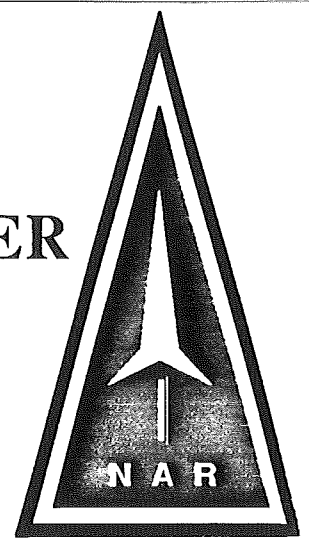


THE UPSTATE ROCKETEER

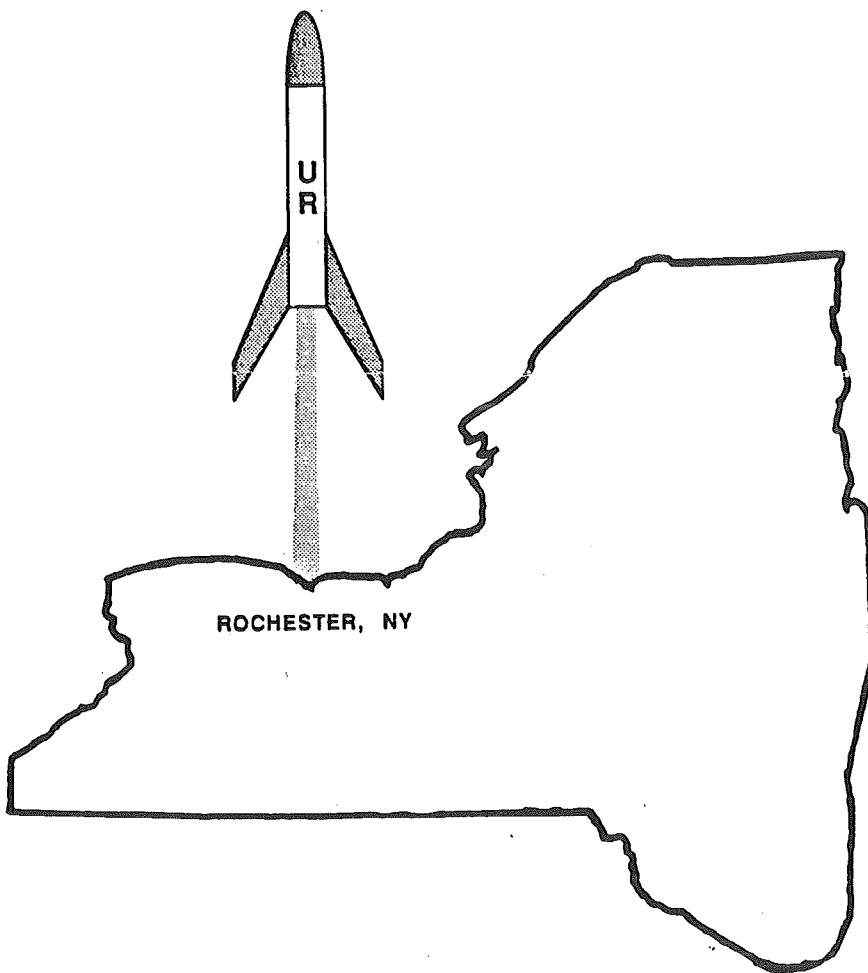
The Official Newsletter of MARS
NAR Section #136



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MUSEUM SELECTED AS
SITE FOR NYSPACE 92

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CLUB NEWS & MORE!

Blowin' In the Wind
(Editorial)

The Upstate Rocketeer

Volume 5, Number 2
April, 1992

The *Upstate Rocketeer* is published six times a year by the Monroe Astronautical Rocket Society as a service to its members and NAR members in Western and Central New York. Subscriptions are \$3.00/year. The *Upstate Rocketeer* is edited by Dan Wolf. Send all comments, complaints, letters, plans, subscriptions, etc. to him at the following address:

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MARS Membership - April 1992

Jay King - President	
Jeff Ryan - Vice President	
Ferenc Roka - Secretary/Treasurer	
Roy Metz - Senior Advisor	
Mike O'Brien	Mark Doty
Jonathan Doyle	Merrell Lane
Bud Piscini	Jessica Ryan
William Springer	C.J. Urlaub
Dan Wolf	Mary Wolf
Sarah Wolf	

Hello again everybody. Yes, the front cover is right. The Board of Directors of the Geneseo Warplane Museum has approved the use of their field for NYSPACE 92. As most of us are aware, this was a major hurdle that we faced in hosting the New York state championships. Not all of the details have been worked out as of yet, but read the NYSPACE update article for more information. I just want to say thanks to Jay King for his assistance in this matter. Also, a special thanks to Ferenc Roka whose idea it was to contact the Museum in the first place. With the site selection finalized and many other details worked out, NYSPACE is shaping up to be the premier rocketry event in western New York for years to come.

In closing, don't forget, the next club meeting is Friday, April 10th at 7:30 PM. Come and see the videos from the March 29th launch.

