

THE LEADING EDGE

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

Volume 24, Number 5
September/October 2001

Club News

Watch The Grass Grow (WTGG) – Since The FAA is granting waivers again (see Bunny's note at right), WTGG is on for this Saturday, October 13th. We'll probably be able to get the range open around 10:00, and fly until 6:00 weather, rockets and sun permitting. Be sure to bring water and food, since there's not much around the sod farm. See directions to the launch site and an email from David Wallis, NIRA's RSO, on page 10.

Leading Edge wins Trophy – This past August at NARAM, The Leading Edge was announced as the winner of the 2001 LAC Trophy for the best section newsletter.

This isn't the first time the Leading Edge has won, it's actually the sixth with prior wins in 1982, 1984, 1996, 1997 and 1999

As I'm sure ever winning newsletter editor has stated, it's really the contributors that win the award, not the editor. One of the reason for NIRA's number of wins is that The Leading Edge isn't written by a small handful of people (like some newsletters), it really show the diversity and strengths of our club.

I'd like to thank all of the great contributors for helping win this award - remember, the next deadline is coming up fast! I'd also like to thank my wife and kids for putting up with (and even helping with) my 'second hobby.'

Scout Launch, October 20th – There will be a Scout Launch on Saturday the 20th (the day before our normal club launch). It will run from 12:00 to 3:00 pm at the Greene Valley Launch site. Please show up if you'd like to help with the launch - well over 40 scouts are expected (each with several engines).

Holiday Party – NIRA has traditionally held a holiday party as the club activity in December and is looking for someone to host the event this

(Club News continued on page 11)

Messages From The NAR President: Announcement on Rocketry Activities Requiring FAA Waivers or Notifications (from www.nar.org)

September 28, 2001

I have received additional information from FAA HQ in Washington, DC regarding current operational procedures for rocket flights conducted under FAR Part 101.

Specifically, I have confirmed that:

1. Model rocket flying (rockets using less than 4 oz. propellant and weighing less than 1 lb.) remain unaffected by the current national airspace emergency.
2. Operations under the "large model rocket" notification provisions of FAR Part 101 (rockets using 4.4 ounces of propellant and weighing between 1 lb. and 3.3 lbs.) have been restored. NAR members and sections wishing to launch rockets under those provisions should use the same process they did prior to the events of September 11, 2001. Please work closely with your local FAA officials in restoring your large model rocket notifications.
3. Rocket operations requiring a waiver application (rockets containing more than 4.4 ounces of propellant and/or weighing more than 3.3 lbs) will be reviewed and approved on a selective basis by FAA offices. No waiver applications are likely to be approved in airspace affected by temporary FAA flight restrictions, particularly for launches in the Washington, DC and New York City airspace. NAR members should be reminded that, historically, any application for waived launches under Part

Homer Hickam will be at Anderson's Bookshop in Naperville on October 23 at 7 pm!

Mr. Hickam, author of *October Sky*, will be signing his new book *Sky of Stone*.

Line number will be given out starting at 6:00 to anyone with a receipt for one of Mr. Hickam's books from the bookshop.

Anderson's Bookshop
123 W. Jefferson Ave
Naperville, IL 60540

(630) 355-2665

101 was subject to denial by the FAA. Again, please be patient in working with your local FAA contacts.

Our country has experienced a tremendous tragedy. Historically, the NAR has had a productive relationship with the FAA. We need to remember that our FAA partners are struggling to meet multiple new demands placed on them by these events. I have pledged the NAR's cooperation and support to the FAA during this difficult period. I ask NAR members to please be patient, polite and professional in their dealings with the FAA as we work to restore our waived flight environment to the conditions which existed prior to September 11, 2001.

As always, I welcome any and all of your comments, questions and suggestions.

Mark B. Bundick, President
National Association of Rocketry

Previous Update, September 20 2001

I have received a telephone call from FAA HQ in Washington, DC, confirming the facts as I outlined them in my September 19, 2001 announcement to members. Specifically:

- The FAA has temporarily suspended all sport rocketry operations operating under either the notification or waiver application procedures within FAR Part 101.
- Model rocket activities are unaffected by this suspension.
- There is not yet a definitive date by which waiver and notification restrictions will be lifted.
- The FAA will notify the NAR when those restrictions are lifted and members can submit either waiver applications or large model rocket notifications.

NAR members are welcome to continue to email me with a summary of any FAA conversations they may be having.

(Message From The NAR President continued on page 11)



Volume 24, Number 5
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Bob Wiersbe

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!

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Photos will be returned, other material returned upon requested.

