

MASA Minnesota Amateur Spacemodeler Association Established January 1998 NAR Section 576

2006 NAR Medium Section of the Year 2007 NAR Medium Section of the Year Host of NARCON 2007 Host of NARCON 2008 2008 LAC Newsletter Award Recipient

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Don't Forget...

MASA's Annual Picnic Launch is Just Around the Corner

Summer is the season of road construction and picnics in Minnesota. This year, MASA will be celebrating summer with our annual picnic, which is scheduled to be held on Saturday, July 18 at the Elk River VFW Soccer Field. All MASA members are welcome to attend along with their families and guests, as well as past and potential future MASA members. Rocket launching will be from 2:00 pm to 5:00 pm, and the picnic will be from 5:00 pm to 8:00 pm.

Official details can be found on the MASA web site at www.masa-rocketry.org. PLEASE RSVP BY JULY 16!

"Reports are coming in from all over the world; the Earth is under attack, an attack from Mars!"*

It's from a pinball game.



by Alan Estenson

According to Quest, this Spare Parts Elimination Vehicle was created after they found a mislabeled crate of plastic saucer tops from their old ready-to-fly UFO. The kit is only available from the Quest web site, www.questaerospace.com. The saucer kit, #A51001, sells for \$10, or you can get the saucer kit with a 3-pack of C6-0 engines for \$15, #A51001SP. I'm assuming that this UFO kit will only be available until they use up the remaining plastic saucer pieces.

Assembling

plastic saucer top, plastic molded The kit contents are: launch lug, motor mount tube, engine block, and three lasercut black fiberboard fins. I'd rate this kit at skill level one as my total building time was no more than fifteen minutes! The assembly instructions are printed on a single sheet of paper and consist of only six steps.

After gluing the molded launch lug onto the saucer top and gluing the engine block into the top of the motor mount tube, you glue the motor mount tube into the saucer. Nothing difficult here; you just need to make sure that you line up the lug with an existing hole in the saucer top. The three fiber fins have their root edge glued onto the lower section of the motor mount tube. Out at the tip of each fin, a tab fits up into an existing hole in the saucer top. To help check your alignment, each fin also lines up with a plastic rib molded into the saucer.

I chose to do a little extra gluing that wasn't mentioned in the instructions. I used CA to tack the fin tabs into the holes in the saucer. I also wicked CA into the lower end of the motor

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Quest Area 51 SPEV Saucer Continued

mount tube and into the trailing edges of the fiber fins. Fillets between the fins and motor mount tube were added with yellow glue.

Finishing

The kit does not come with any decals. However, it does include a sheet of white self-adhesive label paper. By going back to the Quest web site, you may download PDF files for four different decal designs. You can then print the design of your choice on



the label paper, cut out, and apply the stickers to the saucer. Depending upon which sticker design you choose, Quest recommends painting the saucer red, light grey, medium grey, or black. Of course, you could also skip painting and decals and just fly it as-is.

After wiping down the plastic saucer with isopropyl alcohol to clean it, I primed the entire rocket using grey Rustoleum automotive primer. This was followed by two coats of Rustoleum metallic silver. Pondering the four decal designs, I thought about MASA's annual "Great UFO Drag Race" and decided that I'd create custom MASA-themed decals for this flying saucer. Using the drawing program Xara Xtreme, I was able to import Quest's PDF files to give me a starting point for my custom designs. After printing my finished artwork onto clear water-transfer decal paper, I applied the decals to the rocket and finished it all up with a clear coat of "Future Floor Finish" applied with a foam brush.

Flying

This saucer doesn't have any motor retention. However, the motors were a snug fit, so I didn't bother to add any masking tape. Since it doesn't have any "legs", it will be contacting the ground upon landing.

About 8 o'clock on a gorgeous Saturday evening, I walked over to the neighborhood park with the saucer and some launch gear. First flight was on a B6-0. The boost was straight up to around 50 feet. The saucer floated down and landed safely upside-down on the grass of the softball outfield. The second flight was on a C6-0. This flight was noticeably higher - 80+ feet, perhaps. This boost was also straight up except for a very slight curve in the last ten feet of powered flight. Again, the saucer landed fine.

I think that this UFO is a lot of fun. It's inexpensive, easy to build, and it flies great!



