**January 2002 Meeting Minutes (1/4/2002)**

Club President Alan Estenson started the first MASA meeting of 2002 just after 7 pm on January 3rd.  Nine people were present at the Science Museum for this event.

The first order of business was the election of club officers for 2002.  Because there was only one candidate for each position, a motion was made, seconded, and passed by unanimous voice vote of those present to accept the three candidates into their respective offices.  The 2002 club officers are:  President - Alan Estenson, Vice President - Ted Cochran, Secretary/Treasurer - David Fergus.

In addition to being the new VP, Ted Cochran has volunteered to succeed Art as editor of the MASA Planet newsletter.

Alan briefly covered the club finances.  MASA ended the year with a healthy treasury - most of which we are required to spend in accordance with the bylaws.  Money was spent on:  a first aid kit, contest supplies from NARTS, a gift to the sod farm owners, supplies for the holiday party, prizes and books.  There are a few purchases left to make this month to wrap things up.  Among other things, enough people have complained about the name badge holders that we will be buying some better ones.

Rick Vatsaas has devised some great new potential badge designs for 2002.  A vote will be taken very soon to select one of them.

**It being the start of a new year, renewing members (or new members) can pay their dues anytime!  You can pay them at a meeting or launch, or mail them in.**[**Click here for more info.**](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cjoinmasa.htm)

MASA has purchased 5 copies of  Stine's Handbook of Model Rocketry.  Our goal is to donate them to places such as public or school libraries.  After the meeting, Ellison Lenz and Jeff Hove each took a copy; we'll wait for them to report back about where they were donated.  The remaining copies are available if you have a recipient in mind for them - contact Alan.

A decision was made to move up the January launch by one week to the 19th.  This will open up the 26th for a model rocket display/exhibit by MASA at the state championship for the Minnesota Lego Robotics League.  Volunteers will be needed!  More info will be emailed out soon to all club members.

Alan talked about his ideas for promoting [NARTREK](http://www.nar.org/NARTREK/) within the club this year.  We will likely work the NARTREK Bronze level flights in as contests this summer at MASA launches.

A brainstorming session resulted in meeting topics to cover most of the year.  See the [Events](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cevents.htm) page for the lineup.

Glen Overby brought along two "weird" rockets (his description) that he has scratchbuilt.  He also had a new radio beacon that he's working on.  Ellison & Stuart Lenz brought along a nice home-made metal launch pad that they've built.

*(Alan Estenson)*

**February 2002 Meeting Minutes (2/8/2002)**

Club President Alan Estenson called the meeting together at a bit past 7 pm.  It was one of the larger turnouts that MASA has had for a meeting, and the room was quite full.  About 30 people attended, there were many new faces and new members.  Welcome!



This month's launch will be on the 23rd at the White Bear Lake field.  Next month's meeting will be on March 12 (1 week later than normal).  For the meeting activity, we will be having a [RSO / LCO](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Claunchrules.htm) training session.  We would very much like to expand the roster of people volunteering for RSO and LCO shifts at the club launches.  If you're interested in finding out more about these vital club duties, please attend the meeting.  You can learn not only how to spot mistakes that other people make, but also how to make your own rockets better.  If you can help run the training side of it, please contact Alan!

On January 26th, MASA had a model rocket display at the state Lego robotics championship.  [[Click here to read about it](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Coreports%5Creports%5Cor-010.htm).]  This was to help promote the new [Minnesota Rocket League](http://www.hightechkids.org/mrl/) competition.  MASA will be assisting this new competition.

New / improved / more durable name badge holders have been purchased.  They won't be mailed out, but, if you'd like one, you can acquire one from any club officer.  We hope that our supply will last a few years (they cost us $0.39 each).  The new 2002 member badges are currently in work.

Ted Cochran reports that there currently aren't any equipment issues.  He hopes to get the first newsletter of the year out in either February or March.  He will be asking people to write / submit stuff for the newsletters!

A motion was made by Ted Cochran, seconded by Jeff Hove, and passed by unanimous consent.  It was:  "Resolved, that any person maintaining the official MASA web site (webmaster) be reimbursed for any personal expenses incurred in carrying out that activity, or alternatively, at the sole discretion of the webmaster, be designated RSO for all shifts for all MASA launches."

**Reminder, it's time to pay your 2002 dues!  You can pay them at a meeting or launch, or mail them in.**[**Click here for more info.**](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cjoinmasa.htm)



Alan Estenson brought in a scratchbuilt rocket called "da beast".  It was completely made from "found" materials with no out of pocket cost.  It will fly on D or E motors.  [It's on the table in the center of the above photo.]

For the meeting activity, Jeff Hove spearheaded a discussion on scratchbuilding rockets at little cost using essentially "scrap" parts not intended for rockets.  He talked about where to find good tubes, how to make tubes, centering rings, fins... what to use for shock cords, parachutes, launch lugs, etc.  Jeff has made some nice rockets completely from cardboard at pretty much no cost.  Jeff and other meeting attendees brought along piles of supplies for creating rockets from these "found" parts.  The scavenging / building / bull session lasted until nearly 9 o'clock.

Thanks Jeff! *(Alan Estenson)*

**March 2002 Meeting Minutes (3/21/2002)**

The March 2002 MASA meeting was held on the 19th at the Science Museum.  This meeting was held two weeks later than normal, and, for an added change of scenery, we were in a different room.  Club President Alan Estenson got things rolling at the customary time of 10 minutes past 7pm.  Another good group (two dozen or so) was on hand for the evening's fun.

