



Newsletter of the Northern Illinois Rocketry Association,  
NAR Section #117

Volume 29, Number 3  
Holiday 2005

### Elections! Elections!

### NIRA Goes Platonic

It's that time again. Each January business meeting NIRA has its annual election for all officers. Nominations can be by pretty much anybody, for pretty much anybody and will be taken (and sometimes refused) up until the actual voting time sometime during the January meeting.

The nominations so far:  
President: Adam Elliott  
Vice-president: Veronica Hojek  
Secretary/Treasurer: Marty Schrader  
Range Safety Officer: Bob Kaplow

All are the current office holders except for the RSO position which is currently open.

Mail-in votes are accepted, but it helps to show up at the meeting.

Since it's usually way too cold or wet to launch in December, NIRA does things like field trips, building sessions, and demonstrations in the cold months.

This month we will be taking a trip to the Adler Planetarium and Astronomy Museum to help them celebrate their 75th anniversary. Just our luck, they will have extra special exhibits including Gus Grissom's Mercury capsule, the only US manned space capsule that was lost. It spent over 30 years on the ocean floor. When it was recovered it gave evidence of why it mysteriously sank.

We will meet near the entrance (the inside and warmer part) around **11am**. This will give us time to catch at least two shows (starting at 11:30) in the Star Rider theater and one if not two in the Sky theater planetarium. The rest of the trip can be used to explore the museum and 75 anniversary exhibits with the time remaining.

The museum is open 9:30-4:30.

### NARCON 2006 Announced

**NARCON 2006**, which is sponsored by WOOSH and the NAR, will be held on **March 10-12th, 2006**, at **UW-Parkside in Kenosha, WI**. The website is now up and operational and may be found at <http://www.narcon2006.org>. Many of the seminars and forums are listed on the website already. There will be more added to the site as the weeks progress.

#### Keynote Speakers:

Friday night: **Leroy Piester** - Lee was the founder and president of **Centuri Engineering Company**.

Saturday night: **Matt Steele** - Matt was the co-founder and president of **North Coast Rocketry**.

Special Presenter: **Dr. Michael Wolff** - Dr. Wolff works for the Space Science Institute and will speak on his atmospheric studies of Mars using the Mars Rover program.

#### Plus vendors, special events, and fun sessions! Did we mention vendors?

**Compete in the Mars Lander Challenge!** - A Mars Lander Challenge contest rules may be found online. Anyone can enter a design, from the practical to the fantastic, and win a prize. (Editor's note: see the NARCON website or wait until the next issue for more information.)

**Registration** - You can either register online with PayPal, or download a registration form to send in payment via check or MO.

**Lodging** information can be found on the website.

You can contact the NARCON Director, Scott Goebel, at [director@narcon2006.org](mailto:director@narcon2006.org) with any questions you may have that aren't answered on the website.

Vendors, please contact Gabe Kolesari, at [rocketman@wi.rr.com](mailto:rocketman@wi.rr.com) if you are interested in attending or would like to donate to the raffle.





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**NIRA Officers**

President – Adam Elliott  
Vice President – Veronica Hojek  
Secretary/Treasurer – Martin Schrader  
RSO – open

**This Issue's Leading Edge Staff**

Editor – Adam Elliott  
Production – Otis

**This Issue's Contributors**

Adam Elliott  
Bill Ipjian

THE LEADING EDGE is published bimonthly by and for members of the Northern Illinois Rocketry Association (NIRA), NAR Section #117, and is dedicated to the idea that Sport Rocketry is FUN!

Articles, plans, photos, other newsletters, and news items of interest should be sent to the new editor:

Adam Elliott  
0000 Street Drive

or emailed to adamnira at yahoo dot com  
Photos will be returned, other material returned upon requested.

Any original material appearing in the Leading Edge may be reprinted by Sport Rocketry Magazine with proper credit given; all other uses require prior written permission of the author or the Northern Illinois Rocketry Association.

Send membership applications (dues: \$6 per youth, \$8 per adult, \$12 per family, including a six issue subscription to the Leading Edge), non-member subscriptions (\$10 per six issues), and change of address notifications to:

Martin Schrader  
0000 Street Drive

Web site: <http://www.NIRA-rocketry.org>

Email list: see website

InfoLine: 1-888-FLY-NIRA



**CLUB MEETING DATES**

All meetings start at 7:30 pm. Bring a model for "Model of the Month." We always need volunteers for pre-meeting lectures, contact Adam Elliott if you want to schedule a date. The location is usually the Helen Plum Memorial Library, 110 Maple St, Lombard, IL

