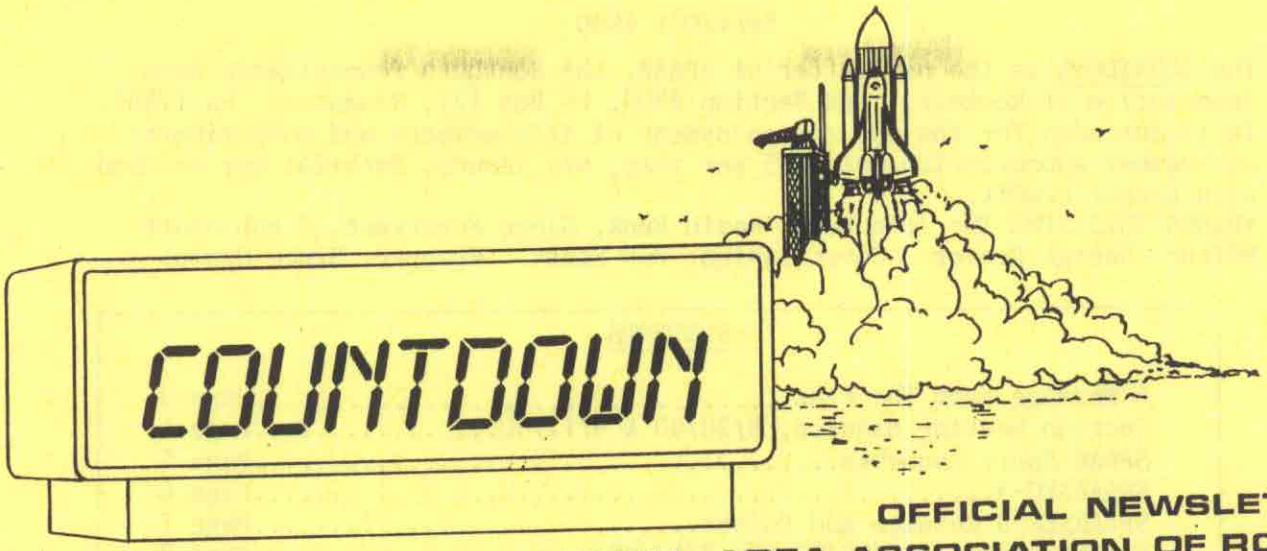


OFFICIAL NEWSLETTER OF
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

VOLUME 3, ISSUE 5 SEPT./OCT. 1990

IN THIS ISSUE:

JOHN YOST'S D/E ROTAROC

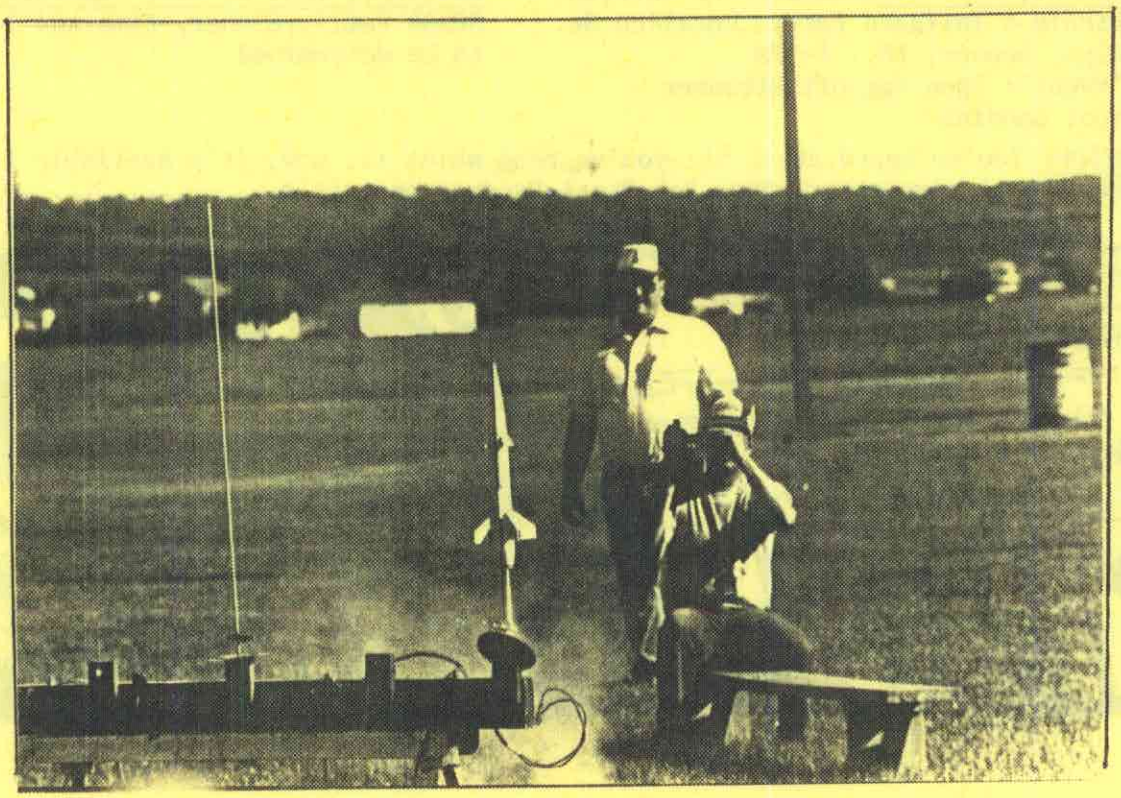
SPAARSEC-3 RESULTS

SPAAR SPORT LAUNCHES

plus

THE FIRST INSTALLMENT OF...

SPAAR TREK !



The COUNTDOWN

Volume 3, Issue 5

Sept/Oct 1990

The COUNTDOWN is the newsletter of SPAAR, the Southern Pennsylvania Area Association of Rocketry, NAR Section #503, PO Box 127, Reamstown, PA 17567. It is intended for the use and enjoyment of it's members and subscribers; non-member subscription rate, $5 per year, six issues. Material may be used with proper credit.

THANKS THIS TIME TO: John Yost, Kevin Funk, Glenn Feveryear, & Bob Stott

Editor: George Beever Cover Design: Bob Stott Wrapper: Bruce Canino

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On the cover: A typical scene at a SPAAR Sport Launch - John Yost videos another liftoff. (J. DePaul photo)

SCHEDULE

SUNDAY, OCT. 14: SPAAR Sport Launch, Cocalico Sr. High, Denver, PA., 1-5PM.

MONDAY, OCT. 15: SPAAR Section Meeting, Lancaster Co. Library, 7-9PM.

SUNDAY, NOV. 4: SPAARSPAM-2, Section Picnic & Tailgate Party, Cocalico Sr. High, Denver, PA., 1-5PM.
"Event": Open Eggloft Streamer Spot Landing.

MONDAY, NOV. 19: SPAAR Section meeting, Lancaster Co. Library, 7-9PM.

MONDAY, DEC. 17: SPAAR Section Meeting, Lancaster Co. Library, 7-9PM.

SATURDAY, JAN. 6, 1991 (TENTATIVE): SPAAR Family Dinner, time and location to be determined.

BELOW: You've heard about it; you've read about it. Now, it's available in your local newsletter! From Bob Stott Productions, it's.....

WE NEED YOU!

SPAAR has experienced a three fold growth in the last two years. Although this is a very welcome and commendable growth, it isn't taking place without growing pains.

SPAAR holds a monthly meeting to conduct business and generally shoot the breeze. The average attendance has been 8 persons. I know that not everyone can attend, but it is your dues and your activities that are discussed at these meetings.

Our monthly sport launches have shown a marked increase in attendance from 10 members, two years ago, to near 30 on September 2. The number of models launched has also increased considerably. Two years ago we worked hard to launch 50 flights, whereas on September 2 we logged 86 flights in a four hour period.

No one more than I, likes to see this great growth. It allows more ideas to be exchanged, rockets to be flown and most of all fun for everyone who enjoys model rocketry, but here comes the bad news. We need help in operating the range. Currently all range duties are being handled by six members. Many of these are the same people who were serving duty two years ago. A statistic that really jumped out after the September 2 launch was that of the 86 flights that day, 39 of them were flown by three people. This is very commendable. However, not one of these people volunteered to help with range operations. This undoubtedly caused some of those members working the range to either not fly the models they brought or put their flying of till the last minute before range closure. Somehow this doesn't seem quit fair, does it?

If SPAAR is going to continue to grow as a section we need everyone's help. The result may be the unnecessary loss of members because of a crowded, disorganized and unsafe range. We want to see everyone at each launch be able to enjoy themselves and fly as much as they like, but we also want to see everyone join in sharing the responsibilities so each has an equal and timely opportunity to do so.

The jobs are not tough, anyone can learn. Don't wait until the range has to be shutdown, until you volunteer to help. Besides, remember how much fun it was when you pushed the button to launch your own rockets? Now you can do it for someone else and not have to chase them!

At the next launch just step up and ask, "can I help?", I will guarantee you won't be turned down and I'm sure you will find it a lot of fun. By-the-way, maybe we can see you at the next section meeting too.

Glenn Lovejoy

Section President

M E E T I N G S

Section Meeting

August 20, 1990

Present: Gary Feveryear, Dick Rhoat, Bill Rhoat, Dale Greene, Ed Miller, Glenn Feveryear, Rita Feveryear, George Beever.

Old Business:

NEWSLETTER: George Beever reported that 45 copies of the July/August issue of the Countdown were printed; 26 went to members and families, 7 to subscribers, and 12 to other clubs on an exchange basis.

