

October 1, 1995

#	<u>FLYER</u>	<u>MODEL</u>	<u>MANUF</u>	<u>MOTOR[S]</u>	<u>RESULT</u>
1	Steve Biers	Dagger	Estes	E C6-5	Seperation
2	Mark Beever	Manta	Estes	E B6-2	Good Flight
3	Drew Kibler	SR-71	Estes	E B4-4	Good Flight
4	Drew Kibler	Space Racer	Estes	E B4-2	Good Flight
5	Drew Kibler	SR-71	Estes	E B4-4	Good Flight
6	Drew Kibler	SR-71	Estes	E B4-4	Good Flight
7	Daniel Fevryr	Athena	Estes	E B4-4	Good Flight
8	Daniel Fevryr	Athena	Estes	E B4-4	GF - 30s
9	Daniel Fevryr	Athena	Estes	E B4-4	GF - 31s
10	Nate Minnich	Sizzler	Estes	E C6-5	Good Flight
11	Nate Minnich	Maxi-Force	Estes	E D12-5[3]	Good Flight
12	Nate Minnich	Dark Star	Estes	E C6-5	Good Flight
13	Nate Minnich	Sizzler	Estes	E C6-5	Good Flight
14	Nate Minnich	Maniac	Estes	E D12-5	Good Flight
15	Casey Miller	Twister	Estes	E A8-3	Good Flight
16	Casey Miller	Mean Machine	Estes	E D12-7	No 'chure
17	Casey Miller	Alpha	Estes	E A8-3	Good Flight
18	Casey Miller	Mean Machine	Estes	E D12-5	No 'chure
19	Casey Miller	Twister	Estes	E B4-6	Good Flight
20	Marcus Good	Mini Patriot	Estes	E A10-3	Good Flight
21	Marcus Good	Gnome	Estes	E A10-3	Good Flight
22	Marcus Good	Gnome	Estes	E A10-3	Good Flight
23	Marcus Good	Gnome	Estes	E A10-3	Good Flight
24	Ben Young	Alpha III	Estes	E 1/2A6-2	Good Flight
25	Ben Young	Alpha III	Estes	E C6-5	Good Flight
26	Gerard Hertzog	Phantom 4000	NCR	AT F25-4W	Good Flight
27	Gerard Hertzog	Phantom 4000	NCR	AT F25-4W	Good Flight
28	Jesse Stauffer	Phantom 4000	NCR	AT F25-4W	Good Flight
29	Jesse Stauffer	Phantom 4000	NCR	AT F25-4W	Good Flight
30	Jesse Stauffer	Phantom 4000	NCR	AT F25-4W	Good Flight
31	Jesse Stauffer	Phantom 4000	NCR	AT F50-4T	Good Flight
32	Michael Rausch	Bullpup 12D	Estes	E B6-4	Good Flight
33	Michael Rausch	Skywinder	Estes	E B6-4	Good Flight
34	Michael Rausch	Bullpup 12D	Estes	E C6-3	Good Flight
35	Michael Rausch	Bullpup 12D	Estes	E C6-5	Good Flight
36	Michael Rausch	Skywinder	Estes	E C6-5	Good Flight
37	Michael Rausch	Airwalker	Estes	E C6-5	Good Flight
38	Michael Rausch	Airwalker	Estes	E C6-5	Good Flight
39	Michael Rausch	Airwalker	Estes	E C6-5	Good Flight
40	George Fetter	ASP-18mm	S8	E C5-3	Good Flight
41	George Fetter	Phantom 4000	NCR	AT F25-4W	Good Flight
42	George Fetter	ASP-24mm	S8	AT E11-5RMS	Good Flight
43	George Fetter	Mirage	Aerotech	AT F50-4T	Good Flight