**Upcoming events:**

* The next meeting will be on April 2.  We will be reviewing the [Minnesota Rocket League](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Coreports%5Creports%5Cor-010.htm) entries.
* The next launch is scheduled for March 23 at the White Bear Lake field.  Setup at 8:30, launching starts at 9am and ends by noon.

**Announcements:**

* New MASA badges have been mailed out to everyone who has renewed for 2002.  Thanks to Dave Fergus for doing the printing and mailing; thanks to Rick Vatsaas for this year's design.  If you've renewed or joined just recently, your badges will be mailed to you.
* New badgeholders are available for your spiffy new badges.  You can get one from any MASA officer.  Remember, members are encouraged to wear their badges to club events.
* The first issue of the MASA Planet newsletter is available on the web site, and it has been mailed out to those needing a paper copy.  Kudos to Ted Cochran for his first issue as editor.
	+ Ted reminds everybody that the deadline for submissions for the next issue is April 15.  He really, really wants to see you contribute!
	+ If you're receiving a paper copy in the mail and you don't really need one (if you're downloading the file also), please let us know.  Each printed copy of the newsletter that gets mailed out costs the club $1.
* MASA's NAR section renewal is in place - keeping us legal into 2003.
* MASA has agreed to potentially host some flights for the [Team America](http://www.nar.org/TAchallenge.html) competition next fall or winter.

**Also:**

* Jeff Hove reported on the flights of "found parts" rockets at the February launch.
* Ellison Lenz reported that he donated the Handbook of Model Rocketry received at the January meeting to the Roseville Area High School Library.

**Show'n Off:**

* Mark Thell brought in his NCR Bomarc.  He reports that it was a 3-year project, and that he didn't enjoy the vacuuform bits at all.
* David Fergus had his [X-File](http://www.aeroconsystems.com/descon/descon10/desconX_Xfile/xfile.htm) (kitbashed Estes Gemini DC) that is his entry into RMR DesCon X.  He also brought along his 2X upscale Big Bertha.  Built from PML parts, Dave plans to use it for his level 1 high power certification.
* Art Gibbens brought along a rocket that was given to him by one of his fellow bus-riders.  Art also brought along his Toblerone rocket.
* Philip Gibbens  showed us his Estes Menace rocket that he has been building.  Philip won this kit at the 2001 MASA picnic.  Looks good, Philip!
* John Carlson brought in two different Redstone's that he is scratchbuilding .
* Ellison Lenz had his new LOC Norad, and talked about putting an H motor in it.
* Leland Cheng showed us some nice craftsmanship with his Estes Mercury Redstone and Maxi Honest John.
* Rick Vatsaas "unboxed" his newest sci-fi creation - created around a plastic toy bowling pin.  [It had one of Rick's infamous long, complicated names which I didn't attempt to write down.]

**Topic:**

For the meeting's topic, Alan talked about the volunteer range officers (RSO and LCO) at MASA launches.  Their duties and responsibilities were discussed, as well as how members can help the club by volunteering for these vital positions.

A PDF version of Alan's RSO/LCO checklists may be downloaded from the [Tech](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Ctech.htm) page.  [If you weren't at the meeting, I encourage you to download and read these checklists - *Alan*]

**Reminder, it's time to pay your 2002 dues!  You can pay them at a meeting or launch, or mail them in.**[**Click here for more info.**](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cjoinmasa.htm)

*(Alan Estenson)*

**April 2002 Meeting Minutes (4/4/2002)**

The April 2002 MASA meeting was held on the 2nd at the Science Museum. Arriving only two weeks after the (delayed) March meeting, a smaller crowd was on hand.

**Upcoming events:**

* The next meeting will be on May 7.
* The next launch is scheduled for April 27 at the Elk River / Otsego field.  The theme will be "Oddrocs"

**Announcements:**

* The deadline for submissions for the next issue of the MASA Planet is April 15.  Editor Ted Cochran welcomes all of your contributions.  If he doesn't have room for them in this issue, he'll save them for the next one!
* If you have anything that you'd like to list on the web site's Swap -n- Sell page, just send it to Alan
* The March launch was a success with 92 flights taking to the skies.
* Photos from the February & March launches are now on the web site.
* Discover Aviation Days at the Anoka County airport has been canceled for this year.  This raises the possibility of moving the May launch forward a week, so it isn't on Memorial Day weekend.
* We may change the May meeting topic.  The planned topic of building rockets to fulfill the Minnesota Rocket League challenge is probably too much for our meeting time.

**Show'n Off:**

* Ted Cochran brought along "Streaming Broadband" - a rocket where the body tube is also the recovery streamer.  A plan for it will be appearing in the MASA Planet.
* Stuart Lenz had a scratchbuilt rocket with tubular fins and lots of transitions.  It has 3 24mm motor mounts.
* Ellison Lenz had a scratchbuilt rocket made from "found parts" with a 24mm motor mount and tubular fins.
* David Fergus had two rockets built for the Minnesota Rocket League challenge.

**Topic:**

Ted Cochran convened the meeting attendees as a Design Review Board.  He distributed the design packets sent in by teams competing in the Minnesota Rocket League.  MASA members looked through the packets, writing down praise and suggestions for the teams.

*(Alan Estenson)*

**May 2002 Meeting Minutes (5/9/2002)**

The May 2002 MASA meeting was held on the 7th at the Science Museum.  A good-sized group was on hand.