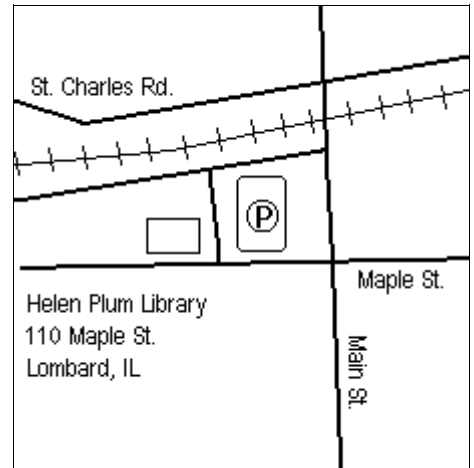
**December 2**

**January 6**

**February 3**

**March 3**

**April 7**



**CLUB LAUNCH DATES AND OTHER ACTIVITIES**

Launches are BYOL (bring your own launcher). Call the NIRA infoline for pre-launch information: 1-888-FLY-NIRA

As the map shows, our new launch field is the East Branch Forest Preserve but the arrangement may not be permanent! **Please** call/check the infoline/website before coming!

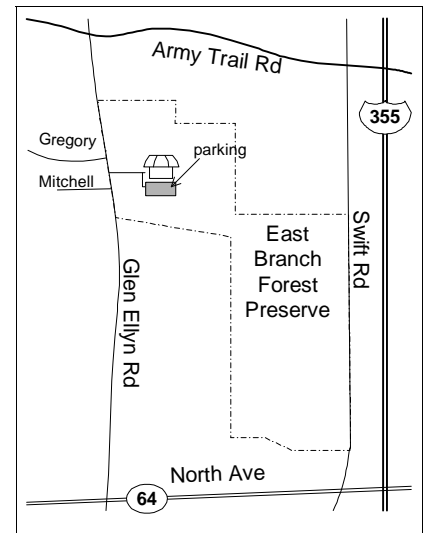
**December 18 - Planetarium and IMAX - 11am**

**January 15 - Building Session???** TBA

**February 19 - NIRACon Lombard Library**

**March 19 - Banquet! Location TBA**

**April 16 - First launch of the season!**



**Club News and Notes**

**Trailer Needed** - NIRA is still looking for an enclosed trailer to haul equipment, as well as people who can pull a trailer. The 5'x8' Pace American is an example of such a trailer. If you see a good deal, contact Adam right away.

**Website Coming Along** - Our club's website, <http://www.nira-rocketry.org>, is coming along nicely and making improvements every month.

It's not quite done yet but we would like to hear from our viewers. Please feel free to contact the webmaster with any nuances, inaccuracies, misspellings, omitted items, and any other general faux pas.

**Submissions Needed** - When was the last issue of The Leading Edge? Quite a while ago, for those of you keeping track. This newsletter is best when members submit thoughts, reviews, plans, ideas, photos, and who knows what else? I mean come on. Ralph the Wonder Llama doesn't work here anymore. Have something interesting to rocketry? Modeling? Space exploration? Send in your stuff today.

**Featured Site of the Month**

<http://www.wildmanrocketry.com>

**New NAR Contest Motor Certifications**

Following repeated requests by NAR members, changes in the NAR S&T contest certification policy were enacted by a vote of the NAR Trustees. Motors tested by TMT and CAR are now eligible for NAR Contest Certification, if NAR S&T determines that the motors meet the definition of a model rocket motor and the availability criterion.

Effective 2/1/06 the following motors are approved for use in NAR Contests:

- Aerotech  
F62T- S,M,L 29x89mm
- G61W- S,M,L 38x106mm  
G67R- S,M,L 38x106mm  
G77R- S,M,L 29x150mm  
G79W- S,M,L 29x150mm

Cesaroni  
G79- Adj 38x125mm

Ellis Mountain  
E10- 6,10 24x102mm  
F23- 6,10 24x140mm

G20- 3 29x149mm  
G35- 6,10 29x165mm  
G37- 6,10,P 24x181mm

**NAR Contest Certification for Aerotech RC motors**

The following motors are certified for use in NAR contests effective January 1, 2005. The manufacturer confirmed their production is now sufficiently regular that all delays of these motors have been available to all contestants for 60 days by this date.

- Aerotech:  
D7-RCT  
E7-RCT  
E6-RCT  
E12-RCJ  
F13-RCT  
F16-RCJ  
F23-RCW  
G12-RCT

Editor's note: We are assuming they mean January 1, 2006.

**Aerotech F21 Contest Decertification**

The Aerotech F21-4,6,8 motors will lose their approval for use in NAR contests effective January 1, 2006 due to production hiatus. They remain certified for general sport flying. Should production of one of these motors be restarted, contest certification will be restored after a 60 day delay.

**NAR Certifies D & E AeroTech Motors**

The following motors are certified for use in NAR contests effective September 19, 2005. The manufacturer confirmed their production is now sufficiently regular that all delays of these motors have been available to all contestants for 60 days by this date.

- Aerotech:  
D21T-4,7  
E15W-P

**NAR Certifies New Motors**

The following motor has been certified by NAR Standards & Testing for general use as model rocket motors effective April 10, 2005.