TREASURER: Ed Miller reported that there were 31 paid members; at the end of the last meeting, there was a General Fund balance of $240.88; since that time, there has been an income of $27.50 in dues, $10 for patches, $20 in Record Trial fees, $3.50 in soda sale profits, and $1.25 in photo profits. Expenses for the month were: $10 for newsletter costs, and .88¢ in photos. This leaves a balance of $292.25.

COMPETITION: Glenn Feveryear reminded everyone that SPAARSEC-3 would be held on Sept. 16, and appointed George Beever as Contest Director for the event. He also reminded those present that the practice event for the Sept. 2 Sport Launch would be F Streamer Duration for C Division, and D SD for A & B.
The new club record list was passed around, listed elsewhere in this issue.

EDUCATION: The plans for workshops for the winter of 90-91 were discussed. Various ideas were d scussed, and it is hoped that the schedule for the workshops will be finalized by the October meeting.

SECTION ADVISOR: George Beever, for Section Advisor John Yost, had no report.

New Business:

Dale Greene led an hour-long discussion on his recent trip to NARAM-32 in Dallas, TX. He brought with him a number of items that he had purchased, including a box of Czech model rocket motors, and an example of the new North Coast Rocketry piston launcher.

General discussion followed, and the meeting adjourned at 9PM.

Section Meeting

September 17, 1990

Present: Glenn & Rita Feveryear, John Yost, Dale Greene, Art Babiarz, Dick Rhoat, Ed Miller, George Beever.

Old Business:

TREASURER: Ed Miller reported that there are currently 32 paid members. At the end of the last meeting, the General Fund balance was $292.25; since that time, there has been an income of $47 in patch sales; $25 in dues; and $46 in launch rod sales. The club has incurred the following expenses: $22.50 in postage, and $88.72 to purchase launch rods. This leaves a new balance of $299.03.

NEWSLETTER: George Beever thanked Ed Miller and John Yost for two major contributions to the Countdown, and discussed submitting the Countdown for consideration for the 1991 LAC newsletter award.

COMPETITION: Glenn Feveryear announced the results of SPAARSEC-3; announced the results of Sept. 2's practice event, which was F SD. Dale Greene won with a 88.9s flight.

EDUCATION: After discussion, it was decided to hold 3 worhshops at the Delta Fire Co. this coming winter; these would be held on Saturdays from 9AM until Noon. In addition, there will be two workshop/discussion periods during meetings this winter. The club's business will be taken care of from 7PM to 8PM, with a presentation on a certain topic from 8PM to 9PM.

SECTION ADVISOR: John Yost presented information on the NEMROC-6 convention, to be held the first weekend in October in Massachussetts.

New Business:

The event for SPAARSPAM-2 was decided upon. This will be "Open Eggloft Spot Landing". The rules are discussed elsewhere.

The 1991 Family Dinner was discussed. George Beever volunteered to gather more information.

Rita Feveryear was commisioned to make a club flag.

The meeting adjourned at 9PM.

C L U B L A U N C H E S

SPAART-1 Record Trials

July 22, 1990

The largest SPAAR event to date was held on July 22, 1990. An NAR sanctioned records trial was combined with a Sport Launch, to produce a record 92 flights, from 9AM to 5PM. Of these 92 flights, 30 were attempts at breaking or setting standing US model rocket performance records, and 62 were sport flights.

The weather that day was a bit of a trial itself. Rain clouds appeared to circle the launch area all day, but thankfully the rain held off until around 6PM, after all flights had been made.

Ed Miller was the "Top Gun" in the NAR records department that day, setting new, pending records in F Streamer Duration (138.5 seconds), and G Streamer Duration, with a time of 181.6 seconds.

A large number of club records were set, too. In B Division, Bill Rhoat set a new A Streamer mark with 85.7 seconds. In C Division, the following records were set: ½A RG, Glenn Feveryear, 14.92s; ½A SRD, Glenn Feveryear, 233 pts; A Helicopter, John Yost, 74s; C Streamer, Dr.Bob? Balogh, 208s; E Streamer, Ed Miller, 106s.

As mentioned, the sport flyers were active, too. Art Babiarz, Sr. and Jr., flew a number of nice scale models, as well as some "oldies but goodies", such as a Centuri SR-71. New member Trevor Smedley was up from Delaware, and flew his very nice Saturn V, not once, but twice.

SPAAR Sport Launch

August 12, 1990

Fourteen members made a total of 60 flights on August 12, and along with the large number of spectators made this one of the best attended launches in SPAAR's short history.

The practice event that day was A Boost/Glide, won by Glenn Feveryear with 42.2 s. George Beever came in second with 17.1s; not bad considering they were the only two who flew A B/G.

There were a lot of composite motors flying around that day. Dr. Bob? flew an "uprated" Estes Phoenix with an Aerotech E15; a North Coast ASLAT with a D12/E15 combination; a AAA LaserSonic 1.6 with an F25; and a AAA Nike-Ram IIb with a G25. Fred Hoke flew a beautiful Aerotech Mustang, first on an E15 and then on an F25. Unfortunately, the F25 CATO'd, severely damaging the model. Your editor flew an Aerotech Intitiator on an E15, and an NCR Aerobee on an F25-6; both were very nice flights.

The stars of the day, however, were Ed Miller and John Yost. Ed flew a much-modified Estes Super Big Bertha with an F25-9WL, and then impressed everyone with his "Magnum Wizard", an UP-scaled version of the little Estes model. This rocket is anything but little, and turned in a very exciting flight on three E15-7WL motors. John flew another up-scaled model, this being an enlarged RotaRoc. John centered the model around the 24mm BT-50 body tube, in order to take advantage of Estes D12 and Aerotech E15 motors. On a D12-3, the model turned in a time of 64.2s, and an E15-4, 115.0s, both new club records. John also set a club D Boost/Glide mark, using a Trip Barber designed "D-Light", complete with dethermalizer, for a 65 second flight.

SPAAR Sport Launch

September 2, 1990

The SPAAR Sport Launch of Sept. 2 all but eclipsed the July 22 Record Tials in the total number of flights made. A total of 86 flights were made in a four hour period by 16 members or guests.

The practice event was F Streamer, won by Dale Greene with a flight of 88.9 seconds on a home-brew model with an F32-5. Ed Miller's attempt, also flown with an F32, went into the clouds and could not be seen by the timers. Incredibly, however, Bob Balogh found the model later in the afternoon, in an area where no one expected it to land.

Karl and Erik Fehrenbach from PARA came over to fly with us, bringing with them a number of larger composite powered sport rockets.

S P A A R S E C - 3

On September 16, SPAAR held it's third NAR Section Meet, SPAARSEC-3. The events flown were ½A Parachute Duration, B Streamer, Multi Round, B Helicopter, Multi, A Boost/Glide, and C Eggloft Duration. Unfortunately, only five C Division members competed; there were no A or B Divisioners there. This cannot, however, take away from the fact that this was Ed Miller's day. Known mostly for his sport flying, Ed showed that he can also play the competition game.

The weather, in a word, was weird, from start to finish. During the course of the day, the breeze picked up to actually become a wind, then backed off again; it eventually swung around 360 degrees by the time the meet was ended by a rain shower at 4:30PM. Hey, it wouldn't be a SPAAR event without some sort of weather-related fun.

In addition to the breeze/wind/breeze and the threat of rain, by midday the thermals were booming. Some incredible times were recorded, but this was not always to the flyer's advantage, as we shall see.

Glenn Feveryear started things off with a ½A PD flight, using a 13mm model and a ½A3-4; after 4+ minutes, the model was last seen thermaling up. His second flight was with a back-up model, an old CMR "Paratrooper"; after staying in the air for over a minute, it landed on the roof of the school, from which it was eventually recovered. Glenn was the eventual winner of the event. Another interesting PD flight was your editor's first flight of the day. After watching Glenn's 13mm model fly away, he decided to play it safe and use an old 18mm model, a 24" chute, and a ½A6-2, just to ensure recovery of at least one flight. Wrong. This model also thermaled away, landing in the middle of a corn field. It just wouldn't be a SPAAR event without some corn problems, now would it?

Glenn also took B Streamer Multi by a wide margin, with three flights totaling 316.6 seconds. Section Advisor John Yost pulled in at second place with 274.2 seconds. After that, it was all Ed Miller.

In B Helicopter, Ed came up with one of the more amazing flights of the day. On his first attempt, flying his helicopter model that is a cross between a RotaRoc and a Helix, he got into a thermal rising off of the macadam parking lot. This thermal lifted the model over the school, adding some lift of it's own. The flight was timed at 133.65 while it was in sight, and was most likely longer than that. After two more flights, Ed had a first place total of 201s. The editor flew an NCR RotaRoc kit and 2nd place with 144s. John Yost had some stability problems with a Rose-a-Roc, but his third flight went for 70+ seconds.

In C Eggloft, Ed took first place once again. Flying an Apogee kit powered by a C6-5, the model deployed a nice 36' mylar chute that caught the thermal over the parking lot, for a 91.3 second flight. However, the best three single flights in the event were not returned. Glenn's second flight went for 113 seconds, and John's went for 121.5; both thermaled in the corn, and were unreturnable. Dale Greene had the real heartburner here, however. His first C ELD flight went for a meet-high 132.1 seconds; it too, thermaled away, leaving Dale to settle for only flight points.

