

# MASA PLANET

OFFICIAL NEWSLETTER OF THE  
MINNESOTA AMATEUR SPACEMODELER ASSOCIATION



Mukluk Land

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**Holiday Edition, December 2015 Volume 18, Issue 05**

**NAR Section #576**

**Established 1998**



## Upcoming Events:

- **Holiday Party:**  
Saturday, December 12  
5:00 pm Social Hour  
6:30 pm Dinner  
7:30 pm Gift exchange  
Bailey's Nursery  
1325 Bailey Rd.  
Newport



## MASA 2015 Holiday Party

The MASA Holiday Party is just days away! Get your RSVP in to Neal Higgins ([nthiggins@gmail.com](mailto:nthiggins@gmail.com)) as soon as possible. He needs the number of people attending and the food item you will be bringing.

Food items so far are:

- Au Gratin Potatoes,
- Dessert
- Pralines

The main entree will be provided by MASA & cooked by Art Gibbens. Like past year's party Neal will have hot water and a variety of instant drinks available (coffee, tea, cocoa).

If you haven't thought of an item to bring we can use:

- Other drinks (non-alcoholic)
- Salads
- veggies and dip
- pickles, olives, etc.
- Dinner rolls

Social hour will start at 5pm. Neal hopes to have a slide show and videos running.

Dinner will be around 6:30pm.

Gift exchange, prizes and Massy Awards around 7:30

We hope to see a lot of you there!

Don't forget to bring a wrapped gift for the exchange game.

**MASA Holiday Party**

Date: Saturday, December 12

Time: 5pm to 10pm

Location: Bailey's Nursery, 1325 Bailey Rd, Newport

## Cross Lake Outreach

Article and photos by Art Gibbens

This is the third year now that I have gone up to Cross Lake, MN at the invitation of Ginny (Virginia) Hersey, the Librarian in that community that runs a day camp for 8 weeks in the summer for students in grades one through six. One group is grades one, two and three and the second group is grades four, five and six. We had 29 students in the younger group and 14 students in the older group. Ginny was of the opinion that the rain kept some away, especially in the second group. As you can see from the pictures, the FITI rockets the MASA members have donated are being put to good use! I received so many “thank-yous” from the students, their parents and the adult helpers this year – it truly has become a hit and the community truly appreciates our efforts to inspire young folk to enjoy our hobby.



As mentioned earlier, there are two groups, the younger group meets earlier in the morning and the older students meet afterwards. When I drove up to the community center/library there were just a few drops on my windshield and it looked like the rain would hold off for a while anyways. It did, until I got right in the middle of my safety and demonstration speech. Bummer! But in five minutes it was over, just a shower and I was done talking so we bugged out the back door of the classroom and right out to the launch

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## MASA Steampunk on Display

by Jeff Taylor, Todd Carpenter

Photos by Carol Marple

Since 2009, several MASA members have built many "steampunk" rockets, decorated to look as if they come from a science fiction world where technology is based largely on the steam-powered 19-century Victorian industrial age. These rockets are typically decorated to look like they are hand-manufactured out of metal and wood, and come complete with copper piping, steam vents, louvers and rivets. Lots of rivets. These rockets are typically antiqued, using paint and finish techniques to deliberately make them look old, rusty and grimy. The steampunk genre has grown exponentially over the past years into a world wide sub-culture and includes large multi-day steampunk events. These events showcase some amazingly creative artwork including gadgets and ornate costumes, making the event and attendees look like they are torn from the pages of a Jules Verne book.



Governor Taylor posing next to a non-union steamfitter at the Princeton

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## Web Formation Flying

by Todd Carpenter



At the August MASA launch, George Gassoway launched Halloween candy-bowls made from plastic spider webs. He found the bowls at Target and the Dollar Store. Sure enough, we found them at the Dollar Store for a dollar each. A quick 5/16" drill through the bottom center of the bowl so I didn't have to use C6-0s, a bit of glue, and a launch lug, and the bowls were ready to fly in 5 minutes. George had a better design with the tube going all the way through and capturing the bowl with centering rings. Brian LaRose suggested epoxy putty. Lots of design options. Here are two of my spiderweb bowls participating in a formation flying event on C6-3s at the MASA September launch.