- Aerotech:  
F20 LUR (Limited-Use Reloadable)  
29mm X 83mm  
F20-4, 7 (51.75 Newton-seconds total impulse, 30.0 grams propellant mass)

The following motor has been certified by NAR Standards & Testing for general use as a High Power Rocket Motor effective March 15, 2005.

- Animal Motor Works:  
J230 SK  
54mm X 326mm  
J230-P (5804.45 Newton-seconds total impulse, 525.7 grams propellant mass)

Note: The manufacturer rates this for at least three uses per case. S&T has tested the system with four used per case with no real change in performance.

**NAR Certifies AeroTech F-Motors**

May 31, 2005

The following motors have been certified by NAR Standards & Testing for general use as model rocket motors effective April 10, 2005. They are single use motors.

- Aerotech: 29mm X 83mm F42-4, 8 (52.93 Newton-seconds total impulse, 27.0 grams propellant mass)

- Aerotech 29mm X 98mm F26-6, 9 (62.19 Newton-seconds total impulse, 43.1 grams propellant mass)

—NAR Standards & Testing

**CTI announces European CE Approval of Pro-X Reload Kits**

July 7, 2005 - Cesaroni Technology Inc. is pleased to announce that it has met all of the requirements of European Directive 93/15/EEC for CE marking of its Pro-X line of high power hobby rocket motor reload kits. This has been the culmination of numerous physical tests and evaluations against a vast array of national and United Nations standards. The Pro-X family of reload kits has met or exceeded all of these standards for safety and reliability in use and transport over a period of several years. These objective evaluations have been carried out in independent test labs and government regulatory agencies in Canada, the United States, the UK and the Netherlands.

With this CE marking, the Cesaroni Technology Inc. Pro-X line will be the only family of solid fuel HPR reloads that may be legally sold within the European Community at the present time. This will be the case for the foreseeable future, as there are no presently established European HPR manufacturers. Also, changes to the US ITAR laws in 2003 made a State Department export permit necessary for exports of propellant containing ammonium perchlorate. This requirement for an export permit, coupled with the legal requirement for CE marking on any solid fuel HPR reload sold in Europe makes European sales very challenging for American manufacturers at the present time.

Cesaroni Technology Inc.'s HyperTEK line of hybrid motor systems continues to be available to European customers alongside the Pro-X family.

Cesaroni Technology Inc. would like to thank our European dealers and also Mr. Peter Mueller of Tripoli Netherlands for their assistance in liaison with local authorities as we pursued this approval.

This approval is another achievement in Cesaroni Technology Inc.'s push for safe, legal and easy to use HPR products for the hobby and research rocket community.

For information and specifications on the full line of Pro-X reload kits, consult the website at [www.Pro38.com](http://www.Pro38.com). Information on HyperTEK hybrids please consult [www.HyperTEKHybrids.com](http://www.HyperTEKHybrids.com). A list of dealers is available at both sites.

—Cesaroni Technology Incorporated



## F21W Econojet Motors Placed on Production Hold

November 14, 2005

Cedar City, UT -- AeroTech's 24mm F21W single-use Econojet motors have been placed on production hold. AeroTech has been unable to obtain phenolic casing of sufficient quality and quantity to continue manufacturing them using the current design. As a result, F21Ws have been removed from all current in-house orders.

AeroTech has designed casing and bulkhead molds similar to those used to manufacture the 29mm standard and Econojet motors, which could be used to create parts for future F21W production. The time frame for implementation of the new design is uncertain. AeroTech will notify its customers if and when the F21Ws are re-released.

AeroTech apologizes for any inconvenience this has caused its customers.

## AeroTech Re-releases 24 & 32mm RMS-R/C Reload Kits

August 19, 2005

AeroTech is re-releasing its 24 & 32mm RMS-R/C model rocket motor reloading kits, which have not been produced since October 2001.

These reloads fill a unique niche in the model rocket propulsion market as they are intended for use in rocket powered gliders and land vehicles only. They are generally designed to produce long-burning thrust profiles to minimize flight stress on lightweight glider airframes.

The D7-RCT (P/N 40700), E7-RCT (P/N 50700), E6-RCT (P/N 50600) and E12-RCJ (P/N 51200) reload kits are designed fit the 24mm diameter AeroTech RMS-R/C 24/20-40 reloadable motor case, which has the same physical dimensions as a black powder 'D' motor but delivers up to 2-1/2 the total impulse (40 N-sec in the case of the E6-RCT).

The F13-RCT (P/N 91613), F16-RCJ (P/N 91616), F23-RCW-SK (P/N 91623) and G12-RCT (P/N 91712) reloads are designed to fit in the 32mm diameter AeroTech RMS-R/C 32/60-100 casing and produce from 60 to 100 N-sec of total impulse. The F23-RCW-SK is intended for robust rocket gliders due to its more aggressive thrust profile, and offers a feature not found in any of the other RMS-R/C reloads: a 15 second smoke tracking charge for "skywriting" after the main propellant charge has burned out.

Since RMS-R/C reload kits do not include a delay or ejection charge, they should not be used in standard model rocket vehicles unless equipped

with a timer, altimeter or radio-activated recovery system.