Until next time,

Dan

Building For NYSPACE

In the last issue ideas and strategies for flying the NYSPACE glider events were discussed. In addition, several glider plans were presented. In this issue, we will discuss B Eggloft Duration. We had hoped to feature C Super-Roc altitude as well. Jay King has built a prototype for this event from discussions and ideas with Ed Lacroix at Apogee. Jay is planning on test flying both this new design and the Apogee "Longshot" kit. If all goes well we will have the plan and the results for the next issue. This should be just in time for you last minute builders, so order those Blackshaft tubes from Apogee now!

Anyway, a plan for a "2 Minute Egg" type model for egglofting appears on page 11. The plan is actual for two different versions. One is designed for standard B engines (18 mm). The other for the Apogee composite B mini engine (13 mm). Both are variations on George Gassoway's original "2 Minute Egg" plan. A few words about the shroud are in order. First, the length of the shroud is a matter of personal preference, the size of the chute you intend to use and how well you can pack it.

(continued on page 5)

MARS Sport Launch II

All is now as it was then, except "You Are There". On Sunday March 29th, MARS held its second sport launch of 1992. The weather was marginal with the temperature at 40 degrees and the winds from the west at 10 to 20 mph (closer to 20 than 10). In attendance were MARS members Dan and Mary Wolf, Ferenc Roka, Jeff Ryan, Jay King and your reporter. Also present were Tom Hall and son who drove over from Lyons. As this reporter saw it, the flight honors are as follows:

Most Spectacular flight: Dan's reloadable F40 powered NCR Thunderbolt. What a flight this was, with the F40 reload producing a very evident smoke trail and a wonderful sound that I still thought was loud from about 50 meters away.

Most Exciting Flight: Jeff's LOC IV with a 1/4I (G-42) with an 8 second delay. Again a beautiful boost and the loooooooooong wait for the ejection charge, finally at about 200 feet after the IVs' 2000 foot apogee.

Most Accurate Spot Landing: Ferenc's Flying Saucer. He just got through explaining how the saucer acts like a lifting body when he proceeded to drop the "stone like" lifting(?) body on my truck body, which is where the launch control was, so he wins.

Most Counterproductive Flight: Ferenc also wins this one for what was once a Tasmanian Devil fixed rotor rocket helicopter. To tell the truth, I don't know how it is possible for one of these things to stay together on the way up, and this one didn't. So if anyone wants one of these kits, see Ferenc because his is a kit for the second time.

Best Junior Honors: Goes to Mary Wolf for her Alpha III and Baby Bottle launches.

Best Glider Flight: Jay's successful test flight of his QCR 1/4A rocket/glider.

Best Scale Flight: Since only I flew any scale, I'll give myself a pat on the back for best scale flight.

There were a number of club firsts on this day. The F40 reloadable was the first nondisposable flown by a MARS member, and Mary Wolf flew the first Quest engine in her Alpha III. So I guess the rest of us have to try to "keep up with the Wolf's"?

Considering the marginal wind conditions, there were quite a few high power flights. My ploy of launching a C engine early on shamed Dan and Jeff into going to the big stuff. These also included Dan's LOC Graduator and his NCR "Mini"(?) Spoil Sport. These were powered by an F25-9 and 4 C6-5s respectively. Also, considering the wind, Jay's 1/4A boost/glider did extremely well after some last minute adjustments. I timed the flight to be about 20 seconds. Dan suggested a new event, the 1/4A apogee catch after watching Ferenc dazzle the crowd with two spectacular 1/4A altitude flights to the staggering height of 8 feet. I think the final feat of magic was my own Maxi Alpha III landing in the parking lot and not breaking any of its tail feathers. A total of 20 missions were flown and most with great success and all with great fun, as it is supposed to be. So that's the way it was, March 29th, 1992 at the White Sands and Peenemunde of MARS, the Videk Test Range.

Bud Piscini
NAR #54692

(Editors Epilogue: I would just like to add a few things here. First, for those who may not know, at the February meeting we agreed to take turns writing up the club launches this year because I was getting tired of writing them and every launch was starting to sound the same. Bud agreed to go first and the result was exactly what I had hoped for, a new and refreshing approach and coverage. Thanks Bud, you did a great job. Second, we also decided to keep a log book of all of our flights at club launches. This will help whoever writes up the launch for the newsletter. It will also be fun to look through the log at the end of the year to see what we flew. Finally, no photos this time, look for them in the next issue.)

CLUB NEWS

February Meeting

The February MARS club meeting was held on Friday, February 21st at Dan Wolf's house. Present at the meeting were Jay King, Jeff Ryan, Roy Metz, Bud Piscini and Dan Wolf. The main item on the agenda was the election of officers for 1992. We also discussed how the club should organize its activities. After some discussion and reviewing the club by-laws, it was decided to form three committees. The committees are membership and publicity, program, and newsletter. The program committee is headed by Jay with Dan also helping out. The newsletter committee is headed by Dan with Jay assisting. Finally, the Membership and Publicity committee consists of Bud Piscini and Roy Metz. The plan is to work new people onto these committees and to form other committees as needed as the club grows. For 1992, all the officers remained the same except for President. The new club president is Jay King. Congratulations Jay (I think?).

It was decided at the meeting to keep dues at \$10.00 for seniors and \$5.00 for juniors. Although we have about \$150 in the treasury, it was decided to keep the dues at \$10 so that we would not run short on money for expenses for NYSPACE.

