



**IT IS OFFICIAL!!!** *Checkout page 2*

The new 2012 MASA officers were sworn in at the January meeting and are now busy planning what we hope will be another fun year of building, learning, flying and socializing with your fellow rocketeers.

**FROM THE PRESIDENTS PAD**

Hello fellow rocketeers,

I hope Santa was good to everyone and you all got that special rocket gift for Christmas.

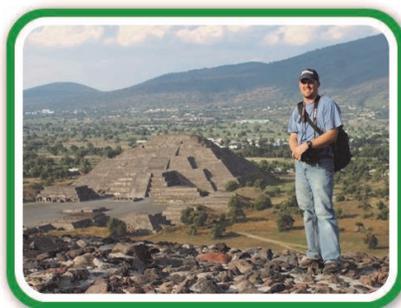
Spring is not too far off so you should all be busy building or repairing your fleet for upcoming flying season. It should be a fun season as we have many events and fun themes planned for the next year.

If you haven't already joined or renewed your membership now is the time to get it done. You will need your membership badge to be eligible to compete/participate in our many club sponsored events and contests in the upcoming year.

*Continued on page 4...*

**NEW MASA PLANET EDITOR**

My name is Kurt Knox and I am your new MP editor. I have got some big shoes to fill to say the least but I hope everyone continues to enjoy the newsletter. Checkout my bio on page 4...



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*2011 Holiday party in pictures on page 3!*



## THE NEW 2012 MASA OFFICERS:



**2012 President** is Neal Higgins who has served as your VP for the past 2 years. Neal currently holds a L2 certification with the NAR and Tripoli. Neal is also the 2011 winner of the prestigious MASA Prang award. More information on Neal's interests and past rocketry experience can be found in the March/April 2010 issue of the Planet. You can email Neal at [masarocketry@rocketmail.com](mailto:masarocketry@rocketmail.com)



**2012 Vice-President** is Art Gibbens. Art has been with MASA for many years and will bring much experience to the leadership team. Art is a past editor of the MASA Planet. Art currently holds a L1 certification with the NAR. Email Art at [art.gibbens@gmail.com](mailto:art.gibbens@gmail.com)



**2012 Secretary/Treasurer** is Gerald Meux Jr, returning for a second term in office. Gerald holds a L3 certification with the NAR. You can email Gerald at [kninja250r@yahoo.com](mailto:kninja250r@yahoo.com)

MASA Website is at:

<http://www.masa-rocketry.org/>

You can find the MASA Planet archives going back to the first issue! And a lot of other information regarding the club.

### MASA PLANET

The MASA Planet is published by members of the Minnesota Amateur Spacemodeler Association (MASA). It is a bi-monthly newsletter dedicated to the continuing education and entertainment of rocketeers throughout the world.

MASA is a large group (over 150 strong) of hobby rocketeers throughout Minnesota and parts of Wisconsin. With monthly meetings and launches throughout the year.

#### Annual dues:

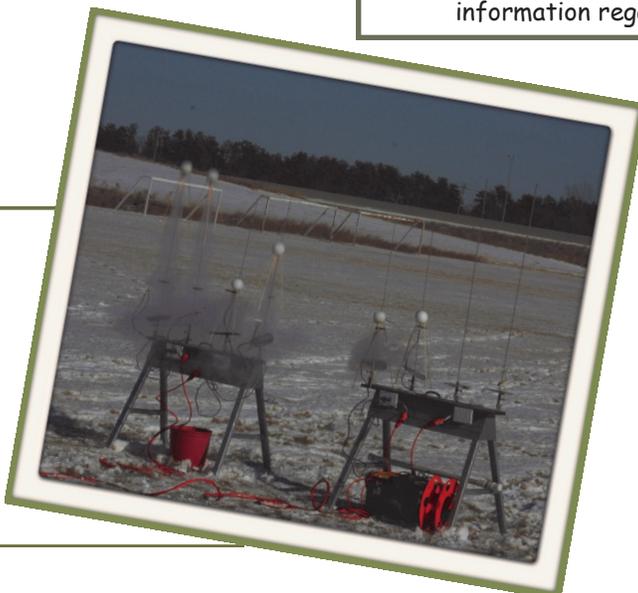
\$12 Family (up to 4)