MASA Members to Celebrate Apollo 11 Moon Landing's 40th Anniversary at the July Launch

The day after I turned six years old, Michael Collins, Buzz Aldrin and Neil Armstrong lifted off from Kennedy Space Center on top of a Saturn V rocket on July 16th, 1969 on their way to the Moon to be the first humans to set foot on another

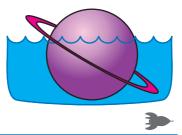


planet. Four days later Buzz and Neil landed the Lunar Excursion Module "Eagle" on the surface, and within six hours of landing, Neil Armstrong made his way out the LEM's hatch and down the ladder to the dusty surface below. After Buzz and Neil spent 2 ½ hours outside of the LEM, they had collected nearly 50 pounds of Moon rocks to bring back to Earth. The three astronauts splashed down in the Pacific Ocean on July 24th, 1969 after what was, and arguably still is, the most historic space flight ever.

To celebrate the upcoming 40 year anniversary of this historic flight, the theme for MASA's July Launch will be appropriately called "Apollo 11 40th Anniversary – Fly Those Saturns". The launch is currently scheduled for Saturday July 25th from 9:00 AM to 4:00 PM (weather permitting) at the Nowthen Sod Farm. A special event will be a "Saturn Beauty Contest", where MASA members will vote on their favorites. MASA members are encouraged to bring any Saturn rockets that you may have to this launch and help us celebrate the success of Apollo 11.

From the Useless Planetary Trivia Department: Speaking of Saturn...

Did you know that if you were able to place the entire planet of Saturn in your bathtub, that it would actually float? Saturn's density is about 70% that of the density of water, so about 30% of the planet would float above the water level.



MASA's Generosity Helps Support NARAM-51 Fi/Ti

One of the events to be held at NARAM-51 this summer is a Fly It/Take It event, where children and other first-time flyers will be able to pick out a free rocket, fly it, and take it home with them to keep. These rockets are donations from NAR sections from around the country. Last year MASA VP Carol Marple coordinated a collection of rockets from MASA members, and ended up with ten rockets. This year, as of press time, Carol has collected somewhere around **THIRTY** rockets from MASA members! Look for details in the next Planet!

MASA's First Regional NAR Competition

On Saturday June 27th, MASA hosted its first Regional NAR-Sanctioned Competition Meet, led by Contest Director Mike Erpelding. The meet included Open Spot Landing, D Dual Egg Loft Duration, A Streamer Duration, B Boost Glider Duration, 1/2A Parachute Duration Multi-Round, and Random Duration competitions.

Weather forecasts for the weekend prompted MASA officials to limit the two-day event planned for Saturday and Sunday to just a one-day event on Saturday, and the windy conditions on Saturday also prompted officials to postpone the scheduled regular June club launch for one week.

Even with the brisk winds, 13 fliers journeyed out to compete at the sod farm flying field in Nowthen, including 8 MASA members, 4 independent fliers, and 1 WOOSH member who traveled from the Milwaukee area to compete.

Congratulations to the winners from each event including:

Open Spot Landing: Rick Vatsaas (Independent)

D Dual Egg Loft: John Cieslak (WOOSH)

A Streamer (B Division): Caleb Boe (Independent) A Streamer (C Division): Todd Schweim (MASA)

B Boost Glider: Lyle Merdan (MASA)

1/2A Parachute (B Division): Caleb Boe (Independent) 1/2A Parachute (C Division): Todd Schweim (MASA)

Random Duration (set at 40 Seconds): Carol Marple (MASA)

Congratulations to Caleb Boe for leading overall in points for B Division and to John Cieslak for leading overall in points for C Division. Special thanks to Contest Director Mike Erpelding for all the work he did to make this event a reality. Check the MASA web site for complete results.

Need Another Day Off in the Summer? Help Proclaim July 20th a National Holiday: Space Exploration Day

Link Supplied by Todd Schweim

In September of 1962, President John Kennedy announced his goal that, by the end of the decade, the United States will land a man safely on the Moon. This goal was reached on July 20th, 1969 when Apollo 11 stepped on the surface of the moon for the very first time. This is no doubt the largest human endeavor in recent times, and is most likely worthy of making it an official national holiday.

You can do your part to help proclaim July 20th as Space Exploration Day (SED) by simply signing an on-line petition. It takes no time at all, and you only need to supply is your first and last name, and your city and state.

Visit the Space Exploration Day Holiday Official Web Site at: www.spaceexplorationday.us for more details on this project and to sign the petition (your Planet editor is signature #1060).