For show and tell, Roy brought along his Bart Simpson rocket. Words can't describe this one. We can't wait to see him fly it. Roy also brought along an Estes Mars Snooper, the first of the new "Collectors Series". Estes sent one to each NAR section. It was decided to save it and use it as a prize for NYSPACE. Ferenc brought along a number of copies of a new publication entitled "Thirty Years of Model Rocketry: A Safety Report". This report, prepared by G. Harry Stine for the NAR and HIA, was published by Estes. It gives a very detailed accounting of the safety of the hobby and specifically, the safety of model rocket engines and the extensive testing done throughout the years by various organizations.

March Meeting

The March meeting was held on March 22nd. Present at the meeting were Bud Piscini, Ferenc Roka, Jeff Ryan, Dan Wolf and Richard Kerr. Rich saw the listing for NYSPACE is AMSPAC. He is part of a group at Kodak that was (is?) trying to form a club inside Kodak and gain

permission for use of the large Kodak fields across from KAD Elmgrove. Anyway, we expect Rich and his friends to join in some of the MARS activities this summer and maybe even become MARS members.

The major discussion at the meeting centered around NYSPACE and mostly the field. See NYSPACE Update article for more information. We also discussed briefly the Greece Towne Mall Aviation Show. Bud was to take care of arranging space for us on one of the RAFC (Rochester Area Flying Club) tables. We also discussed launch safety. It was agreed that the club needed to be more stringent this year regarding safety and particularly, we need to have a fire extinguisher or buckets of water present at every launch. The idea of wetting down the area underneath the launch pads before the launch was also agreed to. The meeting ended with Dan showing some of his favorite videos from various high power launches including the 60 engine Orbital Transport!

Greece Towne Mall Aviation Show

Thanks to the efforts of Bud Piscini, MARS had a display this year at this annual show at Greece Towne. The display featured a variety of models, including several scale models, an assortment of competition birds and some high power rockets from Aerotech, LOC and NCR. Also on display were engines from 1/2A mini engines up to composite I motors. The models and engines on display were provided by Bud, Dan Wolf and Ferenc Roka. These three also happened to man the booth. A 10 page handout with information about the club and the hobby was handed out to over 50 people. Interest seemed high although no one showed up at our sport launch the following day, even though we extended invitations to many. Maybe at our next launch though. The brochure we handed out included names and phone numbers of several club members and it also gave directions to our field and meeting place so we'll have to wait and see. The crowd especially seemed to enjoy the HPR videos that we ran continuously throughout the day. Although we may not see an immediate benefit from this exhibit, it was yet another opportunity for us to get some free exposure for the club and the hobby. Thanks to the RAFC for letting us use one of their tables for our display. A letter of thanks will be going out to them.

NYSPLACE 92 Update

The big news regarding NYSPLACE is that we have received permission from the Geneseo Warplane Museum Board of Directors to use their large field as the flying field for NYSPLACE. The Board agreed at their April 1st meeting to allow us to hold NYSPLACE there. At the time of this writing, not all of the details have been worked out. The Museum Board was sent a package of information prior to the meeting from MARS. This was done as was discussed at the March MARS club meeting. The package included a letter requesting use of the field, a description of the contest including the events and types of rockets flown in each event, a copy of the NAR safety code and the February issue of the newsletter. Apparently the Museum Board had no problems in approving the use of the field but they do have some general questions.

From conversations to date, here are some of their concerns. First, they want to make sure that we have everything worked out as far as the FAA is concerned. Second, they have a concern about one of our rockets damaging one of their planes. Due to their concerns, the following actions seem appropriate:

1. Careful attention must be given to setting up the range. We will strive to make every effort to put the range head down wind from the planes.
2. Even though the field is not considered an airport (they have reasons of their own for not declaring it as such), the FAA limits will be followed for this launch. That would have been the case anyway, since no waiver was applied for. These rules will be strictly adhered to: Total launch weight limit: 453 grams (1 lb.) Total propellant limit: 125 grams (4 oz.) (This means that we may have to turn down sport launch requests for some Aerotech and other HPR model rocket kits but so be it.)
3. Certain rockets that meet all of the above, may still not be allowed to fly, depending upon the weather conditions and other circumstances. For example, if it looks like the range set up and weather conditions are such that a high power rocket might fly over where the planes are parked, then the flight of say a LOC Graduator would not be allowed. At a launch in Georgia earlier this year, GAMMA lost their launch site when a model of this type pierced through the roof of a house under construction near the launch site. Imagine what it might do to the

Museum's B-17.

One other item. The weekend of NYSPLACE is the same weekend as the Museum's fly-in breakfast. The breakfast is on Sunday morning from 7:00 to 12:00. They didn't feel that this would be a problem since we stated in the info packet to them that we would not start flying Sunday until noon. The upside is that they plan to include the NYSPLACE activity in their posters and flyers publicizing their breakfast. I also think it will be a draw for us to get people to participate in NYSPLACE. We have some details to work out with them concerning rain dates, practice launches, etc. but we should have everything worked out soon.

In other NYSPLACE activities, the club gave Jeff some input on what we would like to see regarding the launch system he is putting together. The consensus was a system with individual pads (no torture racks), easily adjustable, and easy to set up. The present launchers were felt to be okay but a pain to set up (stakes have to be pounded in but may be okay with a bigger hammer!) and the blast deflectors are not always effective.

Ferenc reported at the March meeting that most of the letters requesting prizes had been sent out. Since then we have received from LOC/Precision a LOC Graduator kit, several cloth chutes and a stack of price lists/order forms.