\$10 Single (18+)

\$6 Single (17 & under)

Newsletter submissions should be made to the editor Kurt Knox. Email them to [kurtknox@gmail.com](mailto:kurtknox@gmail.com)

**2011 Annual Snowball Fight!** It was a bit chaotic with all the fire and smoke, which is usually not part of a snowball fight. But, I do believe that Alan was the victor.



### Meeting/Launch Schedule

Be sure to check the MASA website events page for the latest schedule on launches and meetings...

<http://www.masa-rocketry.org/events.htm>



2011 MASA HOLIDAY PARTY

Thank you Buzz & Kathy for hosting the holiday party!

### From the Presidents Pad (cont. from page 1)

I would like to thank Carol Marple for the excellent job she did as President of MASA for the last 2 years. I only hope that I can do half as good a job as she did. Enjoy your retirement and I expect to see you flying many rockets this season.

Thanks to Jeff Taylor for his great work on the Planet these past 4 years.

Thanks to Art Gibbens for nominating himself for the office of Vice-President. I will be looking to him for much assistance in the upcoming year.

Thanks Alan Estenson for returning as our webmaster, stats guru and most excellent video game party host.

Thanks to all the volunteers this past year who helped with range setup/tear down and to all who took on a shift or 2 at RSO/LCO.

And last but not least, thanks Kurt Knox for taking on the daunting task as the new editor of the Planet.

With the great flying fields we have access to and hopefully great weather let's make the 14<sup>th</sup> year of MASA as exciting as all the rest. I am looking forward to seeing and talking with everyone at the meetings and launches this year.

Neal



### MASA MEMBER SPOTLIGHT

## Kurt Knox



Do you have a nickname? Friends call me "Knoxy"

Where were you born? St. Paul, MN

Where did you grow up? Stillwater, MN

What city do you live in? Waconia, MN

How old are you? 39

What was your favorite subject in school? Sciences

What do you do for a living? Golf Course Superintendent

What did you want to be when you grew up? Architect or Engineer

What do you want to be when you grow up? Haven't grown up yet

Are you married or not married? Married

Do you have kids? Yep - 1 Son & 1 Daughter

Do you have any brothers and sisters? 1 Brother

Have you ever served in the military? Nope

What was your first job? Paper Boy

Have you ever been to another country? Argentina, Canada, & Mexico

How many different US states have you been to? Lucky 13

What is your dream vacation? Backpacking in Mendoza, Argentina

Do you collect anything (coins, stamps, etc)? A lot of junk

What is your favorite TV show? Star Trek - Most spin-offs

What is your favorite movie? Star Wars

Who is your favorite musical artist? I listen to Country

What book are you currently reading? Game of Thrones

Who are your favorite cartoon characters? Phineas & Ferb

What is your favorite restaurant? Fogo de Chao

What is your favorite spectator sport? Football

If you could live in another century or decade from the past, when would it be? 1800's

What historical person would you like to meet? George Washington

What are your favorite rec activities? Running, golf, water skiing

Do you have any pets? Nope

What do you think is human's most significant invention, endeavor or accomplishment? The microprocessor

What one thing would you change about the world today if there were no limitations? Poverty

What is something that very few people know about you? I used to write poetry

What is your biggest pet peeve? Curved mowing lines

Who is your favorite superhero? Spiderman

If you had the opportunity to travel in space, would you do it? Yep

Do you have other hobbies besides rockets? Little of this and that

How long have you been involved in rocketry? On/Off since I was a kid

How did you get started in rocketry? Jr. High Project

What is your favorite rocket and why? The Estes Astron Ranger, simple but effective 3 engine cluster

Are you a NAR and/or Tripoli member? NAR

How many rockets do you own? 50 or so built, 50 or so un-built

How many rockets have you lost? About a dozen

What is the biggest advantage to you of being a member of MASA?

