What's Up

The Official Newsletter of the Syracuse Rocket Club

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Goodbye Summer - Last Launch 10/13

SRC Officers
President: David Harbaugh
Vice President: George Reavis III
Treasurer: Dennis Friend
Tripoli Prefect: Rich Pitzeruse
NAR Section Advisor: Ron Lioto
Secretary: Elaine Reavis

New Members

The Syracuse Rocket Club proudly welcomes the following "**new**" member:

Michael Taddeo

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Walt's Secret Santa Sale

On November 17th SRC volunteers are needed to man our booth. This is a must see. Contact George at greavisi@rochester.rr.com or 315-548-5826 to volunteer.

Another Summer Passes Away

It seems that Summer never comes fast enough, doesn't last long enough and is gone way before we'd like. This from a transplanted Californian. As another launch season comes to an end we need to begin thinking about our 2008 season. Now is the time to begin planting the seed for future rocketeers. Our sport is enjoyed by kids of all ages. Take a moment to think of a family member(s) or friend(s) that might enjoy spending a few hours or a day at our launches. **Hey, you never know.**

Have you attended a Syracuse Rocket Club meeting lately?

We'd love to see you at our meetings. The SRC meetings are held the 1st Wednesday of the month at 7 PM (July Meeting to be held on the 11th due to Independence Day). Club meetings are an excellent opportunity to exchange ideas, get answers to a building problem or general information, plus we meet at Walt's Hobby Shop. **Remember, SRC members get 10% off their purchases at Walts.**

"What's Up With Who?

Interview by Michelle "Shelly" Ostrowski

Many people spend their leisure time doing mundane activities such as watching television or surfing the Internet, but there are those among us whose idea of fun is sending combustion-powered projectiles hurtling into the atmosphere. David Harbaugh of Phelps, N.Y. is one such individual.

Harbaugh is the president of the Syracuse Rocket Club, a relatively small but dedicated group of model rocket enthusiasts. Though rocketry is a more recent passion of his, Harbaugh has become a prominent member of this niche community.

A former Fairmount resident and graduate of West Genesee High School, Harbaugh received bachelor's degrees in mathematics and computer science from Houghton College in 1983. He currently works as a network administrator at Cayuga Community College and occasionally serves as an adjunct professor in the computer technologies department. Harbaugh enjoys many activities, including astronomy, but building model rockets is perhaps his most obvious hobby.

Harbaugh is not a BAR, an acronym he and fellow club members use to denote a "born-again rocketeer," but became interested in the activity just over 10 years ago. He saw his brother-in-law buy rocket kits for his nephews and became an enthusiast on the spot. "My jaw dropped, 'this is cool!' I thought," said Harbaugh.

"He started looking on the Internet as soon as we got home," said wife Denni Harbaugh. She said that once her husband learned there was a club in Syracuse, they went to a

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few launches to see what it was like and he quickly became involved. "I'm glad the club welcomed him in," she said, "they're really good people."

Denni Harbaugh did not become involved to the same degree as her husband, but she still attends launches from time to time. She said that he devotes at least one or two nights a week to the hobby during the summer season when he is building and taking inventory of his supplies, which is essentially a labor of love. She said that he was very excited when he became president in December, and when she reminded him about the level of responsibility it would require he said he did not see it that way because it is something he enjoys doing.

Harbaugh is grateful to have such supportive wife. "She never gives me any grief," he said. She even gets him the model kits he picks out for Christmas, and this year's gift was an Ultimate rocket.

The Syracuse Rocket Club is Section 566 of the National Association of Rocketry (NAR) as well as Prefecture 053 of Tripoli, another national model rocket society. There is some dispute as to when the club was formed, but most members agree that it was sometime in the mid '90s.

The club convenes at Walt's Hobby Shop on the first Wednesday of the month to coordinate projects and plan launches. They talk business in a back room that looks like a small warehouse, and there is a large racetrack for remote control cars in the center of the space. The meeting agenda is interspersed with friendly banter, and Harbaugh takes the lead in making jokes.