Building for NYSPLACE

(continued from page 2)

For example, the Apogee eggloft kits have very long shrouds, in the 10"-12" range. On the other hand, the ASTRE club member's models usually have very short shrouds, on the order of 6" and ASTRE usually does very well in this event. No matter what length you use, use the formulas, from "The Handbook of Model Rocketry" to help you in building the shroud. For a parachute, I prefer the dry cleaner bag type as it has less tendency to tear. I like the idea of the Easter Egg capsule too but an Apogee capsule offers more protection for the egg. The penalty is added weight and the space that the back end of the capsule takes up in the shroud. Check out the "Competition Tips from Modelnet" article in the last issue for more info on building and flying this type of model.

Calculating the Center of Pressure Using a Computer Spreadsheet by Jay King

I've developed a Lotus 1-2-3 spreadsheet for center of pressure calculations. I felt a Lotus model would be preferable to the existing "freeware" for several reasons.

- 1) Most use "Teletype" style entry, requiring the user to navigate through lines of prompts to perform a single evaluation.
- 2) None are well documented, the user is ignorant of how the calculations are being performed.
- 3) Modifications are difficult, even if the source code and a compiler are available.

I organized the spreadsheet into component part "panels" including; Nose Cone, Cylindrical Body, Fins and Conical Boattail. Additional "panels" can be added for other part types. Centuri technical report TIR-33, "Calculating the Center of Pressure" supplied all the necessary formulas.

Each panel details all the values required for it's calculations, this results in some data redundancy (i.e. the nose diameter on nose cone and conical boattail) but it provides the developer with needed detail and enables easy modification.

There are three major calculations per panel; Normal force on the component part (C N Alpha), center of pressure of the component part (X Bar) and normal force times Cp.

The example is for a model with the following characteristics:

- o Ogive nose cone, 3.6 inches long, .75 inches in diameter
- o Body tube 10 inches long
- o 3 trapezoidal fins, 2 inches at the root, 1 inch at the tip, spanning 1.7 inches from the body.
- o A boattail reducing the body to .5 inches in 1 inch of length.

The total length of the design is 16.6 inches (nose + body + fin root plus boattail) and the center of pressure is 13.86 inches from the tip of the nose cone.

For further investigation, I'm unsatisfied with the fin panel. Semi Span (S) and Root to Tip (l) should be calculated rather than entered and I'd like to have a panel for elliptical fins as an alternative to traps. It should also be possible to attach masses per unit length to each panel and present an estimate of center of gravity and provide a stability assessment.

I will make copies for anyone who will send a blank disk with a post paid mailer. Address to: Jay King, PO 22941, Rochester NY 14623.

Spread Sheet Example

A BC	D	E F G
1	File: Part1	Center of Pressure Calculation
2		
3	C N Alpha	- Component Normal Force
4	X Bar	- Component Center of Pressure
5	Total Normal Force - Summ (C N Alpha)	
6	CP Location	- Summ (C N Alpha*X Bar)/Total Normal
7	Nose Cone Type	Conical - 1, Ogive - 2, Parabolic - 3
8		
9	:-Nose Cone -----:Unit Val-:	
10	Type (C-1,O-2,P-3)	: 2.00 :
11	Length	: 3.60 :
12	Base Diameter	: 0.75 :
13	:-----:-----:	
14	C N Alpha	: 2.00 :
15	X Bar	: 1.68 :
16	C N Alpha * X Bar	: 3.36 :
17	:-----:-----:	
18		
19	:-Cylindrical Body----:Unit Val-:	
20	Length	: 10.00 :
21	Body Diameter	: 0.75 :
22	:-----:-----:	
23	C N Alpha	: 0.00 :
24	X Bar	: 0.00 :
25	C N Alpha * X Bar	: 0.00 :
26	:-----:-----:	
27		
28	:-Trap Fins (3 or 4)---:Unit Val-:	
29	Number (n)	: 3.00 :
30	Root Length (a)	: 2.00 :
31	Tip Length (b)	: 1.00 :
32	Semi Span (S)	: 1.65 :
33	Root to Tip (l)	: 1.70 :
34	Sweep Back (m)	: 0.50 :
35	:-----:-----:	
36	Body Diameter	: 0.75 :
37	Body Radius	: 0.38 :
38	Cmpnt Force (one)	: 23.13 :
39	Interference	: 1.19 :
40	Distance from Nose	: 13.60 :
41	:-----:-----:	
42	C N Alpha	: 27.41 :
43	X Bar	: 14.21 :
44	C N Alpha * X Bar	: 389.51 :
45	:-----:-----:	
46		
47	:-Conical Boattail--- :Unit Val-:	
48	Entry Diamtr (d1)	: 0.75 :
49	Exit Diamtr (d2)	: 0.50 :
50	Length (L)	: 1.00 :
51	Nose Diamtr (d)	: 0.75 :
52	:-----:-----:	
53	C N Alpha	: -1.11 :
54	X Bar	: 0.47 :
55	C N Alpha * X Bar	: -0.52 :
56	:-----:-----:	
57		
58	:-Summary-----:-----:	
59	Total Length	: 16.60 :
60	Total Normal Force	: 28.30 :
61	CP Location (fm nose)	: 13.86 :
62	:-----:-----:	