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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:

Ken Hutchinson
82 Talcott Avenue
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NIRA's web site: <http://nira.chicago.il.us/>

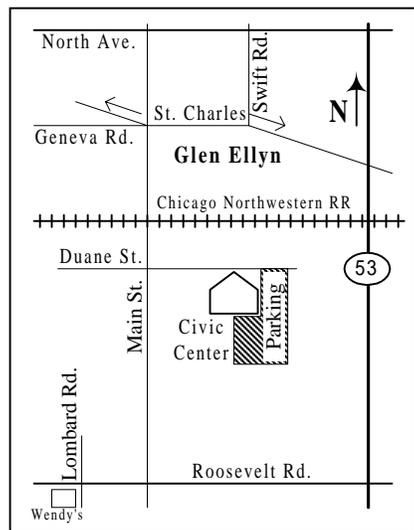
NIRA InfoLine: (630) 830-1587



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 Rick Gaff if you want to schedule a date. The location is usually the Glen Ellyn Civic Center, 535 Duane Street (usually the 3rd floor, but check the board in the lobby).

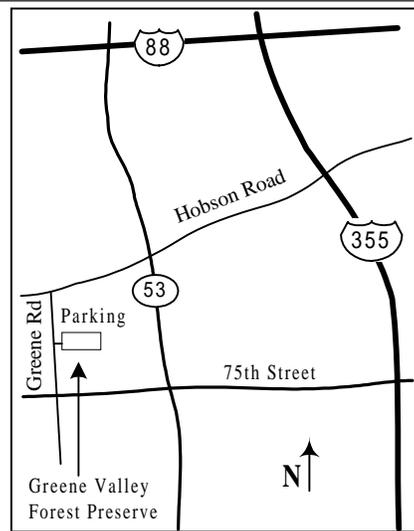
- November 2
- December 7
- January 4, 2002
- February 1
- March 1
- April 5
- May 3
- June 7



CLUB LAUNCH DATES

Launches are BYOL (bring your own launcher). The location for our launches is the Greene Valley Forest Preserve (see map at right). Call the NIRA infoline for pre-launch information: 630-830-1587.

- October 21 – Greene Valley Forest Preserve
- November 18 – Greene Valley Forest Preserve
- December ? - Holiday Party - location/date/time TBD
- January 20, 2002 - Building session - Bob Kaplow's house (map/information in the next issue)
- February 17, 2002 - Building session - location TBD
- March 17, 2002 - Building session - location TBD
- April 21, 2002 - Greene Valley Forest Preserve
- May 19, 2002 - Greene Valley Forest Preserve



Model of the Month Winners! (photos by Jeff Pleimling)

August – Cally Soukup won the adult category with her Custom SAM-X while Alex Wallis captured the youth category with his LOC Little Nuke.

September – Victoria House's Estes Mean Machine won her the youth category while Joe Franck's scratch built X – 1 won him the adult category.

2001 Make-It Take-It Report
by Bob Wiersbe (NAR #44588)

Every fall for the last 10 or so years there's been a major Hobby Show in Rosemont, IL, a suburb just on the edge of Chicago. It used to be called the RCHTA Show, after the Radio Control Hobby Trade Association that runs it. These days it's called the International Model and Hobby Expo. No matter what name you call it by, it means two days of the latest in RC cars, boats, planes, helicopters, plastic models, rockets, trains, tools, glues, components, electronics, all kinds of cool stuff.

It also means Make-It Take-It booths, places where anyone can go and build something sponsored by one of the vendors at the show. There is usually a booth where you can build a balsa airplane, a snap-together plastic model, some railroad scenery, and most importantly, a rocket! This year Quest sponsored the Rocket Make-It Take-It booth, generously donating the Viper kits that were built at the show.

Several months before the show Dane Boles of Quest got in contact with Mike Jungclas and me (Mike and I co-chaired the show for NIRA this year) to talk about which Quest kit



'Master Builders' yep that's us... (Jeff Pleimling photo)

would be best for us to use. He even sent us four kits to evaluate before we decided on the Viper, which we really appreciated (we've never been given a choice before!). After we selected the Viper, Dane had Quest

send us a dozen so that we could build them and develop the instructions we'd need for the show.

While Mike worked on the instructions, I got busy trying to enlist people to sign up for a shift working a table at the show. We'd asked the show management for 18 tables, so we needed a lot of help if we were going to have someone staff each one. As it turned out, the booth could only fit 14 tables which just happened to be the exact number of people that signed up for each morning shift. So things couldn't have worked out any better.



Bob Wiersbe assists some future rocketeers. (Leo Ringwald photo)



Vicky Luevanos and Dane Boles - the helpful people from Quest. (Bob Wiersbe photo)

The Viper kits were an excellent choice to use for the show. They look great, they're a snap to build, they have good quality parts, and they fly really great too (more about that later). With the instructions from Mike and a little training, our volunteer staff was ready to help showgoers build their rockets.

