

MASA PLANET

OFFICIAL NEWSLETTER OF THE
MINNESOTA AMATEUR SPACEMODELER ASSOCIATION



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Upcoming Events:

- **5th Annual MASA Regional Contest:** Sat. & Sun., June 1 & 2, 9-5, Nowthen Sod Fields
- **Meeting:** Thursday, June 6 7:00-8:45 (TBD)
- **Summer Solstice-Launch:** TBD
- **Launch:** Saturday, June 22, 9-4, Nowthen Sod Fields
- See page 9 for more events and details



May/June 2013

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NAR Section #576

Established 1998

Rockets and Power Line Safety

Alan Estenson, NAR 69539

From the Model Rocket Safety Code, Recovery Safety: I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places.

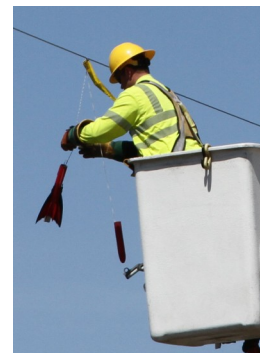
It's something that hopefully you've heard all your life, "Don't mess with power lines!" Yet, since 1997, there have been at least four fatalities due to attempts to retrieve rockets from power lines. If your rocket happens to land on a power line, **STAY AWAY!** Do not, under any circumstance, attempt to recover it yourself! **No rocket is worth your life.** However, you also do not want to simply abandon your rocket on the power lines; it could attract people with less common sense. Someone else could come along and say, "Hey, a free rocket. I bet I could knock it down with a long pole." At least one fatality was from just such a situation.



Photos by Alan Estenson

The ONLY safe way to retrieve a rocket from a power line.

PLEASE leave it to the professionals!



Continued, p. 2

Wood Filler Tales of Woe

By Jeff Taylor

Elmer's Wood Filler in the orange tub is my "go-to" material for every rocket project. I use it to fill balsa grain, body tube spirals and gaps, repair nicks and dings, hide unsightly errors, and to make some super smooth fillets.

I take about a spoonful out of the tub and mix it with just a very little bit of water to get the consistency of pancake batter. After mixing it up well, I just spread it into body tube spirals, balsa grain, or other gaps and defects, or spread it along the joint between the fins and body tube for fillets.

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Rockets and Power Line Safety, cont.

If one of your rockets lands on a power line during an official MASA launch, inform the Range Safety Officer immediately. Do not approach or attempt to retrieve your rocket. If your rocket is dangling low enough to constitute a ready hazard (for example, at the end of a very long shock cord), someone will need to remain in the area, at a safe distance, to warn other people away from it. The safety officers will notify the local power company that your rocket is on their lines and request that they safely remove it. You may or may not get your rocket back.

During the April 2013 MASA launch, a rocket landed on the power lines next to the VFW soccer fields. The power company was notified immediately. Within 45 minutes, one of their boom trucks arrived. They safely removed the rocket and returned it to its owner.

What if you are flying rockets at a time and place other than an official MASA launch and your rocket gets caught on a power line? Again, do not approach or attempt to retrieve your rocket. It is your responsibility to notify the power company and have them safely remove the rocket. To figure out who to call, look on the nearest utility poles for the name of the power company or other identifying markings. You can also follow the power lines to the nearest building with an electric meter; the name of the power company will be on the meter.

The obvious precaution is to choose flying fields without nearby power lines whenever possible. In particular, fields that are near any of the very large, very high voltage transmission lines should be avoided!

Wood Filler Tales of Woe, cont.

Photo by Jeff Taylor

After it dries (I give it a few hours) it can easily be sanded (I usually use 220 grit) to get a nice smooth surface ready for primer.

I ran out the other day and made a quick trip over to Home Depot. Not being a big fan of change, I was discouraged when I could no longer find the familiar orange tub. The original Elmer's Wood Filler had been replaced with Wood Filler Max, which is advertised as "3X Stronger". I decided to give it a try since I really had no other choice.



When I opened the black tub, the first thing I noticed was that the familiar creamy tan material was now a darker putty color. When mixing it with water to get the consistency that I like, it felt grainy as I stirred it with a popsicle stick, as if there was sand or small beads in it. Even after letting the mixture sit for a while it remained grainy.

