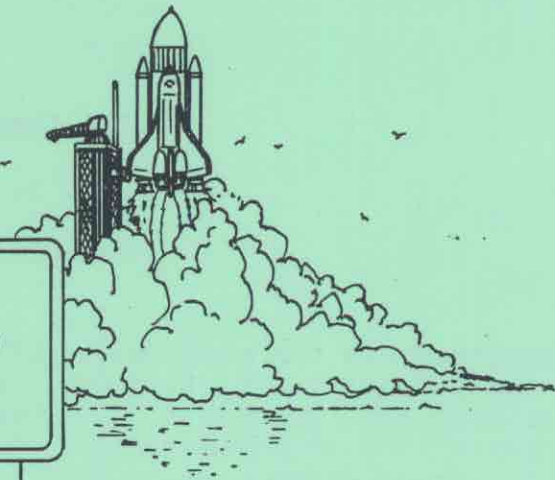


COUNTDOWN



OFFICIAL NEWSLETTER OF
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

VOLUME 8, ISSUE 6 DECEMBER 1995

MERRY CHRISTMAS !!

Product Review:

The Estes JAYHAWK

by Doug Gardei

Sport launch Coverage:

Turkey Day + 1

New Product Information:

Mountainside Hobbies Releases

Kits And Ground Support Equipment



The Countdown

Volume 8, Issue 6

December 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

SUNDAY, JANUARY 7, 1996: SPAAR SPORT LAUNCH, 1PM TO 5PM, COCALICO HIGH SCHOOL DENVER. BRING YOUR OWN LAUNCH SYSTEM.

SATURDAY, JANUARY 13, 1996: SPAAR FAMILY DINNER, 6PM TO ?; LOCATION TO BE ANNOUNCED. DOOR PRIZES AND THE "SPAAR ROCKET-LOK AWARD".

SATURDAY, JANUARY 20, 1996: WINTER WORKSHOP & CLUB MEETING, 9AM TO 1PM AT THE HOMEDCO BUILDING, LANCASTER.

In The Next Issue

1996 Schedule... Membership Roster... By-Law Revisions
Sport Launch coverage... Club Records... The Almanac Issue!

Thanks this time to: Doug Gardei, Mark Kamide & George Fetter

SPAAR SPORT LAUNCH

November 24, 1995

For the third amazing year in a row, our Turkey Day + 1 Sport launch met with great weather, and more than made up for the loss of SPAARSPAM.

Forty-six flights were made by nine different flyers, with but a handful being very successful.

Some of the more memorable: Bill Rhoat's THOY Wasp, flown on a Vulcan F80 motor. What a kick that was! Recovered very close to the pad, too. Dale Greene got yet another great flight from his ORI Das Blue Max, flown on an Aerotech G64 reload. The model and motor were made for each other. Glenn says this is true also of the LOC Onyx and the E15-4 White Lightning motor. Can't say that I disagree, but Glenn's Onyx did suffer some fin damage upon landing. John Yost says the same of the Onyx and the F25-6 White Lightning. The videotape shows this to have had more like a 2-second delay. Ah yes, those Aerotech delay trains..... but it was a great flight anyway, "the best flight of the day, George" sez John. And then there was Ed Miller's Monocopter 32-18, which is more impressive each time it flies. If Ed could just get that thing to land softly....

And then there were some flights that were memorable for other reasons: Dale Greene's

Skinny Pink Thing and George Beaver's Shadow, who competed for the best Core Sample flight. Dale's won on form ["it will fly again, no problem" sez Dale] and George won on sheer weight of sample. [parts is parts]... Doug Gardei flew his Phantom 4000 on an F22 reload, and...well, it was just not enough oomph. A valiant effort, however. And then there was a surprisingly violent CATO of an Estes C5-3 [no surprise] which ruined Glenn's X-30; an equally destructive CATO of an Aerotech G80 in Dale's Initiator, which had just flown beautifully on an F14 Blackjack. Body tube pieces were flying everywhere. Looks like Aerotech owes Dale a kit. And yet, George flew an FSI Megatron with a 1983-vintage D20-0 booster and a 1989 D20-7 upper stage, with no problem. Go figure. And then there was the Estes E15 in George's Shadow, which sent everyone running for cover. It, too, performed flawlessly. Isn't this hobby fun?

Prettiest model flown: how about Glenn and Daniel Feveryear's Estes Hercules? Nice little two-stager. Hope they got the nose cone back.
Model old enough to vote: Ed's Eliminator, like the pink bunny just keeps on going, and going, and going...