Over the two days we built nearly 1000 Viper kits! We were a little disappointed by this, as we would have liked to have built more, but there just weren't that many people at the show this year. There were many times when we'd have a table with just 1 or 2 people building a rocket, which is very unusual for us. There was only once or twice when there was any kind of a line to get into the booth. The show was held several months earlier than normal, so we think this

(Make-It Take-It continued on page 9)

Vipers Infest Greene Valley!
or The Hobby Show Launch
By Bob Wiersbe (NAR #44588)

The week after we help kids build a rocket at the International Model and Hobby Expo we host a special launch and help them fly their rocket for the first time. This year Quest sponsored the Make-It Take-It booth with Viper kits, and generously donated A6-4 motors for the launch. They also donated four starter sets for us to use, and we decided to "raffle" them off to the kids that came out to the launch.

Since the Hobby Show was held in early September we were hoping that we'd have good weather for the launch. Typically, the Hobby Show is held around Halloween and the weather tends to be cold and dark. This year it was a bit

cloudy and drizzling in the early morning, but we had sunshine by mid-afternoon and just a perfect day for a launch.

Mike Jungclas, Rick Gaff, and I arrived at Greene Valley at 11am to get the equipment set up and tested before the 1pm start time. It was a good thing we decided to start so soon, Rick left a vital piece of equipment on his kitchen table and had to go back home to retrieve it. Everything was up and running by the time the first kids came out with their Vipers at 1pm.

The launch started out slow, with only about 15 kids showing up by 2pm. By 3pm there were over 50 kids with Viper rockets on the field and probably another 50 parents and siblings watching. Everyone was having a fun time, cheering each Viper launch no matter whose it was. The kids really got a kick out of flying their rockets.



The Quest catalog was popular reading material (Bob Wiersbe photo)

On their second flight many of them were putting comments on their flight cards, here are just a few examples: Brett Hedstrom "Fun", Katie Jalette - "I like it", Samantha Quintell - "It's cool!"

Several NIRA members flew their rockets to give folks a small glimpse into the diversity of rocketry. Bob Kaplow was flying some Oddrocs, such as his Happy Meal, AOL con, Woodstock (a large yellow badminton birdie), and American Pie (a bunch of plastic dinnerware). Cally Soukup flew her Spool 1 several times; this bizarre little rocket (basically a motor mount) actually works! Charles Hammerslough's Super Big Bertha on a D12-3 was a hit, especially when he put a sky diver in it. Kent Ochs



There were plenty of kids (and adults) having fun at the hobby show launch (Bob Wiersbe photo)

(Vipers Infest Greene Valley continued on page 4)

Estes "Mercury Redstone" Review by Mark Soppet



To commemorate the fortieth anniversary of the late Virgil "Gus" Grissom's first space-flight, Estes has released a flying model of the Mercury Redstone rocket that Grissom flew on that fateful day in July 1961. Before I begin talking about the kit, I just want to clear up one detail: this is not simply a reissue of the Estes (ex-Centuri) Mercury Redstone. This is a re-engineered version of that classic kit.

The largest difference between the two kits is the fins. The old kit, like its cousin, the Jupiter-C, used wooden fins that had to be shaped by hand. The new kit takes most of the challenge out. The fins are injection-molded plastic, and they lock into the plastic slots that are molded onto the engine mount. This makes for easier assembly and better fin alignment.

The capsule is the same one used on earlier releases of the kit. There are slight differences between the Freedom 7 capsule they give you and the actual Liberty Bell 7 capsule, but these are negligible in this scale. The old Centuri instructions instructed builders to remove the spike from the escape tower before launch. But the new kit tells you to glue it on. I would use a generous amount of glue to hold it in. The instructions show you how to attach the parachute so the capsule will descend in a horizontal position. It would be nice if the kit gave you the option of a vertical-position for landing the capsule.

The most disappointing change made to the kit is the decals. You'll be hard-pressed to find water slide decals in an Estes kit these days, and this kit is no exception. I guess that there's nothing wrong with self-adhesive decals, but they just don't seem right. It just might be the model airplane builder inside me talking, but I think that all scale kits should have water slide decals.

The only really bad part about the kit is the instructions. They don't give you a good idea on how to paint the Mercury capsule. If you follow some references, though, a very detailed capsule can be built with an accurate paint job. It tells you to apply the lower body wrap decal before the body tube halves are joined; a better option

Estes 'Mercury Redstone' Specifications:

Length: 23.5" (59.7 cm)
Diameter: 1.6" (40.6 mm)
Weight: 3.0 oz. (84 g)
Recovery: 1 - 12" (30 cm) and 1 - 18" (46 cm) parachute
Fins: Plastic
Maximum Altitude: 500 ft. (152 m)
Recommended Engines:
B6-4 (First Flight), C6-3, and C6-5
Suggested Retail Price: 25.99

would be to join the body tube halves first, and paint them white after filling the joint. Then it is time to apply the wrap.