**Upcoming events:**

* The next meeting will be on June 4.  The topic will be altitude tracking.  Ted and Seth Cochran have volunteered to lead the discussion.
* The next launch is scheduled for May 18 at the sod farm in Blaine.  The theme will be "Fly the Red, White, and Blue".  The fun event will be a  Big Daddy drag race.  The fun contest will be B engine streamer duration (NARTREK Bronze flight).  Also, Mark Thell has promised to bring along a dozen eggs, so be sure to bring along your egglofters!

**Announcements:**

* The summer picnic will be held on July 20.  Serious planning for this event will happen at the June meeting.  Once again, volunteers will be needed to help!
* A new issue of the MASA Planet newsletter is now out.  The deadline for the next issue is June 15; all MASA members are encouraged to submit things to Ted.
* "Thank you" plaques have been purchased for the VFW and sod farm.  They will be presented to them in the near future.
* The "Oddrocs" theme has been rescheduled for the June launch.
* Ellison Lenz has donated a copy of The Handbook of Model Rocketry (provided by MASA) to the Roseville Area High School Library.

**Show'n Off:**

* Ted Cochran brought a long his new Estes Maxi Honest John, painted in an orange test round pattern, and a newly-completed Quest Navaho.
* Leland Cheng had one of the new Estes Maxi V2's.  His first attempt at airbrushing produced a nice camouflage pattern.
* Several other creations were displayed including a nice Aerotech Mustang and a scratchbuilt rocket that has flown on E9's.

**Topic:**

Alan Estenson talked about the [NARTREK](http://www.nar.org/nartrek) program of building rocket skills.  He is promoting it through the [MASA NARTREK Bronze Challenge](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cnews%5C2002%5C2002-02.htm).  Handouts were provided describing this program.  An informal building session went on in the background as people worked on rockets for the Bronze-level flights.

*(Alan Estenson)*

**June 2002 Meeting Minutes (6/4/2002)**

The June 2002 MASA meeting was held on the 4th at the Science Museum.  A good-sized group (more than 14) was on hand.

**Upcoming events:**

* There is not a regular club meeting in July.  We have the club picnic instead on July 20.  See below and elsewhere on the web site for details
* The next launch is scheduled for June 22 at the sod farm in Blaine.  The theme is "oddrocs."  The special events are a Fat Boy drag race and NARTREK Bronze D flights.  Ted cannot make it to this launch.  If you can help haul some of the gear up to the launch field, please let us know!

**Announcements:**

* July picnic.  After some discussion, those present voted to hold the club picnic at the VFW soccer fields / launch site up near Elk River.  We will be able to launch rockets before & after the picnic.  It was decided not to have a raffle this year.  Details will be posted on the web site.  Volunteers will be needed!
* The deadline for the next issue of the Planet is June 15.  Ted welcomes all submissions for this and future issues!
* The May launch was a success with 181 flights.
* On behalf of MASA, Alan Estenson presented sod farm owner Steve Fricke with a "thank you" plaque.
* Similarly, Dave Fergus presented Tom Nichols of the VFW with a "thank you" plaque.
* The web site welcomes any submissions for the [Swap -n- Sell](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cswapsell.htm) page.
* No one has submitted any nominations yet for the [2002 Prang Awards](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cmassyawards.htm)!
* Jeff Hove donated a (MASA purchased) copy of the Handbook of Model Rocketry to science teacher Sue Fornier at Cleveland Quality Middle School in St. Paul.  Jeff is also helping her class launch rockets.
* Seth Cochran took possession of another (MASA purchased) copy of the Handbook with promises to donate it someplace appropriate.
* Ted Cochran showed the nice trophy that MASA purchased / donated for the Minnesota Rocket League competition.
* Ellison Lenz reminded everyone that he is accepting "junkyard rockets" donations in preparation for the October meeting.
* A Scout group in the Eden Prairie area is looking for assistance in building and launching rockets.  If you would be willing to volunteer some time to help them, please contact Alan.

**Show'n Off:**

* Leland Cheng brought along his bright orange PML Endeavour.  He recently successfully certified level 1 with it at the Tripoli Southern Minnesota launch.  Congratulations!
* Ted Cochran brought along his NARTREK Bronze certificate and patch along with his NARTREK Silver packet.
* Alan Estenson had the Estes Searcher that he built back in 8th grade science class.  He also had his brand new Maxi Searcher scratchbuilt upscale version.

**Topic:**

Ted Cochran spoke about the different ways of measuring altitude without having an onboard electronic altimeter.  He spoke of tracking from the ground with theodolites.  (The Estes Altitrak is a simple example.)  By knowing baselines and measuring azimuth and elevation angles, you can pretty accurately determine the altitude of a rocket flight.  [A PDF version of Ted's presentation is available for download from the [Tech](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Ctech.htm) page.]  Thanks Ted!



   

*(Alan Estenson)*

**MASA summer picnic (7/22/2002)**

**A really hot time (again and again!)...**

MASA members gathered on Saturday, July 20, at the [Elk River & Rogers VFW post](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Celkriver.htm)  for the [5th annual MASA summer picnic](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cnews%5C2002%5C2002-03.htm).  Just like the past two years, the weather was very hot and humid.  People started arriving around 3 pm to make use of the launch field before the picnic officially began.  The crowds started to grow around 5, and the grilling started not long after.  By one count, 51 people were present!  This makes it by far the biggest MASA picnic ever held, and almost twice as big as last year.  The event wound down as dusk approached.

The site was the VFW soccer complex where occasional MASA launches are held.  The VFW kindly let us use their grill, tables and chairs, and picnic shelter.  Many people brought their lawn chairs and shade canopies, setting them up on the grass.  There was rocket flying, eating, and a lot of socializing.

By coincidence, this day marked the 33rd anniversary of the Apollo 11 lunar landing.  (July 20, 1969).