FLIGHT LOG

November 24, 1995

<u>#</u>	<u>FLYER</u>	<u>MODEL</u>	<u>MANUF</u>	<u>MOTOR [S]</u>	<u>RESULT</u>
1	Bill Rhoat	Spudnik	SB	E 1/2A3-2	Good Flight
2	Bill Rhoat	X-15	Estes	E A3-4	Good Flight
3	Bill Rhoat	Evader	Quest	E B6-4	Good Flight
4	Bill Rhoat	Big Rage	Quest	E C6-5	Good Flight
5	Bill Rhoat	Wasp	THOY	V F80-7	Good Flight
6	Dale Greene	Magnum	Estes	E D12-0/B6-4	Good Flight
7	Dale Greene	SPT	SB	E D12-0/D12-5	Ouch!!
8	Dale Greene	Das Blue Max	ORI	AT G64-7RMS	Good Flight
9	Dale Greene	Initiator	Aerotech	AT F14-6J	Good Flight
10	Dale Greene	Initiator	Aerotech	AT G80-10T	CATO
11	Rita Feveryear	Big Bertha	Estes	E B6-4	Good Flight
12	Rita Feveryear	Big Bertha	Estes	E C6-5	Good Flight
13	Glenn Fevryr	Onyx	LOC	AT E15-4WL	Good Flight
14	Glenn Fevryr	X-30	Quest	E C5-3	CATO
15	Glenn Fevryr	Hercules	Estes	E C6-0/A8-5	Good Flight
16	Ed Miller	UFO 29-10	SB	AT G64-4RMS	Good Flight
17	Ed Miller	Monocopter 32-18	SB	AT G12 RCT	Good Flight
18	Ed Miller	Patriot	Estes	AT D13-7RMS	Good Flight
19	Ed Miller	Tarsis	SB	AT G75-6J RMS	Good Flight
20	Ed Miller	Eliminator	NCR	AT F50-4T	Good Flight
21	Doug Gardei	Enterprise	Estes	E C6-3	Good Flight
22	Doug Gardei	Jupiter-C	Estes	E D12-5	Good Flight
23	Doug Gardei	Jupiter-C	Estes	E D12-5	Good Flight
24	Doug Gardei	Viking	Estes	E A8-3	Good Flight
25	Doug Gardei	Big Bertha	Estes	E B6-4	Good Flight
26	Doug Gardei	Big Bertha	Estes	E C6-3	Good Flight
27	Doug Gardei	Mega Blast	SB	E C6-3	Good Flight
28	Doug Gardei	Phantom 4000	NCR	AT F22-5J RMS	N.E.M.
29	Doug Gardei	Astrobee D	Aerotech	AT F40-4RMS	Crash
30	Doug Gardei	Broadsword	Estes	E D12-5	Good Flight
31	Doug Gardei	Broadsword	Estes	E D12-5	Good Flight
32	Doug Gardei	Shadow	Estes	AT E11-3J RMS	Good Flight
33	Doug Gardei	Shadow	Estes	AT F39-6RMS	Good Flight
34	Ed Garcia	Thunderhawk	Estes	E B6-4	Good Flight
35	Ed Garcia	Thunderhawk	Estes	E B6-4	Good Flight
36	Ed Garcia	Thunderhawk	Estes	E B6-4	Good Flight
37	George Beever	Big Bertha	Estes	E B4-4	Good Flight
38	George Beever	Big Bertha	Estes	E C6-5	Good Flight
39	George Beever	Sentinel	Estes	E B4-4	Good Flight
40	George Beever	V-2	Estes	E D12-5	Good Flight
41	George Beever	Hellfire AGM	TLP	E D12-3	Good Flight
42	George Beever	Patriot [1/5]	Estes	E D12-5 [2]	No chute
43	George Beever	Shadow	Estes	E E15-4	Good Flight

44	George Beever	Shadow	Estes	AT E11-3J RMS	Core sample
45	George Beever	Megatron	FSI	FSI D20-0/D20-7	Good Flight
46	John Yost	Onyx	LOC	AT F25-6WL	B.F.O.T.D.

N.E.M. = Not Enough Motor

B.F.O.T.D. = Best Flight Of The Day

Models Flown:

Motor Usage:

17	Estes	33	Estes
3	Quest	5	Aerotech Single Use
2	LOC	10	Aerotech RMS
1	Aerotech	1	Vulcan
2	North Coast Rocketry	2	Flight Systems, Inc.
1	The Launch Pad		
1	THOY	1	1/2A
1	Flight Systems, Inc.	3	A
1	Original Rockets, Inc.	9	B
6	Scratchbuilt	8	C
		14	D
# of flyers: 9		4	E
		7	F
# of Cato's: 2		5	G

CLUB NEWS NOTES

NARAM Committee: The incoming 1996 Board, consisting of the club president, vice-president, secretary/treasurer, member-at-large, and Section Advisor, will form a five-man committee to study the feasibility of SPAAR hosting a NARAM sometime in the future. The committee will report it's findings to the membership, along with a recommendation, by August 16, 1996.