The weirdest event of the day, however, had to be A Boost/Glide. Glenn had his first flight DQ'd for a Red Baron. His second flight thermaled away at 250.8 seconds (and was going up). This left him with some nice flight time, but only flight points, since the second flight was not returned. Ed Miller, flying an Estes Dragonfly, took first place with 73.5 total seconds. This just goes to show that a person can be competitive with Estes products! Dale Greene took second in the event with 71.66 total seconds, of which 62.7 seconds came on his second flight.

It was an A B/G flight that closed out the day; John Yost had just launched his Flat Cat with an A8-3 when the rains came, shutting down the range at 4:30. Prior to that happening, however, SPAAR members and guests got in 65 sport flights to go along with the 54 contest flights. This total of 119 flights exceeds the record set on July, 1989 at SPAARSEC-1 of 111 flights.

SPAARSEC-3 Results
16 Sept. 90

C Eggloft Duration

Name	Flight 1	Flight 2	Place	Points
Ed Miller	91.3	NA	1st	70
Glenn Feveryear	87.56	113.11NR	2nd	42
George Beever	68.35	50.5	3rd	28
John Yost	44.9	121.5NR	4th	14
Dale Greene	132.1NR	N/A	5th	7

A Boost/Glide

Name	#1	#2	Total	Place	Points
Ed Miller	40.39	33.11	73.50	1st	80
Dale Greene	9.59	62.07	71.66	2nd	48
George Beever	12.25	22.59	34.84	3rd	32
John Yost	18.8	N/A	18.8	4th	16
Glenn Feveryear	18.3DQ	250.8NR	xxxx	5th	8

B Helicopter Multi-Round

Name	#1	#2	#3	Total	Place	Points
Ed Miller	133.65	35.66	31.70	201.0	1st	120
George Beever	71.91	41.92	30.74	144.6	2nd	72
Glenn Feveryear	38.07	22.52	40.74	101.3	3rd	48
John Yost	DQ	70.40	DQ/UNS	70.4	4th	24
Dale Greene	23.80	23.47	N/A	47.3	5th	12

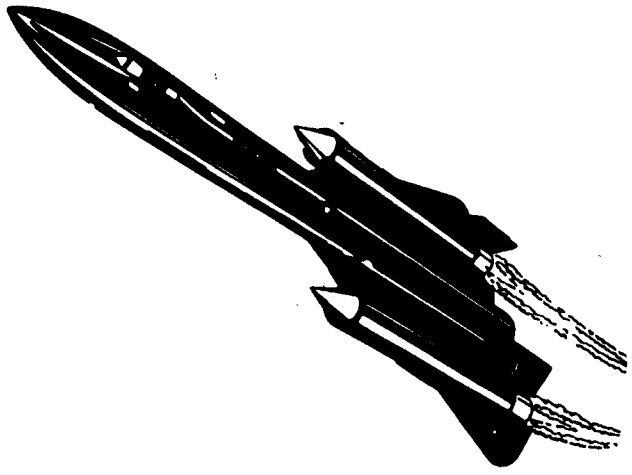
B Streamer Multi-Round

Glenn Feveryear	96.45	112.90	107.2	316.6	1st	60
John Yost	78.35	105.23	90.6	274.2	2nd	36
Ed Miller	106.1	41.2	113.97	261.3	3rd	24
George Beever	142.39	77.2	83.2	242.8	4th	12
Dale Greene	56.99	107.43	N/A	204.4	5th	6

½A PD

	#1	#2	Total	Place	Points
Glenn Feveryear	243.75	68.85	312.6	1st	30
George Beever	146.5	11.76	158.3	2nd	18
Dale Greene	59.70	38.46	98.2	3rd	12
Edward Miller	42.65	21.4	64.1	4th	6
John Yost	24.52		24.5	5th	3

Total Points
1 Ed Miller 300
2 Glenn Feveryear 188
3 George Beever 162
4 John Yost 93
5 Dale Greene 45



F L I G H T L O G S

FLIGHT LOG

July 22, 1990

Sport Flights

Fl#	Name	Model	Motor	Time	Misc.
1	A. Babiarz	Big Bertha	B8-5	12.7	GF
2	" "	Shuttle	C5-3	10.5	GF
3	" "	M. Mars Lander	A10-3	12.8	GF
4	" "	Centuri SR-71	D12-3	20.2	GF
5	" "	Centuri SR-71	D12-3	27.1	GF
6	" "	Crusader S/W	B4-2	6.3	GF
7	" "	AIM-45A	C5-3	35.0	GF
8	" "	Gemini-Titan	C6-3 (2)	xxxx	SEP
9	A. Babiarz III	Saturn V	D12-3	10.1	GF
10	" "	Gyroc	A8-3	19.0	GF
11	" "	Junk	B6-4	21.9	GF
12	" "	Saturn 1B	D12-3	2.8	UNS
13	" "	Soaring Eagle	B6-4	6.5	PRG
14	R. Balogh	Lasersonic 1.6	G80-10	xxxx	GF
15	" "	Shuttle	C6-3	14.3	GF
16	" "	Nike-Ram 2B	F25-9	83.5	GF
17	" "	V-2	E6-4	82.5	GF
18	" "	Uprated Phoenix	E15-4WL	xxxx	GF
19	G. Beever	Big Bertha	C6-5	39.0	CHU
20	" "	IRIS	A8-3	10.0	CATO
21	" "	Firehawk	C6-5	33.1	GF
22	" "	Maverick	D12-5	53.8	GF
23	" "	Sizzler	A8-3	23.0	GF
24	" "	Sizzler	B4-4	27.5	?
25	" "	AGM-78	C6-3	xxxx	GF
26	" "	AGM-78	D12-7	95.1	GF
27	D. Bender	Mega Sizz	D12-5	52.4	GF
28	" "	Yellow Jacket	B4-4	xxxx	SEP
29	" "	Longshot	B6-4	23.3	GF
30	" "	Birdie	A3-4	7.9	GF
31	" "	Big Bertha	C6-5	54.6	GF
32	Glenn F.	Grumpy Dog	D12-0/D12-3	53.9	GF
33	" "	Grumpy Dog	D12-0/D12-3	41.0	GF
34	Gary F.	CMR Rear EJ	C6-5	49.3	GF
35	" "	X-16	B6-4	26.8	GF
36	" "	Mean Machine	D12-5	54.1	GF
37	" "	Scrambler	D12-5	46.0	GF
38	D. Greene	Rascal	D12-5	85.4	GF
39	" "	C SD	C6-7	151.3	GF
40	R. Hackman	A PD	A3-4	22.0	?
41	" "	Rogue	A3-4	xxxx	GF
42	" "	XR-52	A3-4	xxxx	?
43	" "	XR-37	B8-5	34.7	GF
44	" "	Der Red Max	B6-4	27.6	GF
45	" "	Big Bertha	B8-5	13.3	?
46	" "	XR-67	E5-6	23.4	GF
47	" "	Birdie	½A3-4	xxxx	GF
48	" "	Birdie	½A3-4	6.1	GF
49	" "	Blackie	A3-4	xxxx	SEP
50	" "	Birdie	A3-4	7.5	GF
51	E. Miller	Warp II	C6-0/B8-5	41.3	GF
52	" "	AstroCam	C6-5	xxxx	GF
53	" "	AstroCam	C6-7	25.3	GF
54	" "	AstroCam	C6-5	xxxx	GF
55	" "	HelioCopter	C6-5	40.5	GF
56	" "	Rascal	B6-4	14.4	GF
57	" "	Javelin	A8-3	13.3	GF
58	T. Smedley	Saturn V	D12-3	14.5	GF
59	" "	Saturn V	D12-3	16.5	GF
60	" "	Shuttle	C6-5	xxxx	GF
61	" "	Mega Sizz	D12-7	xxxx	GF
62	" "	Mega Sizz	D12-7	57.8	GF

Record Trial Flights

63	R. Balogh	C SD	C6-7	208.0	GF
64	G. Beever	½A FW/BG	½A6-2	xxxxx	DQ
65	" "	C B/G	C6-3	6.6	DQ/NG
66	" "	C B/G	C6-3	24.5	GF
67	" "	B B/G	B4-4	6.3	DQ/SHRED
68	" "	½A HD	½A3-2	32.28	GF
69	" "	½A HD	½A3-2	4.47	DQ/UNS
70	" "	½A HD	½A3-2	27.5	GF
71	Glenn F.	½A SRD	½A3-2	233pts	GF
72	" "	½A SD	½A3-4	60.4	GF
73	" "	½A RG	½A3-2	5.7	?
74	" "	½A RG	½A3-2	14.92	GF
75	" "	C HD	C6-3	78.4	GF
76	D. Greene	½A PD	½A3-4	114.2	NR
77	" "	½A HD	½A3-2	7.0	PRG
78	E. Miller	F SD	F25-12	138.5	GF*
79	" "	G SD	G25-10	181.6	GF*
80	" "	F SD	F25-9	84.6	GF
81	" "	E SD	E25-10	106.0	GF
82	" "	E SD	E15-10	93.0	GF
83	" "	C HD	C6-5	12.4	NO DEP
84	D. Rhoat	E SD	E25-10	58.0	DQ/SEP
85	W. Rhoat	A SD	A3-4	85.7	GF*
86	" "	½A SRD	½A3-2	192pts	DQ/SEP
87	" "	½A SRD	½A6-2	200pts	?
88	" "	½A SRD	½A6-2	207pts	DQ/EJ
89	J. Yost	½A SD	½A3-4	21.7	GF
90	" "	½A HD	½A3-2	7.6	DQ/ND
91	" "	½A HD	½A3-2	32.3	GF
92	" "	A HD	A3-2	74.0	GF

* indicates pending US Record.