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At the August meeting, a total of nine members met to discuss their recent venture with the Museum of Science and Technology and sort out details for the next launch and annual potluck supper on the 25 of the month. Their launch site, Weigand's Hay Farm, is located on Canton Street in the town of Van Buren.

Club members agree that Harbaugh brings enthusiasm and a sense of fun to the group. "He brings life to the position of president," said Vice President George Reavis III.

Reavis, an admitted BAR who is also from Phelps, joined the Syracuse Rocket Club in its first year as an activity for his son to enjoy. Though his son is in now college and no longer participates, Reavis and his wife continue to stay involved.

Reavis says that Harbaugh has a lot of enthusiasm and drive, which are good qualities to have now as the club is seeking to increase its membership. While there are about 30 enrolled members, the number of active members is significantly less. "I don't know why we don't see more people at our launches," Reavis shrugs.

His wife Elaine Reavis, the club's Secretary, does not build or launch rockets herself, but enjoys the company of her fellow members. "It's an eclectic mix," she said.

Elaine Reavis said that Harbaugh is very humorous and keeps the meetings lively. "He's like a teddy bear, you just want to hug him," she said. She also added that he is very helpful, and is currently teaching her and some other members how to operate the launch equipment.

Rich Pitzeruse of Fairmount is the Tripoli prefect of the Syracuse Rocket Club, and often works with Harbaugh on big projects. Most recently, Harbaugh assisted him on a NYPOWER and Tripoli Research Launch in Geneseo. **Continued next page**

Pitzeruse said that Harbaugh is the club's third president, and it is his willingness to help others sets him apart. "He definitely thinks about other people first," Pitzeruse said, "his interests take a back seat to others."

Unlike most members, Pitzeruse has never taken a break from building model rockets, a pastime he began when he was 12 years old.

Treasurer Dennis Friend of Manlius is known for his attention to detail and meticulous work in the cosmetic aspects of model rocketry. Friend, like Pitzeruse, has been building model rockets from a young age, and received his first model kit at age 10. "I stopped buying kits a while ago," he said, "now about 50 percent are self-made."

Though their styles of rocket building differ (Harbaugh said he does not concern himself with cosmetic elements), both Friend and Harbaugh respect each other's talents. Friend said that though Harbaugh has been president for only a short time, he is doing a good job.

Harbaugh and several of his fellow members are certified by the NAR, the exam for which requires individuals to build, fly and recover a rocket from a specified class. Harbaugh is level 2 certified, which means that he can fly high-powered or sport rockets with J, K or L category motors on a scale of A-O. Some of these upper level rockets can be taller than the average person, and in looking at the club's photo album, you see that members are sometimes dwarfed by their creations.

Every member's shared vision for the Syracuse Rocket Club is to see it grow, and Harbaugh wants to increase the amount of outreach programs they do as well.

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The club currently does work with the Museum of Science and Technology and some area schools, but he would like to see such projects become more frequent. "It's really fun to watch the kids," Harbaugh said, "and it's a great way to grow the club and serve the community at the same time."

This edition of What's Up With Who? was provided to us by Michelle "Shelly" Ostrowski, who is a graduate student attending Syracuse University. She spotted our "new" Syracuse Rocket Club sign while driving past our launch site and thought we'd be a good group to interview for a class project. **A big thank you to Shelly for taking the time to visit with us!!**

Want to be featured in "What's Up With Who?"

Send electronic submissions to:
greavisi@rochester.rr.com
Subject Line: What's Up With Who?

Your text submission can be in just about any form. If I can read it, I can use it. We love to include pictures with our stores if available.

What's Being Launched?

We have been making attempts to capture the rockets that are being launched our club launches and posting them on our website. As of this publication, we have the July and August 2007 launches available for viewing. If you would like to submit pictures, please contact me at:

greavisi@rochester.rr.com
Subject Line: What's Being Launched?

Dennis Friend' - USS Morning Star

If you attended the July 2007 launch, you would have seen Mike Taddeo' Space Shuttle. This rocket separates into 4 pieces. This makes for an interesting recovery.