**Launchin!**

Making use of the soccer fields, this was an official club launch, and people set up their equipment in a relaxed misfire alley style.  Using flight cards to record stats, the first launch took place not long after 3 pm and the last launch was around 8:30 pm.  70 recorded flights took to the skies.  While it was gusty during the early hours, the wind died down completely by about 7 pm.

Read the [Launch report](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Clreports%5C2002%5C2002-05.htm) for the other side of this story.

**Swappin'!**

As is traditional, the picnic also was the occasion of the MASA swap -n- sell meet.  A number of rocket items changed hands during the evening.

**Lots of prizes!**

Just after 7pm, club president Alan Estenson drew for the free "door" prizes.  Here's the rundown:  (name in parentheses is the person or business that donated the prize.)

"Next Generation Prizes" - this drawing was for ages 12 and under.  All prizes were donated by Ted and Ann Nolen except for the Big Bertha, which was donated by Todd Carpenter.  [Thanks!]

[apologies for misspelled names]

* Estes Alpha III kits - Caitlin Bright, Dylan Berthiaume, Christian Vatsaas, Miranda Lawell, C[unreadable] Nolen
* Estes Wizard kits - Kayla Dufner, Brian Fergus, Mikey Downham, Hannah Gibbens, Kyle Bright
* Quest A6-4 2-engine packs - Amy Whitaker, Ingrid Vatsaas, Philip Gibbens, Seth Cochran, Travis Lawell, Moriah Cheney
* Estes Big Bertha kit - Ian Galchatt

All ages prizes:

* Seth Cochran - NAR ball cap (donated by MASA)
* Kayla Dufner - Official Lockheed-Martin ball cap (donated by Rick Vatsaas)
* Russ Durkee - Outdoor first aid kit (donated by Alan Estenson)
* Dan Nolen - Rockets of the World [autographed!] (donated by Ted Cochran)
* Moriah Cheney - pack of B6-4 engines (donated by MASA)
* Renee Gibbens - pack of D12-5 engines (donated by MASA)
* Glen Overby - Estes Comanche-3 rocket kit (donated by MASA)
* Mike Erpelding - Estes Nemesis rocket kit (donated by MASA)
* Hugh Hansen - Estes Nova Payloader rocket kit (donated by MASA)
* Craig Hansen - KosRox Streadur rocket kit - ULTRA RARE!!! (donated by MASA)
* Dave Fergus - pack of C11-3 engines (donated by Hub Hobby Center)
* Mark Thell - Custom Fiesta rocket kit (donated by Hub Hobby Center)
* Philip Gibbens - Custom Venture rocket kit (donated by Hub Hobby Center)
* Elliot Carpenter - Custom Ion Pulsar rocket kit (donated by Hub Hobby Center)
* Art Gibbens - Estes Cosmic Cobra rocket kit (donated by Hub Hobby Center)
* Rick Vatsaas - Quest Lightning rocket kit (donated by Hub Hobby Center)
* Mikey Downham - Quest Nike Smoke rocket kit (donated by Hub Hobby Center)
* Cheryl Vatsaas - Quest Quasar rocket kit (donated by Hub Hobby Center)
* Cindy Whitaker - Edmonds Geminee boost glider kit (donated by Hub Hobby Center)
* Jeff Hove - ASP RAM B rocket kit (donated by Hub Hobby Center)
* Debbie Lawell - ASP Micro Jayhawk rocket kit (donated by Hub Hobby Center)
* Austin Whitaker - ASP Micro WAC Corporal rocket kit (donated by Hub Hobby Center)
* Tom Lawell - surprise bag, Droid Fighter kit (donated by Hub Hobby Center)
* Joel Henry - surprise bag, MicroMaxx set (donated by Hub Hobby Center)
* David Whitaker - surprise bag, pack of Aerotech F21 motors (donated by Hub Hobby Center)
* Daryl Thayer - surprise bag, 8 assorted Estes motors (donated by Hub Hobby Center)
* Ann Nolen - surprise bag, MicroMaxx set (donated by Hub Hobby Center)

Some of the rocket kit prizes were built and took to the air before the end of the evening!

**A big "Thank You!" to:**

* Everyone who participated!
* Art Gibbens for serving as Fabulous Grill Meister for the 3rd year in a row!
* Rick Vatsaas for bringing condiments
* Glen Overby, Ted & Ann Nolen for bringing beverages
* The Lawell family for the water-rocket-melon
* Ellison Lenz & Mike Erpelding for helping with the launch range
* Everyone who helped set up and pick up.

*(Alan Estenson)*

**August 2002 Meeting Minutes (8/8/2002)**

The August 2002 MASA meeting was held on the 6th at the Science Museum.  About 14 people attended.

**Upcoming events:**

* The September meeting is on the 3rd.  The topic will be computer software for analyzing rocket stability and predicting flight performance.
* The next launch is scheduled for August 24 at the sod farm in Blaine.  The theme is multi-stage rockets.  The special events will be the 4th Annual Great UFO Drag Race and also a Comanche-3 drag race, if there is sufficient interest.  For those working on their NARTREK Bronze, this will be a great opportunity to make your 2-stage flight.  If someone volunteers to organize it, we could also have a fun MicroMaxx duration contest.