Formulas

F14 2.00
 F15 @IF(F10=1,(2/3*F11),@IF(F10=2,(0.466*F11),
 @IF(F10=3,0.5*F11,"ERR"))
 F16 (F15*F14)
 F21 (F12)
 F25 (F24*F23)
 F36 (F12)
 F37 (F36/2)
 F38 (4*F29*((F32/F36)^2))/(1+((1+(2*F33/(F30+F31))^2)^0.5))
 F39 1+(F37/(F32+F37))
 F40 (F11+F20)
 F42 (F39*F38)
 F43 (F40+(F34*(F30+2*F31))/(3*(F30+F31))+((F30+F31)-
 (F30*F31/(F30+F31)))/6)
 F44 (F43*F42)
 F51 (F12)
 F53 2*((F49/F51)^2)-((F48/F51)^2)
 F54 (1+((1-(F48/F49))/(1-(F48/F49)^2)))*F50/3
 F55 (F54*F53)
 F59 (F11+F20+F30+F50)
 F60 (F14+F23+F42+F53)
 F61 (F16+F25+F44+F55)/F60

News From Modelnet

Compiled by Jay King

(Here is a summary of items appearing in recent weeks in the Sport Rocketry section of Compuserve's Modelnet Forum.)

Dangerous Dave's (3192 Atlanta Hwy, Suite 468 Athens, GA 30606), is operated by Dave Gawlik, a member of GAMMA (Georgia Association of Miniature Model Astronautics, NAR Section #494). He has begun making custom carbon/kevlar components. Roy Green received a perfect copy of the new LOC 5.5" plastic nose cone, weighing in 8 oz lighter than the original.

A recurring rumor is that Estes and Vulcan are cooperating to make and sell composite rocket motors.

Besides the products that showed up in the 1992 Estes catalog, they displayed several additional items at the "Toy Show" in Manhattan including water rockets, molded in colors and shapes of famous comic book super-heroes.

The Estes 1/45th scale Saturn 1B seen at various conventions and trade shows is expected to release in the next few months along with new, higher power, motors.

Kevin McKinny offered a table of appropriate launch

site activities, referenced to engine size.

A - D Just step aside
 E Exit immediate area
 F Do above a little faster
 G Get outta there
 H Oh hell, just run
 I I'm outta here
 J ...get outta my way
 K Keep on trucking and don't look back
 L Lunch time, some where far away
 M Oh momma, I'm gonna dig a hole
 N+ Bend over, place your head between your knees and kiss your A.. goodbye

George Gassaway has been working on a Space Shuttle for FAI Scale. Many people have the idea of putting a couple of engines in the SRB's and orbiter and firing it all off at once like the real thing, but this is very high-risk. If the SRB motors are not ignited exactly at the same time the model will probably crash from the uneven thrust. George has tried an A3-6T in each SRB (for ejection charge only) and has experienced the same. He is now developing a system to fire the 'As' only after the sustainer is running. The model is 1/87th scale and is limited by the rules to 80 N-sec of power. (AMA headquarters has a 1/72nd scale Space Shuttle plan (#347) available.)

Wayne T. Anthony offered some tips for using Epoxy in cold weather. He has experimented with heating it in a microwave oven to get a spreadable consistency. He heats only a few cc's at a time, running the "Nuke" on high for 12 seconds.

Cure times for overheated epoxies accelerate rapidly. Heat in the microwave just long enough to "take the chill off", certainly no hotter than 95 degrees F.

Bruce Kelly is enlarging the editorial scope for "Tripolitan, America's High Power Rocketry Magazine". He plans to run one article related to Model Rocketry and one related to Experimental and Professional Rocketry per issue. Specific topics may include construction, safety and liquid fuel.

NARTS has a new address, PO Box 1482 Saugus MA 01906. They plan to have their new catalog online in Modelnet and are setting up to receive orders directly through Compuserve. Their goal is to ship all orders within 48 hours of receipt.

As The ModRoc World Turns...
(news and rumors heard 'round the hobby)

Manufacturers News...Leading off with news from Estes. The 1992 Estes catalog is now out. The good news is that all of the engines from last years catalog made it to the new one. However, there are no composites or 1/4As yet. The new kits they showed at the RCHTA show are here including the 1/4A scale Patriot, the E2X series, and the rest. Estes has added 2 new kits to the Collectors Series, the Enterprise and the Klingon Battle Cruiser from Star Trek fame. With prices in the \$30.00 range, they are in the same ballpark that Commonwealth Displays charges for the originals (although the Commonwealth combo pack price is cheaper). There are some "surprises" in the new catalog as well, including the "Bail Out", a rocket in which you can put your action figure (Hulk Hogan, Batman, etc.) and have it come down on its own chute. Maybe we could start a new competition event, "action figure" duration. But wait there's more. Also new to the Estes lineup in a rocket called the "CATO". At ejection, it comes apart in to several pieces!