MASA PLANET

MASA Planet Says Good-Bye to a Special Visitor

At NARAM 50 held last summer in Virginia, it was announced that the MASA Planet was to be the 2008 Recipient of the LAC / North American Rockwell Trophy for best NAR section newsletter. The LAC Trophy is a traveling trophy with a long history that dates back to as early as 1969. Each year, independent judges wade through NAR section newsletters from around the country, judging them on criteria set up by the NAR. The winning section gets to keep the trophy in their possession for an entire year, after which it is returned to the next NARAM to be awarded to the next year's recipi-Each winning section gets to engrave their name on one of the plaques that cover the trophy.

2008
MASA PLANET
MINNESOTA AMATEUR
SPACEMODELER ASSOCIATION

Newest inscription bearing MASA's name

In addition to the trophy, the winning section also takes possession of the traveling "Annex" where tradition calls for the section to add a special secret object to the annex to be included with objects from all of the past winners. The contents of the locked annex are to never be revealed to anyone outside of the winning section. Before returning the trophy and annex to NARAM 51, MASA will place its chosen object into the annex to join the others in this deep tradition.

To all of you who had supported the MASA Planet by submitting articles that helped us win this trophy for 2008, I would like to offer my sincerest appreciation and thanks. I would also like to encourage all MASA members to continue submitting articles and ideas to the MASA Planet so that someday we can bring this trophy back to Minnesota again!

Tell NASA What You Think

Now you can give NASA Officials your two cents worth when it comes to the future of human space flight. NASA has created a web site for the Review of US Space Flight Plans Committee where the general public can track committee activies, receive regular updates, and even provide input. Committee chairman Norman Augustine says, "The human space flight program belongs to everyone. Our committee would hope to benefit from the views of all who would care to contact us." Check it out at http://hsf.nasa.gov



Igniter Review

Quest Q2G2 vs. AeroTech 3" Blue FirstFire Jr.

By Ken Jarosch

I bought 30 motors from ValueRocket.com with the NEW AeroTech 3" Blue FirstFire Jr. Igniters for D & E Composite motors, and last Saturday I got to try out a few of these motors. While making a report on those flights it was called to my attention that what I was describing sounded like the Quest Q2G2 igniters. The picture of the Q2G2 on the Quest site looks identical to the AeroTech FFJR. So besides looks, what else do they have in common and what is the difference?

First, appearances would make you think they are the same item. Both use the blue wires with black pyrogen, and a twisted section followed by straight wires. About an inch of covering is removed from the end of the wires. The Q2G2 comes in a plastic tube for shipping protection and for use as an igniter plug. Both igniters were 3" to 3-3/8" long with the AeroTech averaging about 1/8-1/4" longer.

1) The pyrogen head length was slightly above 3/16" on the Q2G2, while on the FFJR it was slightly less than 5/16". The Q2G2 head was bulb rounded and bright while the

FFJR is more spear-like with a dull coating. With experience, this gives them away.

- 2) The Q2G2 ohmed out at 2.9 to 3.6 ohms, while the FFJR ran a tighter 2.0 to 2.4 ohms
- 3) The manufacturer specs for the Q2G2 state that they can be fired using a 6 volt lantern-style battery with a firing current of 120 ma or 1/8 amp; more like an E-match. The AeroTech FFJR requires a 12 volt source capable of 3 amps making it a hotter igniter.
- 4) The Q2G2 warns about a continuity firing if a different controller is used due to the low current igniter. The FFJR warns you to not install the FirstFire JR igniter in your motor until you are at the launch pad, just prior to launch, which is a typical TRA rule.

Quest Q2G2

Photo by Ken

5) The retail cost for the Q2G2 igniter 6 pack is \$6.99, and the blue 3" FFJR is \$4.90 for a 3 pack. On the Quest website you can get the 6 pack for \$5.00 or a bulk pack of 24 for only \$16.00. The minimum shipping is \$10.50.

These igniters appear to be two power level versions of the same product. So, with the Quest continuity warning and the similar looks of the FFJR, you wouldn't want these thrown together where a Quest Q2G2 might end up with the wrong controller.

CONTINUITY TESTS:

I tested the Q2G2 and the FFJR igniters on three different controllers: 1) (BULB) The Estes Electron Beam Controller, 2) (Buzzer) The AeroTech InterLock Controller, and 3) (LED) My QuickBurst HPR 100' relay controller.