**Announcements:**

* Since the last meeting, the club has had four successful launches and the summer picnic.
* The submissions deadline for the next issue of the Planet is August 15.
* Lots of new photos on the web site.  Also, new swap -n- sell stuff.
* Still looking for Prang award nominations from club launches during the first half of this year.
* MASA members Mike Erpelding and Glen Overby are attending NARAM in Texas.
* Despite current rumors, the sod farm in Blaine has not been sold.  We can all see the development moving northward, and it's probably a question of when it will be developed, not if.
* A discussion was made of misfire alley launch ranges and their benefits.
* The November meeting date will probably change to either the first or second Monday.

**Show'n Off:**

* Alan Estenson showed his modified Holverson Wicked Winnie with Rocketronics altimeter in the payload bay.  Alan also brought his Vaughn Brothers Extreme 29 minimum diameter rocket.
* Ellison Lenz brought in his LOC Norad - freshly retrieved from a tree.
* Seth Cochran showed us his Edmonds Deltie Airshow.  It boosts 3 Deltie gliders at once.

**Topic:**

Alan Estenson and Ted Cochran talked about the basics of Quest MicroMaxx (MM) rockets and how to scratchbuild rockets for those tiny engines using inexpensive stuff.

MicroMaxx starter sets, rockets, and engines may be found at hobby stores, toy stores, and mass-merchandisers.

Some links:

* [Aerospace Specialty Products](http://www.asp-rocketry.com/micromaxximage2.html) - sells scale kits for MM, tubing, couplers, nose cones
* [Nano Rocketry](http://www.nerys.com/nanorocketry/) - sells MM kits
* [QCR](http://www.cybertravelog.com/qcr/MicroMaxx.html) - sells MM kits
* [Totally Tubular](http://www.buyrockets.com/buyrockets/tt.html) - sells tubing for MM
* [Art Applewhite](http://www.artapplewhite.com/) - sells MM flying saucer kits and a MM pen rocket kit

*(Alan Estenson)*

**September 2002 Meeting Minutes (9/5/2002)**

The September 2002 MASA meeting was held on the 3rd at the Science Museum.

**Upcoming events:**

* The October meeting is scheduled for the 1st.  However, we just realized that there is a Wild game that night.  The meeting date will be changed - probably to 10/8.  The topic will be "Building challenge - Junkyard Rockets" organized by Ellison Lenz.  More information will be sent out prior to that event.  The meeting may start a little early to allow more building time.
* The next launch is scheduled for September 28 at Blaine.  There will be an Alpha drag race and possibly a Venus Probe / ExoSkell drag race.  Mike Erpelding has volunteered to run a B parachute duration contest.  Info on the contest will be emailed out to MASA members.  This launch will be run as a "hybrid misfire alley".  Only a 6-pad system will be provided; everyone is encourage to bring their own launch pad and controller.

**Announcements:**

* A new issue of the Planet newsletter just came out.
* The submissions deadline for the next issue of the Planet is October 15.
* Everyone present at the meeting filled out a survey about the Planet newsletter.  In exchange, they were able to put their name in a drawing.  Lee Frisvold won the drawing - a brand new Estes Orbital Transport kit!
* There are photos from the August launch up on the web site.
* A short discussion was held on launch etiquette.  We all need to remember to be friendly, helpful, and courteous to other members and visitors.  Not everyone appreciates jabbing comments or our typically skewed style of MASA humor.
* The November meeting date will probably change to either the 4th or 11th.
* A November meeting topic is needed!
* Start thinking about officer nominations for 2003
* Start thinking about the December holiday party (we need a new location for it!)
* Estes is going to do another production run of their Saturn V kit this fall.
* NASA Astronaut Lt. Col [USAF] Duane Carey will be giving a public lecture at the University of Minnesota, Institute of Technology, at 6 pm on October 25 at the McNamara Alumni Center.

**Show'n Off:**

* Alan Estenson showed his rear ejection "I.P.F.I. Corrigan".  It was kit-bashed from an Estes Sizzler.  It has flown once (successfully) on a C5-3.
* Ted Cochran brought his newly constructed Orbital Transport.
* Lee Frisvold showed us his Public Enemy V2.  It lead to a discussion of the flying qualities of different V2 kits.
* David Whitaker brought along his LOC Viper III.  He has flown it successfully on clusters of three D12's and three E9's.

**Topic:**

Alan Estenson, Ted Cochran, and others in attendance talked about various computer software packages for designing, analyzing, and simulating rockets.  Thanks to Ted for bringing along his laptop and projector.

Some links and notes (not an exhaustive list!):

VCP – Visual Center of Pressure (freeware)
Calculates center of pressure location for “standard” types of rocket configurations.  Can handle transitions and up through 8 fins in a group (trapezoidal, elliptical, ring tail)  Can also print fin patterns, alignment guides, shroud templates.  <http://www.missileworks.com/VCP.htm>

  WRASP – Windows Rocket Altitude Simulation Program (freeware)
Windows version of the classic program for simulating rocket flight.  <http://ourworld.compuserve.com/homepages/CGibke/wrasp.htm>

 RockSim (commercial - $95, free reduced capability demo)
“Construct” a model rocket on screen.  Continuously analyze CP and CG location.  Simulate flights.  Very powerful program.  <http://www.apogeerockets.com/rocksim.asp>

 SpaceCAD (commercial - $34.95, free reduced capability demo)
Model rocket design, analysis, and flight simulation)  <http://www.spacecad.com/>

 AeroDRAG – calculates and predicts rocket drag coefficients (commercial - $20)
<http://www.aerorocket.com/aerodrag.html>

 AeroCP – calculates center of pressure location (commercial - $10)
<http://www.aerorocket.com/aerocp.html>

 AeroCFD – model rocket computational fluid dynamics program (commercial - $65)
[http//www.aerorocket.com/aerocfd.html](http://www.aerorocket.com/aerocfd.html)