I spread some out on my LOC IV repair job, let it dry, and then started sanding. The original Wood Filler in the orange tub sands extremely easily with 220 grit sandpaper. However the 3X Stronger Wood Filler Max took considerable effort to sand down, even with 100 grit sandpaper. It was like sanding concrete. Wood Filler Max may be a decent material to use on the siding of your house or a wood fence, but it would not be a good material to use on a rocket, especially on or near balsa since it takes too much effort to sand it.

Luckily a quick check at the Elmer's web site mentioned nothing of Wood Filler Max completely replacing the original, so I am thinking it is still available – just not at Home Depot. If you use Elmer's Wood Filler in the orange tub on your projects and are still able to find it in stores, let me know who still carried it. And if you need to repair some siding, I have an 8 oz black tub of Wood Filler Max that is yours for the asking.

“What I Enjoy About Model Rocketry . . .”

This question was recently asked of MASA members. Here are the responses:

Gerald Meux, Jr. — Camaraderie at the launches. Rocket people are like family to me. I'd basically give my right arm for a fellow rocketeer.

Brian Uhlenkamp — I enjoy many parts of model rocketry. First and foremost I like the "science" part of it all. The building is great (probably since it's the most time spent on it). The anticipation of a launch is exciting—each and every time. Finally, I enjoy the family aspect of the hobby. I enjoy that model rocketry helps me enjoy time with the family, while teaching my kids many skills including technical and safety.

Art Gibbens — I got into Model Rocketry because the models moved under their own power. Allow me to explain. I was, and in some respects still am, a motor head. I was car crazy as a kid and could identify all the models that were on the streets when I was in junior high and high school. So naturally I built model car kits because I was too young and too poor to be able to work on real cars. Then, in eighth grade, a fellow classmate did a speech on model rockets and I was enamored. I asked for more information and he brought me an Estes catalogue with an order form to purchase my first ones. I was so excited to build a model that did something more than set on my dresser to be ogled.

And to answer why I am still flying now after 41 years - is that it is still fun. That is, to take "ordinary" paper products, some balsa or plastic, a bit of black powder and poof, you can put something up into the air and then retrieve it to reuse it over and over again. What could be more fun, I ask? Why, bigger rockets, of course!

It is, simply put, still rewarding to craft something that does something - that doesn't just sit there. For me, this is pure joy.

Jeff Taylor — What I enjoy about building is being able to convert a bag of paper, plastic and balsa into a high speed flight vehicle. And once in a while I like to challenge myself and step out of my comfort zone by trying new techniques. What I enjoy about launching is seeing what other members are building, and sharing their experiences. Launches are also a great place for me to learn about new products, designs and high-tech gadgets.

N. Luke Brown — I find the build relaxing, and to launch what I build feels like accomplishment. — N. Luke Brown

Chuck Ross — I guess I just like taking a seemingly innocuous pile of materials and turning it into a (potentially) lethal projectile . . . Seriously, this is all still relatively new to me. It's fascinating, though—some shapes/configurations are obviously flight worthy, while others that seem doomed to failure will fly like a champ. I like the oddball/unconventional rockets, but when I'm at a launch I make an effort to watch every liftoff. This is such a cool hobby!

Anand Vyas — 1) It provides me with a safe way to have a reality check on my imagination and 2) opportunity to meet with friendly and helpful folks at MASA launches.

Ron Wirth — Relaxation. That is true for both building and launching rockets.

Ted Cochran — Rocketry is a detail-oriented exercise of planning and execution in which you get to find out, finally and unequivocally, how good a job you did. You push the button and it's you against the immutable laws of physics. You don't get to recall the flight, or adjust the trim during boost, or add talc to the parachute after it wads up. When things don't go well, you learn. When things work, it's glorious.

Views from a BAR

By Brian Uhlenkamp

NAR 39505 SR

Runs, drips, and errors

When it comes to “rattle can” painting our rockets, I think we all get a little nervous. You’ve worked hard on the model for some time and the “painting anxiety” of will it turn out, will it make the model look as envisioned, will it ruin it, and on and on. I think we all know the feeling.

As a BAR, I remember as a youngster, painting in an old garage (with a semi gravel floor). I think I was pretty good for my age, and I remember getting runs, not getting a gloss sheen, etc. When I got back into rocketry, I had to learn all over again. Spray painting can have so many variables. You have your prep work, you have the paint itself, the spray tip, and finally your painting technique.