FLIGHT LOG

August 12, 1990

Fl#	Name	Model	Motor	Time	Misc.
1	Gary F.	Orbit	F100-8	XXXXX	SHRED
2	D. Bender	Srike	D12-3	Xxxxx	GF
3	" "	Mega Sizz	D12-5	63.3	GF
4	" "	TSC	C5-3	20.3	SEP
5	" "	Thunderhawk	C6-7	60.0	GF
6	Glenn F.	D HD	D12-5	59.8	GF
7	" "	B SD	B4-6	168.5	NR
8	" "	½A PD	½A3-4	115.0	GF
9	" "	C SD	C6-7	NT	?
10	R. Balogh	Space Shuttle	C6-3	xxxx	GF
11	" "	Phoenix	E15-4WL	45.2	GF
12	" "	ASLAT	D12-0/E15-4	xxxx	PRG
13	" "	Lasersonic 1.6	F25-6	xxxx	SEP
14	" "	Nike-Ram 2b	G25-10	96.0	GF
15	M. Snyder	Commanche-3	B6-4	42.0	GF
16	" "	V-2	D12-5	65.0	GF
17	" "	Sidewinder	C6-5	36.2	GF
18	" "	Phoenix	D12-3	xxxx	GF
19	" "	EOS	D12-5	66.2	GF
20	F. Hoke	Super Big Bertha	D12-3	xxxx	CHU
21	" "	Mustang	E15-7	xxxx	GF
22	" "	Mustang	F25-9	xxxx	CATO
23	" "	Sunbird	C6-5	78.0	GF
24	R. Fuld	Voyager	E60-6	xxxx	CHU
25	" "	Nova	B4-4	xxxx	?
26	" "	Strike FTR	B4-4	25.2	GF
27	" "	Hawkeye	A10-3	24.1	GF
28	" "	Hawkeye	A10-3	24.1	GF
29	" "	Micron	A10-3	xxxx	GF
30	" "	Micron	A10-3	20.5	GF
31	" "	Viking	C6-5	43.9	GF
32	" "	Viking	C6-5	52.0	GF
33	" "	Viking	C6-5	xxxxx	?
34	G. Beever	Warp Drive 21	D18-6	30.0	ND
35	" "	Initiator	E15-4WL	28.5	GF
36	" "	Aerobee-Hi	F25-6WL	83.4	GF
37	" "	Super Big Bertha	D12-5	xxxx	PRG
38	E. Miller	Hornet	B6-4	28.8	GF
39	" "	The Wizz	B8-5	xxxx	SEP
40	" "	Bullpup 12D	B6-4	xxxx	SEP
41	" "	Mini Scorpian	A10-0/A3-4	xxxx	GF
42	" "	Super Nova	B6-0/B4-6	xxxx	GF
43	" "	HelioTrash	D12-0/C6-0/C6-5	xxxx	OOPS
44	" "	Micro Spoilsport	A3-4(4)	24.6	GF
45	" "	Super Big Bertha +	F25-9	79.5	GF
46	" "	Magnum Wizard	E15-7WL (3)	70.8	GF
47	Derek Yost	Tasmanian Devil	B4-4	5.7	GF
48	Daniel Yost	Tasmanian Devil	C6-5	?	GF
49	Daniel Yost	Tasmanian Devil	?	?	?
50	J. Yost	D-Light D B/G	D12-3	65.0	GF
51	" "	D HD	D12-3	64.2	GF
52	" "	E HD	E15-4	115.0	GF
53	" "	B FW/BG	B4-2	177.5	NR
54	R. Hackman	C PD	C6-3	77.5	GF
55	" "	XR-45	B8-5	xxxx	?
56	" "	XR-61	E5-6	14.5	GF

Practice Event: A Boost/Glide

57	G. Beever	A10-3	17.1	GF
58	" "	A8-3	xxxx	DQ/RB
59	Glenn F.	A3-2	42.2	GF
60	" "	A3-2	xxxx	DQ/RB

FLIGHT LOG

September 2, 1990

Fl#	Name	Model	Motor	Time	Misc.
1	J. Lytle	Heliocopter	B4-4	8.59	?
2	" "	Strike FTR	B4-4	10.78	GF
3	Glenn F.	D HD	D12-5	66.6	GF
4	" "	A HD	A3-4	27.8	ROT
5	" "	B BG	B4-2	112.3	GF-CR
6	R. Balogh	C2-CSD	C6-7	226.6	NR
7	" "	Phoenix	E15-4	25.1	GF
8	" "	Arreaux	F25-9	79.5	GF
9	" "	Nike Ram2B	G25-5	111.7	GF
10	" "	ASLAT	D12-0/E15-4	9.2	PRG
11	R. Hackman	Birdie	A3-4	26.1	GF
12	" "	Blackie	A10-3	106.9	GF
13	" "	Rogue	A3-4	6.8	?
14	" "	Maxell-46	½A3-2	4.1	UNS
15	" "	XR-72	B4-2	28.5	GF
16	" "	XR-61	D12-5	21.5	GF
17	" "	XR-55	C6-3	xxxx	CHU
18	" "	XR-78	B4-2	24.1	GF
19	" "	XR-78	B6-4	29.1	GF
20	D. Greene	Big Brute	F80-5	54.9	GF
21	Gary F.	X-16	B6-4	31.2	GF
22	" "	CMR Streamer	D12-5	38.19	GF
23	" "	Mean Machine	D12-5	55.9	GF
24	" "	Shuttle	C6-3	10.5	GF
25	E. Miller	Mini Pathfinder	A3-4	22.5	GF
26	" "	UFO-D	D12-0	5.5	GF
27	" "	Magnum	D12-0/C6-7	69.6	GF
28	" "	Lance Beta	F44-5WL	31.6	GF
29	" "	Armacron III	C6-7 (3)	69.3	GF
30	" "	Mini Katana	E15-7(1) C5-3(6)	77.9	GF
31	" "	Shock Wave	E60-0/E60-6	55.7	GF
32	" "	HelioTrash	D12-0/C6-0/C6-5	50.9	?
33	R. Fuld	Hawkeye	A10-3	23.1	GF
34	" "	Strike FTR	C6-3	50.5	GF
35	" "	Nova	C6-5	48.3	GF
36	" "	Gnome	A10-3	19.3	GF
37	" "	Gnome	A10-3	18.7	GF
38	" "	Starbird	C6-5	36.1	GF
39	" "	Starbird	C5-5	34.5	CHU
40	" "	Viking	C6-5	48.3	GF
41	" "	Viking	C6-5	44.3	GF
42	" "	Rotaroc	B4-4	29.5	GF
43	" "	Rotaroc	C6-3	51.5	GF
44	" "	Rotaroc	B4-4	27.0	GF
45	" "	Micron	A10-3	22.6	GF
46	" "	Micron	A10-3	20.2	GF
47	K. Pattison	Patriot	C6-3	38.4	GF
48	" "	V-2	D12-5	60.8	GF
49	" "	Silver Streak	C6-7	4.0	UNS
50	F. Hoke	Honest John	C6-5	70.5	GF
51	" "	HXP-1	C6-3	13.8	GF
52	" "	Wizard	B6-6	97.0	NR
53	A. Newman	Aerotech	B4-2	1.9	UNS
54	" "	Tazmanian Cruiser	B4-4	18.9	CHU
55	" "	Fork Tail Devil	C6-5 (2)	32.2	GF
56	" "	Saturn VI	D12-5	36.7	GF
57	" "	HASTE	B4-4	21.4	GF
58	" "	SRAM-A	B6-4	17.1	GF
59	" "	Teran Scout	B6-4	25.3	GF
60	" "	Nimbus	B4-4	19.7	GF
61	" "	SNARK	B4-4	28.6	GF
62	" "	SNARK	C6-5	51.2	GF
63	" "	Scout II+	A8-5	33.9	?
64	J. Yost	D-Light D B/G	D12-3	67.3	GF
65	" "	Maxi-Alpha	D12-7	55.5	GF
66	G. Beever	B ELD	B6-2	28.8	GF
67	" "	Viper III	D12-5 (3)	44.6	GF
68	" "	Eggspress	D21-4	21.6	CHU
69	" "	½A PD	½A3-2	37.3	GF
70	" "	A PD	A3-4	125.0	GF
71	" "	½A RG	½A3-2	4.94	NG
72	David Kearns	Alpha	B6-4	65.7	GF
73	" "	Alpha	B6-4	55.6	
74	Erik Fehrenbach	Lil' Nuke	E15-7	28.8	GF
75	" "	Der Red Max	C5-3	35.0	GF
76	" "	Onyx	E30-7	25.3	GF
77	" "	Lil' Nuke	E10-4	18.1	?!
78	Karl Fehrenbach	Mega Sizz	D12-3	37.7	GF
79	" "	Pathfinder	D12-3	60.5	GF
80	" "	Starburst	D12-3 (2)	21.2	GF
81	" "	Viper III	D12-5 (3)	44.6	GF
82	" "	Graduator	E25-7	32.5	GF
83	" "	D SD	D12-3	34.5	GF