People with likeminded interests and flying rockets together

Have you ever been to a NAR National Event? Nope

What is the next rocket you plan to build or buy? My Level 1 cert rocket, the LOC/Precision Marvin's Wild Ride, is under construction

What rocket is at the top of your wish list? Probably a Saturn 1b

### IEWS FROM A BAR

By Brian Uhlenkamp

Model Rocket Manufacturers and Vendors-Then and Now

I'm certainly a true BAR. I got my first rocket in 1984 as a teen. It was an Estes of course, purchased from a local hobby shop. I got the Astrobee, then a Alpha starter kit, and so on. I remember at first I thought Estes was the only model rocket company around. Anyway I purchased most of my rockets from the local hobby shop and some thru mail order with Estes, using their nice full color catalogs. Believe it or not, I still have many of those worn out catalogs. I can recall paging thru and picking my favorites and dreaming of building and flying them. After a couple years, I recall doing some searching for other rocket companies. I found most thru some model rocket books and technical articles I had acquired (remember no internet back then). I knew of Centuri and CMR (Competition Model Rockets), but never had a catalog of either. I got FSI (Flight Systems, Inc), Crown Rocket Technology, and MRC Concept II catalogs, but never purchased a kit from any of them. It was 1986 when I found NCR (North Coast Rocketry). To me, NCR was the first real Mid Power and High Power model rocket manufacturer. I made a couple kits and scratch builds from them. There were probably a few other rocket manufacturers at the time, or before my time, and some old timers and BARs could probably chime in about them. So at the time, I had only built Estes and NCR kits. I dreamed of building some others.

Continued on page 8

## MAKING THE LITTLE FATBOY

By Jeff Taylor

After kit-bashing a Baby Bertha kit into an Honest John Goonie, I had a Baby Bertha Nose Cone left over that needed a home. Since it is the same shape as the FatBoy Nose Cone, I decided to use it to build a downscaled FatBoy. The standard Fatboy Body Tube is a BT-80 with a 2.6" diameter, and the Baby Bertha's Body Tube is a BT-60 with a 1.64" diameter, making the Little FatBoy a 63% downscale. Using the 63% scale factor, the standard 8" long Body Tube scaled down to 5.04" long.

I wasn't looking to build this as an exact scale downsize so I was able to take a few liberties with some of the proportions. Since it would be a challenge to plane a 3/32" sheet of balsa down to less than .06" thick, I decided to just leave the Fin thickness at 3/32". Also, since I suck at cutting Body Tubes and since Semroc has a BT-60 Body Tube in stock that is 5" long I figured I could live with it being a mere .04" shorter than the scale proportions.



mine without the Coupler, although you could use it between the two Centering Rings. I filed out a small notch in the ID of the Aft Centering Ring to provide some clearance for the Motor Hook to bend. I put a small hole in the Forward Centering Ring for a Kevlar Shock Cord. I assembled the Mount like any other Mount using Elmer's Wood Glue. I threaded a loop of Kevlar Shock Cord through the hole in the Forward Centering Ring, tied it around the Motor Tube and glued it all in place. After it was all dry I glued it into



the Body Tube so that the aft end of the Motor Tube was flush with the aft end of the Body Tube.

The Fins were hand cut from 3/32" balsa sheet using a template that I scaled down from an original FatBoy Fin. I set up my Standard Rockets Assembly Tool with the appropriate template and glued all three Fins on at the same time, again using Wood Glue. I also glued a 1/8" Launch Lug to the side of one of the Fins for a clean



look, even though a standard FatBoy Launch Lug is quite a bit further forward.

The short BT-60 Body Tube didn't leave me much room for wadding and a parachute, so I cut off the back part of the Baby Bertha Nose Cone with my razor saw to be able to use the hollow Cone for more storage space. A RockSim model



showed that I needed to add a little nose weight, so I smashed 0.8 ounces of modeling clay up into the inside of the hollow Nose Cone to provide stability with a C6 engine. Since I had sawed off the Nose Cone's original Shock Cord mounting location, I drilled a small hole in what was left of the shoulder where I attached a Swivel for an attachment point for the recovery hardware.