Despite its minor flaws (which is really nit-picking on my part,) the new Mercury Redstone can be built into a scale model worthy of being displayed. Of course, you can fly it on a B6 or C6, but why risk losing or damaging this work of art? I wouldn't say that this should be your first scale model (the old mini-Patriot was a better place to start,) but a rocketeer with average skills should be able to build a beautiful model. The most important advice is to take your time - you don't want to "screw the pooch."¹

1. Quoted from "The Right Stuff"

(Vipers Infest Greene Valley continued from page 3)

Super Big Bertha with an E18-4 reload stole the show though. The roar of the White Lightning motor got everyone's attention.

Everyone got to fly their Viper at least twice, thanks to the generosity of Quest. Everyone also got a Quest catalog when they signed in, and all over the field you could see moms and dads looking through them with their kids. Some parents got hooked immediately and went to local hobby shops for more motors. All they had in stock were C motors, which landed the first model across the street in someone's backyard. We quickly decided to swap out the parachutes and install streamers for anyone who wanted to fly their Viper on a C motor, and after that they were all landing back in the range area. In all there were 128 Viper flights made during the launch.

Every hour we would draw a flight card out of a hat and "raffle" off one of the starter sets that Quest had given us. The kids absolutely loved this! The raffle winners couldn't wait to fly their new rockets, so they opened them up on the field, put



One of the vipers flown at the launch.
(Leo Ringwald photo)



Mike Jungclas assists some kids prepping their rockets.
(Leo Ringwald photo)

them together, prepped them, and brought them to the check in table. Most of them used up all the motors in the set! The raffle winners were: Kyle Anderson (Chain Reaction), Xavier Flores

(Recoil), David Dailey (Tidal Wave), and Corey Couchman (Whiplash).

Many people came up to me during and after the launch to thank us, and to thank Quest for donating the Viper kits and the motors for the launch. All of the raffle winners (and their parents!) said a big "Thank You!" with a smile on their face. They really enjoyed building the rocket, and flying it.

I'd like to thank all the NIRA folks who came out to help at the launch: Mike Jungclas, Rick Gaff, Bob Kaplow, The Hojek Family, Cally Soukup, Charles Hammerslough, Kent Ochs, Mike Ugorek, Leo Ringwald, John Kouhns, and Cole Artzen. We couldn't have done this without your help!



Smiling raffle winners (left to right) Kyle Anderson, Xavier Flores, David Dailey, and Corey Couchman.
(Bob Wiersbe photos)

2001 Hobby Show Report
Copyright Bob Kaplow (NAR 18L)

This years Hobby show was more than 2 months earlier than previous shows. Seems the manufacturers need more than 45 days lead time to deliver goods in time for holiday sales. But the down side of this is that show participation was down. There were less exhibitors, less trade people, and over the weekend less public. The drop-off in public attendance was most noticeable, and probably caused by other summer activities still running, plus the start of school hasn't got youth groups fired up for their fall activities yet.

This year there were only two rocket companies present, Aerotech and Quest. Apogee, Custom, Estes, Extreme Rocketry, Holverson, PML were all absent. The rumor I heard from several folks at the show was that after last years incident, Estes was told they were not welcome back. Also absent were Glencoe, Bob Smith, Foredom, and others that were regulars in the past. *[Editor's note - I heard the rumor that Estes wasn't here (and wasn't at the East Coast Hobby Show either) because, with their new distributorship deal with Great Plains, they didn't think they needed to. It also saved some money - and money's an issue right now with Estes.]*

But wandering the show were Bill Saindon of BMS, Andy Jackson of ASP, and the return of Bill Stine with a new non rocket company.

Make-it Take-it:

With the absence of Estes, Quest filled in and donated 2000 Viper kits for the Make-it Take-it. Due to the lower attendance, we built less kits than in the past few years. Still, under the master organization of Bob Wiersbe and Mike Jungclas, with the assistance of many NIRA volunteers, and a few friends from SCAM and WOOSH, we helped over a thousand kids build a rocket at the show.

Saturday we'll host a launch for all the kids.

Aerotech:

Gary Rosenfield and Aerotech had their full line of kits, motors, RMS, and hybrid products on display.

Products new to the show were the F21 24x95mm motors at 55 NS, plug compatible



Bob and Kathy Hart being shown around the Aerotech booth by Mike Martens. (Jeff Pleimling photo)

with the new Estes E9. The total impulse is limited to 55 NS not by the casing size, but by the 30g postal shipping limit exemption obtained by Aerotech, making the motor shippable to dealers and distributors without the UPS HAZMAT fee. And they are at least looking into an upgraded 24mm RMS casing.