44	George Fetter	Astrobee-C	Aerotech	AT F25-4W	Good Flight
45	George Fetter	Space Clipper	Quest	E C6-3	Good Flight
46	George Fetter	ASP-24mm	SB	AT E11-5RMS	Good Flight
47	George Fetter	Astrobee-D	Aerotech	AT G64-4RMS	Good Flight
48	George Fetter	Phantom 4000	NCR	AT F25-4W	Good Flight
49	George Fetter	Phantom 4000	NCR	AT G80-4T	Good Flight
50	Rick Hackman	XR-54	SB	E D12-5	Good Flight
51	Rick Hackman	F-3A Tiger	SB	E D12-5	Good Flight
52	Rick Hackman	XR-70	SB	E A8-3	Good Flight
53	Rick Hackman	XR-71	SB	E A8-3	Good Flight
54	Rick Hackman	XR-72	SB	E A8-3	Good Flight
55	Rick Hackman	Rogue	Estes	E A3-4	Good Flight
56	Rick Hackman	TurboTwister	SB	E D12-5	No chute
57	Rick Hackman	Turbo Tiger	SB	E B4-4	GF - 40.0s
58	Mark Kamide	Titan IIIC	SB	AT E15-4W	Hmmm....
59	Mark Kamide	Broadsword	Estes	AT E15-4W	Good Flight
60	Mark Kamide	Saturn V	Cox	E D12-5[2]	Good Flight
61	Andy Miller	Patriot	NCR	AT G80-7T	Good Flight
62	Andy Miller	Phoenix	Estes	E D12-7	Good Flight
63	Andy Miller	Phoenix	Estes	E D12-7	Good Flight
64	Jeff Aughey	Deep Space Tr.	Estes	E C5-3	Good Flight
65	Jeff Aughey	Deep Space Tr.	Estes	E C5-3	CATO
66	Jeff Aughey	Bullpup 120	Estes	E A8-3	Good Flight
67	Jeff Aughey	Condor	Estes	E B6-4	Good Flight
68	Jeff Aughey	Star Fighter	Estes	E B6-4	Good Flight
69	Jeff Aughey	Egglofter	SPAAR	E A8-3	Good Flight
70	Matt Musselman	Mix Match	SB	E C6-7	Good Flight
71	Matt Musselman	Nova Payloader	Estes	E C6-7	Good Flight
72	Matt Musselman	Comanche-3	Estes	E C6-7	Good Flight
73	Ed Miller	Monocopter 24-12	SB	AT E15-7W	Good Flight
74	Ed Miller	Monocopter 32-18	SB	AT G12 RCT	Good Flight
75	Ed Miller	BiCopter 32/18/120	SB	AT G12 RCT	Good Flight
76	Ed Miller	Tekyon	SB	Vulcan G200-5	Good Flight
77	Ed Miller	Hyperon	SB	FSI F100-8[3]	Good Flight
78	Ed Miller	Tarsis	SB	AT G75-6J	Good Flight
79	Rich Good	Mean Machine	Estes	E D12-5	Good Flight
80	Rich Good	Mean Machine	Estes	E D12-5	Good Flight
81	Rich Good	Mean Machine	Estes	E D12-5	Good Flight
82	Rich Good	Mean Machine	Estes	AT E15-7W	Good Flight
83	Rich Good	Alpha III	Estes	E C6-5	Good Flight
84	Glenn Fvryr	X-30 Space Pl	Quest	E C6-3	Good Flight
85	Glenn Fvryr	1/2A BG	SB	E 1/2A3-2	Red Baron
86	Glenn Fvryr	Onyx	LOC	AT E15-4W	Good Flight
87	Glenn Fvryr	A PD	SB	E A8-3	48.5s - GC
88	Gary Rubright	Rascal	Estes	E B6-4	Good Flight
89	Gary Rubright	Athena	Estes	E B4-4	Good Flight
90	Gary Rubright	Cajun	Estes	E B4-4	Good Flight
91	George Beever	Titan Mk. IV	SB	E B6-2	Good Flight
92	George Beever	Titan IIIE	Estes	E D12-5	Good Flight
93	George Beever	Bullpup 12B	TLP	E D12-5	Good Flight
94	George Beever	Exocet MM40	TLP	E D12-5[2]	Hmmm...
95	George Beever	Javelin	FSI	AT E30-4T	Good Flight

Launch Statistics

Models Flown:

33 Estes
 4 North Coast Rocketry
 1 Cox
 2 The Launch Pad
 2 Quest
 1 Flight Systems, Inc.
 1 SPAAR
 1 LOC/Precision
 2 Aerotech
 20 Scratchbuilt

Motor Usage:

73 Estes
 18 Aerotech Single Use
 6 Aerotech RMS
 3 Flight Systems, Inc.
 1 Vulcan

Motor Failures:

1 Estes C5-3 CATO

Meeting Minutes

November 17, 1995

Present: Bill Rhoat, Dale Greene, Dan Weinhold, Gary Feveryear, George Beever, Rick Hackman, George Fetter, Glenn, Rita, Renee, & Daniel Feveryear.

Treasurer: Reported 45 current members; expenditures: \$49.75 for newsletter copy costs. Income: \$10 in dues. Balance, \$556.46.

Competition: The RAMTEC-4 Regional Meet will be held at Allentown College, over the weekend of June 15/16, 1996. The events will be: B SD, C HD, D ELA, & Sport Scale.

Section Advisor: No report.

Newsletter: Submissions needed, as always.

High Power: No report.

Old Business: Dale Greene will be checking out the Hosses' Steak House in Elizabethtown for the Family Dinner. The

dinner will be held on **Saturday, January 13, at 6 PM.** More news as it becomes available.

Club patches are still available. See Dale Greene.

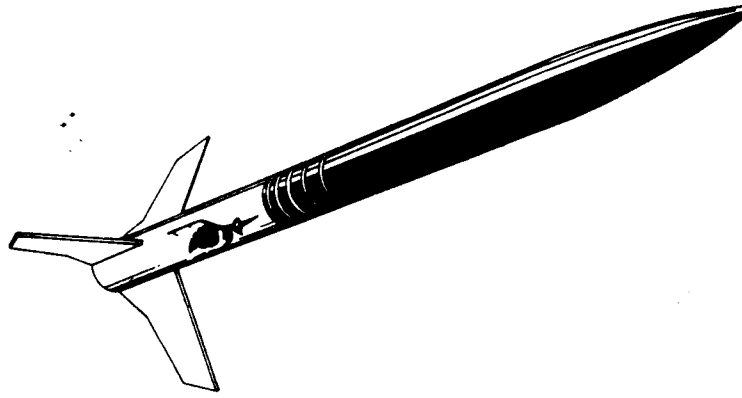
New Business: The club will seek permission to use the same meeting facility for 1996. Dan Weinhold will handle.

NARHAMS has announced the events for the East Coast Regional Meet, ECRM, to be held over the weekend of April 13/14, 1996, in Middletown, MD. They are: B HD, PMC, 1/2A BG, and 4 X A Cluster Altitude.

Nominations were made for club officials for 1996. See enclosed ballot.

NAR Records

November 6, 1995



A Division

Rule #				
19.	1/4A Alt	58 m	06/05/93	S Smith
19.	1/2A Alt	95 m	05/18/91	M Whymark
19.	A Alt	295 m	05/12/86	J Lyon
19.	B Alt	510 m	08/11/81	H Rose
19.	C Alt	202 m	05/31/81	C Ramos
19.	E Alt	330 m	09/28/91	M Whymark
19.	F Alt	1820 m	09/27/81	F Craven
19.	G Alt	640 m	09/28/91	M Whymark
22.	C PL Alt	489 m	08/09/89	J Marsh IV
23.	B EL Alt	44 m	05/18/91	M Musarra
23.	C EL Alt	363 m	08/06/92	A Miller
23.	D EL Alt	428 m	04/27/91	A Miller
23.	F EL Alt	508 m	09/28/91	M Whymark
24.	D DEL Alt	412 m	08/07/90	J Marsh IV
24.	F DEL Alt	765 m	05/26/90	R McBroom
25.	1/2A Clstr Alt	113 m	06/05/93	S Smith
30.	1/4A PD	38 s	09/22/91	A Miller
30.	1/2A PD	77 s	06/26/95	M Filler
30.	A PD	180 s	08/03/92	S Smith
30.	B PD	65 s	08/20/95	J Shapiro
31.	1/4A SD	20 s	09/22/91	A Miller
31.	1/2A SD	104 s	03/18/90	J Kmetz Jr
31.	A SD	650 s	10/13/85	T White
31.	B SD	65 s	08/08/88	J Kmetz Jr.
31.	C SD	217 s	08/07/89	J Marsh IV
31.	D SD	137 s	04/15/90	R McBroom
32.	A HD	141 s	08/09/88	M Sias
32.	B HD	155 s	05/08/93	M Filler
32.	C HD	83 s	04/15/90	R McBroom
32.	D HD	139 s	08/04/92	R Lemon III
32.	E HD	124 s	04/28/91	A Miller
33.	B SR Dur	8316 p	10/15/95	J Shapiro
34.	B EL Dur	180 s	08/09/88	A Linder
34.	C EL Dur	151 s	10/20/90	A Miller