## Airbrushes and Rockets: A Follow-on Article from an Airbrush Demonstration at the October MASA Meeting

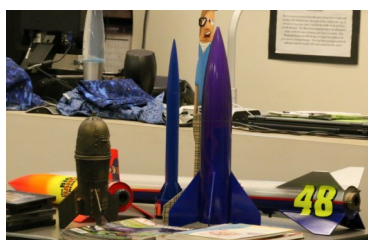
by Jeff Taylor, Photos by Carol Marple

Airbrushing is a popular alternative to painting rockets with spray paint cans (aka "rattle cans"). Although airbrushes are capable of spraying a huge variety of paint types, this article will focus on water-based acrylic paint. Everyone has different ways of painting, and there may be better techniques than what is discussed here. While something may work better for you, this is what works for me.

As with any alternative process, it has some advantages and disadvantages. Some of the major advantages of using an airbrush instead of spray paint include:



- Overspray is minimized – The spray pattern of an airbrush produces a much smaller spray fan than spray paint cans do. This results in more of the paint spraying directly on the rocket and less paint ending up as overspray.
- No toxic or obnoxious fumes – When using water-based acrylic paint, you won't get the strong solvent fumes that you do with spray paint cans.
- Easily done indoors – Because there is less overspray and no fumes, airbrushing can be done indoors, particularly with a small hobby spray booth. No need to wait for "good" painting weather. Wind, darkness, cold, rain, humidity and bugs won't wreck your paint.
- Increased control of application – The smaller spray fan allows you to put paint right where you want.
- Ability to mix and blend colors – Unlike spray paint cans that spray only spray whatever color is on the cap, airbrushing allows you to mix colors together to get just the right shade for your project. Fades from one color to another are easily produced with an airbrush due to the smaller spray fan.
- Drying time reduced – Water-based acrylic paint dries very fast, and the dry time can be further reduced with the hot air from a hair dryer. No need to wait a week for your paint to cure before moving on to another color.



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Rocket 1: Xavier, Brooke, Taryn,  
Jackie, Heidi  
Rocket winner: Brooke



Rocket 2: Max, Blake, Eli,  
Nolan, Brandon  
Rocket winner: Nolan



Rocket 3 Avery, Charlie, Parker,  
Gannon, (Not pictured: Grier)  
Rocket winner: Gannon



Rocket 4: Madison, Cora, Selby,  
Cara, Kambria  
Rocket winner: Madison

### Outreach, continued

site that I had set up before coming into the building. A quick wipe down of the equipment and we were ready for some launching. All 6 rockets went up and were all recovered without incident.

As we were getting ready to go back in, it started to rain again so we all walked briskly – no running allowed – back into the classroom. Needless to say, the kids were pretty wound up after the launch and the shower!

So it rained pretty much through the dismissing of the first group and the same safety talk and demonstration where I pass around my rocket Genesis for hands on time for the students. And then it stopped raining again. Quick, let's go out and launch! We got all 6 rockets launched again and at the end our time outside the sun poked through for a short spell. We went back in and finished up our discussion which was cut a little short because the rain had stopped while I was giving the lesson. I said good-bye to the kids and went back out to put my gear away – wet – ugh. Then I went back in again to wash my hands and I got plied with more questions by parents that were there to pick up their children, and I stood around for another 10 or 15 minutes answering them. Many thanks were extended to me personally and to MASA for working with the students this way. So, I finally get my hands washed and then I headed back out to my S10 Blazer to head home.

So as I hit the road I only got just outside the city limits before the skies opened up for good and it rained hard. I had to slow down to about 35 mph and put the wipers on super fast to be able to see well enough to keep between the center line and the edge of the road. This went on for at least 15 minutes and would have made the field where we were launching a mud pit. Whew, got done in the nick of time. Along the way home I stopped in at a restaurant that came recommended named The Bungalow in Emily, MN. It was ok, and I definitely could have done worse. Made it home without incident, though it rained off and on the whole way back. Another successful outreach launch in the books.

Photos continued on p. 5



Rocket 5: Grady, Joshua,  
Becker, Waylon  
Rocket winner: Waylon



Rocket 6: Oldin, Alaina, Emily,  
Trevi, Henry  
Rocket winner: Henry



Rocket 7: Keira, Rose, Aubree,  
Rocket Winner: Rose



Rocket 8: Jahda, Hannah  
Rocket Winner: Jahda

Steampunk, continued



One such event is coming up soon in Minnesota. Jeff Taylor, Carol Marple, and Todd Carpenter will have a booth at the "13 Gears" Steampunk Event on October 24, 2015 at the Grain Belt Bottling House in NE Minneapolis. They are attending as artisans, and will display Steampunk Rockets (of course), along with several tools of the trade, including safety goggles, scales, torches, steam engines, and propellant distillation glassware. They will hand out MASA signup sheets to interested parties. Please let one of them know if you have a steampunk rocket you would like them to include in their display.