RMS-R/C reload kits are defined as a "model rocket motors" and while no user certification is required, they may only be sold to consumers 18 years of age or older in compliance with Consumer Product Safety Commission (CPSC) regulations.

All RMS-R/C 24/20-40 reload kits may be shipped via U.S. Postal Service Parcel Post with no hazmat fee, due to the fact that the reload kit propellant grains contain less than 30 grams of propellant each. The 32mm RMS-R/C 32/60-100 reloads may be shipped via FedEx ground.

Motor and reload kit specifications can be found on pages 12 and 13 of the AeroTech catalog, and the RMS-R/C reload kit instructions (which include thrust curves and additional motor data) are available for download in PDF format from the AeroTech Resource Library.

This announcement pertains to the availability of the RMS-R/C reload kits only, which are intended for use in existing RMS-R/C motor hardware manufactured prior to October 2001. A separate announcement concerning the re-introduction of the AeroTech 24 & 32mm RMS-R/C reloadable motor hardware will be made in the near future.

Retail prices of the RMS-R/C reload kits will be as follows:

Part No.	Description	Retail Price
40700	D7-RCT (3-pack)	\$15.00
50700	E7-RCT (3-pack)	\$17.00
50600	E6-RCT (3-pack)	\$20.00
51200	E12-RCJ (3-pack)	\$20.00

91613	F13-RCT (2-pack)	\$20.00
91616	F16-RCJ (2-pack)	\$20.00
91623	F23-RCW-SK (2-pack)	\$22.00
91712	G12-RCT (2-pack)	\$24.00

AeroTech Consumer Aerospace is a division of RCS Rocket Motor Components, Inc., Cedar City, UT.

## AeroTech Re-releases D21T Single-Use Motors

AeroTech is re-releasing its 18mm D21T single-use model rocket motors, which have not been manufactured since October 2001.

These motors are the same physical size (diameter and length) as a black powder 'C' motor, but produce over twice the total impulse. The D21T also delivers more power than a black powder 'D' motor in a much smaller and lighter form factor. They are perfect for rockets of lightweight construction as well as oversize models that need more impulse than a 'C' motor can pro-

vide.

The D21T will be available in 4 and 7 second delays.

The D21T is defined as a "model rocket motor" and while no user certification is required, they are recommended for consumers 16 years of age or older.

The D21T can be shipped via U.S. Postal Service Parcel Post with no hazmat fee, due to the fact that the motor contains less than 30 grams of propellant.

A copy of the D21T instructions (including a thrust curve and other motor data) in PDF format may be downloaded from the AeroTech Resource Library at <http://www.aerotech-rocketry.com>.

## AeroTech Receives California State Fire Marshal Approvals

The California Office of the State Fire Marshal (OSFM) has issued classification approvals for a number of AeroTech motors and reload kits. They include the following:

Model Rocket Single-Use  
F42-4T (#64204), 8T (#64208) Econojet  
F26-6FJ (#62606), 9FJ (#62609) Standard

Model Rocket Reloadable  
G77R-S, M (#07077M, uses the RMS-29/120 case)  
G79W-S, M, L (#07079M, uses the RMS-29/120 case)  
G61W-S, M, L (#07061M, uses the RMS-38/120 case)  
G67R-S, M (#07067M, uses the RMS-38/120 case)  
NOTE: The G77R and G79W reloads use the Easy Access<sup>®</sup> high-power line RMS-29/120 case, not the model rocket RMS-29/40-120 case.

High-Power Reloadable  
I600R-M (#09600M, uses the RMS-38/720 case)  
K780R-P (#11780P, uses the RMS-75/2560 case)  
L1150R-P (#12115P, uses the RMS-75/3840 case)  
L1420R-P (#12142P, uses the RMS-75/5120 case)  
M1297W-P (#13129P, uses the RMS-75/5120 case)  
K680R-P (#11680P, uses the RMS-98/2560 case)  
L1300R-P (#12130P, uses the RMS-98/5120 case)

The approvals allow the sale and use of these rocket motors and reload kits by California consumers. A copy of the new California OSFM approvals may be downloaded in PDF format from the AeroTech Resource Library at <http://www.aerotech-rocketry.com>



## More AeroTech News

### Incorrect Instructions in Select AeroTech Reload Kits

AeroTech recently discovered a number of RMS-29/120 G77R and RMS-38/120 G67R reload kits were shipped to dealers with incorrect instruction inserts. Specifically, the inner pages of these instructions were reversed (38mm instructions in the 29mm G77R and 29mm instructions in the 38mm G67R). This error has been corrected in current production. Customers who have purchased G77R and G67R reload kits with the erroneous instructions are advised to download PDFs of the correct inserts from the "Instructions" page of the AeroTech Resource Library at <http://www.aerotech-rocketry.com>.

