

## 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

## FWS (Falling With Style)

By Ray King

This is the 2nd year I entered the EMRR Spaceship Design Contest. Last year, I was fortunate enough to place 1st and thanks to all the MASA member votes I pulled out another 1st this year. This is the brief story of the year long development of the rocket named FWS (Falling with Style) which earned its name on almost every flight, but especially on its very last flight (more about that a little later).

Again, this year my daughter is credited with naming this rocket. I chose to model the EA Kestrel Shuttle (see the picture).

My original plan was to make this a glider recovery and after one of the prototype flights my daughter said it flew like Buzz Light Year. I didn't really understand until she said it really wasn't flying, it was "Falling with Style". So FWS (Falling with Style) was born.

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## RENEW YOUR MASA MEMBERSHIP TODAY

Remember that your 2008 MASA membership expired at the end of last year. To continue your membership in Minnesota's premier rocketry club, renew your membership for 2009 today. For an application, visit: <http://www.mn-rocketry.net/masa/joinmasa.htm>

### 2009 Annual MASA Dues:

- Individual Membership (18 or older) = \$10.00
- Junior Membership (17 or younger) = \$5.00
- Family Membership (maximum of 4) = \$12.00
- Printed newsletter mailed to your home = additional \$6.00

Send your completed application form by regular U.S. mail along with a check (no cash, please) to:

MASA/Rick Vatsaas  
604 Autumn Oaks Court  
Eagan, MN 55123

Please do NOT make your check payable to MASA. Please make checks payable to Rick Vatsaas.



Photos by Ray

The body of the rocket is 2 vacuum-formed shells with balsa wings (or fins). The substructure is BT20 tubes and balsa supports. The rocket is powered by 3 - 18mm engines which provide enough power to lift it to a nice altitude.

I finished the rough design and build in late February and made the first flight around that same time. After roughly about 8 flights I finally got the right amount of nose weight and wing orientation that I decided it was time to build the final version including final paint and finishing. As part of the competition, you need to make 3 flights, so although I had already made 8 flights I wanted to make 3 flights with the final/finished design. The first flight was good, but had a few more twists

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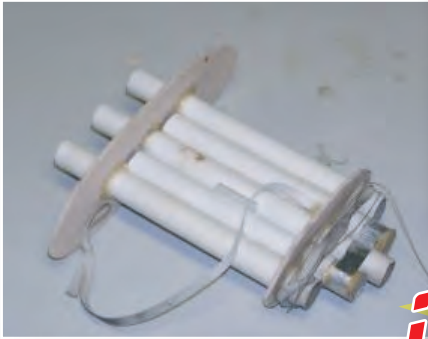
## FWS (Falling With Style)

than I would like. The second flight was the best flight I had seen. I found that the rocket performs better with a little wind. The final flight was also very nice until the ejection charge did not deploy the parachute and the results were devastating. The rocket was totally destroyed; however, with a name like Falling with Style I should have known something like this was inevitable.

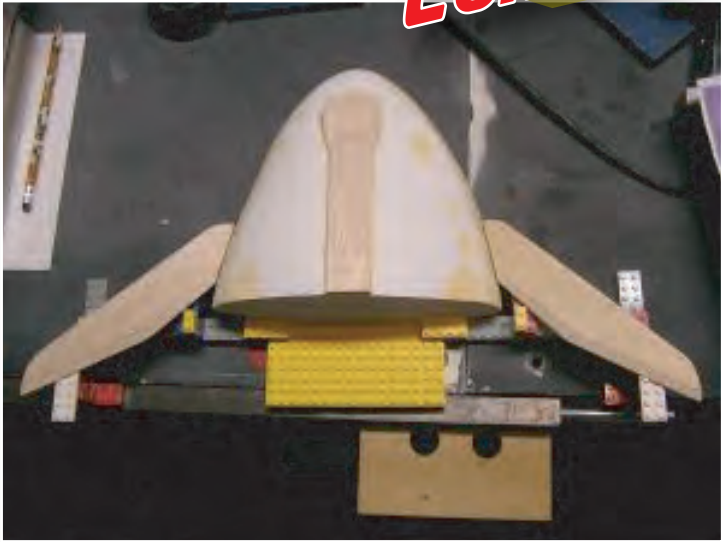
If you are interested in the detailed building instruction as well as a movie of the final 3 flights, visit:

[http://www.rocketreviews.com/reviews/all/design\\_fws.shtml](http://www.rocketreviews.com/reviews/all/design_fws.shtml)

Thanks again to all the MASA members who took the time to vote. 