More information about 13 Gears can be found here: <http://13gears.yolasite.com/>



Custom rockets by Jeff and Todd



Preliminary steampunk rocket display mockup for 13 Gears

Outreach, continued



Rocket 9: Mason, Lane  
Rocket Winner: Mason



Rocket 10: Jameson, Brad  
Rocket winner: Jameson



Rocket 11: Warren, Emmett  
Rocket winner: Emmett



Rocket 12: Esther, Zeyland, Stephanie  
Rocket Winner: Zeyland

**THANK YOU** to MASA members for donating these rockets for this outreach event! Do you see yours?

- |                                       |                                 |                                      |
|---------------------------------------|---------------------------------|--------------------------------------|
| 1. Quest Astra, Dark blue             | 5. Estes Viking, Blue           | 9. Semroc Start, Red, white and blue |
| 2. Estes Patriot, Red, white and blue | 6. Quest Sprint, Yellow         | 10. Quest Astra, orange              |
| 3. Quest Astra, Light blue            | 7. Estes Twister, Red and white | 11. Quest Sprint, Pink               |
| 4. Quest Sprint, Light blue           | 8. Estes Alpha 3, Blue          | 12. Quest Totally Tubular, Yellow    |



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Some airbrush disadvantages include:

- Initial equipment investment – Airbrush costs range from \$20 and \$300, although for painting rockets a \$20 airbrush should be just fine. Airbrushes require an air source, either disposable aerosol cans of compressed air (which are expensive and don't last long) or an air compressor. Compressors made specifically for airbrushing are quite expensive, but are practically silent when they run. Air compressors that you might have in your garage can also be used, but you will need a regulator and a good dryer.
- More time consuming on larger rockets – Because of the small spray fan, painting larger rockets will take quite a bit more time than using spray paint cans.
- Needs a good clear coat – Water-based acrylic paint is permanent on most surfaces when set with heat, but is not very robust and usually not glossy. A good coat of UV resistant clear coat is recommended.



The major types of airbrushes include differences in the “mix” and the “action”. Airbrushes have to mix air together with the paint to atomize it for spraying. Internal Mix airbrushes mix the air and paint inside the airbrush before it is sprayed out the nozzle. This generally produces a finer spray with less splatter. External Mix airbrushes mix the air and paint outside the nozzle in mid air. Single Action airbrushes start spraying the air and paint when the trigger is pressed down, just like a spray paint can. The amount of paint that flows through is not adjustable while you are spraying, but you can change the paint flow by readjusting the amount the needle moves with a screw on the end of the airbrush. Dual Action airbrushes start spraying air when the trigger is pushed down but no paint flows out until the trigger is pulled back. The amount of paint that flows through is easily adjusted on the fly while you are painting simply by the amount that the trigger is pulled back. Single Action External Mix airbrushes are designed for basic hobby use and cost less, while Dual Action Internal Mix airbrushes are designed for fine art and cost more. Either type is perfectly suitable for painting basic rockets, so there is no need to purchase an expensive airbrush.

The paint that I usually use is Createx™ Airbrush Colors. These are water-based acrylic airbrush paints that are available on-line or locally at art and hobby stores. I have also recently started using Createx™ Auto-Air, an automotive quality paint that is also water-based. I choose water-based products for easy cleanup and no annoying or harmful fumes so I can paint indoors. Airbrush paints come in a variety of types such as opaque, transparent, fluorescent, candy, pearl and metallic to name a few. These paints stick extremely well to a base coat of Rustoleum Painter's Touch 2X White Primer. The same basic rules that apply to spray paint cans apply to using an airbrush; you will get better performance using multiple light coats of paint rather than one heavy coat, and always keep your airbrush moving while spraying to get consistent even coating across your project.

After applying the airbrush paint I will dry it with a hair dryer at high heat. Then I can mask the project for the next color. My masking tape of choice is Tamiya yellow masking tape. If I am making a complex mask such as the flames on the FatBoy in the demonstration I did at the October meeting, I cut the mask out of Frisket film using my Silhouette Cameo cutting machine. Frisket is a clear low tack film that is available in sheets or rolls on-line or locally at art and hobby stores. Frisket can be cut before or after it is applied to your rocket. The Silhouette cutting machine allows me to precisely lay out the artwork on a computer using Adobe Illustrator, and then I transfer the image to the Silhouette for precision cutting.