A) The Aerotech FFJRs are continuity-safe on all three types of controllers, as you might expect with 12 volt 3 amp requirements.

B) The Quest Q2G2s are continuity-safe with the AeroTech InterLock and QuickBurst relay controllers. But the Quest Q2G2 is NOT continuity-safe with the Estes Electron Beam Controller as might be expected with the current draw of the bulb. The Quest Q2G2 fired the instant I pushed the Safety Key into the controller socket.

FIRING TESTS:

The main reason for these tests was to see how these igniters worked with AP motors. The motors would be the 2-3/4" length types, such as the 18 mm D's and 24 mm SU & RMS. Also, with a low voltage and low current maybe the Q2G2 could be used for a series/parallel cluster launch.

Several of the AeroTech Blue igniters were used at the MASA May 2, 2009 launch with SU motors with good results. I used E15's and D21's at a Tripoli launch on May 09, 2009. The 3" FFJR gave an instant ignition to the E15's and the D21's tested so far when a good 12v source is used.

On June 13, 2009 we returned to a Tripoli Launch to complete our tests. Since TRA-MN had just replaced the clips, wires, junction box and repaired the thick cable on the low power pads, we were confident of a good test series. Of course they did the Continuity Safety check first. All was safe with the buzzer.

First a little background on the Quest Q2G2 igniters: The pyrogen heads are somewhat of a bulb shape vs. the spear-like heads of the FFJR. Both igniters went through all nozzles except the tiny E11's and F12's. Several thick heads of both igniters failed to go into the D10's nozzles.

On static ignition tests the Q2G2 made a very light burst forward only. No evidence of a side burn. The heads were barely burnt. Not at all like the Magnelite or FireStar where I've come to expect the complete destruction of the upper part of the igniter.

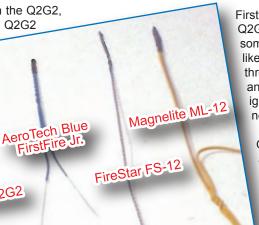
The tests were to run on D10-3W and E15-4W White Lightning motors and D21-4T and E30-4T Blue Thunder 18mm and 24mm single use motors. I figured that we would have no trouble with the Blue Thunder motors but that the White Lightning might be a problem especially the D10's.

The test would start with one Q2G2 igniter. If that failed then we would follow up with the included ValueRocket.com 3" Blue FFJR to confirm the difference.

Q2G2 TESTS:

- 1) 24mm WL: On a Art Applewhite 7.25" Stars & Stripes Original Saucer we used the E15-4W with a Q2G2 igniter. At ignition it momentarily looked like nothing happened. No smoke or flame. Then suddenly the saucer lifted off. That hesitation was disturbing but the flight went great.
- 2) 18mm WL: The return of my junkyard rocket Lil' BDR on a D10-3W was the next test. At ignition there was a very slight puff of smoke but no firing. I decided to try another Q2G2 igniter. The result was the same with no motor ignition. But the third attempt with the included FFJR igniter the motor fired instantly.

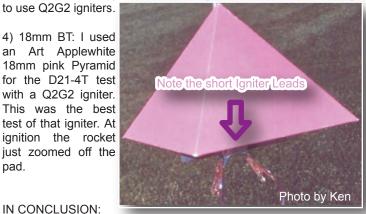
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Quest vs. AeroTech Continued

3) 24mm BT: The Big Daddy on a big E30-4T motor with a Q2G2 got inconclusive results. After two attempts to fire the same igniter, it would not burn. We still got continuity but no firing. I checked for shorts with the blast deflector and the launch rod but they were ok. This particular igniter had more of the insulation removed, but the wires appeared separate and not shorted. We replaced the Q2G2 with a FFJR and had a successful launch. When I later ohmed the Q2G2 it read 3.5 ohms as good. Using another E30-4T on a followon test at the MASA Solstice Launch the evening of June 20, 2009 in my Estes Shadow the same failed Q2G2 igniter instantly lit the Blue Thunder motor providing a successful attempt. Besides the new motor, this is what I did to have that igniter work: When I inserted the failed igniter in this new motor the bare wires touched each other causing a short. I cut the red protective tube in half and put these over the igniter bare wires down to and over the wire coatings. I carefully bent these recovered leads over at 180° checking for shorts. In the process the igniter was pulled back out slightly. I taped this in place and ohm-checked the circuit. All ok. Out to the pad, careful hookup and ignition. It worked great but a lot of trouble to go

4) 18mm BT: I used an Art Applewhite 18mm pink Pyramid for the D21-4T test with a Q2G2 igniter. This was the best test of that igniter. At ignition the rocket iust zoomed off the pad.