The next two rockets (Sting Ray and Shark Attack) are missing in action. Both were 1st flights by Avery Laporte that left the pad and our eye sights shortly thereafter.

Above is Samantha Shusdocks Egghead rocket. Below is a picture of her payload from her second successful flight of the day.

This is just a "small" sampling of the rockets that were launched this summer. **I encourage all of you to begin selecting your "WINTER" rocket building projects.**

Got a rocket building problem or question? Don't forget that you can get answers to your rocket building questions from "experts" at our monthly rocket club meetings. We meet the first Wednesday of each month at Walts Hobby. See directions on our website.

PAINTING ROCKETS

by Dennis Friend

You need four things for a great paint job, anything less, and its just mediocre. You need 1) Practice, 2) Patience, 3) The right tools, and 4) Clean hands.

1) Just like playing an instrument, the more that you do it, the better you get.

2) If you try to do it fast, you'll forget something, make a mistake, or both. So take your time and do it right, so you won't have to do it over.

3) You need certain tools to do certain things. If you don't have them, some things will be difficult and very time consuming, and other things will be impossible. So decide what you need before you start, and go get everything first.

4) If you have grease, wax, dirt, or just natural skin oils on your hands, it will come off on the rocket when you handle it, and leave strange looking blotches in your paint job, and possibly even fingerprints. Some types of paint will not even dry when sprayed over oil. So wash your hands every time you work on your rocket. Don't use hand lotion either. They must be clean and dry.

You must prime the rocket before you paint it the final colors. The primer will help the final colors to adhere better, give you a smoother finish, and help hide the color of the assembly materials and glue that the rocket is constructed with. The primer and the finish paint must be compatible with each other, to prevent the second coat from dissolving the first. So check the solvents on your cans ingredients lists. But before you do any painting, the surface must be prepared. First, fill in the spiral tube slot with Bondo, and sand it down. Then file and sand down the mold lines on the plastic nose cone. Sand the entire surface of the cone, and any other plastic parts. Use a fine grit paper such as 220, or 320. The paint will stick better to a slightly rough surface, than it will to a smooth one. Sand the body tube and the launch lug also, and anything else that's going to be painted. Wipe off all the sanding dust before you start applying the primer. Fill in all the dents and gouges, and file down the high spots. You may be tempted to wet sand the primer. Some primers are formulated for this purpose. (Continued next page)

Painting Rockets

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But this will only work if the rocket is made of materials that WILL NOT absorb water. Wet sanding is used to make the finish coat look better, but if you sand too much and go through the primer onto a surface of wood, paper, or cardboard, the water will soak in, the material will expand, and you'll have a lump to deal with. You'll have to wait for it to dry out before you can sand it down again.

If your rocket is small like an Estes kit, you can make a holding tool. Find a spent motor case and scrap out the insides. Take a dowel about a foot, to a foot and a half long, and glue one end of it into the empty motor case. Insert this into the motor mount to hold the rocket. The rocket should be held horizontally, so that if you spray on too much paint, you can just rotate the model, slowly, so that runs will not form. Rotate it until the paint sets, and then hang it upside down from the dowel until the paint dries. Alternately, you can place a weight on the dowel and hold the rocket off the edge of a table while it dries. If the rocket is too big or heavy to hold it with one hand, you'll have to make a pair of cradles for it to lie on. These can be cut from ½" plywood, and nailed to bases, so that they won't fall over easily. For this to work well, you will have to designate two places on the rocket for strips of decorative tape to be placed after the paint is dry, in order to hide the areas where the model was lying on the cradles. These two places should be covered with masking tape while it's being painted. The tape should be wider than the plywood.

Most of the instructions on the spray cans tell you to hold the can a certain distance from your work. I, however recommend that you experiment with this. Find some large scraps of cardboard, and try painting at different distances and speeds, to see what produces runs, and what doesn't. Different brands of spray paint come out faster than others. They may be packed under varying pressures. I have no experience painting rockets with a spray gun, so you will not find any instructions or advice on adjusting the gun controls. You must refer to the gun manufacturer for this information.