Aerotech has a new catalog out. This one has the same shape as the Estes and Quest catalogs. Aerotech has added five new kits to their lineup. They are the Cheetah, Strong-Arm, Wart-Hog, Mirage, and Barracuda. The Astrobee D is now available also. That brings the Aerotech line up to 11 kits, not including the Phoenix R/C Rocket Glider. Speaking of the Phoenix, Aerotech has added a new motor for the Phoenix called the Sky'riter. This motor, the F23W-Sk "has a 15 second skywriting time" following burnout. On the topic of motors, included with the catalog is an insert called the "MOTOR MATRIX". This handy little item lists the recommended motor types and delays for all of the Aerotech kits. This list includes both reloadables and single use motors. The sheet also includes the technical data as well as thrust curves. Looking this sheet over, it can be seen that Aerotech has quietly filled out its line of reloadables for engine sizes from "B through G". For example, although they weigh slightly more than black powder engines, the 18mm size in the C engine class has a C4, C6 and C12 reload. The 29mm now has F engine reloads F22, F40 and F52. The catalog now shows two starter kits. The Initiator Systems Package - SU comes with 2 single use motors while the Initiator Systems Package - RMS comes with the RMS-29/40-120 and two reload kits. Besides the kits, the new catalog

includes all the parts that make them up, sold separately so that you can replace an item (like my Initiator nose cone that is still hanging from a utility pole) or order parts to design your own rocket. Even the decal sheets are offered separately. Strictly opinion on the new Aerotech catalog: Overall, this catalog is pretty good, and much better than the earlier "catasheets". If only they would get rid of those staged photos with "models" holding the Aerotech models. Aerotech's address is 1955 S. Palm St., Suite 15, Las Vegas, NV 89104. Their toll free number for orders or questions is 1-800-752-8018. The price on the catalog is \$2.00.

Quest is now shipping its hobby store line of kits and engines. Dan's Crafts and Things has a good selection of the kits and engines. The engines and "tiger tail" igniters worked flawlessly at the March 29th sport launch. Also, the Quest catalog is free at Dan's (although its one of those catalogs with no prices in it).

NAR News...(provided via a message posted by Pat Miller after the February Board of Trustees meeting). The biggest news item from the NAR is that *American Spacemodeling* will go to an 8 issue per year schedule. Five of those issues will be 48 pages with the other 3 being 32 pages. In other NAR news, the NAR-SFA Insurance coverage has been changed. The aggregate amount has been raised from one million to two million with no additional increase in price. The NAR is continuing to work with the SFA in other areas as well including a tentative national marketing campaign that will include print media and cable television. Also, the NAR is again pursuing the FAA regarding the now five year old proposal to the FAA to change the weight limits. This time the NAR has enlisted the help of a Washington D.C. law firm. Finally, the NAR will soon accept MC/Visa for membership renewals and perhaps NARTS (By the way, the new NARTS address is in the Modelnet article).

Rochester Area Hobby Stores

(A look at area hobby stores and their Model Rocketry offerings)

Introduction

At the MARS exhibit at the Greece Towne Mall aviation show, one of the most often asked questions was where to buy the various items we had on display. There is still a large number of people who do not like to buy anything mail order so hobby stores are important for the hobby and our club to continue and grow. Over the past few two weekends, Mary and I took a whirlwind tour of the area hobby stores. Below are the results of our visits to the shops, in the order in which we visited them.

Dan's Crafts and Things 352 Empire Blvd.

Dan's and Edmunds have probably been around the longest and are the two most well known shops in the area. Dan's was one of the first ones I visited when I came to Rochester in the mid 70s (for some reason I liked the name) and the store impressed me enough to make me a regular customer there. In those days, Dan's carried a large stock of rocketry items including virtually everything that was in the Centuri catalog at the time. He was also heavily into airplanes and R/C and was one of the few shops to carry Jap tissue. His balsa selection was good in those days too and included Sig contest balsa, C grain and wedge and pre-airfoiled sheets.

First and foremost however, Dan is a businessman and a successful one at that. Over the years, he has expanded heavily into crafts of all types at the expense of some hobby supplies. This has certainly paid off as the store is often crowded these days, especially on Saturday. Most of the customers are older women, shopping for all sorts of craft supplies. We visited the shop a couple of Saturdays ago and had a hard time finding a parking spot. As far as rockets go, Dan's appears to be the leader in Rochester. On this trip, we found kits and motors from no less than four different companies: Aerotech, Estes, MRC, and Quest. He was even selling Aerotech RMS motors and I couldn't resist buying one and some reloads for it. He no longer stocks body tubes and nose cones however. In regards to building and finishing supplies, Dan's has one of the best selections of finishing materials around. There is a large selection of paints as well as a variety of brands and types of glues. My only complaints are the lack of balsa filler products and that he no longer has Jap tissue. The balsa selection is not what it once was either but it is about average. Overall, this is probably the most

complete hobby store in the area for the rocketeer. Another benefit is that Dan's is open on Tuesday and Thursday nights and is open Sunday afternoons. The only problem I have with Dan's is that they have not been supportive of the club in recent years. In particular, they have been unwilling to display flyers or posters about the club and the NAR that we have brought to them. This is unfortunate since their model rocketry offering is so strong.

Panco Hobbies 1865 Penfield Rd.

In contrast to Dan's, Panco is a small store in Penfield that is strictly hobbies. In particular, this store caters to the R/C plane crowd but they do carry the Estes line of model rockets and engines. Panco's has a limited selection of glues and paints, but their balsa and plywood selection was surprisingly good for a shop this size. The owner is quite friendly and more than happy to let to post notices and posters regarding club activities on his bulletin board. If you go there, don't forget to mention you are a member of the club to receive a 15% discount.

The Hobby House 2366 Lyell Ave.