FinSim - fin analysis program that can load info from RockSim files (commercial - $10)
[http//www.aerorocket.com/finsim.html](http://www.aerorocket.com/finsim.html)

Rockets3 – design and test rockets on screen (commercial - $60)
<http://tentwentyone.com/rocketry/rocket-designer.html>

ParaCalc – helps you choose parachute size (freeware?)
<http://www.angelfire.com/co/m2rules/paracalc.html>

WinSim – rocket analysis and simulation program (commercial - $?)
<http://www.telusplanet.net/public/ucluelet/>

Rocketry Software and On-Line Calculators
[http//www.liars.org/Misc/Software.htm](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cmreports%5C2002%5Chttp%5Cwww.liars.org%5CMisc%5CSoftware.htm)

Rocketry.Org's Software List
[http//www.rocketry.org/software/](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cmreports%5C2002%5Chttp%5Cwww.rocketry.org%5Csoftware%5C)

Amateur Rocketry Links Library
[http//users.cybercity.dk/~dko7904/software.htm](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cmreports%5C2002%5Chttp%5Cusers.cybercity.dk%5C~dko7904%5Csoftware.htm)

[http//mks.niobrara.com/altitude.html](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cmreports%5C2002%5Chttp%5Cmks.niobrara.com%5Caltitude.html)

*(Alan Estenson)*

**October 2002 Meeting Minutes (10/10/2002)**

The October 2002 MASA meeting was held on the 8th at the Science Museum.

**Upcoming events:**

* The November meeting is scheduled for **Monday the 4th** (our normal date, Tuesday the 5th, is election day).  No topic has been set at this time.  Official club business will include opening the nominations for 2003 MASA officers.
* The next launch is scheduled for October 26 at Blaine.  There will be a "missile" drag race.  The theme is clusters.  This launch will be run as a "hybrid misfire alley".  A 4 or 8 pad system will be provided; everyone is encourage to bring their own launch pad and controller.

**Announcements:**

* The submissions deadline for the next issue of the Planet is October 15.
* A teacher and group of students from North High School in North St. Paul joined us for the meeting.  They will be participating in the Team America Rocket Challenge.  They are looking for one or more experienced rocketeers to act as mentors to their group.  If you're interested, contact Alan.  More information will be sent out to MASA members soon.
* Anyone willing to lead a topic at the November meeting, or just with a good idea, please speak up!
* Alan has designed new MASA flight cards.  They will be made available on the web site soon.
* Details about the MASA officer positions and how to nominate someone will be sent out via email.
* Ken Hoyme has graciously volunteered to host the club's December holiday party at his home in Plymouth.  The date will be Saturday, December 14.

**Topic:**

Ellison & Stuart Lenz organized a Junkyard Rocket building challenge as the meeting's activity.  Ellison had been collecting "junk" rockets and parts all year, and he had a large storage container full.  MASA members and the visiting high school students broke up into four teams of 3 people.  Using only parts from the "junkyard", each team had to build a rocket that would carry and eject a "standard payload with streamer" while using motors that would stay under a specified total impulse limit.  All construction had to be completed by meeting's end, and all of the rockets were then impounded by the judges.  The teams will fly their rockets at the October launch and compete for prizes.  Some very interesting creations resulted from this challenge.

There were lots of parts left over, so Ellison hopes that this becomes an annual event.  Big thanks to Ellison and Stuart; it was lots of fun!

  

  

  

photos by Stuart Lenz & Alan Estenson

*(Alan Estenson)*

**November 2002 Meeting Minutes (11/5/2002)**

The November 2002 MASA meeting was held on the 4th at the Science Museum.

**Upcoming events:**

* The annual MASA holiday party is scheduled for Saturday, December 14 at the Ken Hoyme residence in Plymouth.  Details will be announced on the web site.
* The next launch is scheduled for November 23 at Elk River.  Lee Frisvold will be the launch director.  The traditional 8-pad rack (using signup sheets) will be used.  (NO misfire alley.)

**Announcements:**

* The winners of the Junkyard Rockets competition were announced:  Jeff Hove won a Sam-X kit for his 2nd place finish.  The team of Ted & Seth Cochran and Alan Estenson won a Orbital Transport kit for their 1st place finish.  Thanks to Ellison & Stuart Lenz for organizing it!
* The deadline for the next issue of the MASA Planet is December 15.

**2003 Officer Nominations:**

* [Have their own page](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Cnews%5C2002%5C2002-04.htm)

**Show'n Off:**

* Ted Cochran brought the rocket that he designed, built & flew for the NARTREK Gold level.  He described the experience and his results.
* David Whitaker brought the Aerotech Sumo that he used to certify level 1 at the October launch.  He remarked that he didn't care for the piston design.
* Stuart Lenz had a scratchbuilt recreation of a Centuri UFO Invader.  Very neat looking rocket.
* Ed Eastman brought his scratchbuilt "XF-52 Space Superiority Fighter"
* Tom Lawell showed his new LOC Graduator complete with lots and lots of white vinyl stick-on stars.
* Alan Estenson showed how he added fins to an existing large tube-fin rocket to improve its flight characteristics.

*(Alan Estenson)*

**December 2002 Holiday Party (12/18/2002)**

On Saturday evening, December 14, many MASA members and their families gathered at the residence of the Hoyme family for the annual club holiday party.  Talk filled the air while snacks filled the stomachs. Cards (and rockets) were signed.  Ken's home theater was admired.