Practice Event: F SD

84	G. Beever	Orbit	F25-9	68.6	?
85	E. Miller	Warp 24	F32-15	whoooshhh	
86	D. Greene	F SD	F32-5	88.9	GF

FLIGHT LOG

SPAARSEC-3

September 16, 1990

Fl#	Name	Event	Time	Misc.
1	Glenn F.	½A PD	4:03.75	NR
2	" "	½A PD	1:08.85	GF
3	G. Beever	½A PD	2:26.5	NR
4	" "	½A PD	11.76	GF
5	D. Greene	½A PD	59.7	GF
6	" "	½A PD	38.4	GF
7	E. Miller	½A PD	42.65	GF
8	" "	½A PD	21.4	GF
9	J. Yost	½A PD	24.5	GF
10	E. Miller	C ELD	1:31.5	GF
11	Glenn F.	C ELD	1:27.5	GF
12	" "	C ELD	1:56.0	NR
13	G. Beever	C ELD	1:08.0	GF
14	" "	C ELD	50.0	GF
15	J. Yost	C ELD	44.99	GF
16	" "	C ELD	2:01.5	NR
17	D. Greene	C ELD	2:12.4	NR
18	E. Miller	A BG	40.39	GF
19	" "	A BG	33.11	GF
20	D. Greene	A BG	9.59	GF
21	" "	A BG	1:02.07	GF
22	G. Beever	A BG	12.25	GF
23	" "	A BG	22.59	GF
24	J. Yost	A BG	18.77	GF
25	Glenn F.	A BG	18.3	RB
26	" "	A BG	4:10.89	NR
27	E. Miller	B HD	133.65	GF
28	" "	B HD	35.66	GF
29	" "	B HD	31.70	GF
30	G. Beever	B HD	71.91	GF
31	" "	B HD	41.92	GF
32	" "	B HD	30.74	GF
33	Glenn F.	B HD	38.07	GF
34	" "	B HD	22.52	GF
35	" "	B HD	40.74	GF
36	J. Yost	B HD	4.2	UNS
37	" "	B HD	70.4	GF
38	" "	B HD	7.3	UNS
39	D. Greene	B HD	23.8	GF
40	" "	B HD	23.4	GF
41	Glenn F.	B SD	1:36.45	GF
42	" "	B SD	1:52.90	GF
43	" "	B SD	1:47.2	GF
44	J. Yost	B SD	1:18.35	GF
45	" "	B SD	1:45.2	GF
46	" "	B SD	1:30.6	GF
47	E. Miller	B SD	1:46.1	GF
48	" "	B SD	41.2	GF
49	" "	B SD	1:53.9	GF
50	G. Beever	B SD	2:22.39	NR
51	" "	B SD	1:17.2	GF
52	" "	B SD	1:23.2	GF
53	D. Greene	B SD	56.99	GF
54	" "	B SD	147.43	NR

SPORT FLIGHTS

55	Gary F.	ASM	A10-3	18.15	GF
56	" "	Nike-Apache	B6-4		
57	E. Miller	E SD	E45-12	146.2	GF
58	" "	F SD	F32-15	134.4	GF
59	D. Bender	Longshot	B8-5	20.4	GF
60	" "	Honest John	A8-3	hung on rod	
61	" "	Sky Demon	B6-0/A8-5		
62	" "	Sky Demon	C6-0/B8-5		
63	" "	Strike	E15-4	78.5	GF
64	F. Hoke	Nova	B6-4	13.8	
65	" "	Nova	C6-5	5.9	CATO
66	A. Newman	Stealth	B4-4		PRG
67	" "	Dessert Hawk	½A3-2		UNS
68	" "	Hercules	B6-0/A8-5	8.7	
69	" "	Marauder	C6-6	64.7	GF
70	" "	Soviet Shuttle	B6-0/B6-0/A8-5		GF
71	" "	Zaxon FTR	B6-0/A8-5		
72	" "	Aerotech	B4-2	15.5	GF
73	" "	S.W.A.T.	C6-3	22.4	GF
74	" "	S.W.A.T.	C6-3	29.0	GF
75	" "	Starship Nova	C6-3	12.0	
76	" "	Commanche-3	D12-0/A8-5	22.6	
77	" "	SNARK	B6-4	34.06	
78	" "	SNARK	B6-4	33.8	
79	" "	Fork Tail Devil	C6-5(2)		
80	" "	Fork Tail Devil	C6-5(2)		
81	" "	Fork Tail Devil	C6-5(2)		
82	" "	Sizzler	C6-5	255.8	GF
83	" "	Scout II+	A8-5		EJ
84	" "	Scout II+	A8-5	11.09	
85	" "	Scout II+	A8-5		

Competition Plan:

D/E H E L I C O P T E R

[Editor's note- The rather improbable event of E Helicopter has been a favorite of sorts with many SPAAR members. A number of solutions to the "problem" of E HD have been tried, with varying degrees of success, or lack thereof. Section Advisor John Yost took the approach of simply scaling up George Gassaway's original RotaRoc design; this isn't a new idea, but it's the first time any of us can remember that it worked!!]

This version of the very reliable Rotaroc was first flown at a recent SPAAR Sport Launch. The first flight was powered with a D12-3, and the second with an E15-4 composite. Both flights were fairly long considering the model's size and weight.

The plan shown here is mostly just a scaled up version of the original, with a few subtle changes in construction, along with added details and tips for building the model. A complete parts list is included along with a list of sources where you can obtain the parts needed. The entire model was put together using Hot Stuff Super-T and Five Minute Epoxy. This greatly reduced construction time, yet did not compromise on strength.

CONTRUCTION

Begin by marking the two BT-50 tubes and the ST-10 tube as if you were going to mount 3 fins on each one (each line will be 120 degrees apart from each other around the tubes.) Extend each line the entire length of each tube.

Then, take the five inch length of BT-50 and mark it as before, centering three new lines equidistant from the original ones. Mark the center of these lines with a small X. Now, marking these same lines two inches from one end of the body tube and again 1 inch from the other end, draw a 3/16" wide rectangle centered on the lines and between the marks just made. Using an expended D or E engine casing inside the tube, very carefully cut out the rectangle with a very sharp razor knife. When completed, mix a small amount of epoxy and coat the bottom of the nose cone. Set this aside while you coat the inside of the 5" BT-50 with epoxy, using a cotton swab. Quickly insert the cone into the end of the tube closest to the exhaust port cut-out. Set aside to dry.

Next, using a heavy, straight pin (I recommend a "T" pin) punch a hole 3½" from one end of the long 24mm tube, starting on one of the lines marked previously, and coming out directly on the opposite side. Then, ream both holes with a razor knife to about the diameter of a 1/8" launch lug. Then, using a long cotton swab, or one taped to a small diameter dowel, and marking it 3" and 6" from the swab end, very carefully apply a thin coating of epoxy to the inside of the tube, using the marks as a guide. Take care not to get any epoxy closer than 3" from the end of the body tube, or the engine won't fit! This epoxy coating is to protect the inside of the tube from the powerful ejection charges, especially when flying the composite E engines. Also, be sure to clear any epoxy clogging the holes you just punched. At this point, if you are using the Estes BT-50 tubes, epoxy the 18" piece to the 6" one, using a BT-50 coupler; obviously, the two are mated at the end opposite of the end where the two small holes have been punched. This will give you the 24" length required. If you are useing the North Coast tube, you can use 29" of the 34" tube.

Now comes the fun part. Time to cut out all of the balsa peices. Use the dimensions shown in the plans and follow the grain directions indicated. The fins are cut from 3/16" balsa, and all others are cut from 1/8" balsa.

Mark each of the three rotor peices ½" from opposite diagonal ends. (see plans) Draw a line connecting the marks on each piece. Then, score the lines with a razor knife, almost, but not quite cutting all the way through the wood. Gently break, but do not separate the pieces. Match the bend with the end view shown and tack it in place with a few drops of Super-T. Repeat for the other end of the rotor, as well

as each remaining rotor. When you feel that the pitch or "bend" is correct, mix some more epoxy and apply it to the top side of the rotor along the cut. Finish the remaining rotors, and allow them to dry.

Next, sand the leading edge of each fin round, then attach them to the body tube (the end with the holes) with Hot Stuff, aligning the fins along the lines drawn earlier. When you are sure that each is properly positioned, hit 'em with a cyano accelerator.

Now, with the "T" pin, punch one hole along side any of the fins, 2½" from the bottom end of the tube. Insert the long end of the engine hook into the hole, and tack it to the fin/tube joint. Make sure the hook faces the center of the tube. Fillet all fin/tube joints with epoxy. Do not fillet the last 1" of the fin/body tube/hook joint at the end of the tube, to ensure proper action of the hook.

While you're waiting for the first fin fillet to cure, you can begin to attach the hinges to the rotors. Start by placing the complete hinge half on the underside of the rotor, lining it up with the corner of the large flat portion, away from the diagonal cut. Make sure of two things before tacking it on: a) that the hinge lies flat against the tube when the rotor is folded, and b) the cut out of the free portion of the hinge faces the same corner you lined up with the hinge. (see the rotor drawing) Once correctly positioned, tack the hinge on with Super T using just a drop at the bottom and one at the edge of the rotor. Butt a second hinge against the first with it's cut out portion facing the diagonal cut in the rotor; tack the second hinge inplace. With the "T" pin punch through the six holes in the hinge. For maximum strength, sew (yes, sew) the hinges to the rotors with about 1½ to 2 feet of carpet thread using a standard needle. Now, tack a rotor stop to each rotor, centering it on the hinges on the top of the rotor and at the edge of the rotor. Once set, epoxy the hinges, threads, and rotor stops, taking care not to get any near the hinge pivots.