Also new was the Sumo rocket, a shorter than the G-force 4" kit with a motor mount that will take H reloads, making the kit suitable for Level 1 certification.

Finally, Redline propellant and Kosdon by Aerotech were present but lower key. Aerotech was showing a slick video that will be available to about 1600 hobby dealers around the country, featuring some cool HPR flights, and the fastest assembly of an Initiator and a G64 on record.

Mike Martens was doing a smaller scale Make-it Take-it with the Aerospike educator pack, giving away a dozen Mustang like models over the weekend.



Aerotech Sumo (Rick Gaff photo)

Aerotech is looking into several other product improvements in response to user suggestions.

Quest:

Dane Boles is still at the helm of Quest, and business is better than ever. The Micro Maxx motors have been upgraded from 0.2 NS to 0.3 NS in the same size casing. The Saturn-V fin area has been increased for stability. And the packaging of the whole line has been upgraded. The Micro Maxx starter sets are in a more attractive blue box. The quick build

kits (plastic fin units) will be going from bags to a hard shell clear plastic box, and the fin units will be getting a major overhaul.

The construction kits (balsa fins) are getting more flashy graphic covers. Dane said the line will grow, both in RTF, quick build, and construction kits. In the next year he expects to have more models than "that other company". And there will be some really exciting announcements among those new products, including Micro Maxx kits and more.

The rest of the show:

The Tripoli booth was back this year. Bruce Kelly was present for part of the show and again used the space to sell his personal magazine from space donated to the not for profit organization.

Bill Stine is with a new company, X-planes, making small 1/144 static models of the old X planes. The line includes the X-1, X-3, X-4, X-5, X-15A-2, and X24A. An X-15 was on display with the Quest Micro Maxx stuff, making us all wonder...



The really tiny X-planes (Rick Gaff photo)

Polar Lights had a Forbidden Planet spaceship that is begging to be turned into the worlds largest flying Happy Meal! It must be over 24" in diameter! Also coming are Land of the Giants Spindrift, and Voyage to the Bottom of the Sea submarine. Maybe not PMC legal, but probably flight convertible for fun. The Dick Tracy Space coupe from last year is still available and should be PMC legal. And while not rockets, you Speed Racer fans can get the Mach-5 kit in either glue or snap-kit.



The Quest booth. (Bob Wiersbe photo)



Polar Lights' Seaview and Spindrift re-releases of the old Aurora kits. (Jeff Pleimling photo)

Revell had a new 1/72 Space Shuttle orbiter with spacelab.

(2001 Hobby Show Report continued on page 9)

Impromptu Labor Day Launch 2001

by Adam Elliot

A small band of NIRA members turned out at the Greene Valley launch facility for a nice Sunday club launch. Okay, this was originally just a couple guys wanting to go launching for fun, but turned into a club event. The weather was impeccable. About the only improvement would have been the complete lack of air motion.

Rick Kramer showed off his usual oddroc flying food containers and tube fin designs. Included in the show were the

Bowl Apogee! and the UFO Alfredo. His 3-Cheese UFO however got kinda stuck on the rod for a rather cheesy flight. Then there was his America Off Line CD and dome rocket. At least 5 varieties of tube fin rockets flew from his stable, one suffering a separation.

The Spool Rocket craze has hit the NIRA folk in rapidly increasing numbers. Twice the number of people were launching them this month. Culminating in a spool rocket drag race between Rick Kramer and Martin Maney launching theirs on a C6-3 and C6-5 respectively. For the most part, they were stable. Sane? Maybe, but they all made safe flights.

The Martin and Cally launch and recovery crew were in force with their loads of fun Maple Seed rocket and Cally's Stretched Yankee, a repair job of the stock kit. All flew beautifully on A class motors.

Club president Rick Gaff had an interesting day. All his rockets were classics including his Ion Pulsar on a Quest A6-4 and Wren on an E28-7t. His other models didn't fare so well. At least two suffered interesting failures when the rear closure of his RMS spit out each time. One of them seemed to have lost the casing, but it was just hiding inside the rocket, safe from all the commotion. His Initiator wasn't lucky either. The flames were spewing out on the blast deflector and starting to melt the fin tips. A douse of water seemed to cool things off. Rick can now initiate a corkscrew with the model.

A highlight of the day was a three way drag race involving two Big Daddys on D12-5s and a Blobbo on a C6-3. Dan Cordes, Cal Jestic, and Rick Kramer all pushed their buttons at the same time for quite a spectacular show.

Dan Cordes had numerous flights including several on his full scale Pencil on a motor that was 1/8 the size of the true scale motor and mere fractions of the thrust. Also his Venus Probe suffered an interesting failure that seems to remain inexplicable. Needless to say, it didn't go very high.