**CONGRATULATIONS, RAY!**





# Add a Pilot to Your Next Sport Rocket

By Ted Cochran

This winter I was kitbashing an Estes Renegade to make a prize for a contest in an online forum I frequent. It turns out that for this prize, having a monkey pilot would be particularly apropos, so I elected to include a monkey astronaut in the kit.

I checked at Creative Kidstuff to see if they had little plastic monkeys, and low and behold, for a few bucks, you can get a baby chimpanzee from Schleich (<http://schleich.animobil.info/>) that is a nearly perfect fit in the Renegade's BT-60 nose cone. With the key element in hand, the rest was a fun little weekend project.

With a brand new x-acto knife blade, I carefully carved out the windows from the Renegade's nosecone, leaving the window frame in place. Each of the four windows was then replaced with a counterpart cut from .010 clear plastic sheet stock. I also cut the rear bulkhead off of the nose cone. I mounted the monkey on a little plastic sled, along with a control panel and a joystick made from spare plastic parts, and glued that into the nosecone. Voila! Much better than clay nose weight!



## January Meeting Minutes

By Alan Estenson

The January 2009 MASA meeting was held on the 8th at Aero Systems Engineering in Plymouth. A total of 5 people attended the meeting.

Meeting Locations: We discussed various known and potential options for MASA meeting locations for 2009.

Waiver: Our waiver application for the Nowthen sod field site is in progress. The FAA will be issuing it after the new FAR changes take effect in February.

Dues: 2009 dues for new and renewing members may be paid anytime. Dues remain at \$12 family, \$10 individual, and \$5 junior. If you choose to have paper copies of the Planet newsletter mailed to you, we are asking for an additional \$6 to cover printing and postage. (PDF versions of the Planet are always available for download from the MASA web site.)

NARAM Fly-It / Take-It: Remember to build a rocket (or two) this winter to donate for kids to fly and take home with them at NARAM 51.

NSL: Memorial Day weekend in Wisconsin. Road trip!

Show and tell:

Lyle Merdan brought several kits from his to-build pile: Always Saturn V, Zooch Saturn V, Qmodeling WAC Corporal. He also brought some balsa nose cones that he custom turned.

Tim Barr brought his night-flight rocket complete with sequenced flashing LEDs.

A major part of the meeting was spent brainstorming ideas for meetings and launches this year. (Thanks to all who submitted ideas!) If you'd like to volunteer to lead a meeting on any of these ideas, or some other idea that you may have, please speak up!

Potential ideas for meeting topics:

- Finishing/Painting
- Large Model Rockets
- RockSim
- Rocket Gliders
- Junkyard Rockets
- TARC mentoring
- RSO/LCO
- Reloadable Motors
- Competition Basics
- Camroc/Vidroc
- L1/2 High Power Certifications
- How to Prepare for Contests
- Zipperless Construction
- Clustering/Staging
- How to make decals
- UFO building
- Outreach
- Ground Support Equipment
- Electronic Deployment
- NARTREK
- Rocket Locators

Potential ideas for launch themes:

- 40th anniversary of Apollo 11 (July)
- Mars
- Beauty Contests (for rockets)
- Scale Contest
- Oddrocs
- Regional Contest
- MASA Records
- Kitbashing



## February Meeting Minutes

By Alan Estenson

The February 2009 MASA meeting was held on the 5th at the Science Museum. A total of 14 people attended the meeting.

**Next Launch:** The next regular launch will be on Saturday, February 28th at Sunrise Park Middle School in White Bear Lake. This will be a mod-roc launch (max 1 lb).

**Next Meeting:** The date, location, and topic (NARCON review?) of the March meeting will be announced soon. The March, April, and May meetings will NOT be held at the Science Museum.

### Discussions:

Possible MASA display at MarsCon scifi convention in Bloomington. Anyone interested?

**NARAM Fly-It / Take-It:** Remember to build a rocket (or two) this winter to donate for kids to fly and take home with them at NARAM 51.

**NSL:** Memorial Day weekend in Wisconsin. Road trip!

**Dues:** 2009 dues for new and renewing members may be paid anytime. Dues remain at \$12 family, \$10 individual, and \$5 junior. If you choose to have paper copies of the Planet newsletter mailed to you, we are asking for an additional \$6 to cover printing and postage. (PDF versions of the Planet are always available for download from the MASA web site.)

**Badge entries?** The contest for the 2009 MASA badge design is still open. Only a few entries have been received.

Reports from TARC mentors

**FAR changes** are now in effect - model rocket definition goes all the way up to 53 ounces, propellant to 125 grams. No more LMR notifications!