Round off the top of the balsa reinforcing strips with fine sandpaper, and cyano them to the peice of BT-50 which contains the exhaust vent ports. Align them on the lines next to the ports, and centered with respect to them.

Using the "T" pin again, make a small hole about ½" deep into the nose cone at the very end of the body tube and on the same line as the reinforcing strips. Insert upper band hooks into the holes and cyano them in place.
Following the same method, install the rotor band hooks on the rotors and cyano them on both sides. Then, cyano the split lugs to the tops of the rotor stops.

Draw a line around the top of the main (24") body tube, 13/8" from the top (forward) end. Slide the ST-10 tube into the BT-50 tube until the end of the tube touches the line, checking the fit. If too tight, sand the inside of the ST-10. Then, remove the ST-10. Now, for our last sewing session, run thread through the holes in one of the rotors and lay it on the tube so that one of the lines on the tube is between the hinges (or centered on the hinge if using only one large one. (see parts). Run the thread around the tube and through the hinge again, pulling it tight. Then tack it down with thick cyano.

Run a bead of epoxy around the inside of the ST-10 tube and slide it into the 24" tube, so that the bottom of the rotor is about 1/8" away from the tube end, and centered between the two fins. Temporarily hold the rotor and tube in place with two rubber bands. Continue mounting the rotors as in the first, except with the last one, use several feet of thread and take it through all the holes in the other hinges and wrap it around the ST-10 tube. Apply epoxy to the hinges and threads being careful not to get any near the pivots. Hold the model upside down and check for any runs until the epoxy sets.

Run a bead of epoxy around the inside of the ST-10 tube, and insert the nose/tube assembly. MAKE SURE THAT THE RUBBER BAND HOOKS LINE UP WITH EACH OTHER. Coat the undersides of the rotors with epoxy near the thread holes and/or apply Trim Moncoat to protect them.

PREPPING FOR FLIGHT

Starting along the hole along the fin line, run a long piece of elastic thread through the body tube. Then, bring the end back around the tube, and wrap it around the closed rotors.

Pull the threads tight and tie a double knot against the rotor. Cut the ends, leaving about 1" or so. Install a rubber band on each of the hook sets.

When launching with an E engine, wrap several layers of masking tape around the engine and hook.

Install an appropriate ignitor, and slide the model down over the launch rod, using the space between the rotor and fin, and out the top between the two rotors.

USE AT LEAST A 3/16" ROD !!!!!*

PARTS LIST

Nose Cone	BNC-50K	Estes
Body Tubes:	BT-50/BT-9	Estes/NCR
one 18" BT-50, one 6" BT-50, and one 5" BT-50		
	-OR-	
one 18" BT-50 and one 11" BT-50		
	-OR-	
29" of North Coast BT-9 tubing		
Sheet Balsa	1/8"	SIG
Sheet Balsa	3/16"	SIG
Hinges	Cat# 116	DU-BRO
	or DU-NH-116	SIG
	or GD-KH-100	SIG
	or SH-701**	SIG**
Music Wire	.020	SIG
Music Wire	1/32"	SIG
Elastic thread	-----	local craft
Carpet thread	-----	or sewing store
rubber bands	1/8" X 3"	#32

** If used do not cut

Notes: All parts listed first were used on the original model.

The SIG parts listed were obtained locally.

PARTS SOURCES

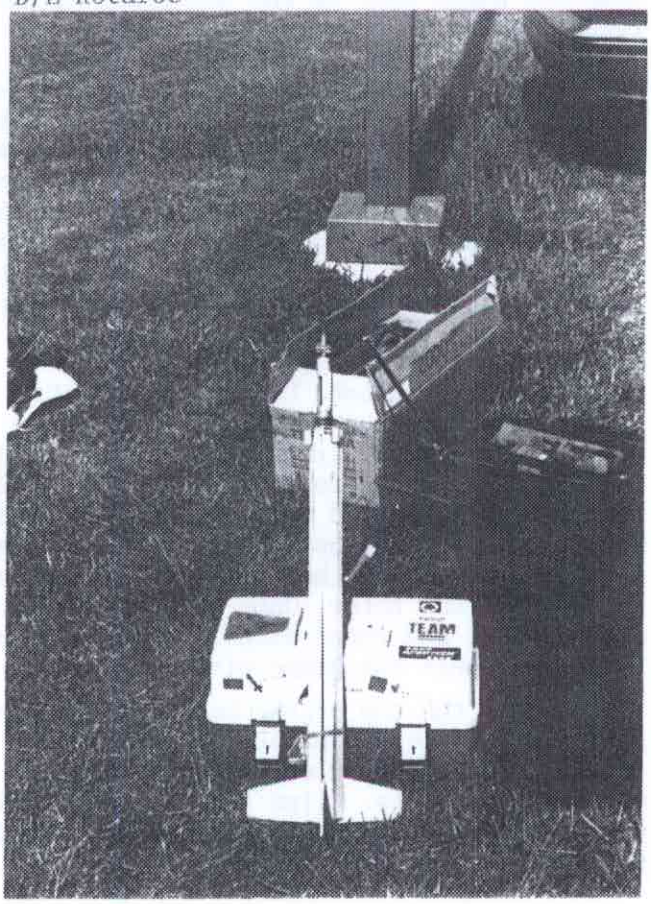
Estes Industries
PO Box 227
Penrose, CO 81240

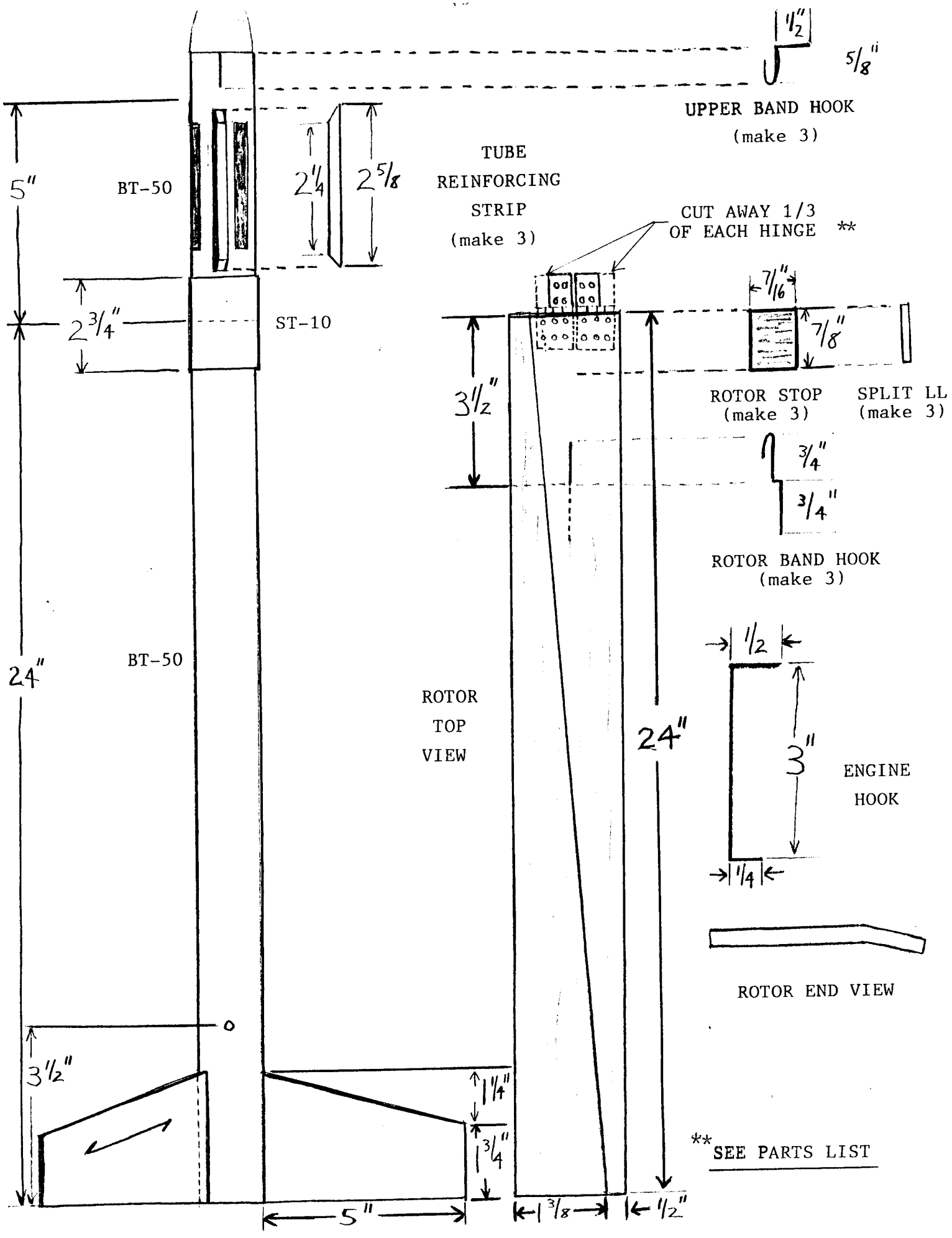
North Coast Rocketry
PO Box 240017
Mayfield Hts, OH 44124

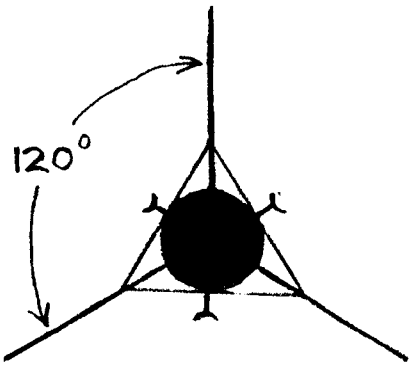
SIG Manufacturing Co.
401-7 S. Front St.,
Montezuma, IA 50171