I’ve had it all happen, the typical paint run, paint crackle, fisheyes, errors in trying to resand/fix areas, using the wrong paint, incorrect primer and prep, etc. I’ve also had the rocket finish coat applied, decided I didn’t like the color and had to repaint (see MASA Planet-Vol. 15 Issue 2).

Whenever I paint, my goal is always to have a nice smooth, perfect finish w/o adding too much weight. Being a perfectionist, I’d say most the time I end up adding too much paint weight to be satisfied. Regardless, we all want the best looking finish, but we need to remember, that it doesn’t happen by luck. OK, sometimes it is luck, but you can’t consistently count on luck.

In my “relearning” I automatically remember using dowels and a sawhorse to position the rocket. I still think that is key. I then picked up some Krylon and used it on two or three rockets and really didn’t like it. I then switched to Rustoleum Painters Touch Ultra Cover 2X enamel and consider that the “go to” paint for me. I also have had good results with Rustoleum Professional High Performance Enamel and Rustoleum Engine Enamels. I also use Testors laquer and enamel paints when I need a different or specialty color.

I’ve tried several primers, my first primer was the basic Rustoleum Painters Touch Ultra Cover 2X white/gray primers. They did a decent job, but didn’t fill in voids and didn’t sand super smooth. I then tried a high solids “shellac based”, Zinsser BIN Primer. It works pretty good, especially good at covering/blending different materials such as paper, plastic, glues. Like the 2X primer, it took several coats to seal balsa if it wasn’t previously sealed good. It also can tend to create runs/drips easily, but sands nicely. Although it says it dries in 15 minutes, reading the tech sheet it has a 72 hour recommendation for full cure, so I wait that long before sanding. I then tried a high build Rustoleum Filler Primer. It really works great at filling voids and sealing balsa. It sands super nice, especially final wet sanding, and can be sanded 2-4 hours after applying. I prefer this now in almost all my rockets, if I have a lighter final coat, I follow up the Filler Primer, which is gray, with the standard Ultra 2X white primer prior to the final coat application.

Whenever I have an “error”, I make sure to wait 48 hours before sanding it off. Our first instinct is to fix the mistakes as fast as possible, but I will tell you from experience, it is worth the wait. After sanding, I will wait another 48 hours prior to applying primer and final coat, this helps let any newly exposed uncured paint to cure. In my opinion, this avoids crackles and fisheyes.

I have the privilege of having a homemade “paint booth” in my heated garage over the winter seasons-when I do the majority of my painting. I have ducted, filtered, ventilation and I have lighting in the booth. It allows me to have a consistent condition to paint in. If you don’t have that privilege, or when I paint outdoors, I avoid wind which affects the paint spray and avoids dust, grass, etc. from getting on the model. I still struggle with lighting outdoors. I feel it is more difficult, but with practice can be done successfully.

Continued next page

Views from A BAR, continued

Some other experiences I've had is grabbing the wrong paint can. Once I sprayed gloss white onto a bare rocket vs. white primer-and I have also done the opposite. I've also grabbed the entirely wrong color. I always double check now and spray a test spot prior to hitting the rocket.

Should we talk about clear coat? No, let's leave alone as I consider that a whole different issue. Let's just say I don't spray clear coat anymore, I simply use Future Shine after applying decals.

To me, there is no doubt that "rattle can" painting requires practice, practice, and more practice to get down your technique. Everyone is different. Find a brand you like that fits your painting style the best for your final coat. Here are my final suggestions:

- Always follow instructions and manufacturers recommendations, including dry/cure times.
- Always make sure the paint is warm before using, at least 50 degrees F. I place the cans in a warm water bucket for about 10 minutes.
- Shake/mix appropriately.
- Use a dowel to properly hold the model.
- For primer, use a high solids primer that can be sanded.
- Sand and/or wet sand before applying final coat.
- Wipe/remove all dust.
- For the final coat, apply one or two light coats, then one final heavier coat. I work at a distance of about 10-12". Speed and overlap are very user dependent-practice, practice.
- Make sure you have proper lighting so you can see your work.
- If you need to fix anything, allow the paint to dry the appropriate amount of time, both before and after sanding (48 hours on both for me) to avoid crackling and fisheyes.
- Finally, for safety, wear an appropriate paint mask and make sure you have proper ventilation.