The Hobby House is located on Lyell Avenue just west of 390. This store has been around for around 4 years and caters mostly to the R/C car and plane crowd. Although they carry a fairly complete line of Estes kits and engines, all of the kits are stuffed into a glass counter/display case, laying on top of each other instead of hanging up as in most stores. They claim to do this because they lack the space to hang them up. For a while their engine prices were discounted but they were at list price when we stopped in last Saturday. The paint and glue selections are only fair but the balsa and other wood selections are good. In particular, I like the selection of hard balsa and spruce for glider booms. They have been very supportive of the club in the past and are always willing to let us leave club flyers and newsletters in the store. I have received a few phone calls from people who were directed to the club by them.

Edmunds Hobby Shop 1521 Mt. Hope Avenue

This hobby store, located on Mt. Hope avenue just south of Elmwood has been the hobby store in Rochester for R/C and other types of planes for years.

For rockets, they carry the standard Estes line. What has made this shop special in the past was their excellent supply of balsa. If you are looking for light balsa or C grain, this shop is normally the place to go. However, when we stopped in there last Saturday, I was disappointed in the selection. Several of the bins were empty. In fact, the hobby store was "bare" in general, including the rockets. I can think of two possible reasons for this. One, he just hasn't ordered anything for spring as of yet. Two, the recession has hurt many of the hobby stores (people afraid of losing their jobs aren't going to go buy a new R/C plane and radio). More on that thought later. The present owner of Edmunds (2nd since Edmunds himself died) is very supportive of the club. He has indicated in the past that he would like to come to a launch with us sometime and he is always willing to post any notices, flyers, etc. that we give him. Overall, this visit to Edmunds was disappointing. Here is a store I have enjoyed going to in the past, particularly for their balsa, but this time I was let down.

HO/RC Hobbies 982 Monroe Ave.

Our visit to this store, located on Monroe Avenue, just south of 490 was totally bizarre. The store is actually two store fronts, adjacent to each other. We entered the wrong door and found ourselves in the middle of skateboards and Nintendo games. By the way, this side of the store had in the display window the ugliest looking Aerotech Initiator I have ever seen. The body was painted a fluorescent green and it appeared to have been assembled incorrectly. There was a 1/4" gap between the body tube and the fins as the fin mount/motor tube assembly appeared to be built wrong.

Inside the correct side of the store, we discovered they were in the process of remodeling. The two employees in the store were too busy working on some shelves and/or racing a car on the 4 lane HO slot car track to wait on me. I did discover on the floor in a corner, an Aerotech starter kit, as well as Mustang, and Arreaux kits. I could find no Aerotech engines however and the price on the Arreaux box was wrong (\$69.95 ?). Since I couldn't get anyone to help me, I don't know if they had the engines someplace else. It looked like the kits had been there a while. Hanging on the wall were several of the original MRC kits (not Concept II). There must have been dozens of them. Of course the usual Estes stuff was there including a Mercury Redstone kit.

As far as building and finishing supplies, this

store was about the worst we visited. The balsa selection was pathetic as was the selection of glues and paint. Perhaps we caught them at a bad time with the remodeling but don't be too sure. The good news is that they are open Saturday night until 8:00 while most shops in town close by 4 or 5 on Saturday.

Rochester Raceway & Hobby 1725 N. Clinton Avenue

Another hobby store open on Saturday night, this store is on Clinton Ave. just north of 104. As you might expect, this store's main action is R/C cars and the shop has a large indoor track in the back. I would say 80 to 90 percent of what they offer is for R/C cars but they do have a surprisingly good selection of Estes kits and engines. Another place to hit on Saturday night before a launch when looking for a pack of engines.

Other Stores

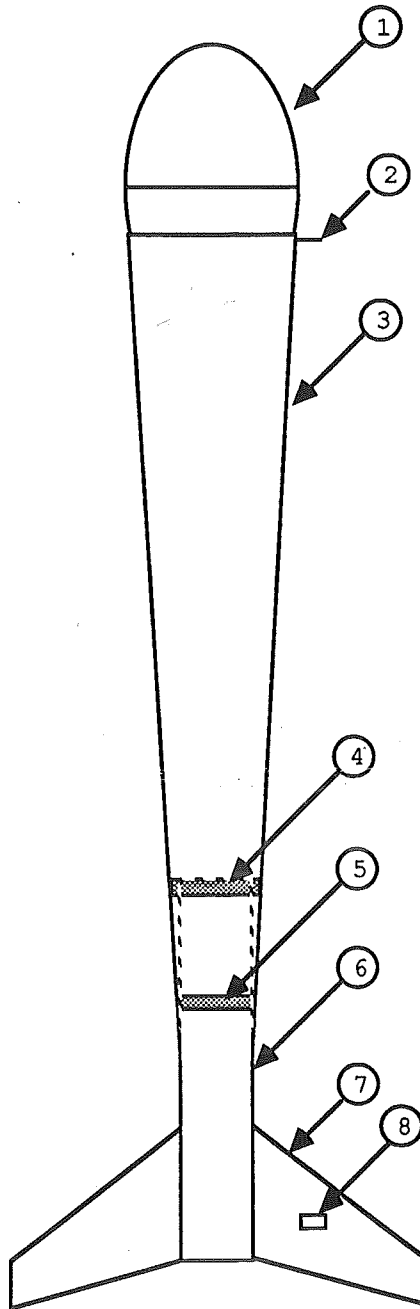
We had planned to include some other stores in this review, but two of them we were going to visit went out of business. The hobby store in Canandaigua is no more and the same goes for the Hobby Peddler in Pittsford. I can understand the latter but I was really surprised about Canandaigua. The recession has taken its toll as both of these stores have been around for a number of years. Another store we stopped at was Lake Country Hobbies in Farmington. This store primarily sells R/C cars and supplies. They do not sell rockets but the owner told me that he had ordered some rocketry items for a few area people after the Canandaigua store closed. He said that the problem that he and some of the other hobby store owners have is that "we don't know what to carry" regarding rockets so they don't carry anything! Another store we didn't get to but have visited in the past is Miniature Hobby Supply in Honeoye Falls. Last time we visited, they carried the Estes line and they also had a nice selection of the MRC Concept II kits.