Acme Rocket Co.
Box 28283, Dept. A5,
Tempe, AZ 85282

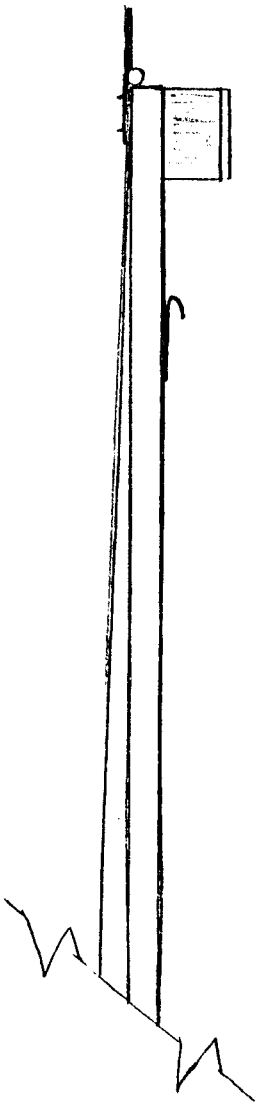
Above and below- John Yost with his D/E Rotaroc



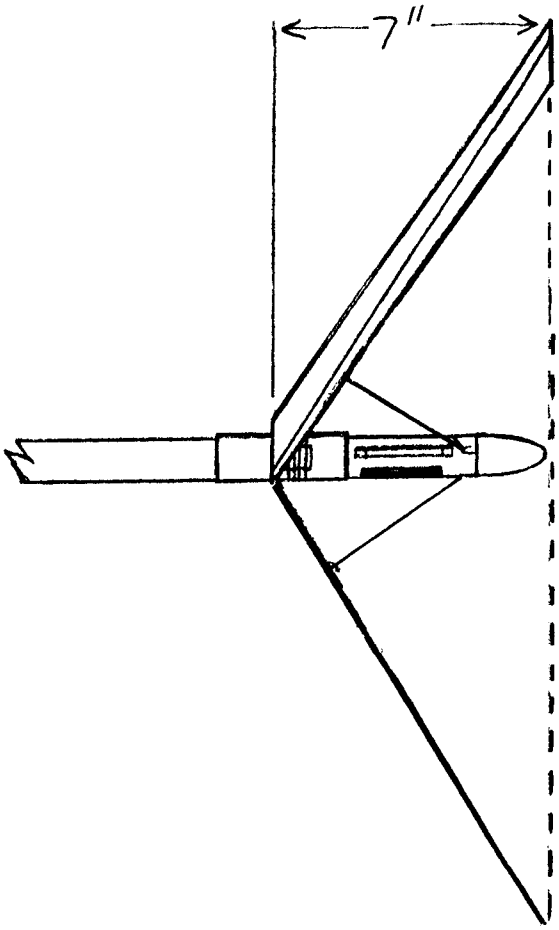

1/2"
5/8"
UPPER BAND HOOK
(make 3)
TUBE
REINFORCING
STRIP
(make 3)
CUT AWAY 1/3
OF EACH HINGE **
5"
BT-50
2 1/4
2 5/8
2 3/4"
ST-10
7/16"
7/8"
3 1/2"
ROTOR STOP
(make 3)
SPLIT LL
(make 3)
3/4"
3/4"
ROTOR BAND HOOK
(make 3)
24"
BT-50
ROTOR
TOP
VIEW
24"
1/2
3"
ENGINE
HOOK
1/4
ROTOR END VIEW
3 1/2"
1 1/4"
3 1/4"
5"
3/8
1/2"
** SEE PARTS LIST



TOP VIEW
(rotors folded)



SIDE VIEW
OF
ROTOR



ROTOR
DIHEDRAL

DRAWINGS NOT TO SCALE

PERFORMANCE:

Date	Motor	Time
8/12/90	D12-3	64.2s
8/12/90	E15-4	115.0s

S E C T I O N N E W S N O T E S

YOU DON'T KNOW WHAT "OPEN EGGLOFT STREAMER SPOT LANDING IS?: OK, we'll tell you. Open Eggloft Streamer Spot Landing, or OESSL (?) is the official "event" for this year's club tailgate party, otherwise known as SPAARSPAM-2.

The rules are (get a load of this):

1. A grade A hen's egg, supplied by the club, is used;
2. Any motor which will allow for a safe flight may be used, which means B class or above;
3. Recovery must be by streamer, not 'chute;
4. The egg must not be broken or cracked, and the egg capsule must be opened in front of the judge(s);
5. You must land the model closest to a predetermined spot;
6. One flight per person only.

The scoring will be determined as follows: 10 points for a qualified flight (safe boost, streamer deployment, unbroken egg); the flight time in seconds, and the distance the nose (or egg) lands from the target,as measured in feet, subtracted from 100.

Now, for the really important part: THE FOOD. Everyone is asked to bring something to share with everyone else. Bring your own drinks and eating utensils; you may be contacted and asked to bring a particular item. If you are in need of suggestions, call George or Teresa Beever at 733-4170.

The date for SPAARSPAM-2 is Sunday, November 4, from 1PM to 5PM, at Cocalico Sr. High.

****

NEW MEMBER: Our newest member is Jason Wingenroth, age 10, from Reinholds, PA. Jason made his first rocket flight at the Sept. 23 Sport Launch. Despite the fact that the high winds drove his Estes Athena onto the roof of the High School, he recovered his model when those same winds blew it off ofthe roof!

****

MR. BILL GOES TO COLLEGE, PART 2: Having been a college "dormie" myself once, I know how nice it is to receive mail from home. If you have the chance, we're certain that Bill Rhoat would like to hear from you. His mailing address is:
Lehigh University, UC #29 D077,
Bethlehem, PA 18015

NEW RELEASES FROM ESTES: Estes Industries has announced a number of new kit releases for this fall. New sport kits are "Jammin'" (4.59), "Survivor" (9.99), "America" (9.19), and "Beta Launch Vehicle" (14.19). Scale kits are the Saturn 1B (39.89) and Little Joe II (15.49) Both are reportedly updated versions of the old Centuri 1/100 scale kits, and were to be available Sept. 21. (DART/Warp-9)

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...AND FROM APOGEE COMPONENTS: At NARAM-32 this past August, Ed LaCroix of Apogee announced that he had contracted Aerotech Consumer Aerospace to produce a 13mm composite B class motor. The new motors will be classed as B7's, and will be available with 6, 8 or 10 second delays. Apogee will be the sole distributor of the new motor, which reportedly will retail for $7.95. In addition, plans are going forward for Aerotech to produce an 18mm composite C10, also to be sold by Apogee.

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THE ZOG STRIKES: Congratulations to NARHAMS, whose newsletter, ZOG-43, captured the LAC Newsletter Award at NARAM-32. The ZOG is edited by Bob Austin, and is one of our exchange newsletters. The ZOG, as well as all of the other newsletters that we receive on an exchange basis, are available at club meetings.

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INSURANCE WOES CONTINUE: Gee, it wouldn't be the NAR without an insurance problem, would it? At NARAM-32, NAR prez J. Pat Miller revealed that the current insurance agreement with the AMA is in trouble, due to the fact that the AMA does not want to continue offering rocketry-only insurance to NAR members at $7 per year. The AMA wants the insured to carry the full AMA membership, which is $40 per year. J. Pat stated that he will try to have a new insurance plan in effect by NARAM-33 next August. The latest AMA National Newsletter headlined an insurance controversy, but didn't mention word one about the NAR agreement. Figure that one out.

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WELCOME PARA: We have received the news that there is a new NAR Section in Pennsylvania. This is PARA, the Philadelphia Area Rocketry Association, NAR Section #520.

Spearheading the new club is our friend Bob Stott, who is also the editor of the PARA newsletter, the "Delaware Valley Rocketeer". The first issue contains plans to convert an Estes Big Bertha kit to a three-engine cluster "Ranger", an Estes design of the 60's.

PARA has offered the use of their flying field to SPAAR, as a possible sight for an Open Meet. We thank them for this offer, and it will be looked into this fall.

We welcome PARA, and we look forward to having an NAR Section close by!!

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IF YOU WANT 'EM, WE STILL GOT 'EM!!: Still have what? SPAAR club patches, thats what! Even after a period of record sales, at both SPAAR Sport Launches and at NARAM-32, we still have patches for sale. Even with the recent threat of inflation, the price remains the same: $3 for members, $5 for non-members. Get yours today... the Christmas gift giving season is coming (tongue firmly in cheek). See Dale Greene, the Exalted Keeper Of The Patches, at the next SPAAR event.

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WILL THE "STEAM MACHINE" RETURN? Recently, FSI (Flight Systems) discontinued production of the long-burning F7 motor, known to some as the "Steam Machine", because of it's long duration, low-thrust characteristics. This motor, derided by many for it's bad habit of going KA-BOOM at the most unfortunate times (like about 2 seconds into the flight, in front of a bunch of spectators, like the local FAA rep., etc) also developed a following with some of those folks who really liked excitement. FSI took the motor out of production, reportidly because defective casings were causing the nasty CATO habit. Now, word comes that a new source for the casings has been found, and FSI will crank up the production line again. Oh boy.....