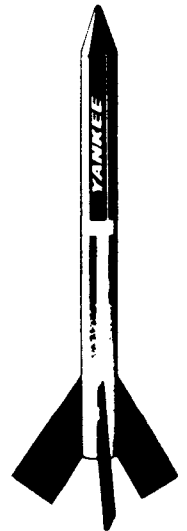
34.	D EL Dur1	26 s	02/28/88	V Bernatchez
35.	D Dual EL Dur	80 s	06/12/93	S Smith
36.	1/4A BG	55 s	05/08/93	S Smith
36.	1/2A BG	54 s	06/16/90	J Whymark
36.	A BG	247 s	06/26/82	M Beyers
36.	B BG	153 s	10/24/92	S Smith
37.	1/4A RG	17 s	08/05/92	A Miller
37.	1/2A RG	48 s	10/24/92	S Smith
37.	A RG	49 s	09/30/79	J Whitehead
37.	B R/G	22 s	06/26/95	M Filler
37.	C RG	118 s	09/09/90	L Barber
37.	D RG	30 s	10/03/92	S Smith
38.	1/4A Flex BG	62 s	05/08/93	S Smith
38.	1/2A Flex BG	169 s	05/17/92	S Smith
38.	A Flex BG	120 s	10/03/92	S Smith
38.	B Flex BG	487 s	06/13/93	S Smith
38.	D Flex BG	249 s	08/04/92	S Smith

B Division

19.	1/2A Alt	149 m	05/18/91	E Glembocki
19.	A Alt	284 m	10/16/93	B Gormley
19.	F Alt	1430 m	08/11/88	K Kmetz
22.	C PL Alt	325 m	06/08/93	B Gormley
23.	C EL Alt	216 m	06/26/95t	S Smith
23.	D EL Alt	316 m	07/04/81	C King
24.	E DEL Alt	416 m	07/27/94	K J Gormley
30.	1/2A PD	210 s	06/26/95	S Smith
30.	A PD	101 s	10/29/95	S Smith
31.	1/2A SD	80 s	09/24/88	E Glembocki
31.	A SD	118 s	06/18/94	B Gormley
31.	B SD	73 s	12/10/88	K Frazier
32.	1/2A HD	98 s	05/01/94	B Gormley
32.	B HD	90 s	08/09/89	M Sias
34.	B EL Dur	74 s	12/10/88	K Frazier
34.	C EL Dur	53 s	10/29/95	S Smith
36.	1/2A BG	55 s	10/29/95	S Smith
36.	A BG	88 s	06/18/94	B Gormley
36.	B BG	132 s	08/08/89	M Sias
37.	A RG	418 s	08/14/81	N Riviuccio
37.	B RG	157 s	08/03/93	K J Gormley
37.	C RG	99 s	05/19/91	B Gormley
38.	1/2A Flex BG	383 s	08/12/81	M Sykos