### RockSim Files Posted to AeroTech Site

Cedar City, UT -- RockSim-compatible .rkt files for all AeroTech kits have been posted to the Resource Library on the AeroTech website under the "RockSim Motor and Kit Data" heading. <http://www.aerotech-rocketry.com>

### AeroTech Develops Drilling Adapter for Delays

August 11, 2005

AeroTech has designed a Delay Drilling Adapter (DDA) that permits the adjustment of AeroTech 29 & 38mm high-power RMS-Plus<sup>a</sup> delay elements using the CTF<sup>a</sup> ProDAT<sup>a</sup> 38mm delay drilling device.

Using the AeroTech DDA is simple. First, set the ProDAT<sup>a</sup> tool for the desired number of seconds to be reduced from the delay. Then, insert the DDA into the tool and drop the RMS-Plus<sup>a</sup> delay element into the well at the bottom of the DDA. Hold the delay in the DDA well with your finger, and rotate the adjustment tool for a few revolutions until the delay setting is complete. The delay element should be installed in the motor with the drilled end facing the propellant.

Because of a difference in delay propellant burning rates, the depth of drilling required per second of delay reduction is less when using the CTF<sup>a</sup> device to drill AeroTech delays. A label on the AeroTech DDA translates the ProDAT<sup>a</sup> settings to the equivalent RMS-Plus<sup>a</sup> delay time reduction: -3 seconds reduction for CTI motor delays is -4 seconds for AeroTech RMS-Plus<sup>a</sup> delays, -5 seconds reduction for CTI is -7 seconds for AeroTech, and -7 seconds reduction for CTF<sup>a</sup> is -10 seconds for AeroTech. There is no equivalent calibration for the CTF<sup>a</sup> -9 setting, as the maximum delay time for 29 & 38mm RMS-Plus<sup>a</sup> reloads is currently 14 seconds.

It is recommended that AeroTech delays not be shortened to less than 4 seconds actual delay time. Users should keep in mind that pyrotechnic time delay tolerance may be up to +/- 20% of the stated value.

The AeroTech DDA (P/N T062705-1) is expected to be available from AeroTech's high-power RMS<sup>a</sup> product dealers in late August, at a suggested retail price of \$19.95.

—RCS Rocket Motor Components (RCS), Inc.

## New Stuff From Giant Leap

### Monster Motor Aerotech Hardware from Giant Leap

Giant Leap Rocketry has released its line of Rouse-Tech Monster Motor Hardware. It is Aerotech compatible and is made by Rouse-Tech. Monster Motors from Giant Leap feature a hard anodized rear closure, which according to Ed at Giant Leap "makes cleaning easier and makes them last much longer." Ed also points out that Monster Motor hardware is significantly less expensive than other Aerotech-type hardware. The casings are gold anodized with silver end caps. The casings are laser engraved with the Monster Motor name and logo. These are available for immediate shipment. Ed says that "in addition to the low pricing, there is a summer sale until August 20th where buyers can save an additional 10%.

For more information about MONSTER MOTORS from Giant Leap, log on to: [http://www.giantleaprocketry.com/products\\_atmotors.asp](http://www.giantleaprocketry.com/products_atmotors.asp)

### New Mega-Foam from Giant Leap

Giant Leap Rocketry, Inc. introduces its new Mega-Foam. This is a two-quart kit of premium grade expandable foam. It is a closed-cell expandable foam that fills in the fin tab / motor tube area, nosecone, or other area. It has a variety of applications and has been used to reinforce crimped airframes. Just mix the two-part foam and pour into the cavity within 45 seconds. It's high-density structure helps hold fins or other structures in place, and provides rigidity to other components like nosecones. It has virtually no weight. Mega-Foam is a special heat-resistant formulation. According to Ed at Giant Leap, "Mega-Foam is the highest grade foam we carry. It has excellent flow characteristics and sets up uniformly. The current price of \$39.99 for the two-quart kit represents a savings of about 33% over smaller quantities." To learn more about Mega-Foam from Giant Leap, log on to: [http://www.giantleaprocketry.com/products\\_whatsnew.asp](http://www.giantleaprocketry.com/products_whatsnew.asp)

## Shen Zhou 6 Simulator Demo Released

LINWOOD, New Jersey - HougYu Space Technology, released screenshots and a demo movie on October 12, 2005, the same day as the successful launch of the actual Shen Zhou 6 manned spacecraft. The Shen Zhou 6 game is being developed using and in parallel with Pyramid Design's A-OK! Spacecraft Simulation System.

HongYu released the demo movie on Sina.Com, China's largest news web site. Currently, the game simulates the launch phase of the mission, allowing users to run monitor operations executed automatically, or perform all tasks manually.

The demo movie and screenshots can be found on Pyramid Design's A-OK! web site: <http://www.pyramiddesign.us/aok/shenzhou>

A-OK! Spacecraft Simulation System is currently scheduled for a summer, 2006 release. No release date has been set for the Shen Zhou 6 game.