One of the evening's activities was a fun gift exchange.  Going in order of drawn numbers, each person could unwrap a gift or steal someone else's gift.  As in previous years, lots of things got swapped around with a book about the Apollo program being the hot item.

Later in the evening, MASA President Alan Estenson had a program of year-in-review, presentations, and awards.

This year, MASA had 11 official club launches ([click here for all the stats](file:///C%3A%5CUsers%5CCarol%5CDesktop%5CMASA%20Club%20and%20website%20info%5CWebsite%20-%20old%20files%20from%20Alan%5Cmasa%5Clreports%5Claunchstats.htm)) with 1,161 flights for the year.  MASA also had 10 successful meetings and a huge summer picnic.

Alan thanked everyone who organized or presented a meeting topic this year:  Jeff Hove, Ted Cochran, Stuart and Ellison Lenz.  Thanks were also extended to Jeff Hove, Mike Erpelding, and Ellison & Stuart Lenz who each organized a contest at a launch this year.  Other notables were:  Ted Cochran for all his hard work as editor of the Planet newsletter and Lee Frisvold for serving as launch director for November.

A round of applause was raised for the three outgoing MASA officers:  President Alan Estenson, Vice President Ted Cochran, and Secretary/Treasurer David Fergus.

The critical volunteers at every launch are those people who give up some of their time to serve as LCO or RSO.  Without them, the launches couldn't happen, so a big Thank You goes out to all of them.  The LCO volunteers this year included:  Alan Estenson, Rick Vatsaas, Ted Cochran, Mark Thell, Ellison Lenz, Stuart Lenz, Walter Kjellander, Glen Overby, Lee Grimm, Ed Eastman, Leland Cheng, Art Gibbens, Mike Erpelding, Kerry Hodges, David Whitaker, and Neal Higgins.  The RSO volunteers this year included:  Rick Vatsaas, Alan Estenson, Ted Cochran, Steve Hum, Steve Robb, Dave Leininger, Walter Kjellander, Lee Frisvold, Dave Fergus, Ellison Lenz, Stuart Lenz, Glen Overby, and Mark Thell.  At the July launch, Steve Hum pulled RSO duty all day!  Thanks everyone!  (I hope that you as well as other members will volunteer in 2003!)

As an additional thank you to these people, Alan put each of their names in a drawing once for each time they had volunteered this year.  Unlike the door prizes, these people didn't need to be present to win.  The winners of the RSO/LCO "thank you" drawing were:

* Mark Thell - Custom Tri-Star kit
* Rick Vatsaas - pack of C6-5's
* Ted Cochran - Neubauer Micro Saturn 1B kit
* Stuart Lenz - ASP FOTL kit

There were two level 1 high power certifications this year at MASA launches:  Neal Higgins and David Whitaker.  Dave Fergus and Leland Cheng also achieved certifications while flying at the Minnesota Tripoli launches.

Mike Erpelding and Glen Overby represented MASA at NARAM down in Texas.  Mike also attended the Midwest Regional Contest in Wisconsin.

This year, many MASA members participated in the NARTREK program.  Completing the NARTREK Bronze were Ted Cochran, Alan Estenson, Mike Erpelding, Joe Schneider, David Whitaker, Ken Hoyme, and Stuart Lenz.  Ted Cochran also went on to complete the Silver and Gold levels!

**2002 MASSY Awards**

In grand MASA tradition, President Alan Estenson created this year's awards in a particularly inspired session of lunacy.  Recipients were given a lovely paper certificate suitable for framing (or wiping glue off their fingers).  As usual, most of the awards were rather "tongue in cheek".

* **The "Ambition Award" - Leland Cheng:  Flew his first "E" motor from the snow, had his L2 cert by mid summer!**
* **The "Flying Brick Award" - Ted Cochran:  For making an Estes Masters Series Space Shuttle actually fly well!**
* **The "Flying Lumberyard Awards" - Steve Hum and David Whitaker:  For their ECEE Thunder rocket glider flights.**

New members of the Ballistic Fenceposting Club:  John Stenberg, Derek Lynch, Dave Lynch, Ryan Schwartz, Joe Schneider, Ed Eastman, Stuart Lenz

[From 2001, charter members of the "Ballistic Fenceposting" Club:  Alan Estenson, Kent Peterson, Mike Kutzke, Tim Bush, Mollie Frisvold, John Carlson, Randy Miller, Ted Cochran, Josh Handeland, Philip Gibbens, Art Gibbens, Lee Grimm, Dave Fergus, Steve Hum, Ellison Lenz]

**2001 MASA Prang Awards**

**The "Percussion" Award - Jeff Hove:  For his CATO of an ancient C motor in a Stomp rocket during the summer picnic.**

**Prang Award - "Dishonorable Mention": Alan Estenson for his "More Gopher Holes" and "Super Duper V2" flights.**

**Alan Estenson's "More Gopher Holes" on an E9-6**
"I launched it on an E9-6 for 1st flight. It went straight up 150 feet, then took a hard right turn, flew horizontal and did a javelin impression right into the drainage ditch. When it ejected, it threw the back half up onto the bank, but the front half was completely submerged. Had to pull hard on the shockcord to yank it out of the muck. Postmortem showed that the tube had kinked hard over, right in front of the tube fins. Was bt-55 that I bought from ASP. Must have had a \_really\_ weak spot. Was wet, green, smelly, muddy, and mortally wounded, so I gave it away." - nominated by Larry Schwartz & Stuart Lenz