C Division

19.	1/2A Alt	163 m	09/03/95	G Feveryear
19.	B Alt	535 m	08/11/81	A Rose
19.	C Alt	756 m	08/07/90	J Sexton
19.	D Alt	1214 m	04/17/94	M McCauley
19.	F Alt	1741 m	09/27/81	D Frost
22.	A PL Alt	142 m	08/04/93	B Kreutz
22	B PL Alt	199 m	05/30/81	R Kaplow
22	D PL Alt	983 m	11/11/89	D Lucas
23.	B EL Alt	133 m	06/21/86	J Warnock
23.	C EL Alt	289 m	08/11/82	D Cook
23.	E EL Alt	932 m	08/10/83	J Zingler
24.	D DEL Alt	369 m	08/07/90	T Barber
24.	E DEL Alt	590 m	04/24/94	G Feveryear
24.	F DEL Alt	978 m	03/05/89	W Roush
25	1/2A Clstr Alt	222 m	08/05/93	B Kreutz
30.	1/2A PD	112 s	08/19/95	J Vincent
30.	A PD	272 s	09/17/95	B Dauphin
30.	B PD	106 s	08/20/95	K Smith
31.	1/2A SD	183 s	05/07/89	D Saukerson
31.	A SD	249 s	05/17/87	D Domina
31.	B SD	115 s	08/19/95	J Vincent
31.	C SD	231 s	12/27/86	R Santella
31.	D SD	335 s	12/03/88	T White
31.	E SD	303 s	04/27/85	M Steele
31	F SD	238 s	07/26/94	T Barber
31.	G SD	182 s	07/22/90	E Miller
32.	1/4A HD	31 s	10/10/93	J Distel
32.	1/2A HD	711 s	09/25/93	F Williams
32.	A HD	126 s	06/26/95	G Feveryear
32.	B HD	157 s	04/04/87	D Domina
32.	C HD	198 s	05/21/92	E Miller
32.	E HD	95 s	10/11/89	K Brown
33.	B SR Dur	5346 p	10/15/95	D Shapiro
33.	E SR Dur	45150 p	09/16/95	B Dauphin
34.	B EL Dur	308 s	08/11/88	S Maxwell III
34.	C EL Dur	622 s	09/06/81	A Nienast
35.	D DEL Dur	273 s	06/26/93	B Kilby
36.	1/4A BG	207 s	09/14/91	J Vincent
36.	1/2A BG	447 s	09/22/85	L Fuke
36.	A BG	311 s	09/09/89	T Barber
36.	B BG	260 s	04/29/90	G Feveryear
36.	C BG	157 s	10/20/90	T Barber



36.	D BG	463 s	05/19/91	D Klouser
36.	F BG	217 s	05/17/81	T Lee
37.	1/4A RG	16 s	06/13/94	J Distel
37.	1/2A RG	230 s	05/17/81	L Bercini
37.	A RG	750 s	10/10/81	M Huber
37.	B RG	276 s	09/16/95	A Jackson
37.	C RG	240 s	07/26/94	K E Gormley
37.	D RG	361 s	08/06/87	D Domina
37.	E RG	951 s	09/26/93	F Williams
38.	1/2A Flex BG	670 s	06/18/94	D Winings
38.	A Flex BG	1476 s	04/26/87	R Lambert
38.	C Flex BG	427 s	07/03/82	J Zingler
38.	D Flex BG	224 s	10/11/85	T White



Team Division

19.	1/2A Alt	219 m	09/17/88	Neutron Tm
19.	A Alt	414 m	05/11/86	Odd Couple Tm
19.	D Alt	860 m	08/30/81	Lou Dick Tm
19.	E Alt	1387 m	05/11/85	Lou Dick Tm
22.	C PL Alt	553 m	08/09/89	Spaceman Spiff Tm
23.	B EL Alt	69 m	09/03/95	Flirtn' With Disaster Tm
23.	C EL Alt	91 m	06/26/95	Snowball's Chance
23.	D EL Alt	526 m	05/11/86	Omega Alpha Tm
30.	1/2A PD	1052 s	09/27/87	Jankov Pavlov Tm
30.	A PD	1039 s	04/25/82	Lou Dick Tm
30.	B PD	618 s	03/31/85	Lou Dick Tm
30.	C PD	447 s	04/14/90	Beach Bums Tm
31.	A SD	74 s	06/26/95	Snowball's Chance
31.	B SD	227 s	07/22/85	Dual Egglofters Tm
32.	A HD	498 s	08/09/88	Robyn & Randy Tm
32.	D HD	161 s	01/11/86	Lou Dick Tm
32.	E HD	202 s	06/11/94	Los Cohetedores Tm
32.	F HD	75 s	06/29/88	Jankov Pavlov Tm
29.	B EL Dur	698 s	11/11/90	Southern Comfort Tm
29.	D EL Dur	924 s	12/03/89	Ace Disaster Tm
36.	1/2A BG	75 s	10/29/95	Snowballs Chance Tm
37.	B RG	179 s	08/09/90	Barber Girls Tm
38.	B Flex BG	237 s	02/20/82	Lou Dick Tm