"This is a great milestone for both products," states Joe Nastasi, president of Pyramid Design. "A large portion of the A-OK! Spacecraft Simulation System architecture is now developed and running. HungYu's Shen Zhou 6 demo is a great demonstration of our progress."

AOK! Spacecraft Simulation System is a cross-platform engine for developing world-class space simulators for use in commercial and consumer environments, including kiosks, museums, and amusement park simulation rides. A-OK! Spacecraft Simulation System is developed using REALbasic and OpenGL. Pyramid Design is a professional software development firm that specializes in application development and consultation. The company also offers A-OK! The Wings of Mercury and FTP Suite for REALbasic. The company is located in Linwood, NJ, USA. HongYu Space Technology Co., Ltd. is a subsidiary of the Chinese Academy of Space Technology. HongYu is very strong in space-related simulation and satellite applications. It is also one of the key IBM BlueEx service providers in China. HongYu is involved with the Shen Zhou manned spacecraft program.

Contact: Pyramid Design 505 Hamilton Ave., Suite 207 Linwood, NJ 08221 or email at [aok@pyramiddesign.us](mailto:aok@pyramiddesign.us)



## HOLIDAY BLESSINGS

Unsolicited Advertisements

### Rocketman Holiday Sale

Rocketman Enterprises, Inc. is having their Annual 'This is the Season to be Jolly' Rocket Parachute Sale! Get 25% off on all the Rocketman chutes, except the Super Chute. Sale ends 12-20-05. For details, visit: <http://www.the-rocketman.com> or call 800-732-4883.

### Kevlar Bungie from Giant Leap Rocketry

Giant Leap Rocketry, Inc. introduces a 1/4" KEVLAR BUNGIE. According to Ed at Giant Leap, "the product is designed for the best of both worlds; it has the heat resistance and strength of Kevlar, but the shock absorbing ability of bungie." It is 1/4" in diameter and should be used in applications similar to those of Giant Leap's existing 1/4" tubular Kevlar. As can be seen from the picture, it has bungie rubber in the center, with a Kevlar wrap that is sewn in a way that allows the cord to stretch. The elasticity of the cord is much less than standard bungie in order to help avoid the potential collision of separated rocket parts that can occur with the highly elastic nature of standard bungie. Ed maintains that "to our knowledge, this is the first Kevlar Bungie ever produced."

To learn more about Giant Leap's Kevlar Bungie, log on to: [http://www.giantleaprocketry.com/products\\_whatsnew.asp](http://www.giantleaprocketry.com/products_whatsnew.asp)

### New Kit from Wildman

Wildman Rocketry is pleased to announce the release of their newest rocket kit, The Ultimate Wildman. Owner Tim Lehr states, "This is the perfect level three bird--it will take what ever you want to put in it and ask for more, would you expect anything less from Wildman?" The construction is all fiberglass and is 11 feet tall and 6 inches in diameter with a 98mm motor mount. The dry weight is 20.5 lbs.

The kit includes:

- 1) 5-1 ogive nose cone
- 1) 48" upper airframe
- 1) 48" booster
- 1) 18" altimeter bay
- 1) 98mm motor mount
- 3) G10 fins .187 thick
- 3) G10 6.0-3.9 centering rings .125 thick
- 3) G10 6" coupler bulk plates
- 2) G10 6" Bulk plates
- 4) 3/16 quick links

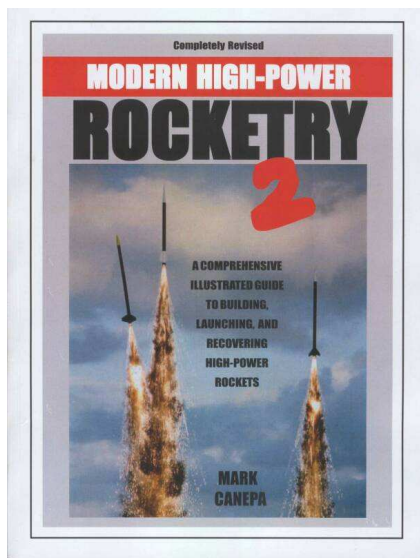
Cost: \$650 retail (Wildman club members price is \$585).

Visit <http://www.wildmanrocketry.com/> for details.



### Al's Hobby Shop Now Stocking Aerotech RC motor reloads.

Al's Hobby Shop received received a shipment of the Aerotech RC 32 mm reloads. They are the F23-RCW-SK, F12-RCT and G13-RCT. For all those glider fans out there, these reloads are now in stock and ready to ship. More information may be found at [www.alshobbyshop.com](http://www.alshobbyshop.com) or by calling 630-832-4908 (ask for the rocket department).