For the FatBoy, I started with a coat of Createx Iridescent Electric Blue, followed by a very light fade at the very back end with Iridescent Purple. I cut and applied the flame mask prior to the meeting, and had sprayed a coat of opaque white over the area where the fluorescent flames would be applied. This was done because fluorescent paints are very transparent and need to be sprayed over white. At the meeting, I airbrushed fluorescent yellow over the white, and followed it up with a fade to fluorescent orange. Since the yellow and orange are similar colors and I wanted a gradual fade, there was no need to let the yellow dry before spraying the orange. At the end of each flame lick I also sprayed a fade of fluorescent red, although this is difficult to see in the pictures. After removing the masking the rocket was done. The next day I sprayed a coat of Minwax Fast-Drying Polyurethane clear gloss from a spray can to give it a gloss protective coating.

## MASA DIRECTORY

Established 1998

Founding President: Russ Durkee

### 2014 President

Neal Higgins—nthiggins@gmail.com

### 2014 Vice President

Jeff Taylor— jeff.taylor@mn-rocketry.net

### 2014 Secretary/Treasurer

Carol Marple— MASA576Treasurer@gmail.com

### MASA Planet Newsletter Editor

Jeff Jones, beginning January 2106

### MASA Planet Online

[www.masa-rockeetry.org/planetonline.htm](http://www.masa-rockeetry.org/planetonline.htm)

### Club Website

[www.masa-rockeetry.org](http://www.masa-rockeetry.org)

### Webmaster

Alan Estenson — [estenson@mn-rocketry.net](mailto:estenson@mn-rocketry.net)

### Club Yahoo Group

<http://groups.yahoo.com/group/masarocketry>

## Editor In, Editor Out

by Andy Heren

After 3 years of being the MASA Planet Editor, I have decided that it is time to step aside for awhile and let someone else take it over. My involvement in MASA is hindered by my distance from the Twin Cities and I don't feel my work is what it has been in the past. I'd like to thank all those who contributed articles and photos during my 3 years as editor!

Jeff Jones has accepted the challenge. I look forward to the work that he will be sharing with us in the future!

## Activities Disclaimer

Scheduled dates, times and launch sites are subject to change due to weather and/or field conditions. Check the MASA Web Site ([www.masa-rockeetry.org](http://www.masa-rockeetry.org)) or MASA Yahoo Group (<http://groups.yahoo.com/group/masarocketry>) for up-to-date changes.

All MASA Launches are "Misfire Alley" (bring your own launch pad and controller), however, community pads are usually set up for everyone's use.

For more information, click [HERE](#) to go to the  
**MASA website**

**MASA PLANET**  
**C/O ANDY HEREN**  
**3711 BRIAN ST.**  
**EAU CLAIRE, WI 54701**

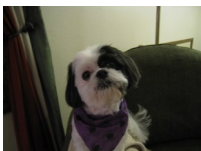


Mailing Label Here

## **MASA**

Minnesota Amateur Spacemodeler Association, founded in 1998, is an active rocketry club with members from the Twin Cities and surrounding areas of Minnesota and western Wisconsin. MASA is dedicated to the safe and enjoyable pursuit of the rocketry hobby. MASA is a registered section (Section #576) of the National Association of Rocketry (NAR). MASA has been recognized by the NAR as “Medium-Sized Section of the Year” in 2006 and 2007, has received the NAR’s North American Rockwell Trophy for best newsletter in 2008, 2009 and 2010, and has hosted NARCON (the NAR’s Annual National Convention) in 2007 and 2008. MASA has an official club launch on the 4th Saturday of each month (weather dependent) year round at one of several different flying sites located in Nowthen, White Bear Lake and Otsego. We also hold monthly club meetings on the 1st Thursday of each month, typically held at the Science Museum of Minnesota in St. Paul. We host a Club Picnic in July and a Holiday Party at the end of the year. MASA also participates in numerous rocketry-related outreach activities including Cub Scouts, Girl Scouts, schools, 4H, TARC and USLI to name a few. Visitors, spectators, and prospective members are always welcome to join us at club events! MASA welcomes rocketeers of all ages and experience levels. MASA members share their building and flying experience to help you hone your skills and become a better and safer rocketeer. Flying in a club environment keeps you in touch with the latest rocketry techniques and products, as well as offers encouragement and support through camaraderie of fellow club members. You do not need to belong to the NAR (National Association of Rocketry) in order to join MASA. However, we do encourage you to consider NAR membership. (Find out more about the NAR at [www.nar.org](http://www.nar.org)) You can find more information on the MASA web site, [www.masa-rocketry.org](http://www.masa-rocketry.org), or email us at [masarocketry@rocketmail.com](mailto:masarocketry@rocketmail.com).

**For more information, or to join MASA ,go to [www.masa-rocketry.org](http://www.masa-rocketry.org)**



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