*Finishing continued on next page...*



Besides already having the Baby Bertha Nose Cone, some 3/32" balsa sheet for the Fins, and miscellaneous parts like Shock Cords and Parachutes lying around, I ordered the following parts for this project:

- BT-60 Body Tube 5" Long (Semroc Part Number BT-60R, [www.semroc.com](http://www.semroc.com))
- 18mm Motor Mount (Semroc Part Number EM-7-60, [www.semroc.com](http://www.semroc.com))
- Downscaled "FatBoy" Vinyl Stickers ([www.stickershock23.com](http://www.stickershock23.com))

### Assembly:

The first step in this build was to assemble the Motor Mount. The Semroc EM-7-60 kit includes all you need to build an 18mm Motor Mount that fits inside a BT-60 Body Tube, including Centering Rings, Motor Tube, Motor Hook, Thrust Ring and a BT-60 size Coupler. I built

### Finishing the Little FatBoy (continued from page 5):

Once the structure was complete, the body tube spirals, balsa grain and fillets were all filled in with a watered-down mixture of Elmer's Wood Filler with just enough water to get a pancake batter consistency. After the

Wood Filler dried I sanded it all smooth with 220 grit sandpaper and used a round chopstick as a sanding block for the Fin fillets. Once I got it as smooth as I wanted, I sprayed the entire rocket with Rustoleum

Painter's Touch 2X White Primer. I let this cure for a week or so and sanded it smooth with 320 grit sandpaper. For painting the Fins, I mixed some Createx Opaque White with Opaque Blue acrylic paint to get a light blue color and airbrushed it onto the Fins. I then masked off the Fins using Tamiya yellow masking tape to define the edge and Frog Tape to cover the rest of the Fins. Then I airbrushed the

Body and Nose Cone with a few coats of Createx Opaque Red to cover the light blue overspray on the Body. Once that dried I airbrushed a final coat of red using Jacquard Metallic Red. I removed the masking, and after paint dried I set the paint with the heat from a hair dryer. Finally I applied the vinyl decals and after a few days, a few light coats of clear. If you use acrylic airbrush paints you need to remember that they



are water-soluble, and a coat of clear will help protect the paint from sweaty hands or an accidental landing in a drainage ditch.

### Final Word:

This downscaled FatBoy ended up being 7.95" long and weighed in at 2.1 ounces with a third of that being clay nose weight. Since I won't be flying it until the spring, I have ran some basic flight simulations in RockSim. Flying on a C6-5, it should get up to about 850 feet, but it will also fly comfortably on a B6-4 to 340 feet and on an A8-3 to 110 feet.

Given its small size, I could have quite possibly built it to fly on 13mm motors, which would have reduced or possibly eliminated the nose weight that I needed to add. I may have to save that thought for a future project. In addition to this downscaled FatBoy, I also have a high power 5.5" diameter FatBoy as well as several assorted standard-sized FatBoys. Alan has built a suite of Groove Tubes and Solar Warriors in various sizes, and that has inspired me to try to build another FatBoy at a size in-between a standard FatBoy and my high power FatBoy, like maybe a mid power 4" diameter which equates to about a 154% upscale. If I could only figure out how to build the Nose Cone for it....

Jeff



\* The Family Portrait \*

## ROCKET I.D. CONTEST RESULTS



Last November Buzz McDermott put out the challenge to name these 4 rockets. The deadline was set for the December holiday party, at which the winner would be announced and awarded a wondrous prize. And the winner is... Kurt Knox. "Thank you, thank you, thank you."