Whistles were heard when Cal Jestic launched his Whistler rocket. This was a Big Bertha or the like modified with one of those wooden train whistles in the nose. It whistled away on a D12-5. Cal's Poorly Trimmed Zoomie lived up to its name by barely gliding into the tall grass. Fortunately it was painted in bright colors so it was found.

A real show stopper was the impromptu, but naturally demanded drag race between the two DUDEs present on the field. Rick Kramer and Charles Hammerslough were both ready to go. Unfortunately this kit presents its

usual complexities. The igniters didn't fire at the same time, but it sure was fun to watch these things go off. Several members should show up with DUDEs and have a DUDE FUED.

Brett showed up with his usual assortment of homemade rockets, including one of his daughter's. All flew nicely on B class motors until his Pogo-Hi was reflown on a D13-4. It screamed.

Adam Elliott got in some excitement by flying his Cherokee-D twice. Once on a C6-7 and then a D12-7. This kit still has the original rubber shock cord. Let's just say that Adam is very happy the D12-7 is back in production. Other models include his finless Delta Dummie and nicely finished Blackhawk, both on C6-5s. Adam finally got his rail in working order by fabricating a pad to attach it to. The Monolith, now fitted with rail buttons, took off on a D12-3 for a flight resembling something far closer to stability than previous flights. Still needs work, though.

Rick Kramer led the day with 20 flights followed by Dan Cordes with 15. Cal and son Brian Jestic clocked in with 11 with Adam Elliott lofting 6 times and Brett launching 5. The Martin and Cally team put up 2 and 4 flights respectively. Charles Hammerslough got off 3 while Rick Gaff logged only 2 official flights.

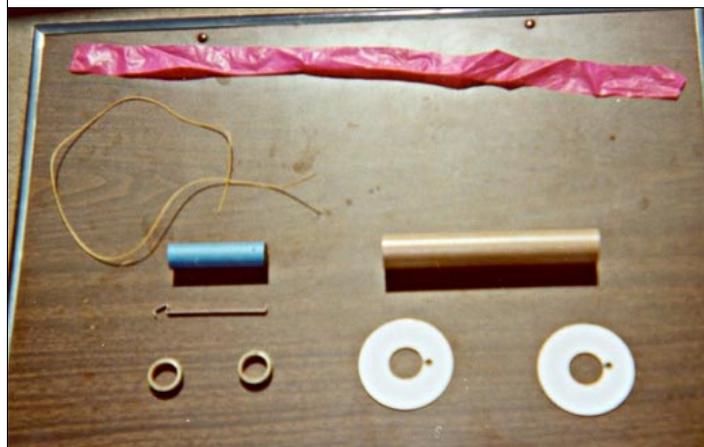
It was a great day in a great weekend. The launch was a great way to fill time in an extra long weekend. 🐛



Adam Elliot checks his rocket.
(Dan Cordes photo)



Photographs of Rick Kramer's Spool Rocket. The finished rocket (above) and the parts it's made from (below).
(Rick Kramer photos)



A couple of Dudes getting prepped for launch.
(Dan Cordes photo)

Spool Rocket

A sport model that uses 2 flat plates instead of fins
By Rick Kramer

Parts List:

- A. 1 - Six inch length of BT-50 body tube.
- B. 2 - 8050 Estes cardstock centering rings.
- C. 1 - Estes 18 mm motor mount kit: (Or Parts:)
 - BT-20 motor tube
 - Engine Hook
 - 2 - 5020 Rings
- D. 1 - Twelve inch length of Kevlar or 1/8" Sewing elastic
- E. 1 - 2" X 20" Top Flight Nylon streamer or 3 Feet of surveyors flagging tape
- F. 1 - Paper Shock cord mount (Estes - 3 folds)
(Items D-F are optional)

Specifications:

Length: 6"
Diameter: .976" (body tube), 2.56" (plates)
Recommended Motor: C6-3

Construction Information:

For those of you that do not read rec.models.rockets on the internet, here is an example of the latest designs to push the Odd-Roc envelope. These rockets have no fins. They are aerodynamically stabilized by two plates located on each end of the body tube. If you have seen an AOL compact disk fly at one of the NIRA monthly club launches, it is actually half a spool rocket (only one plate). The people on R.M. R. are flying actual wooden wire spools with large composite AP engines in them. This little Spool Rocket will give you the chance to experiment with new technology and still recover it inside the boundaries of the flying field.

The last three items in the list are entirely optional. I used the nylon streamer simply because I had one in my range box. A recovery device is not necessary as the spool can safely tumble. However, even an Estes plastic streamer gives you a better chance of finding your spool in the tall grass and weeds at Greene Valley.

