

# MASA PLANET

OFFICIAL NEWSLETTER OF THE  
MINNESOTA AMATEUR SPACEMODELER ASSOCIATION



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## Upcoming Events:

- **Launch:** Saturday, September 27 9:00 a.m.—4:00 p.m. Elk River/Otsego VFW Soccer Fields
- **Meeting** Thursday, October 2 7:00—9:00 p.m. Location: TBA
- **Launch:** Saturday, October 25 10:00 a.m.—4:00 p.m. Location: TBA



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## Crosslake Outreach

by Art Gibbens

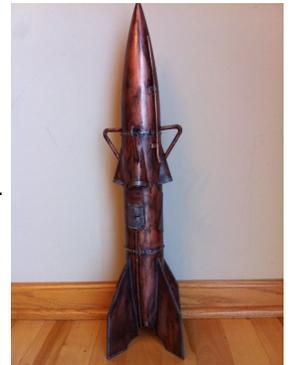
This is the second year I have had the opportunity to work with Ginnie (Virginia) Hersey, the Librarian at Crosslake Community Library that runs a summer reading program for the local students. She was very excited to have me back to represent MASA and model rocketry in general. She shared with me that the previous year's experience created a lot of positive buzz in the community afterwards as the students went home with rockets and shared with their parents what they did that day.

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## Jules Verne's Revenge

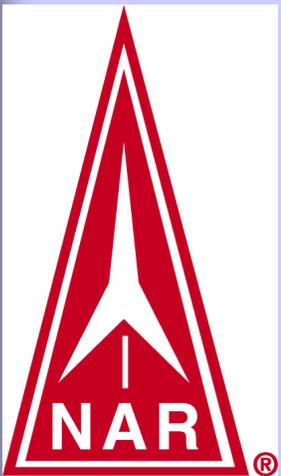
by Sean Flynn

At the end of June, I decided I wanted to do my first steampunk. Having been awed by Jeff's ACME Spitfires, I wanted to give it a try. I was nervous at first, as I consider myself "Artistically Challenged". In fact, I first asked Jeff if he would like to do a joint build, with me doing the basic rocket build and him doing the finishing. But Jeff was unable to take on this proposed project, and encouraged me to do it myself. I am so glad he did.



I always thought that the V2 practically screamed "Steampunk ME!", so I bought an Estes V2 from Hub Hobby to start with. Next, I wanted to do a second rocket with forward mounted, canted motors. Since the V2 has four fins, the practical number of motors is either two or four. I decided to go with four 18mm motors. So now the design is decided upon. An Estes V2 with quad forward mounted and canted motors, rear ejection chute, exhaust baffle, and lots of steampunky stuff on the outside.

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## 2014 MASA Picnic

by Jeff Taylor

Photos by Carol Marple

The 2014 MASA Club Picnic was held on Saturday August 9 at Columbia Park picnic shelter in Columbia Heights. Approximately 36 MASA members were in attendance on a day that alternated between sun, clouds and sporadic light drizzle.

The picnic shelter turned out to be adjacent to a nice playground that kept the little one entertained. Lawn darts (not the kind you are thinking of), sidewalk chalk, Frisbee and blowing bubbles kept a great many more of us entertained. A special thanks to Art and Stuart for manning the grill keeping up with the demand of burgers and hot dogs.

The picnic marked the unveiling of the 2014 KitBash Kontest, where participating members were to build anything they wanted using parts from an Estes Cosmic Explorer and Vector Force based on anything Star Trek. About a half dozen members debuted their creations at the picnic.

This is the first time the picnic has been held at that location. In past years it has seemed to me that the launch portion of the picnic is typically not well attended, so this year I had suggested that we not do a launch and instead have the picnic at a location that is more centrally located to most of the club members. In hindsight this may have been a misjudgment on my part since most members did in fact want to fly. The picnic grounds did have a tree-lined soccer field, and many members brought some Micro Max rockets, although none were flown.

After we were all fed, Neal awarded door prizes. Congratulations to all of the following winners:

14 and younger:

Hannah Fischer - Phoenix Bird  
 Jadon Beard - Photon Probe  
 Ethan Erpelding - Hornet  
 Amelie Isom - Photon Probe  
 Darrien LaRose - Plasma Probe  
 Jennifer Jones - Cosmic Explorer  
 Malcolm LaRose - Payloader II  
 Davis Isom - Space Eagle  
 Jace Flansberg - Vector Force

15 and older:

Trudy LaRose - Orion  
 Carol Marple - E9-6 engines  
 Phillip Gibbens - E16-6 Engines  
 Jon Isom - Aero Dart  
 Todd Carpenter - Black Star Voyager  
 Art Gibbens - Minataur  
 Renee Gibbens - MIRV  
 Stuart Lenz - US Tog  
 Holly Newton - Xarconian cruiser