The correct identifications, left to right:

1. ACE Rocket Manufacturing - Allegro
2. MRI - Kappa One
3. MRC - 2x2
4. U.S Rockets - Aero-Roc 3

The wondrous prize:

Rocketpad Kits - Asroc

Thanks a bunch Buzz for the contest and prize,,

*Kurt*



## CUB SCOUT & BOY SCOUT MASA OUTREACH EVENT



1 Dec 2011

MASA members Neal Higgins, Kurt Knox and Buzz McDermott attended the December meeting of a local Boy Scout Council Roundtable in Crystal. This is a gathering of Scout leaders from northwest metro troops in order to disseminate information to multiple troops at one time. When the members got to the Roundtable they found out that there was also a Cub Scout Roundtable going on in a different room. Buzz volunteered to talk to the Cubs while Neal and Kurt stayed with the Boy Scouts. There were some 30 adult scout leaders in each group. Kurt and Neal gave the Boy Scouts a Power Point presentation on 'What is Model Rocketry?'. Buzz gave a 5 minute overview of MASA and model rocketry to the Cub leaders. The Boy Scout leaders were also given information on the Team America Rocketry Challenge.

Quite a few models were brought and displayed. These ranged from small 3FNC sport models to a couple of contest rockets, some odd-rocs and an example TARC rocket.

Both groups were told about MASA outreach activities, how the club likes to help out with build and launch sessions, that the club has members experienced in teaching the Space Exploration merit badge, and that MASA also has a number of registered TARC mentors. Having been told all of that, and knowing that Scouts don't like to leave a volunteer unused, the MASA should expect to receive several requests for help over the coming months and into next spring.

This outreach session was made using an old presentation that Buzz had put together several years ago. It was clear the presentation needs a little updating. Also, whenever a club member gives a presentation on (or mentions) group build sessions at an outreach event, there should be a web link that can be given out which will have links to get bulk pack rocket kits and motors at discounted prices, links to TARC and NAR web sites, and links to documents on group build sessions, safety codes and organizing group launches. It is a suggestion that MASA should add such a page to its web site.

*Buzz McDermott*



## 2011 MASA IN REVIEW

- MASA's 13th year
- We now have more than 150 members
- 12 club launches were held in 2011, including a 2-day regional contest
- 1,100+ flights (second highest in club history)
- 1,200+ engines burned (second highest in club history)
- Nearly \$8,000 worth of engines used (a club record!)
- The total number of MASA flights to date is nearly 13,000!
- We had 71 high power flights, which is the most ever in one year (and nearly double last year's total)
- We were fortunate to have some amazing flying weather this season, with only a few launches needing to be rescheduled.
- We held 9 meetings plus the summer picnic and winter holiday party.
- We had 7 members completed their L1 and L2 certifications (5 L1s and 2 L2s). In the first 10 years of MASA, approximately 25 members completed their L1 or L2 HPR certification. In 2010, we had 12 members completed their L1 and L2 certifications (6 of each). Approximately 30% of our total club members have obtained their HPR certification at some point in their rocketry career.
- We supported many outreach events, including long-standing events like Westwood and TARC, and new events with some boy/girl scout troops and homeschool groups.
- MASA held its third annual regional contest.
- About 10 club members traveled to Cincinnati, OH for NARAM 53 (and some are already making plans for NARAM 54 in Muskegon, MI).

Special Note: Stats are courtesy of Alan Estenson

### View From a BAR (cont. from page 4)

Well, I went off to college, got married, etc. and somehow 20+ years went by with no building and launches I could count on one hand. I became a true BAR in 2009 when my son Lukas and I came across some of my rockets (I only had a handful left) while cleaning the garage and he certainly had an interest. So, the first thing I did was hop on the internet and do some searching. I found that Estes was still around but somewhat fading. I also found Quest and then all the online vendors. I purchased a couple Quest kits that we built and launched. We also found some discounted Estes kits at Wal-Mart.

Since then, becoming a more addicted BAR, I have spent time searching the internet and it is truly amazing finding all the model rocket manufacturers and vendors out there. The internet has changed our hobby in this way: There are so many vendors, some small, some home based, and some very product specific. You can find so much information before purchasing something and not to mention all the archived information, forums, etc. Back in the day, you'd have to request a catalog, get it in the mail, and so on. Recently I've found a local hobby shop that increased their product offering, although still fairly small, plus I got a chance a few months back to go to the often mentioned by MASA members, Hub Hobby during a trip down to the twin cities for the holidays. Call me a rocket geek, but that was a rocketry heaven experience!