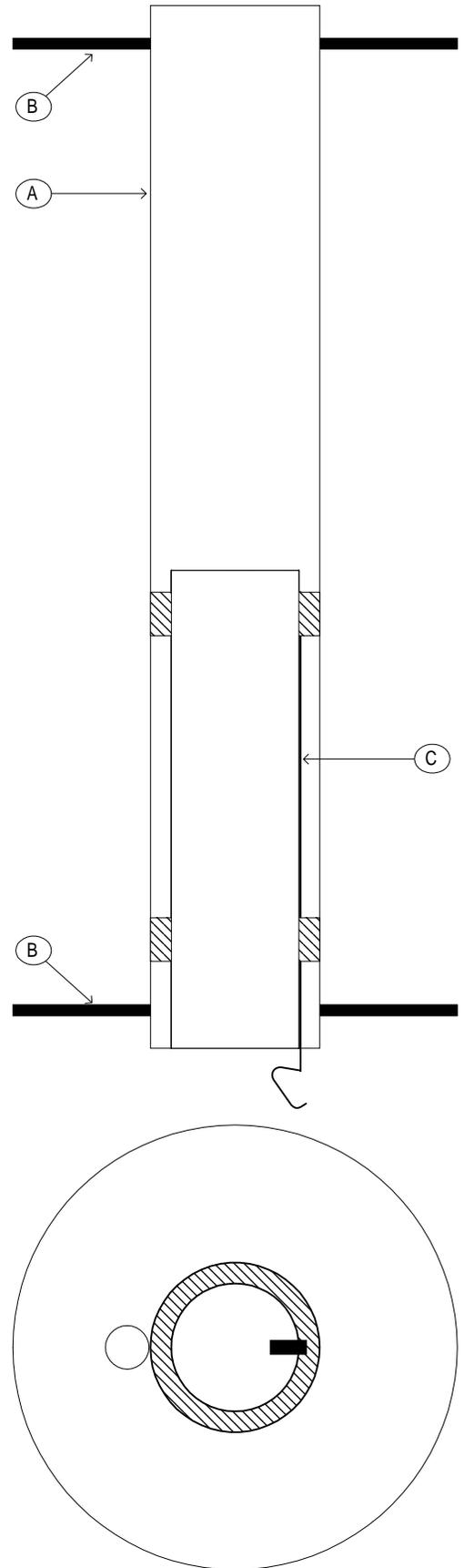
Well, let's get busy and build one of these interesting new contraptions. The Spool Rocket is very simple to build. It's like building the stuffer tube for a large rocket kit and then quitting and flying it without building the rest of the rocket kit.

Using white or yellow glue, Assemble the motor mount following the Estes instructions that come with the kit. If you are doing this from spare parts, the engine hook fits in a 1/8" slit which is cut 1/4" from one end of the motor tube. One of the 5020 rings is glued to the motor tube approximately near the center of the engine hook. The other 5020 ring is glued right over where the front of the hook enters the motor tube. Next glue the completed motor mount inside the BT-50 body tube flush with one end. Using a paper hole punch. Make a hole in each of the 8050 centering rings as close as you can to the inside diameter large hole. Draw a pencil line down the full length of the body tube.

Place the 8050 rings one on each end of the body tube about 3/16" from each end. Line up the punched holes on the pencil line and finally glue the 8050 rings to the body tube. If you're not installing a recovery device, congratulations you are ready to fly. For the rest of you, install the elastic or Kevlar in the three fold shock cord mount and glue it into the front of the body tube. Since there is no nose cone shoulder to worry about, you can glue it right up to the top inside edge of the body tube. Tie on the streamer or flagging tape and you also are ready to fly (Once your glue dries.)

The average single hole punch makes a hole slightly less than 1/4 inch. I suggest a 3/16" launch rod to keep the wiggle room to a minimum. I have used C6-3 engines in my Spool Rocket which flies straight and true to around 300 feet. I have observed other Spool Rockets wiggle back and forth during boost, tumble end over end during coast, and float down with both plates perpendicular to the ground during recovery. A lot is yet to be learned about these different yet interesting Odd-Rocs.

Have fun with this one!



Space Launch Report for July-August 2001 by Tim Johnson

Government-funded missions accounted for all but one of the 12 launches in July-August. Ariane 510 suffered the year's first launch failure on July 12, stranding two satellites worth nearly \$1 billion in low transfer orbits. Arianespace recovered with an Ariane 44L launch on August 30. Meanwhile, Japan scored its first launch success in three years with the inaugural H-2A.

Florida was busy, with two space shuttle launches from Kennedy Space Center (KSC) ferrying a dozen astro/cosmonauts to and from the International Space Station (ISS) while adjacent Cape Canaveral hosted Atlas IIA, Delta II, and Titan IVB launches. Baikonur handled an ISS Soyuz-Progress launch and a military Proton launch. A Molniya-M and a Tsyklon 3 flew from Plesetsk.