I don't think there is any given "right" paint method for "rattle can" painting as I feel it is so much up to the individual. I believe with practice, you can learn to avoid most runs, drips and errors, however, don't be surprised as you'll never avoid them all, no matter how much experience you have. Happy painting!

NAR National Events for 2013

Are you a member of the National Association of Rocketry? If not, we encourage you to become one! As a member of the NAR you will have access to launch sites through local NAR clubs (such as us!), the bi-monthly color magazine *Sport Rocketry*, insurance coverage for your flights, and certification for high power rocket flying. For more information on membership, go to www.nar.org



The NAR's remaining national event this year is NARAM 55 will be hosted by the Mantua Township Missile Agency (MTMA), NAR Section #606, in Aurora, Ohio, on July 20-26, 2013. More information will be coming to www.naram.org.

The NAR is also a sponsor of Team America Rocket Challenge, a contest designed to inspire and attract the next generation of engineers and technicians to join the aerospace industry. MASA has had numerous members serve as mentors. More information can be found at www.rocketcontest.org.



MASA SHOWCASE

This is the section of our newsletter that showcases recent builds by MASA Members. Thanks again to the Uhlenkamp family for their contributions of some of their fleet. This section can be expanded, so please consider submitting pictures of your recent builds, or not so recent builds for this section!



Brian Uhlenkamp-Semroc Laser X SLS. A classic upscale kit by Semroc, 29mm engine mount, basswood fins.

Lukas Uhlenkamp MiniMax, a classic downscale kit by Estes. 13mm engine mount

Lukas Uhlenkamp Shuttle Express, Estes E2X kit built in two days, features dual gliders.

Julia Uhlenkamp, Dink, an Estes E2X kit built in one day. Pink of course.

Julia Uhlenkamp, Freedom, a Custom Rocket kit with some painting help from Dad.

Photos by Brian Uhlenkamp

Space Quote

"It's human nature to stretch, to go, to see, to understand. Exploration is not a choice, really; it's an imperative."

– Michael Collins, Gemini and Apollo astronaut.



New Way Space Models Quadzilla Build

By Brian Uhlenkamp , NAR 39505 SR

I saw these square tube rockets, by New Way Space Models (www.newwayspacemodels.com) which came out in the last year or so. I thought they were different, so I finally picked one up when there was a sale before the holidays. I thought the Quadzilla kit was interesting.

The kit was put together nicely; it even included a sandpaper kit (3 small sheets of sandpaper and an emery board) and a glue applicator. It came with (2) square launch lug for a 1/8" rod and (2) 3/16" round launch lugs, I opted for the 3/16" due to the length and its D+ powered. It also had nice detailed instructions, including some color photos. Other than the square tube, you'll notice the body tubes are not glassine coated, and they have a spiral "overlap" vs. a spiral groove.

I built the kit as recommended. The kit was obviously unique due to being square vs. round. The centering rings need to be carefully aligned, and I was careful keeping the rocket tube true when gluing the lower and upper body tube with the coupler. The TTW fin mounts on the corners were also unique. (It appears all the other New Way models have the fins on the flat sides.) The only modifications I made were using a Gatorade motor retainer vs. the standard metal clip and using a Top Flight Recovery 18" Thin Mil chute vs. the kit chute (which included a snap swivel). I just like the reliability of nylon chutes for anything D+ powered.

The build went fine, but the most challenging portion of the build was when I went to get rid of the overlaps on the tubes. Being it's a square tube, I really wanted a nice square look and that became more difficult than anticipated. I used Elmer's Fill n Finish. I used an old playing card to level it on the four sides. Since there was no glassine coating, the overlaps seemed to absorb some moisture during application and lift, but seemed to bond back down upon drying. I used a nice sanding block, which worked quite nice on the flat sides. It took quite a bit of filler (two coats) since there was an overlap seam and not a groove.

I thought I had a decent finish, so I applied some Zinnser BIN Primer. Well, that's when I became disappointed. The seams lifted again slightly, and in the end, I could see about half of the spirals. It appears with the sanding, I may have exposed more paper on the high spots of the spirals and they absorbed more of the paint and lifted some. It was ok but I needed to fix it. I figured I needed something that sealed and glued all in one shot. I used Bob Smith Industries 20 minute Finish Cure Epoxy. I've used it for filling balsa and other things before. I mixed it and again used an old playing card to level across the flat sides. I let it dry and did another side, until all four sides were done. I sanded, and sanded some more (the one downfall of the Finish Cure), but in the end, got a nice smooth and sealed finish. I primed it again, and was finally happy. If I would do it over, I'd probably give a Finish Cure coat right from the start.