Well, as a BAR, I've purchased Estes, Quest, Aerotech, Semroc, FlisKits, LOC Precision, MadCow, Rocketarium, and Sirius Rocketry kits. I've built and flown some, but I have many I still need to build and fly. Then, I'll probably get some other manufacturer kits! In my opinion it is truly a great time to be a model rocketeer with the wealth of model rocketry manufacturers, vendors, and information out there. I think it is great learning about different manufacturers kits, their methods and technologies, styles, etc. It will be interesting what the future holds for all of us.

## SPECIAL RECOGNITIONS

- A HUGE thank you to Buzz and Kathy for hosting this year's holiday party!
- Thanks to Neal Higgins for his service as MASA Vice President, and to Gerald Meux for his service as MASA Treasurer/Secretary.
- Thanks to Jeff Taylor for his service as editor of the (multiple award winning) MASA Planet newsletter.
- Thanks to Mike Erpelding for serving as event director of MASA's regional contest (first, second, third, and counting).
- Thanks to Alan Estenson for running a number of fun contests, and serving as MASA Webmaster, flight statistician, and Section Advisor.
- Thanks to Ted Cochran for his continued service as the NAR Vice President.
- Thanks to all those who volunteered their time to serve RSO/LCO shifts this year: Todd Carpenter, Ted Cochran, Mike Erpelding, Alan Estenson, Chris Feld, Neal Higgins, Ken Hoyme, Carol Marple, Gerald Meux, Buzz McDermott, Bob Moyle, Glen Overby, Kent Peterson, David Schaffhausen, Todd Schweim, Dwayne Shmel, Jeff Taylor, and David Whitaker. Our launches run smoothly and are safe because of all of you!
- Thanks to all the newsletter contributors: Ted Cochran, Jason Colt, Mike Erpelding, Alan Estenson, Art Gibbens, Ken Jarosch, Ray King, Carol Marple, Buzz McDermott, Gerald Meux, Jason Pokorny, Todd Schweim, Alyssa Taylor, Jeff Taylor, and Brian Uhlenkamp.
- Thanks to all the meeting topic presenters: Caleb Boe and the Inver Thrills USLI team, Ted Cochran, Alan Estenson, Carol Marple, Buzz McDermott, Jeff Taylor, and the many club members who participated in build sessions and show 'n tell sessions we held throughout the year.
- Congratulations to Caleb Boe and the Inver Thrills USLI team. They competed in the NASA USLI contest, and placed 4th out of 33 teams.
- Thank you to Kurt Knox, who is the new MASA Planet Editor. Thank you for volunteering your time to make sure the club continues to have a great newsletter!
- Congratulations to the 2012 MASA Officers: Neal Higgins (President), Art Gibbens (Vice President), and Gerald Meux (Treasurer/Secretary). Thank you for volunteering your time for the club!

*Carol Marple*

## 2011 MASSY AWARDS

Following MASA tradition, club president Carol Marple presented a few special awards.

### Service to the club - Jeff Taylor

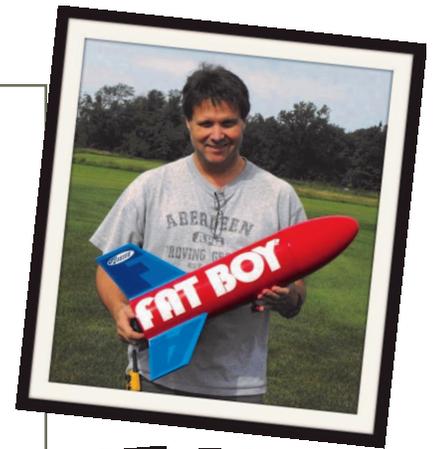
Jeff recently retired from his position as MASA Planet Editor, after serving for 4 years in the role. During that time, the MASA Planet won the LAC/North American Rockwell Trophy for best NAR Section Newsletter three times (in 2008, 2009, and 2010). The newsletter also won Honorable Mention in 2011. Thank you, Jeff!