A TRIBUTE TO BIG BERTHA

At a recent SPAAR launch, I noticed that three flyers all had Big Berthas to fly. Giving it just a little more thought, I recalled having seen everyone who was there with a Bertha at one time or another.

So what's the point? The point is, after being around for about 34 years, it's time to give 'ol Big Bertha her due. She is a true rocketry classic.

Big Bertha first appeared as a plan published by Estes in 1961. She was designed around an 18-inch length of 1.637" diameter BT-60 tubing, the same size as a paper towel tube. [Gee, how 'bout that] Four swept fins and a blunt balsa nose cone gave the Bertha her classic shape.

Bertha was first offered in kit form in 1965. Compared to the other offerings in the Estes catalog, she really was "big". In fact, the Estes catalogs of the period described her as, "a huge 24 inches long", with "slow, realistic lift-offs", making the Big Bertha "a perfect demo bird!" Not only that, but she was recovered via a "huge 18 inch parachute".

It all seems somewhat silly in this day and age, when 4 foot tall, 4 inch diameter g-powered models are almost commonplace at sport launches. But not so when I started flying rockets in 1968. Big

Bertha really was a big model rocket.... all for \$2.00. Yup, two bananas, two clams, two bucks.

Over the years, Bertha shrank and grew. As a result of inflation in the early 70's, Estes introduced a line of "Mini Brutes", sport models powered by 13mm 1/2As and As. One was the "Mini Bertha", designed around an 18mm BT-20 airframe. Smaller, but still a Bertha.

The standard Bertha received a plastic nose cone around 1976, as well as pre-cut fins. But still a Bertha.

In late 1988, Estes came out with the Super Big Bertha, or as it came to be known, "the Bertha on steroids". Built around the 2.6" diameter BT-80, this version was designed to fly on 24mm Ds and eventually, E motors. Now called the Broadsword, she's still a Bertha.

I have even seen photos of monster-scale Berthas, 4" in diameter. Even when powered by H, I & J motors, the basic design remains stable.

The current standard Bertha sports a yucky color and decal scheme, and goes for about \$10. But no matter how big or small or ugly you make her, she's still a Bertha... and a classic!

HOW TO WIN IN COMPETITION

[Without Knowing Why]

by Kenneth Brown

[Editor's Note: Ken Brown, of the NOVAAR Section and "CEO" of Qualified Competition Rockets, wrote this classic piece a number of years ago. It has appeared in "The NOVAAR Free Press", and we thank Ken for it's use here.]

The following list is intended to help the new and average builders of competitive model rockets.

PARACHUTE, STREAMER, AND ALTITUDE

1. Use 12 inch tubes for all rockets.
2. The slicker the model, the higher it goes.
3. Put the shock cord on the outside, except on altitude models.
4. Make the fins oversize if the nose cone is light. Make the nose heavy if the fins are small.
5. The smaller in diameter, the higher it goes.
6. Hollow out balsa nose cones.
7. Peeling the inside of body tubes is not worth the time and trouble, except in altitude.
8. Worry about the basics and forget the fine tuning, except in altitude.
9. Painting models orange is worth the difference; timers see the model and you can find it in the weeds.
10. In streamer, make sure the streamer does not move during boost, or a prang is in order.
11. Use 2-stage models in altitude with 2-second delays instead of -0 delays in the first stage.
12. Use a piston in a tower - always.
13. Use 14mm in 1/2A & A as you can insert larger 'chutes & streamers.