## Twilight Interceptor

by Neal Higgins

When I first saw the Interceptor I knew I had to have it and in 1972 I bought one. It was a great kit to build and fly but somewhere down the road it was lost. I didn't think about it much until about 4 years ago and I decided I needed to have one again. I purchased the kit, built it and primed it. For some reason I never got around to the final paint and decals so there it sat in the unfinished bin for a couple of years. It was at the picnic this year while talking to Jeff Flansberg that he mentioned a website where you could buy full vinyl skins for the Interceptor. I immediately checked it out and thought it looked like a great idea. There were 2 choices for the wrap, one in white and another in black. I chose the black twilight version and placed the order. It arrived a few days later and off I went into the workshop where I dusted off the Interceptor and started the work of applying the wrap. The wrap was intended to go on before building but the instructions did say it could be done to an already assembled kit. I started with the nose cone pieces and it went on surprisingly easy. I moved on to the wings and again they went on very nicely. Now for the body tube wraps. These I found were going to be very hard to put on with it assembled so I very carefully cut the tube wraps into smaller pieces which made it very easy to then apply them. I will mention that these wraps do not allow for movement once you have started so you have only one chance get them right. Despite a few minor incidents I got them all applied and I think it turned out quite nice. Up close you can see imperfections but when it is on the pad and flying it does look awesome.

If you would like to try one yourself you can find them at <http://www.accur8.com>. The website does say that there will be an Interceptor E version sometime down the road so I will be getting one of them someday. My E version is getting dusty and covered in cobwebs and needs to be finished someday.



## Crosslake Outreach, continued

forward mounted and canted motors, rear ejection chute, exhaust baffle, and lots of steampunky stuff on the outside.

So it went pretty much like it did last year. We started inside with each group where I shared with the students the safety rules we needed to fly by while I let them pass around my larger Genesis mid-powered rocket. About half the kids were new and had not been there the year before, so going over the rules was important. We discussed the differences between model rockets which are very safe and fireworks which are not so much. The big word for the day was “exponential” when I used it to share with them the concept that each letter designation on the side of rocket engines means that the next larger engine is twice as powerful as the previous one. We had a lot of fun with that new concept.

At this point, allow me again to say a huge thank-you to all you MASA folks that build and donate the FITI rockets that I am able to give away in these outreaches. We had 30 students this year, 10 in the younger group and 20 in the older group. I had determined ahead of time to allow each group to choose and fly 6 rockets. Ginnie uses a lottery system every week to hand out prizes so we just did what she normally does and gave away 6 rockets in each session. Let me tell you that these rockets are highly coveted by every student!

Something Ginnie and I did a little different this year was to make sure all the students were on “launch teams” so they could take part in the launching and recovery of the rockets once we got out on the field. So you will see in most of the pictures of the rockets before they are launched, several students standing next to “their” rocket.

We had no misfires this year and all the rockets landed safely on the baseball field just across the road from where we were launching. It was a beautiful day with just a light wind out of the NW allowing us to set up in the morning shade under the trees behind the library. Similar to what I did last year I flew my pyramid (Apophos' Revenge) for the final flight for a bit of shock and awe which everyone in attendance enjoyed. Ginnie and I are both looking forward to next year's outreach.



All photos by Ginnie Hersey



Photos continued on p. 5

## Jules Verne's, continued



I started by cutting the slots for the motor. There are mathematical ways to determine the shape, but I decided to do it a different way. I took a scrap piece of BT20 tubing and cut it at a 15 degree angle. I then held it against the body tube and traced around it. I then repeated this for the remaining three motor mounts. I then cut the motor mount tubes and glued 1/8" balsa pieces on the inside sides of each that were cut at 165 degrees. I installed each tube and glued the entire circumference of the motor tubes to the body tube. This filled any gaps due to imperfect cutting of the holes. The balsa pieces touched the inside of the body tube below the motor mounts and were glued to the inside of the body tube for extra support.

I then made the fin can. I reinforced the fins with card stock. I then replaced the BT50 motor mount with a BT55 tube that fit perfectly to the ID of the bottom of the plastic boat tail. This eliminated the need for a rear centering ring. Once the fins were glued, I filled the fincan with foam. But not the \$20 2-part foam. I used a \$3 can from Menards, which worked great. The top of the BT55 had a bulkhead glued in to the top of it, and holes cut in the side just below the bulkhead to allow the ejection gases to pass through.