IN CONCLUSION:

The Q2G2 igniters produced poor or no ignition results in the tested AP motors. Of the five tests, one hesitated badly, two resulted in no ignition, one igniter failed to fire and only one was completely successful. The failed igniter will be followed up on another trial.

Reasons for the AP ignition failures are; 1) The bulb type pyrogen head fires mostly forward, 2) the short head may fall into that area between the propellant and the delay grain missing the propellant on firing, and 3) the very weak firing burst barely burning the igniter head does not ignite the AP propellant with any degree of success.

These Q2G2 igniters at 6 volts and 120 ma would do a great job as an E-match lighting a Black Powder charge. But as an AP motor igniter I cannot recommend them. I have enhanced Solar Igniters and weak CopperHeads that I had on hand with the Magnelite pyrogen. It was said I could do that with the Q2G2's also. But why buy Q2G2's at \$1.17 to enhance them when I can just buy FireStar at \$0.94 or Magnelite at \$0.84 each? Both these come in regular and LOW AMP versions, but that's another article.

However, the AeroTech included Blue 3" FFJR from ValueRockets.com were excellent at starting all these 4 motors.

The short length of these igniters results in just a one inch leads hanging from the nozzle. When you insert the Q2G2 or 3" Blue FFJR igniter into the AP motors you have about 1/4" of covered lead to bend over the nozzle for taping. That leaves the bare 1" leads next to the motor. That is a tight fit at the pad, especially if you need to wrap the leads around the clips. In a recessed motor tube it's really a hard job. I wish AeroTech had made the leads 4" for more room. Of course, the Q2G2 were designed for BP end-burner motors.



STS-125 Behind the Scenes

Personal Photos from a NASA Employee





Just Like a Launch in the Park

By Alan Estenson

In the face of a beautiful, calm, summer evening, I have often thought, "I should be out flying rockets someplace." This summer, I finally realized that "someplace" can be the park just two blocks down the street from my house. It has open areas that are split into softball, baseball, and soccer fields. Since there are scattered trees and surrounding houses, it's best suited for flights that stay under ~600 feet and for breezes out of the west or east.

Keeping the KISS (Keep It Simple, Stupid!) principle in mind, I assembled a park launch equipment kit. Starting with an open-top plastic tool tote, I added:

- Estes Porta-Pad, 1/8" and 3/16" launch rods, blast deflector and several clothespins.
- · Quest launch controller and a tiny compartment organizer for spare igniters and sundry.
- Small roll of masking tape, piece of ScotchBrite pad, emery board, and a cheap multi-tool.
- Piece of ½" dowel with an old motor casing glued on the end (useful for pushing in wadding) and a one gallon zipper bag full of "dog barf". [Since I prep the rockets at home, I usually leave these last items in the garage.]

My intent was to keep things simple, lightweight, and inexpensive. I won't be flying clusters or multi-stage rockets in the park, so I don't need a big pad or fancy controller. While I'm fond of Estes Electron Beam controllers, the Quest controller is lighter, works fine, and has built-in "nubs" for winding the wire around it for storage. With the exception of the tiny compartment organizer (\$2.49 at Fleet Farm), I had all of this stuff around the house and garage.

So far, I've been to the park several times to do some launchin'. I keep my eye out for beautiful, nearly-calm evenings when park empty. Then, at home, I'll prep six to eight rockets, pile them on



the tote, walk over to the park, set up, launch, pack up and walk home again. On my first outing, I found that I'd forgotten to put an igniter and plug in one rocket. Spare igniters, I had, but no plugs or masking tape [I added the tape before the next trip.] You know what? A large dandelion stem works just... dandy... for holding an igniter in a nozzle.

Why not go for your own launch in the park? Of course, first you should check with your local park board or other authorities having jurisdiction to make sure that rocket flying is permitted there.