I then used Rustoleum High Performance Enamel, "Safety Green". I felt that was a good color choice for a "lizard". The model cardstock photo appears to be a type of "camo" painted design to look like lizard skin, but for simplicity, I decided to just skip that and stay with a single color. The decals are a unique design, including eyes and a tail. I did have a slight challenge on the decals, they were very delicate, compared to what I am used to. I had two rip while applying but got the job done. I would suggest spraying them with a coat of Testors Decal Bonder or a clear coat of your choice to give the decals a little more strength. For final finishing, I applied two coats of Future Shine.

I like the way the model turned out in the end. I ended up at 5.875 oz. vs. the approx. 4.2 oz on the instructions. I'm sure most of the extra weight came from the added filler, epoxy and paint on the body tube. It is definitely unique being square. If you do plan on building one, the tube finishing and decals are the tricky parts in my opinion, otherwise I highly recommend the New Way Quadzilla kit. I haven't launched it yet, but I look forward to my first "square" launch.



Stake 'em Down!

Alan Estenson, NAR 69539

When you set up any type of portable shade canopy at a MASA launch, ALWAYS stake it securely to the ground! Even on a perfectly calm day, strong dust devils can blow in without warning and send your canopy tumbling away to crash into other canopies, people, cars... Please make it your habit to spend the extra minute to anchor your canopy every time that you use it.

If the stakes included with your canopy are just little bent pieces of metal wire, you can pick up inexpensive beefy metal tent stakes in any sporting goods department. Bringing along a hammer is also a good idea in case the ground is too hard to push the stakes in with your foot.



Photos by Alan Estenson

5th Annual MASA Summer Regional Contest June 1 and 2, 2013 Nowthen, Minnesota

The Minnesota Amateur Spacemodeler Association (MASA), NAR Section # 576, is pleased to invite all NAR members to our fifth annual summer regional contest.

The contest will be held at our Nowthen, MN, launch site on Saturday and Sunday, June 1 & 2, 2013.
(Rain dates are Saturday and Sunday, June 8 & 9)

This is a NAR sanctioned regional competition.

Go to <http://www.masa-rocketry.org/news/2013/2013-01.htm> for all the details.

Hope to see you there!



MASA Directory

Established 1998

Founding President: Russ Durkee

2013 President

Neal Higgins—nthiggins@gmail.com

2013 Vice President

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

2013 Secretary/Treasurer

Chris Feld — christopher.feld@my.uwrf.edu

MASA Planet Newsletter Editor

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MASA Planet Online

www.masa-rocketry.org/planetonline.htm

Club Website

www.masa-rocketry.org

Webmaster

Alan Estenson — estenson@mn-rocketry.net

Club Yahoo Group

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

MASA Calendar

Annual MASA Summer Regional Contest (and sport launch)

Date: Saturday and Sunday, June 1 & 2, 2013

Time: 9:00 A.M. — 5:00 P.M.

Place: Nowthen Sod Filds

For more info: <http://www.masa-rocketry.org/news/2013/2013-01.htm>

Meeting

Date: Thursday, June 6 2013

Time: 7:00 — 8:45 P.M.

Place: TBD (To Be Determined)

Topic: TBA (To Be Announced)

Summer Solstice Evening Launch

Date: TBD

Time: TBD

Place: Nowthen Sod Fields

Launch

Date: Saturday, June 22, 2013

Time: 9:00 A.M. — 4:00 P.M.

Place: Nowthen Sod Fields

Theme: Patriotic Rockets—Fly the Red, White, & Blue

Summer Picnic

Date: Saturday, July 13

Time: TBD

Place: TBD

For more detailed information, please go to the MASA website at
www.masa-rocketry.org/events

MASA PLANET
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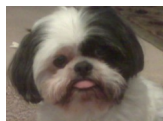


Mailing Label Heren

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) You can find more information on the MASA web site, www.masa-rocketry.org, or email us at masarocketry@rocketmail.com.

For more information, or to join MASA ,go to www.masa-rocketry.org



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