Next I cut the slots in the nose cone shoulder where the motor tubes were, and glued in the nose cone. Then I glued the fincan into the body tube. At this point, if I forgot to do anything inside, I was hosed.

Last thing to do before steampunking, is the ejection and recovery system. Since the chute is in the rear, I had to think about how to keep the chute from coming out during forward acceleration, but still come out when the ejection charges go off. I used a balsa BT55 plug to hold things in. Open Rocket said max G forces with C6 motors was 20 Gs. Since the plug, chute and Kevlar weigh less than one ounce, the max forces the plug had to withstand was 20 ounces. So I made a simple friction fit calibration rig that I would hang a 1.5 pound weight on. If that held, I would add an additional 1 pound weight, for a total of 2.5 pounds to ensure it would then come out. Since the cross sectional area is about 1.3 square inches, that means I need between 1.2 and 1.9 PSI to eject the recovery system. And since the motors are also friction fit, I use the same rig to ensure they are in tight enough as well.



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So now it's on to the part I had the most anxiety about. I disguised the launch lug as a drain pipe, added plastic O-scale diamond plate, cardstock straps, 3mm adhesive pearls as rivets, O-scale 3d rivet water slide decals, 4 bendy soda straws and even a sewing bobbin. Once done, I primed and painted it with Krylon copper paint. The final step was the "antiquing". I used thinned out oil based black paint. I realized I had to wipe off quickly because it dries quick and was removing some of the base copper. In some cases, the grey primer showed through, but I was ok with these errors, as it made it look even better for a steam punk. Then I applied a coat of clear coat.

Now it's time to fly. I loaded it up with (2) B6-0 and (2) C6-5 motors. The RSO at Tripoli MN asked I put it out in the high power area as he was nervous of it being close if a motor failed to fire. Once on the rod, I connected 4 pairs of extensions to come down the sides between each fin, then connected them to my cluster whip. When the LCO pushed the button, all four motors lit, and the rocket went straight up. The chute stayed put until the ejection charges went off. The chute opened fully and it slowly drifted back to earth. Nose first. Upon landing, one of the bendy straws broke off, but this will be easily repaired.

## MASA SHOWCASE

This is the section of our newsletter that showcases recent builds by MASA Members. Thanks to Brian Uhlenkamp for the pictures.





*See your article or pictures here!*

*Submit an article or picture for the  
MASA Showcase to*

*[planet.article576@gmail.com](mailto:planet.article576@gmail.com)*

## Space Quotes

“The vehicle explodes, literally explodes, off the pad. The simulator shakes you a little bit, but the actual liftoff shakes your entire body and soul.” - Mike McCulley

“The view of the Earth from the Moon fascinated me - a small disk, 240,000 miles away... Raging nationalistic interests, famines, wars, pestilence don't show from that distance.” - Frank Borman

Frequently on the lunar surface I said to myself, 'This is the Moon, that is the Earth. I'm really here, I'm really here!' - Alan Bean, Apollo 12

“What fiction could match - in drama or suspense - man's first walk on the Moon?” - Leonard Nimoy

“When once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been, and there you will always long to return.” - Leonardo da Vinci

## 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

Andy Heren—planet.editor576@gmail.com

### MASA Planet Online

www.masa-rockeetry.org/planetonline.htm

### Club Website

www.masa-rockeetry.org

### Webmaster

Alan Estenson — estenson@mn-rocketry.net

### Club Yahoo Group

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

## MASA Calendar

### Launch

Date: Saturday, September 27

Time: 9:00 a.m.—4:00 p.m.

Location: Elk River/Otsego VFW Soccer Fields

### Meeting

Date: Thursday, October 2

Time: 7:00 p.m.—9:00 p.m.

Location: TBA

### Launch

Date: Saturday, October 25

Time: 10:00 a.m.—4:00 p.m.

Location: TBA

### Meeting

Date: Thursday, November 6

Time: 7:00 p.m.—9:00 p.m.

Location: TBA

## Special Offer from Sirius Rocketry

Sirius Rocketry is offering an additional 10% discount specifically for MASA members valid from now until the end of October. MASA members can take an additional 10% off Sirius Rocketry's already discounted prices by entering the coupon code MASAMN1014 (case sensitive) in the Discount Coupon/Redemption Code section during step 2 of checkout. Not valid in combination with any other offers or coupon codes. Looking forward to seeing my friends from MASA soon! The online store can be visited at [www.siriusrocketry.biz](http://www.siriusrocketry.biz) / [www.siriusrocketry.com](http://www.siriusrocketry.com).

David J. Miller  
Sirius Rocketry, LLC

For more information, please go to the  
MASA website at  
[www.masa-rockeetry.org/events](http://www.masa-rockeetry.org/events)

**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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