2009 Launch Windows

Subject to Change

Check MASA Website or Yahoo Group for updates

All MASA Launches are "Misfire Alley" (bring your own launch pad and controller)

MASA Summer Picnic

Saturday, July 18 - 2:00 pm to 9:00 pm

Location: Elk River VFW

Check the MASA web site for details

Notes: Model Rockets (max 1 lb and max "E" motor) only

MASA July Launch *

Saturday, July 25 - 9:00 am to 4:00 pm

Location: Nowthen sod fields

Theme: Apollo 11 40th Anniversary - Fly Those Saturns!

Special Event: Saturn Beauty Contest

NARAM 51

NAR National Even

August 8-14

Location: Johnstown, PA For details, visit: www.naram.org

MASA August Launch *

Saturday, August 22 - 9:00 am to 4:00 pm

Location: Nowthen sod fields

Theme: Multi-Staging

Special Event: The Great UFO Drag Race

Comanche-3 Drag Race

MASA September Launch *

Saturday, September 26 - 9:00 am to 4:00 pm

Location: Nowthen sod fields

Theme: Clustsers

Special Event: Deuces Wild Drag Race

MASA October Launch *

Saturday, October 24 - 9:00 am to 3:00 pm

Location: Nowthen sod fields

Theme: Odd-Rocs

MASA November Launch

Saturday, November 21 - 10:00 am to 2:00 pm

Location: Elk River VFW

* For Nowthen sod fields only: FAA waiver will be in effect permitting high power flights to 4,500 feet AGL. Field size supports up through J motors.

the MASA Planet.... Than

📂 Alan Estenson 🍞 Glen Overby

Neal Higgins

Todd Schweim

Ken Jarosch Carol Marple > Jeff Taylor

To contribute pictures, stories, build reviews, or just about anything, email to jeff.taylor@mn-rocketry.net





2009 Meeting Schedule

Subject to Change

Check MASA Website or Yahoo Group for updates

MASA August Meeting

Thursday, August 6 - 7:00 pm to 9:00 pm

Location: Science museum of Minnesota, St. Paul

Topic: TBD

MASA September Meeting

Thursday, September 3 - 7:00 pm to 9:00 pm Location: Science museum of Minnesota, St. Paul

Topic: TBD

MASA October Meeting

Thursday, October 1 - 7:00 pm to 9:00 pm

Location: Science museum of Minnesota, St. Paul

Topic: TBD

MASA November Meeting

Thursday, November 5 - 7:00 pm to 9:00 pm Location: Science museum of Minnesota, St. Paul

Topic: TBD

MASA Directory

Established January 1998

Founding President: Russ Durkee

2009 President and Webmaster

Alan Estenson - estenson@mn-rocketry.net

2009 Vice President

Carol Marple - cjmarple@peoplepc.com

2009 Secretary/Treasurer

Rick Vatsaas - rick@vatsaas.org

MASA Planet Newsletter Editor

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

Club Website

www.masa-rocketry.org

Club Yahoo Group

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

New MASA High Power Certifications

Congratulations to Andy Juntunen with his 1/4-scale PML Patriot on an H123, and to Scott Gleason (Junior L1) with "Inferno" on an H180! Andy and Scott both received their HPR Certs at the May 30 launch.



May 2 Launch Report By Alan Estenson

On Saturday, May 2nd, MASA held its third launch of the year. This was the first launch of the season on the sod near Nowthen.

The skies were sunny & blue all day. It wasn't terribly warm, but it wasn't too bad, either. The breeze was fairly stiff out of the west. The launch ended for the day a little after 2pm when the wind started gusting to 20mph (and more).

Thanks to Ken Jarosch & Neal Higgins for being there early to help set up the launch range!

Thanks to everyone who stuck around to help clean up and tear down the range at the end of the day! Visit the MASA web site for more reports from members.



May 30 Launch Report By Alan Estenson

On Saturday, May 30th, MASA held its fourth launch of the year. This was the second launch of the season on the sod near Nowthen.

There was plentiful sunshine and perfectly clear skies. Temperatures were in the 60's. Coming out of the N to NNW, the wind was about 7-9 mph early in the morning, but increased to 12-15mph with gusts to 20mph by the early afternoon. The wind served to keep the turnout light and the number of flights comparatively low at 44. We called it quits for the day about 1:30pm.