Your Travel Agent Recommends

If you are headed to Buffalo, check out Niagara Hobby near the Galleria Mall. They were one of the first stores in Western New York to carry Aerotech and they are a very complete store. If you are headed the other way, towards Syracuse, check out Walt's Hobby. They sell the Aerotech line as well. Walt's also has a nice assortment of adhesive coverings (trim coat, etc.) in a variety of colors and patterns.

B Eggloft Plan(s) "Variations on a "2 Minute Egg"

PARTS LIST

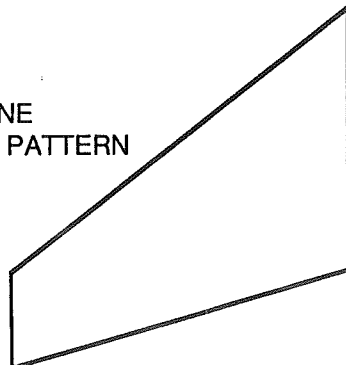


1. Egg Capsule. Use two large halves of plastic Easter egg or Apogee Capsule
2. Upper Launch Lug. Bend from music wire and attach to top of shroud.
3. Cardboard Shroud. Make from thin card stock. Length depends on size of chute and personal preference. Size shown (1/2 scale drawing) is 8.5". Use shroud formula from "Handbook of Model Rocketry".
4. Shroud centering ring. For BT-20 (standard engine) model, use EstesAR-2050. For BT-5 (for use with composite B) model, use BT-5 to BT-20 ring or older style 18mm engine block (thick brown cardboard type)
5. Engine Block. Use appropriate block for size of body tube.
6. Body Tube. BT-20 (4") for standard engine model. BT-5 (3") for composite B model. Apogee tubing can be used here as well but is not necessarily recommended.
7. Fins (3 required). Method 1. Use 3/32" balsa. Sand to tear drop airfoil and fill grain till smooth. Method 2. Use GBS-20 waterglass. Sand in airfoil with 220 grit and smooth with 400 then 600 grit.
8. Lower launch lug. Small piece of 3/16" launch lug or make from music wire.

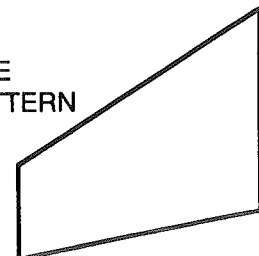
ITEMS NOT SHOWN

9. Shock Cord. Attach Apogee Kevlar Cord, KSL-100 to shroud centering ring. (Drill hole through centering ring. Pass cord through it knot on other side and glue in place. Make cord at 12" to 18" long. Attach 12" to 18" round elastic to end of Kevlar and to capsule.
10. Parachute. Use 36" to 54" chute depending upon the weather and your chute packing ability. Make from mylar or dry cleaner bag. use 16 to 24 shroud lines.

"STANDARD" ENGINE
MODEL (BT-20) FIN PATTERN



COMPOSITE B ENGINE
MODEL (BT-5) FIN PATTERN



Events Calendar

Model Rocketry related events in the Upstate New York or of interest to rocketeers of this area are listed below. If you have an upcoming model rocket event planned, send info to the editor.

April 10th, MARS Club Meeting.

Regularly scheduled club meeting.

Contact: Dan Wolf 458-3848.

April 26th, MARS Sport Launch.

Club fun fly. Everybody is welcome.

Location: MARS Flying Field. Corner of Rt. 332 and Collett Rd. Farmington, NY

May 8th, MARS Club Meeting.

Regularly scheduled club meeting.

Contact: Dan Wolf 458-3848.

June 6-7 NYSPACE-92 (New York Spacemodeling Annual Championship & Exhibition) Regional.

Events: 1/2A Altitude, C Super-Roc Altitude, 1/4 A PD (MR), 1/4A B/G, A R/G, B Eggloft Duration, Sport Scale, Open Spot Landing. Special NYS Section Champion Award.

Location: Geneseo Warplane Museum. Geneseo, NY

Contact: Dan Wolf 458-3848.

June 13-14 WUBBA 15 Regional.

Events: B HD MR, 1/2A R/G MR, E SR Dur, 1/4A PD MR, 1/2-A FW MR, FAI S6A (A SD).

Contact: Art Rose, 8 Sandusky Rd. New City, NY 10956

Note: A practice launch at the Geneseo Warplane Museum may be held some time in April or May. Club members will be contacted when the time and date have been set.

THE UPSTATE ROCKETEE

c/o Dan Wolf

235 Kislingbury St.

Rochester, NY 14613

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