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Spray can primers are available in white, gray, red, and black. Some are specifically for use on cars, while others are general purpose primers. Most of them are sand able to some extent, though many of them will load up your sandpaper quickly, if they are sanded dry. If you use a primer like this, you will go through lots of sandpaper if you can't find a way to clean it off. Choose a primer color that is as close a match as possible to your finish color, unless you plan to use a base coat to help the finish color hide the primer color. Different base coat colors can be used to alter the shade of the final finish coat. If your finish paint is going to be a light color, use white primer or a flat white base coat over the primer. If it' s to be a dark color, use a gray, red, or black primer, or a dark flat base coat over the primer. For example, if you use gloss yellow for a finish color, use a light colored primer, or a flat white base coat. This will insure that the yellow will be bright. If the yellow is applied over a dark primer or base coat, the yellow will be darker. All primers should have a flat finish. For those who don't know, a flat finish is one that's not glossy. Spray paints adhere better to flat finishes than to glossy ones.

Spray on two or three coats of the primer of your choice, and let them dry according to the time given in the instructions on the can. Sand each coat with progressively finer sand paper, and wipe off all the sanding dust between each coat. You should start with 220 grit, and end with 400. Just two coats of the base coat should be sufficient for hiding the colors that you don't want to show through. Keep in mind that each coat of paint adds weight to your rocket. If it's a high power model, this extra weight won't matter, but if it's a little Estes kit, it will. Try to apply light coats of each type of paint that you use, for this reason. A light coat of paint will dry faster than a heavy one too. If you want to apply decals or stickers to your model, they'll go on last, and the final coat of finish paint, whether glossy, flat, or semi gloss, (Continued next page)

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must be thoroughly dry. If more than one color is to be used, wait three to five days before applying the masking tape for the next color. Testors or Pactra brand model masking tape is a good choice, as is the brown, low-tack painters tape that's available in hardware stores. You need to use a tape that has a non-aggressive adhesive, so that when you peel it off, you won't pull off the first color that you sprayed on. But whatever you do, don't use the regular light tan colored utility masking tape, scotch tape, or any other general purpose tape. The solvents in the paint will creep under it, dissolve the adhesive, and make a mess of your rocket. You will not get a nice straight line division between the different colors. The ink on newspapers will come off on some brands of paint, even when it's dry, so be warned.

Careful construction techniques should make it easier to give the rocket a good finish. For example, having neat instead of sloppy glue fillets on the fin joints. If they're lumpy and runny, they will still look crappy even after they've been painted. On the other hand, if they were smoothed out before they hardened, they will look much better. When using cans of spray paint, you must use them during warm weather. The temperature should be at or above 75 degrees. First, it will dry faster, and second, if it's about 60, or below, it will take a frost. This means that the finish on a glossy color will have cloudy patches in it when it's dry. So paint outside in the summer, or inside in a heated paint booth. Car paints, if used, are formulated for different temperatures. So if you don't have a heated booth available, or you can't find time to paint during the summer, you can get a car paint to use when it's cool outside. **You must resist** the temptation to remove bugs or specs of dirt from the model when the paint is still wet, or you will mess up an otherwise fine paint job. No one is careful enough to do this without fouling it up, even if they use tweezers. Wait until it's dry, then you can use something dull like your fingernail to scrape it off. The tiny imperfection that's left in the paint will be much smaller this way, you won't need to sand it down, (Continued next page)

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and you can cover it with a decal later. If you paint outside, don't do it on a windy day, or else find a sheltered area for your spraying. The wind will cause the paint to flash over quickly. This means that a thin film will dry on the surface of the paint, and prevent it from blending with itself as you go around the model. Overspray will fall on a partially dry portion and make it rough, and no longer glossy. Try to paint it as quickly as you can, so that the whole surface is wet at the same time. This may require some planning if the model has a complex fin arrangement, or an unusual shape. You can paint the fin edges first, then the sides of the fins, and then the tube and the nose cone. But if there are other things sticking out, you'll have to make sure that you paint all the sides of every detail, unless they are masked, or added later. If some of the details are to be different colors, then small artist brushes may be in order. If you wish to clear coat your creation to protect the finish, decals, and details, you can experiment with different brands of clear spray paint, but everything else must be completely dry first. They are available in gloss and flat finishes. Some will dissolve the decals, whereas others won't. Try spraying a scrap of the decal paper first, to see what it does to it. You should apply the stickers last, because the solvents in the paint will tend to creep under the edges of the stickers, and loosen the adhesive. Wait until the clear coat is dry, and then apply the stickers.