The theme of this launch was "odd-rocs". Strange rockets seen taking to the air included: A three Sputnik drag race (Neal Higgins & Alan Estenson). a three Death Star drag race (Dwayne Shmel, Dave Schaffhausen, Todd Carpenter), an Art Applewhite Pyramid (Todd Carpenter), a "Pumpnik" (Alan Estenson), and a Birdie (Alan). UFO's included a Snitch (Dwayne Shmel) and a Pheord X150 (David Whitaker)

Thanks to Neal Higgins for for helping set up the launch range. Thanks to Neal and Andy Juntunen for helping disassemble and pack it up, too. Thanks to Ted Cochran for his shift as LCO/RSO.

Outreach Report

MASA Goes Back to School Again, and All Eyes Are On the Skies

By Jeff Taylor



Is there a better way to end the school year than to build and launch rockets with MASA? We think not. That is why, towards the end of May, Ted Cochran, Todd Carpenter, Carol Marple and Jeff Taylor traveled to Westwood Elementary School to carry on Ted's ten-plus year tradition of ending the Blaine school's year with a bang. The four MASA members spent an afternoon with the entire fourth grade class building rockets with them. They returned to the school on May 29th to launch all of these rockets with the students.















Rules are Rules

A Few Reminders About Some MASA Rules

Let's face it: A lot of us don't like a lot of rules. But in order to keep MASA alive and this hobby safe and enjoyable for all of us, there are certain rules that we need to follow. These rules are in place to preserve our safety, but we also have rules in place to preserve our flying fields.

First and foremost is safety. The NAR has spent a lot of time making this hobby safer for all of us. They have developed a Model Rocket Safety Code and a separate High Power Rocket Safety Code. These safety codes must be followed even if you are not a NAR member. The NAR safety codes can be found on the NAR web site at www.nar.org. Take some time to familiarize yourself with them, even if you have already read them.

MASA has its own set of rules which can be found in various locations on the MASA web site at www.masa-rocketry.org. Some of them include:

- > You MUST be a MASA member (did you renew for 2009?) to fly any rocket weighing more than one pound, uses an engine bigger than a "D", or uses a combined total total impulse of all engines (staged or clustered) of 20 Newton-seconds or more. In other words, if you are not a MASA member, you are limited to what you can fly.
- Tissue-style wadding is not allowed at MASA launches. Only cellulose-type wadding is to be used (and is abundantly supplied free of charge at all launches).
- Please remember that in many cases (particularly at the Nowthen Sod Farm), we are flying on private property and are guests of our hosts. Please pick up all trash before you leave. Please do not bring your pets to launches. Do not play on or near the farming equipment. Be respectful of the land-owner's property.

MASA PLANET

MASA Solstice Launch

By Jeff Taylor

Wikipedia defines a Solstice as an astronomical event that happens twice each year, when the tilt of the Earth's axis is most inclined toward or away from the Sun, causing the Sun's apparent position in the sky to reach its northernmost or southernmost extreme. The name is derived from the Latin sol (sun) and sistere (to stand still), because at the solstices, the Sun stands still in declination; that is, the apparent movement of the Sun's path north or south comes to a stop before reversing direction. At MASA, we call that an excuse to hold a special launch.

A few years ago, Alan came up with the idea to have an evening launch on the longest day of the year, the Summer Solstice. Since then it has become a tradition, and on Saturday June 20th, we weren't about to break that new tradition. However, breaking from tradition this year, we were lucky enough to

have our Solstice Launch at the Nowthen sod farm instead of the Elk River VFW (thanks to the VFW

having some soccer games scheduled for the same day!). Another break in tradition was that Alan was not able to make it, as he had a previous engagement set up for that weekend. I agreed to be the Launch Director for this launch, but a few missed emails between Alan and myself meant that we didn't have the usual MASA staples on hand, such as unlimited supplies of dog barf wadding and flight cards. Neither seemed to slow us down, although it

Photo by Neal Higgins

meant that our flights would not be recorded in the books.

The weather was about as perfect as a person could ask for with practically no wind to speak of. The launch was scheduled from 4:00 pm to 9:00 pm, but typical with any summer evening in Minnesota, as the day went on, the bugs came out in droves. The gnats had most flyers packed up by 8:30, and Glen and I the last to leave the field after a last-minute search for trash by 8:45.

Perhaps the most memorable flight for many of us that night was the debut of Neal Higgins' "Mr. Spudnik", a Sputnik-style rocket with a Mr. Potato Head for the body, and an E9-4 shoved up his unmentionables.

ADDRESS SERVICE REQUESTED

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