### Show and tell:

Glen Overby had a "sonic rocket locator" - a \$1 door alarm from Harbor Freight. Glen also had a BigRedBee transmitter. Lyle Merdan brought a prototype of his new fin alignment jig. Dave Schaffhausen brought along his L1 cert rocket.

### Ground Support Equipment (GSE):

The topic for the evening was GSE. In particular, home built or modified launch controllers and pads. Nearly everyone in attendance brought along an example. We reviewed the fundamental requirements (interlocks, cord lengths, etc) and some good parts sources.

Alan Estenson brought along his 6-pad controller (seen at most recent MASA launches) and his simple 2-pad controller (seen in a past issue of the Planet).

Glen Overby had his 3 channel launch controller. It features a pad-side disarm feature. Glen also brought a homemade head for a pvc pad. It featured a swivel made from a plastic ball.

Dave Whitaker brought a stock Quest controller, an Estes Electron Beam controller modified with longer lead wires and 12 volt operation, an Estes Command Control, and a Pratt Hobbies launch controller for hybrid motors.

Tim Barr brought his classic 2 channel relay controller and his pad made from aluminum extrusions.

Ted Cochran brought his 12 pad controller and one 6-pad relay box as well as his single pad launch controller.

Caleb Boe brought his 8 pad controller that he built as a 4-H project.

Jason Colt brought his custom launch controller. He built it based upon a hand-crank flashlight, so his launch controller is "green".

Dwayne Shmel had his highly modified Electron Beam that he extended into a 3-pad controller.

Lyle Merdan brought an example that he built of the simple GSE plans found on the NAR web site.



## MASA Directory

Established January 1998

Founding President: Russ Durkee

### 2009 President and Webmaster

Alan Estenson - [estenson@mn-rocketry.net](mailto:estenson@mn-rocketry.net)

### 2009 Vice President

Carol Marple - [cjmarple@peoplepc.com](mailto:cjmarple@peoplepc.com)

### 2009 Secretary/Treasurer

Rick Vatsaas - [rick@vatsaas.org](mailto:rick@vatsaas.org)

### MASA Planet Newsletter Editor

Jeff Taylor - [jeff.taylor@mn-rocketry.net](mailto:jeff.taylor@mn-rocketry.net)

### Club Website

[www.masa-rocketry.org](http://www.masa-rocketry.org)

### Club Yahoo Group

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



## Contributors to this issue of the MASA Planet....

-  **Ted Cochran**
-  **Alan Estenson**
-  **Ray King**
-  **Jeff Taylor**

Thank You  
Thank You  
Thank You  
Thank You

To contribute pictures, stories, build reviews, or just about anything, email to [jeff.taylor@mn-rocketry.net](mailto:jeff.taylor@mn-rocketry.net)





## 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 March Launch

Saturday, March 28 - 10:00 am to 2:00 pm

Location: Elk River VFW

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

#### TARC Qualifying Launch

Saturday, April 4 (rain date: April 5) - 9:00 am to 1:00 pm

Location: Apple Valley High School

#### MASA April Launch \*

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

Location: Nowthen sod fields

#### TARC Finals **NAR National Event**

May 16

Location: The Plains, VA

For details, visit: [www.nar.org](http://www.nar.org)



#### NSL 2009 **NAR National Event**

May 23-25

Location: Kansasville, WI

For details, visit: [www.nsl2009.org](http://www.nsl2009.org)



#### MASA May Launch \*

Saturday, May 30 - 9:00 am to 4:00 pm

Location: Nowthen sod fields

Notes: One week later than normal

#### Solstice Evening Launch

Saturday, June 20 - 5:00 pm to 10:00 pm

Location: Elk River VFW

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

#### MASA June Launch \*

Saturday, June 27 - 9:00 am to 4:00 pm

Location: Nowthen sod fields

#### MASA Summer Picnic

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

Location: Elk River VFW

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

#### NARAM 51 **NAR National Event**

August 8-14

Location: Johnstown, PA

For details, visit: [www.naram.org](http://www.naram.org)



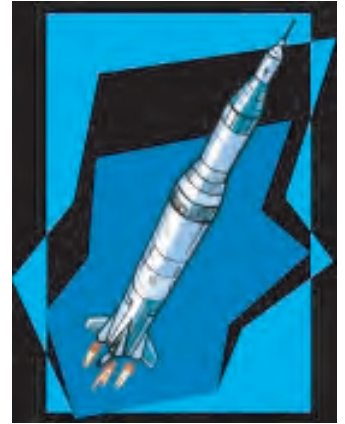
\* For Nowthen sod fields only: FAA waiver will be in effect permitting high power flights to 4,500 feet AGL. Field size supports up through J motors.