NEW CLUB RECORDS

Through 9/2/90

A Division			
B HD	Derek Yost	8/12/90	5.7s
B Division			
A SD	Bill Rhoat	7/22/90	85.70s
C Division			
½A RG	Glenn Feveryear	7/22/90	14.92
½A SRD	Glenn Feveryear	7/22/90	233pts
A HD	John Yost	7/22/90	74.0s
A PD	George Beever	9/2/90	125.0s
B BG	Glenn Feveryear	9/2/90	112.3s
B SD	Glenn Feveryear	8/12/90	168.5s
C SD	Bob Balogh	7/22/90	208.0s
D BG	John Yost	9/2/90	67.38s
D HD	Glenn Feveryear	9/2/90	66.66s
E HD	John Yost	8/12/90	115.0s
E SD	Ed Miller	7/22/90	106.0s
F SD	Ed Miller	7/22/90	138.5s
G SD	Ed Miller	7/22/90	181.6s

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(Flight Log, 9/16/90, cont. from page 9)

86	R. Fuld	Hawkeye	A10-3	17.1	
87	" "	Starbird	B4-4	49.4	GF
88	" "	RotaRoc	B4-4	37.2	GF
89	" "	Strikefighter	B4-4	41.0	GF
90	" "	Nova	B4-4	25.0	GF
91	" "	Micron	A10-3	18.7	GF
92	" "	Micron	A10-3	21.1	GF
93	" "	Gnome	A10-3	20.6	GF
94	" "	Viking	C6-7		
95	" "	Viking	B4-4		
96	" "	?	E60-6	66.7	
97	A. Babiarz	Vector	A3-2	19.3	
98	" "	Crusader S/W	B4-2	11.2	
99	" "	Saturn V	D12-3	12.5	GF
100	" "	Big Bertha	B6-4	12.5	GF
101	" "	Excalibur	A8-3	16.2	GF
102	" "	Honest John	A8-3		
103	" "	Gyroc	A8-3		GF
104	" "	Saturn 1B	D12-3	42.0	GF
105	" "	Saturn 1B	D12-3		GF
106	" "	Junk	B6-4	24.1	
107	" "	Sentinel	B6-4		
108	" "	Soaring Eagle	B4-2	6.4	
109	" "	Mini Mars Lander	A10-3		
110	" "	Mini Mars Lander	A10-3		
111	" "	A-11/GDT-21	D12-3	12.8	
112	R. Davidson	Nova	B4-4	26.6	GF
113	" "	Alpha	B6-4	32.8	GF
114	" "	Estes Science Kit	B6-0/B6-6		
115	J. Kearns	SR-71	B6-4	12.0	GF
116	" "	Alpha	B4-2	29.6	GF
117	" "	SR-71	C6-5	23.2	GF
118	" "	Nova Payloader	B6-4	25.0	GF
119	" "	Nova Payloader	B6-0/B6-6	31.78	

Product Review:

by George Beever

It appears to some people, myself included, that the Aerotech Initiator has been all but reviewed to death. During 1990, it has been rather hard to find a model rocketry publication, be it a club newsletter or American Spacemodeling, without seeing some sort of reference to this kit, as well as the other new Aerotech products. It says here that there is good reason for this. The plastic model folks have a "Kit of the Year" award; if model rocketry had such a thing, in my opinion it would go to the Aerotech people for the Initiator. With that said, I suppose I should explain why.

Back in early 1988, many of us BAR's (Born Again Rocketeers) were excited to read about a new firm called Enertek. Enertek had hit the scene, coming out with a sharp full color brochure, hawking their new line of advanced model rocket kits, to be flown on E, F, and G class composite motors. The flagship of the line was to be the Initiator; a fairly simple looking model, with three "cranked" swept fins, a sharp red and white paint sceme, and the capability to handle the full line of new motors. The Initiator had been designed by Bob Sanford, one of the Enertek crew taken on by former Centuri boss Lee Piester to make Enertek the leader in what many saw was a new, wide open market: the BAR, the person who had enjoyed model rocketry during his teens, and had drifted away for all of the usual reasons-school, marriage, work, etc., and was now back. The BAR would open a catalog from the company in Penrose, the first he may have seen in a number of years, and be less than excited. The BAR wanted something a bit more advanced; something a bit more complex than the usual Skill Level 1 offerings.

Thus, the basis for Enertek. However, as we know, Enertek went out of existance without ever having produce a single Initiator, or anything else for that matter.

The following year, Aerotech, who had been contracted by Enertek to manufacture the motors for that company's line, decided to pick up where Enertek had left off. The Initiator, as well as a number of other items that Enertek had planned, were released under the Aerotech name. So much for the background; now to the kit itself.

The Initiator design, on the outside at least, is not really radical. At first, at appears as a larger version of the Estes Alpha design. There is where the similarity ends, however. Even if the design itself is not new, the entire package is what makes this product so differant.

When my kit came via UPS, the first thing I couldn't help but notice was the packaging. Shipped in a sturdy, heavy-duty box, the covering of the package contained just about all of the important information about the product within. Just the fact that the kit came in a box was nice. The 29 parts that make up the Initiator were well placed inside, with the main body tube having it's own compartment. The large, colorful self-adhesive decal sheet is shipped rolled up inside the tube. This is to protect it against any shipping damage. It does not protect it against ham-handed modelers, however. More on that later.

The Initiator was designed to be flown with 24mm and 29mm motors, E through G. The main 29mm motor mount accomodates the 24mm adapter by

means of a heavy-duty clip. This allows for easy changing from one size motor to another.

As part of the main motor tube assembly comes one of the real innovations of this model. The entire motor mount/centering ring assembly serves as a guide for positive placement of the three fins, in a thru-the-wall fashion. This "FIN-LOK ASSEMBLY" in effect becomes part of the structure of the model itself. The body tube has pre-cut slots through which the fins are inserted into the rings which make up part of the motor mount. The fins themselves are made of a strong polyvinyl, with the airfoils and filets included.

The upper portion of the motor mount is occupied by what Aerotech calls a "cooling mesh", intended to make the use of recovery wadding unecessary. The elastic shock cord is attached to this upper motor mount section.

The lugs are also a novel feature. There are two, shaped in the form of a "C", and are attached through the body tube much in the same fashion as the fins. This eliminates any chance of misalignment.

The parachute may be the one negative of the entire package, and that's stretching things. It is made of nylon, and is a bit lighter in weight that the 'chutes usually found in high-power kits. The one included in my kit is an off-white color, and proved to be somewhat difficult to see at altitude.

Oh yes, the decals. Personally, I don't care much for self-adhesive decals, but be that as it may, the ones included in the kit are of good quality. As mentioned before, they are packaged inside the main body tube, and instructions for the kit go out of their way to remind you to remove them prior to using your trusty X-Acto knife to clear the fin slots in the tube. Well....I didn't, and sliced through parts of the decal sheet. No problem, though. I phoned Aerotech, and wound up speaking with Bob Sanford, the designer himself. He politely stifled a chuckle at my story of woe. I was able to purchase a replacement decal sheet with no problem.

I got the chance to fly my Initiator at the Sport Launch on August 12. For this flight, I used the Aerotech E15-4WL. The model turned in a perfect flight.

To sum it up, I was very impressed with the entire Initiator package, for many reasons. Many of the ideas which make up the Initiator are not new. But these concepts haven't been offered in one package such as this before, and this is what makes this product so different. If you have never built and flown a high power kit before, and are looking to try one out, the place to start is with the Initiator. Nice job, Aerotech!

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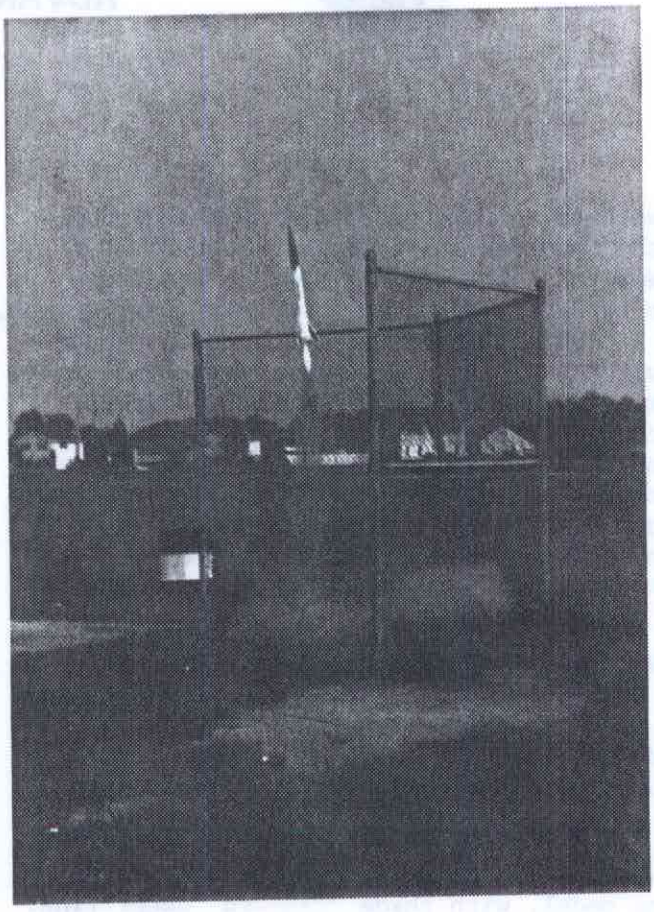

ABOVE- The author's Initiator lifts off under E15 power, August 12.

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COUNTDOWN

Volume 3 **No.** 5
SEPT/OCT **1990**