Some details can be added during construction, and some others after painting. Large details and those made of wood that need to be sealed should be glued on before painting. Small details and those made of plastic can be added after the paint is dry. Mark the location, and scrape off the paint where the part is to be glued on so that you glue it directly to the tube. Very few types of glue will adhere to the paint, and those that do will cause chips of paint to be pulled off if the extra part gets broken off by accident. All external details will create aerodynamic drag, so if you want high altitude shots from your model, (Continued next page)

Painting Rockets

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omit them. If it's a scale model however, add as many as you desire. If the model is your own design, it's a good idea to flight test it before you paint it. Because, if it proves to be unstable, you'll have to change it in some fashion; either make it longer, or increase the fin area, and if it's already been painted, it will have to be repainted all over again. The exception to this is adding weight to the nose cone. All you need to do here is drill a hole in the base of the cone, drop in a few fishing sinkers, and glue them in place. No repainting should be necessary for that. Retest your own designs after painting them, because the paint adds weight and the extra details also add weight to different areas, and you may have destabilized a previously stable rocket. If your design is too complex for the RockSim program, then string testing will be necessary.

To protect the finish on your rocket fleet while driving to the launch field, I suggest you make some padded wooden boxes using adhesive backed foam, or collect cardboard boxes and use bubble pack sheets. The second method is much cheaper and takes less time. Don't use packing peanuts, as they'll blow away on a windy day at the field. If you just simply put them in a big box, then every time you drive over a bump, they will hit against each other, scrape the paint, and break off parts, and they may very well be unflyable by the time you arrive at the launch site.

A special thanks to Dennis Friend for his submission.

Got something to share?

Send electronic submissions to:
greavisi@rochester.rr.com
Subject Line: SRC Newsletter

T-Shirts For Sale

We have "**1**" T-Shirt remaining.
Adult size L - $8.00
(50/50 cotton/polyester blend)
Contact David Harbaugh

Rocket Items For Sale

The Launch Pad Hellfire Rocket - finished but not flight worthy. Price: $30 - Contact Dennis Friend at: 315-637-3549

Discreet components for sale:
Contact Dennis Friend: 637-3549
Diodes
Resistors
Capacitors
Transistors
IC's, small and large
Switches, plugs and sockets
LED's, individual and displays
Fuse holders
Battery holders
Potentiometers
Solder and flux
Panel lights
Small fans & small speakers
PC boards with components on them
Perfboard
Electroplate Kits
Blank PC board
Pen for drawing custom circuit boards
Ferric chloride etching solution
Price: Negotiable

Rocket Items Wanted

James Shattell is looking for unwanted Launch Controllers. James refurbishes them and gives them away. If you have any unwanted controllers, please bring them to our club meetings or launches.

Please send your For Sale or Wanted Ads to: greavisi@rochester.rr.com
Subject Line: SRC Rocket Items For Sale or Wanted

Just a reminder

Keep your NAR and Tripoli memberships current. Each chapter requires a minimum number of active memberships. Don't forget to include your NAR/Tripoli membership numbers when you renew your yearly SRC memberships. This allows Dennis to monitor our National Memberships.

I encourage all of you to help fill these pages with pictures, helpful hints or general information that would benefit the club.

Send electronic submissions to:
greavisi@rochester.rr.com
Subject Line: SRC Newsletter

2007 SRC Launches

All launches are from 10 am to 3 pm at Weigand's Hayfarm.

Dates are subject to change due to the weather and field cuttings. Please check the SRC website http://www.syracuserocketclub.org the morning of the launch to confirm that the launch will be held.

We look forward to seeing you there!