### Congratulations to those with successful Level 1 certification flights this year:

Craig Bowman  
Chris Feld  
Kent Peterson  
Alyssa Taylor  
Anand Vyas

### Congratulations to those with successful Level 2 certification flights this year:

Kent Peterson  
Todd Schweim



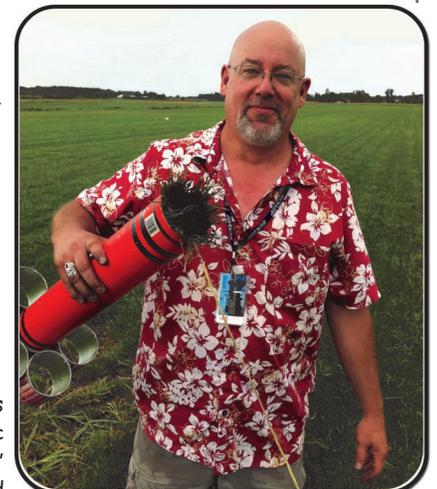
## 2011 PRANG OF THE YEAR

Prangs worth a mention:

- Buzz's "Candy Striper" on 3 D12-5s with Quest Q2G2 long-lead igniters. In his own words, "I was hooking up to an Estes controller that had been modified for 12 volts. As soon as I put in the safety key, one of the motors lit. There wasn't enough current to light more than 1 of 3, though. The rocket lobbed 50 feet into the air and then pranged right next to me. Ejection was AFTER impact."
- Neal's 4" Crayola crayon rocket on an H165 in the Back to School drag race. The chute did not open, it came close to hitting Ken, and he got a very impressive core sample. Neal said, "I think it would work great for cutting new holes on putting greens."
- Neal's LOC Norad in the OctoberFAST G80 drag race. According to Neal, "Watching 6 rockets take off and 1 explode made for a very exciting drag race. Jeff and I posted pictures of the CATO aftermath. It will get rebuilt and fly again next year."
- Todd Carpenter's beautifully steampunked "Steamship One" on a D13-7, which suffered late ejection and lawn darter.
- Alan's Fat Boy on a C6-5, which suffered rod whip, turned into a cruise missile, lawn darter, and then ejected.
- Neal's "Angry Bird" on an E20-7, which shredded at ejection.
- Neal's "Tres Super Alpha" on 3 B6-6s, or at least he attempted to light 3 motors... only one lit, it lawn darter, and then the ejection charge went off.
- Dave Schaffhausen's "Mega Baron" on a D12-3. According to the flight card, it suffered a core sample and "explosion."

### Prang of the Year Award: Neal Higgins' Crayola Crayon Rocket on an H165

With 50% of the notable prangs, Neal has earned the 2011 Prang Award. The specific flight that earned him this honor was his 4" Crayola Crayon rocket that core sampled during August's Back to School drag race.





**NARAM 54**  
July 28 - Aug 3, 2012  
Muskegon, Michigan

**NSL 2012**  
May 26-28, 2012  
Geneseo, New York

**NARCON 2012**  
April 13-15, 2012  
Hutchinson, Kansas

Make sure to check out the NAR website, [www.nar.org](http://www.nar.org) on a regular basis for current news regarding our national organization. It is also a great place to find various information on all aspects of our hobby. A couple of tidbits for you PDF readers to click-on:

In November 2011 the Level 2 High Power Certification exam was updated.

Minnesota has 12 teams registered for TARC 2012. Let's make sure we support them in their efforts!

The NAR certified motors list was updated on December 11, 2011.

Which NAR record is in your sights for 2012? Check the list and get planning.

And if your not a member yet, sign up and support this great hobby even more...

Special thanks to the newsletter contributors:  
Neal Higgins, Carol Marple, Buzz McDermott,  
Jeff Taylor, & Brian Uhlenkamp

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