# MASA PLANET

## TRF 2.0

### The Rocketry Forum is Back

The Rocketry Forum (TRF) ([www.rocketryforum.com](http://www.rocketryforum.com)) returns after rebuilding from a major system crash. TRF is an on-line forum that literally has something for everybody. Post and read messages with other rocketeers about all aspects of the hobby. Find out how other rocketeers handled the issues you have with that latest kit you are working on, or just log on to show off your latest paint job. It's fun, informative and it is free. Sections include low, mid and high-power rocketry, propulsion, support & recovery, product reviews, techniques, rocketry contests, events and even a yard sale. Check it out today!



[www.rocketryforum.com](http://www.rocketryforum.com)

## 2009 Meeting Schedule

### Subject to Change

Check MASA Website or Yahoo Group for updates

#### MASA March Meeting

Monday, March 16 - 7:00 pm to 9:00 pm

Location: Aero Systems Engineering, 13825 Schmidt Lake Road, Plymouth

Topic: Clusters and Multi-Staging

## Get the Most Out of Your Hobby - Join the NAR

Consider becoming a member of the NAR (National Association of Rocketry), and help promote the safety and future of our hobby. For more information about the NAR and on how to become a member, visit the NAR's web site at [www.nar.org](http://www.nar.org)



## Connect to MASA Members and News On-Line

Did you know that MASA has its own on-line Yahoo Group? This is where you can find out the latest club news and join in on chatter about club launches, projects, and other club activities. **The MASA Yahoo Group should be the first place you check to see if a scheduled launch needs to be cancelled due to weather.** Check it out today and see all that you have been missing at <http://groups.yahoo.com/group/masarocketry/>

If you are a current MASA member, you are eligible to join the on-line MASA Yahoo Group. To join, just send a blank email to [masarocketry-subscribe@yahoogroups.com](mailto:masarocketry-subscribe@yahoogroups.com), and upon approval, you can join in.



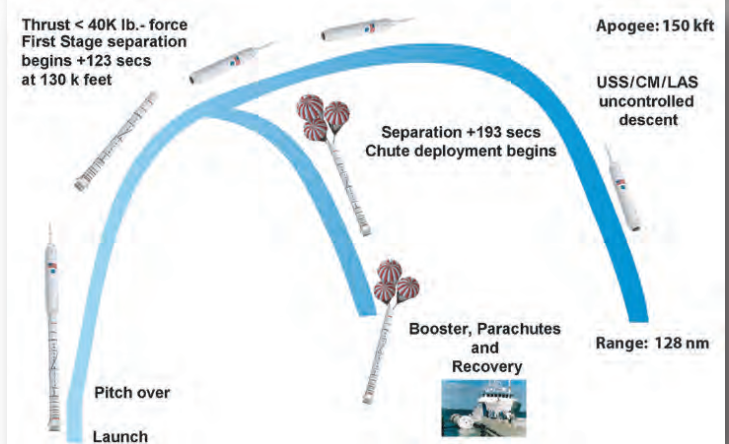
## Ares I-X Test Flight Coming Soon to a Cape Near You

From NASAfacts FS-2008-04-142-LaRC

The first test flight of NASA's new Constellation Space Program is scheduled for later this year with the launch of Ares I-X from Kennedy Space Center in Florida. The Orion crew module and upper stage will be simulated in size and mass for this un-manned test flight to confirm that the vehicle is safe and stable during launch (NASA's version of spinning a rocket around in circles from a piece of string to see if it is stable before flight). The primary objectives of this test flight are to demonstrate the performance of the flight control system and to gather data on how to control roll torque on the Ares I vehicle.

The flight will simulate the first two minutes of an Ares I flight, and the first stage will be recovered after three main parachutes deploy, while the simulated upper stage and crew module (with no parachute) will crash into the Atlantic Ocean. The first stage is a four segment reusable solid rocket motor from the Shuttle program modified to include an inert fifth segment, which will be live on future Ares I flights.

The vehicle is expected to accelerate to Mach 4.7, at which time the first stage will separate at an altitude of 24.6 miles up. Apogee should be at an altitude of about 28.4 miles.



ADDRESS SERVICE REQUESTED

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 Coon Rapids, MN 55448