### Modern High-Power Rocketry 2 Release

Modern HPR Press and Trafford Publishing are pleased to announce the release of Modern High-Power Rocketry 2, by Mark Canepa. This 388-page book is a comprehensive guide to building, launching, and recovering high-power rockets, authored by a veteran Level Three flyer and frequent contributor to Extreme Rocketry and Sport Rocketry magazines. The soft-cover book offers direction and lessons in almost every aspect of high power from step-by-step instruction on building a Level 1 or Level 2 rocket to advice from experienced rocketeers all over the world on how to ensure a flawless launch and recovery at Level 3. This is a completely revised and updated version of Canepa's first book, Modern High-Power Rocketry, and at 18 chapters and more than 800 photographs and illustrations, has more than 140 extra pages and twice as many photos, almost all of them new. Among other things, the new book contains chapters on building altimeter bays, the high-power launch, building your first Level 3 rocket, Level Three and Beyond, and much more. The new book, which will also be available in a few months on Amazon.com, will retail for \$32.50. However, for a limited time and through Modern HPR Press, there are discounts available to Tripoli, NAR and CAR members. For more information, chapters, and a list of dealers near you, log onto [www.modernhpr.com](http://www.modernhpr.com).

### ASP Rocketry 10th Anniversary Sales

Aerospace Speciality Products is celebrating their 10th anniversary with huge sales!

This month they have tons of stuff for your stockings on the mantle. Rocket kits! Epoxy! T-shirts! Finishing supplies! Launch lugs! Egg capsules! Streamers! The new Quest Q-2 igniters! And a more!

Visit [www.asp-rocketry.com/specials.html](http://www.asp-rocketry.com/specials.html) for more information and order today!

### Shockcords.com Now Open

Shockcords.com is pleased to announce they are open for business. They currently stock one inch and two inch diameter tubular nylon shockcords for the mid and high power rocketry hobby in different colors with sewn loops in the ends using heat resistant Nomex thread. Kay Carroll, owner of shockcords.com, says her business was borne out of a need in high power rocketry to have ready made shockcords to make assembling the recovery system simpler and more efficient. Shockcords.com currently offers shockcords in four standard lengths with custom lengths also available. Visit [www.shockcords.com](http://www.shockcords.com) or contact Kay Carroll at [sales@shockcords.com](mailto:sales@shockcords.com) for more information.

### MRFF 2005 A Success!

The Midwest Regional Fun Fly's return after a three year absence proved to be a smash for everyone involved. Co-hosted by WOOSH, the launch had several flyers from a few states show their stuff.

Okay, so nobody showed up for the evening activities such as kitbash and banquet but the raffle went ahead as planned and all prizes were awarded.

Next year's MRFF will probably be in the same location at Bong State Recreational Area near Burlington, WI over Father's Day weekend. If you know of any kind of site that may be large enough to host such an event, please let Adam Elliott know right away. We are always looking for alternatives.

The MRFF 2005 Committee would like to thank all those who showed up.

MRFF 2005 Committee members:

Adam Elliott - coordinator  
Rick Gaff  
Bill Ipjian  
John Hojek

### Apogee Releases RockSim v8 Software

The new RockSim v8 software has been released Apogee Components and it is available for immediate download. The software allows modelers and educators to design any size model rocket, and then to simulate how high these might fly. What's new? The software is now available for either Windows or Macintosh computers, and can simulate both Tube-Fins, and Ring-Tail rocket configurations.

Another new feature is that RockSim now generates a realistic animation of the rocket's flight, including the fire and smoke coming out of the rocket engine. The smoke actually drifts with the wind, giving visual clues and perspective to the launch simulation. The animation allows designers to see what trajectory the rocket will take, and where the model is likely to land.

The software allows teachers to quickly and safely demonstrate common scientific principles, like "Newton's Laws of Motion," and aeronautic concepts of "Lift, Drag, Thrust, and Trajectory Flight." Modelers can also use it to create detailed simulation reports and graphs, which give the students further insight as to what is occurring during their rocket's flight. Tim Van Milligan of Apogee Components remarks, "Modelers say they've learned more in one hour of play than they have gotten in over a year of trial-and-error on the rocket range. RockSim is that useful!"

The software, which is used by over 856 schools throughout the USA, can simplify the rocket design process by allowing designers to stretch-and-pull common shapes into any size rocket they desire. Based on the shape, weight, and dimensions, the software then calculates how high and fast the rocket will fly with any commercially available model rocket engine. It also checks the stability of the rocket prior to flight, so that the designs will fly a straight and safe trajectory path.

The RockSim software is available for both Windows and Macintosh OS X computers. A free 30-day trial version can be downloaded at: [www.ApogeeRockets.com/rocksim.asp](http://www.ApogeeRockets.com/rocksim.asp)

For more information contact: Tel: 719-535-9335 or Web site: [www.ApogeeRockets.com/rocksim.asp](http://www.ApogeeRockets.com/rocksim.asp)

—Apogee Components

### RockSim Software officially recognized as a Certified Space Educational Product

The Space Foundation announced it has approved RockSim, model rocket design and simulation software from Apogee Components, as a Certified Space Educational Product. This certification indicates to educators and parents that RockSim can be used to stimulate and encourage a student's interest in and knowledge about space.