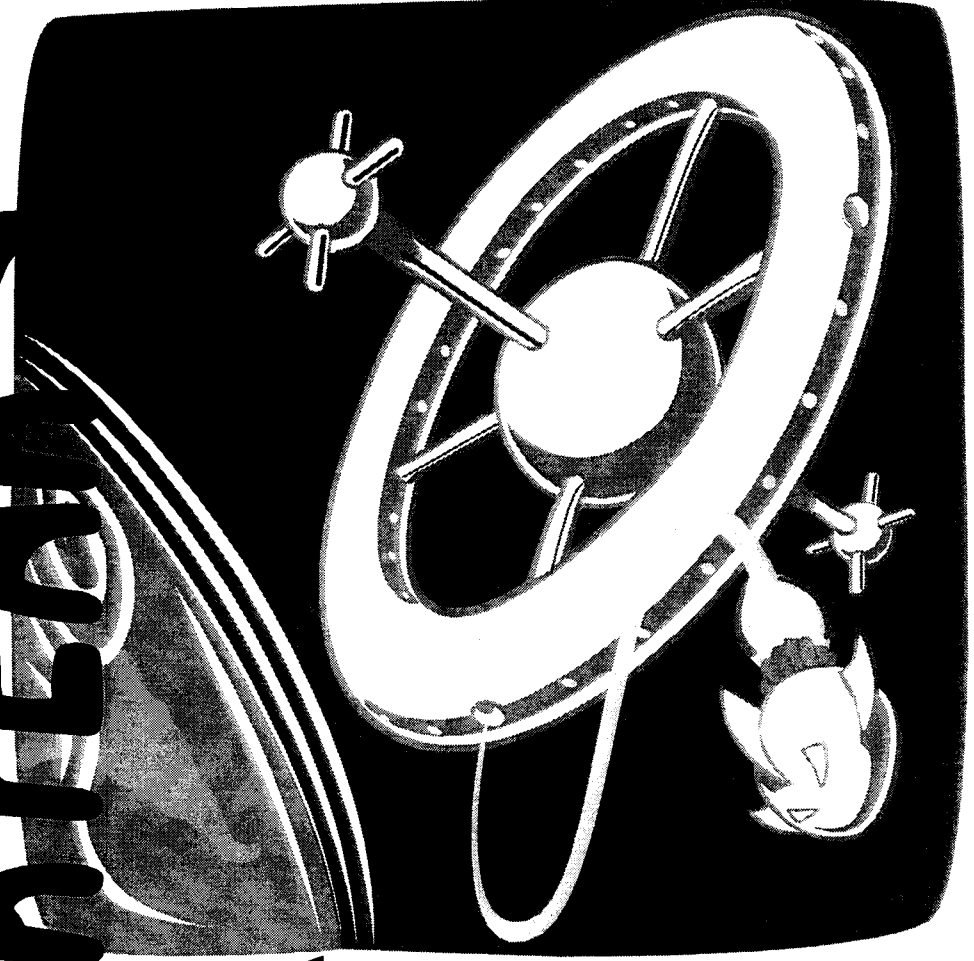
GLIDERS

1. Use only 4-6lb C-grain balsa for wings - if you can find it!
2. Use one thickness greater than usual and don't tissue wings.
3. Use heavy [12lb] balsa for booms, not spruce.
4. Build a turn in, then use clay - but only if required.
5. Fly early in the morning and late in the evening; those times are calmer.
6. "Overbuild" one glider to use in bad weather & wind and to ensure a return.
7. Fly one with a tight turn for a return.

EGGLOFTERS

1. Cushion the egg with egg carton sections & a plastic bag.
2. Use wire lugs, 1 on a fin & 1 taped around the egg capsule.

SPARR MEETING AT FEVE RYER'S



WHERE: 701 MAIN ST. DELTA, PA

WHAT: MEETING & ELECTION

WHEN: SAT. DEC. 16th 6:00pm

QUESTIONS? CALL GLENN

717-456-5570