In short, if you have an opinion or thoughts on the topic, make them known to your club officials. Likewise, if approached, please help out.

Workshop Changes: Please note that the Winter Workshops will be held at the Homedco Building in '96, not in

Delta as in the past. Check your schedules for dates and times.

Winter Sport Launches: Remember two things: to dress intelligently and to bring your own launch system. Flight cards will be supplied to keep track of all of the club's flights. Just hand them in at the end of the day.

As for the weather, let common sense be your guide. [uh-oh, we're in trouble already]. If it's snowing or raining, or the wind is howling at about 50mph, chances are the launch is canceled. If the weather is borderline, chances are there will be other members there to shoot the breeze with [no pun intended].

NEWS.....NEWS.....NEWSNew from Mountainside Hobbies:

Mark Kamide and George Fetter have released the first items in Mountainside's rocketry line, consisting of three kits and a launch controller.

The first release is a 1/4.91 sport-scale version of the Atmospheric Sounding Projectile, the ASP. Powered by 18mm C and D motors, the kit is 1.325" in diameter and 34" long. The kit features pre-cut fins and Estes-quality parts, and retails for \$18.99.

The second kit is a 1/25-scale V-2, 2.6" diameter and 22.5" tall. This is the same scale as the most recently discontinued Estes V-2, built around the BT-80. This kit sells for \$21.99.

Mark Kamide had recently mentioned that he could not find an acceptable, affordable launch controller to sell at the shop. He found himself in the position of selling a lot of higher-powered model rocketry kits and motors [E, F & G range] but was frustrated by the lack of quality ground support equipment. The answer? Develop and market your own! Mountainside's Launch Controller features 12-volt battery clips, 30' of cable, and high-grade micro-clips. The price is a very affordable \$24.99.

On Tuesday, December 11, Mountainside's third kit went

on the market: a 1/2.5-scale ASP. Many of SPAAR's members, no doubt, have seen the prototype flying at club launches. This larger version of the ASP uses a D, E, or F 24mm motor for power. The model stands 50.75", with a diameter of 2.26". The "ASP-24" prices out at \$28.99.

The rumor mill: other Mountainside projects that may appear in kit form are at least one sport-scale version of the Saturn V. A 1/242-scale prototype has already flown successfully. Also being considered are two versions of the IRIS sounding rocket, including a 4" diameter version, and a larger scale V-2, also in a 4" diameter.

George Fetter recently advised that Mountainside now has a reliable source of 4" diameter tubes, which should help make some of these ideas reality.

Kevin Nolan of Countdown Hobbies recently contacted Mark and George about carrying Mountainside's kits, and an agreement is reportedly in the works.

As with everything else in the place, mail order is available. For more information, call Mountainside Hobbies at [717] 733-4140.

From The Messy Workbench:

The Pro-Series Jayhawk

Product Review
by Doug Gardei

For several years, I have bought, built, and flown several Estes kits. I have found that Estes kits are usually reliable, good looking, and fun to build and fly. In the past few years, Estes Industries have expanded their horizon and started to produce kits that fly in the E through G power range. One of these is the Jayhawk.

The Estes Pro Series Jayhawk is a very attractive 1/5-scale model. This 30" tall, 2.5" diameter model rocket features scale-like flights that simulate the US Navy's AQM-37A Missile Target Drone. This 8.6 ounce bird [without motor] can fly on a variety of disposable and reloadable motors from the D through F range. The retail price is about \$40, which I think is a bit high.

The Jayhawk is packaged in the standard Estes heavy duty range box that keeps all the parts safe from damage. All parts were present in the kit and were in excellent condition. I chose 5-minute epoxy for construction.

The motor mount assembly was a little difficult because the beefy plywood centering rings were a little too loose on the extra sturdy motor tube. This problem was solved by cementing a layer of typing paper around the motor tube, and cementing

the rings over the paper layer. Instead of using the shock cord mounting method the instructions recommended, I chose to cement a screw-eye to the forward centering ring and tying the shock cord to the screw-eye. After all the cement on the motor mount cured, the paper tailcone was cemented to the motor tube, and the motor tube into the body tube.

The wings of the Jayhawk are assembled from regular balsa wood. First, the through-the-wall tab is cemented into the main wing. Then the basswood leading edge strip is cemented on to the leading edge of the wing. Next, the rudder is sanded to it's proper shape and is cemented to the wing. You have two choices of what position to attach the rudder, trailing edge centered [flights with little or no roll] or trailing edge aligned with the underside of the wing [flights with a neat roll]. After all the cement on the wings are cured, they are epoxied onto the tube.