**Alan Estenson's "Super Duper V2" on a D12-3**
"I nominate ALAN ESTENSON's V2 Flight. After a completely normal countdown and ignition, the rocket took a hard turn and went into cruise missile mode directly towards the crowd, coming to a rest about 5 feet from the LCO. It then proceeded to provide wonderful up-close-and-personal display of the ejection sequence for those (un)lucky enough to have a ring side seat." - nominated by Steve Hum
"I also nominate Alan's purple V-2 launch for the prang award, I was standing right behind the LCO with the deer in the headlight look as well, it was quite amusing." - John Carlson

**Prang Award of the 3rd Order:  Martin Dietl's "The Launch Pad" Exocet MM-40 on two E15's**

"Martin Dietl wanted to fly his Exocet MM-40 on a cluster of two E15s using copperheads. We gave it the best chance we could - Glen lent him a clipwhip made out of jumper cables (OK, lamp cord, but at least we're not talking bell wire here). I lent him Thumper, which has lit 7 AP motors before (albeit not with copperheads). Thumper did its part, and both igniters fired. Unfortunately, one of them got spit. The other motor lit, and vectored thrust led to a very scale-like flight trajectory. Alas, the full size Exocet flies horizontally. The model Exocet did work up a little spin, but that served only to increase the realism of the flight profile. It did its programmed pop-up maneuver and acquired a target before entering terminal flight. Ellison Lenz (who, whether he knew it or not, was playing the role of signal officer on the HMS Sheffield) watched the impact, and then the ejection (the ejection charges on both charges blew, to add to the overall excitement. Fortunately, the second motor's AP didn't burn from the top down, which sometimes happens). The only factor that detracts from the nomination is that the rocket was not completely destroyed--indeed, with a new section of BT and some motor mount repairs, it will likely fly again (hopefully not on copperheads!)." - nominated by Ted Cochran

**Prang Award of the 2nd Order:  Mollie Frisvold's 2-stage Fat Boy on D12-0 to C6-5**

"It had a little problem getting off the launch rod, so it decided to take the launch pad with it. First time I ever saw a lunch pad actually get off the ground! The launch pad then fell over and unfortunately the rocket successfully staged. The second stage was still stuck on the launch pad (good thing) laying on it side. It just sat and burned there until ejection." - nominated by Ron Hammer
"Lee Frisvold with his "Don't forget the launch pad" flight of his two stage Fatboy that brought along the pad for good measure, albeit for only about a foot before ramming the ground." - Rick Vatsaas

**Prang Award of the 1st Order: Stuart & Ellison Lenz.  On numerous occasions, this father-son duo set lofty new MASA standards for unstable, underpowered flights and the creation of impressive debris fields.**

* **Stuart Lenz' modified 2-stage ARV Condor on B6-0 to A8-5**
"Stuart Lenz gets first place in my personal prang award competition, for his Estes ARV Condor modified for two stage (!) flight. It was seriously underpowered on a B6-0 (My Condor--without the booster--is marginal on a B6-2) and it started arcing over at about 80 feet. It then (unfortunately) successfully staged, and the A8-5 drove it right into the ground before ejecting. Pieces flipped all over--glider nosecones, glider bodies, pod parts--but it looked surprisingly repairable." - nominated by Ted Cochran
"I wasn't happy with it when I looked at it before it flew. Next time, something like this goes to the away cell on the other side of the first irrigation ditch." - seconded by Glen Overby
"I second the prang nomination on the full power ARV Condor impact and impressive debris field. It looked like Roswell all over again." - thirded by Tim Bush
* **Stuart Lenz' Black Cat Turbo Flash (multiple flights)**
"Stuart gets an honorable mention for his Black Cat turbo flash, A converted fireworks fountain, flown as a cone rocket, that was every bit as unstable on a B6-2 as it was on a A8-3." - nominated by Ted Cochran
* **Stuart & Ellison Lenz - various rockets**
"Besides, what would a MASA launch be without a few skywriters? The Lenz family was there, right? The Lenz family may just want to print up a bulk set of decals for their scratch built rockets with the name "Skywriter". They could add I, II, III, IV, etc after them with magic markers. They may be up to MCMXLVII by now. (I'm thinking here of Stuart's D powered tubefin red white and blue rocket, or maybe it was the 3 x A8-3 red white and blue rocket. Or both. And a few last launch, too. Maybe they could get a deal if they ordered those decals at the same time as the "Aw, Chute!" decals (in memory of "With Liberty", for example). They could loan one to Dave Fergus (and a whole lot of other people, too, I think)." - nominated by Ted Cochran

Drawings were held for a huge number of free door prizes.  The winners were:

* Philip Gibbens - Estes Astrosat LSX kit
* Alex Carlson - Estes Exo-Skell kit
* Sarah Fergus - Quest Nike Smoke kit
* John Carlson - Quest Lightning kit
* Kirsten Hoyme - Estes Skywriter kit
* Eliot Carpenter - Estes Banshee kit
* Blayne Carlson - Quest Q-EZ Payloader kit
* Tom Lawell - ASP Micro Corporal kit
* Russ Durkee - Titan Missile Museum T-shirt
* Quinn Carlson - Quest Nike-K kit
* Jeff Hove - Estes Banshee kit
* Matthias Gibbens - Estes Exo-Skell kit
* Susan Fergus - Quest Big Rage kit
* Mollie Frisvold - Estes Astrosat LSX kit
* Sue Carlson - Estes Comanche 3 kit
* David Whitaker - The Launch Pad Anubis kit

A BIG thanks to Hub Hobby Center for donating many of the prizes!  A HUGE thanks to Ken & Julie Hoyme and family for hosting the party this year!  An enormous thanks to everyone who attended!

 *(Alan Estenson)*