"RockSim is an exciting tool to assist students with conceptualizing rocket construction and launch capabilities, which can increase their interest in pursuing further science, technology, engineering, and math education," said Dr. Patricia Arnold, the Space Foundation's vice president of education and workforce development.

According to Apogee Components, the software is already in use by more than 850 schools throughout the United States. It simplifies the rocket design process by allowing students to stretch-and-pull common shapes into any size rocket. Based on the shape, weight, and dimensions, the software then calculates how high and fast the rocket will fly with any commercially available model rocket engine. It also checks the stability of the rocket prior to flight so the designed rocket will fly a straight and safe trajectory path.

Tim Van Milligan, president of Apogee Components, said, "I'm thrilled RockSim has received this special certification from the Space Foundation. Our software really sparks an interest in learning science because kids want to know more about how to make rockets travel higher, faster, and straighter. They need to know science to do that." The Space Foundation, in cooperation with NASA, created the Space Certification Program to promote extraordinary products and services that bring the benefits of space technology home to Earth and enhance public interest and awareness in space. For more information about the Space Certification program, visit [www.SpaceConnection.org](http://www.SpaceConnection.org)

—Stephanie Fibbs, Space Foundation

### Joint Statement on BATF Litigation, November 30, 2005

Below is a joint statement from the National Association of Rocketry and Tripoli Rocketry Association:

This message will outline the current status and progress of our efforts in the U. S. Court of Appeals in Washington, DC.

Our case has completed the first four of five steps prior to oral argument before the Court. Specifically, NAR and TRA, referred to as the Appellant in the language of the Court, filed our initial brief on August 10, 2005. BATFE, referred to as the Appellee, filed their initial brief on September 9, 2005. Our reply brief to ATF was filed Friday, September 23, 2005. All three documents are available for download on the TRA and NAR websites ([www.tripoli.org](http://www.tripoli.org) or [www.nar.org](http://www.nar.org)):

Appellant's (NAR / TRA) Brief  
Appellee's (BATFE) Brief  
Appellant's (NAR / TRA) Reply Brief

A hearing for oral arguments has been set for Tuesday, January 10, 2006. After oral arguments, the Court would review the record and author an opinion. That opinion appeal will determine a key point -- whether the ATF even has jurisdiction to regulate APCP motors as meeting the legal definition of an explosive. Any relief sought by NAR and TRA would come in a Court Order attached to the opinion.

We appreciate your strong financial support for this important legal work. As you head into the close of 2005, with this case still pending, we hope you will continue to consider donating in whatever amount you possibly can. Your support and generosity will be recognized and acknowledged, and you'll be able to say "I supported the fight for an unregulated sport rocket hobby."

As we have further developments, we'll continue to report them here and in our publications.

Ken Good, President Tripoli Rocketry Association

Mark Bundick, President National Association of Rocketry

## 2006 National Events Announced

The National Association of Rocketry has announced it's big three national events for 2006:

NARCON - Kenosha, WI. Scott Goebel: director. - see front page!  
National Sport Launch (NSL) - McGregor, TX. May 27-28. Don Magness: director  
NARAM 48 - Rainbow Valley, AZ. July 30- August 4. Matt Steele: director.  
More information is always available through [www.nar.org](http://www.nar.org).



## ROCKETRY WORD SEARCH

D A R T S N A R R Y B  
R B R E Q U R O F Q L  
O N I R A P R T A U A  
C B L G R Y X O P E C  
K E R L D C A M R S K  
C X U A B A D Q U T P  
O R Q U L T D W B E O  
H L A N R O E D I S W  
S R O C K E T F Y V D  
T S M H X S N I X M E  
R O F A T B O Y S T R

### Words to find:

FATBOY  
EPOXY  
ROCKET  
LAUNCH  
MOTOR  
RSO

ESTES  
BIGDADDY  
NIRA  
BLACKPOWDER  
SHOCKCORD  
QUEST  
CATO



Adam Elliott, Editor  
54321 Rocket Way  
Wolf 359

## Upcoming Events!

**Field trip!** It's too cold in December! See front page.

**Building session!** January isn't any better! Somebody please volunteer to host an event that month.

**NIRACon!** February, cold again! See this page for more details.

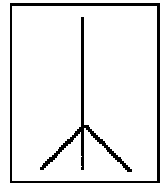
**Banquet!** Are we going to have this in March? We don't know, but the idea has been passed around. Stay tuned.

## NIRACon to be held in February

Since it's still too cold for most of us in February, we will again host a NIRACon in place of the regular launch. No one has signed up yet. If you have a demonstration or generally anything for show and tell, contact Adam as soon as possible.

## NEW!!! NIRA Infoline!

NIRA once again has an infoline for everyone to call and get the latest news. The number to call is: 1-888-FLY-NIRA



«First Name» «Last Name»

«Address»

«City», «State» «Zip»

Expires: «Expire\_Month» «Expire\_Year»

**This may be your last newsletter! Check your label for the expiration date.  
If it says Membership Expired or Membership Expiring this will be your last newsletter!**