The vertical stabilizers are assembled by sanding the leading edge into a taper and the trailing edge into a wedge on all four halves. Cementing the halves together, the two vertical stabilizers are finished. After all cement has cured, the stabilizers are cemented onto the wings.

Then the vacuum-formed conduits are cut out from their sheet and cemented to the underside of the tailcone, bodytube, and the nosecone. The nose canards are assembled by cutting the four halves out of the sheet and cementing the halves together. The canards are then set aside.

Finishing the Jayhawk started with applying epoxy fillets to all the joints. After the epoxy cured, Bondo Spot Putty was applied over the epoxy and was sanded smooth after it was dry. Then, I used my one hour sanding/sealing formula [see Sport Rocketry, Oct. '94, pg 43] to fill in all the grain in the balsa wood. The Jayhawk was then primed with Rust-Oleum Rusty Metal Primer.

Using a Badger airbrush, I painted the Jayhawk and the canards with Rust-Oleum Gloss Orange. After the orange dried, the forward portion of the nose cone was painted with Rust-Oleum Flat Black. After the black paint dried, the canards are cemented to the nosecone.

The black plastic wire antennas were then trimmed to their proper length. Using a drill, a small hole was drilled into each antenna mount, and the antennae attached.

I think that decaling models are fun. I thoroughly enjoyed myself with this model because there are a lot of decals. After an hour or so of careful measuring and positioning, the Jayhawk detailing was finished.


The instructions give you the option of having the model descend horizontally, however the kit does not contain the materials needed for this conversion. Instead, I stayed with the standard tie-the-parachute-and-shockcord-to-the-nosecone. The 24" nylon chute is nice but the shroud lines are too long. Cramming the clay [I like Quest's clay better; it doesn't stain your hands or your model] into the nosecone is the finishing touch to the Jayhawk.

Flying the Jayhawk is fun, but the landings are disappointing. I've had problems with shock cord breakage. This has resulted in cramps from running after the nosecone as it is dragged cross the parking lot [does wonders for the paint], or using Caladryl for 3 weeks after a tour of a nearby cornfield looking for the nosecone. Also, at least one of the wings or stabilizers break after each landing.

I don't recommend flying the Jayhawk with a D12. The flights are too slow and low. If you want to use a D motor, try a D13-4W RMS from Aerotech. The Estes E15-4 flights were superb. The lift-off is mighty slow, but it speeds up quickly. The Aerotech E18-4RMS gives a spectacular flight.



I have to give Estes credit for producing the Jayhawk, even though there is room for improvements. The Jayhawk was fun and challenging to build and it turns a lot of heads at the launch field.

Mountainside Hobbies Own Kit Line!




MSHRK100 - ASP18 - This is a sport scale kit of the ASP high altitude research rocket. Out kit includes a 18mm engine mount, pre cut balsa fins, 18" chute. Everything is included except glue, paint, and the engines. This model flies great on Estes c6-3's. The ASP is 34" long, 1.325" in diameter and weights 7oz. Only **\$18.99**.

MSHRK101 - ASP24 - This kit is the same as above, except BIGGER! Again, this model is a sport scale kit of the actual ASP research rocket. Out ASP24 kits features a 24mm motor mount as well as pre cut balsa fins. This model is 50" long, 2.6" in diameter and weights 13oz. Flies great on AeroTech E15-4, E11-3, and F24-7's. A big rocket for only **\$28.99**.




MSHRK103 - V2 - The famous V2 rocket can now be purchased sporting a 24mm motor mount. This is sport scale version of the real V2 missils that flew during WW II and after the war for research pupopes. Our kit features a plastic nose cone, plastic tail cone, pre cut balsa fins, and an 18" chute. This cute rocket is 22 1/2" long, 2.6" in diameter, and weights 7oz. Our V2 flies great on Estes D12-5's and AeroTech E15-7. Only **\$21.99**.

MSHRK104 - IRIS24 - This sport scale research rocket is a great preformer on AeroTech E15-4, E11-3, E18-4, E28-4, and F24-7's. This rocket is 50 3/4" in length, 2.6" in diameter and weights 13oz. Features include 24" chute, plastic nose cone, and pre cut balsa fins. Only **\$29.99**



MSHRK105 - AeroBee350 24 - This sport scale research rocket is over 56" in lenght 2.6" in diameter and weights 14oz. This kit is due to be released in early January 1996 for Only **\$31.99**



All Mountianside Kits feature balsa or plywood **pre cut fins!** New kits due for release in early 1996 include a 4.0" diameter Iris, 4.0" diameter V2, 4.0" Alpha III look-a-like, and a 2.217" diameter Saturn V rocket. Any Question Please call or write to Mountainside Hobbies, 25 East Main St., Ephrata, PA 17522. (717)733-4140.