ISS Mission

Shuttle Atlantis flew to ISS from KSC Launch Complex (LC) 39B on July 12. The STS-104/ISS-7A mission crew; Commander Steve Lindsey, Pilot Charles Hobaugh, and Mission Specialists Michael Gernhardt, Janet Kavandi, and James Reilly; attached the \$164 million "Quest" airlock to the Unity module during a 12 day mission. The flight used the first Block 2 Space Shuttle Main Engines outfitted with Pratt & Whitney LH2 turbopumps.

Orbiter Discovery began the STS-105/ISS-7A.1 flight from LC-39A on August 10 with a new station crew, 4,700 kg of supplies, and the Leonardo logistics module. Commander Scott Horowitz, Pilot Frederick Sturckow, and Mission Specialists Patrick Forrester and Daniel Barry ferried the Expedition 3 crew; Frank Culbertson, Vladimir Dezhurov, and Mikhail Tyurin up and brought the Expedition 2 crew; Jim Voss, Susan Helms, and Yuri Ysachev; down on August 22 after 5.5 months in orbit.

A 2.5-stage Soyuz-U boosted Progress M-45 with supplies to ISS on August 21 from Baikonur Pad 1, replacing three-month-old Progress M1-6.

Arianespace Troubles

Ariane 510 failed to properly orbit two satellites during Arianespace Mission 142 on July 12. The Ariane 5G's twin solid rocket boosters and cryogenic core stage burned correctly during the first 10 minutes of the flight from Kourou ELA 3, but the hypergolic, pressure-fed Storable Propellant Stage (EPS) engine suffered combustion instability at startup. The damaged engine then provided only 80% thrust during a burn that ended 80 seconds early. The failure stranded the \$850 million, 3,100

kg European Space Agency Artemis data relay satellite and 1,300 kg BSat-2B in 17,500 x 600 km orbits, short of the planned 36,000 x 800 km. BSat-2B was a total loss, but ESA planned to use on-board propulsion to salvage Artemis with a reduced lifetime. It was the third Ariane 5 failure in ten flights.

Arianespace recovered with an Ariane 44L launch of 4,725 kg Intelsat 902 into GTO on August 30 from ELA2. Mission 143 was the 63rd consecutive Ariane 4 success. Only 11 Ariane 4s remain.

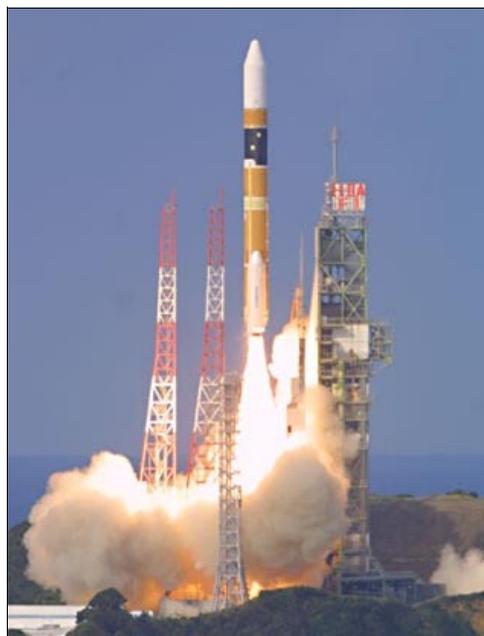
H-2A Inaugural

Japan celebrated its first successful space launch since July 1998 when the first H-2A, a 202 model, lifted off from Yoshinobu Launch Complex at Tanegashima on August 29. The 2.5 stage, \$71 million "F-1" vehicle put its second stage into geosynchronous transfer orbit (GTO), along with attached Vehicle Evaluation Payload 2 and a deployed "mirror ball". 53 meter tall, 285,000 kg H-2A/202 is designed to put 4,150 kg into GTO, comparable to an Atlas IIIA or Delta IV-M, but less than an Ariane 5 or Proton. Monolithic solid boosters and simplified LE-7A first stage and LE-5B second stage cryogenic engines allow H-2A to cost half as much as the H-2 it replaces.

Cape Canaveral Summer Rush

Cape Canaveral hosted three launches. AC-142 put 2,279 kg GOES- M(12) into GTO+ from SLC 36A on July 23. It was the 56th consecutive Atlas launch success and the 53rd straight Atlas II success. It was also one of the final launches planned from SLC 36A. Only Pad B has been upgraded to handle the Atlas III, and Atlas V rockets will use rebuilt Pad 41, several miles up the coast. Less than a dozen Atlas IIA launches remain.

Titan 402B-31 launched 2,380 kg DSP-21 from SLC 40 on August 6. The \$460 million rocket's IUS-16 third stage put the \$256 million early



Liftoff of Japan's first H-2A (NASDA photo)

warning satellite into geosynchronous orbit (GEO) about 6.5 hours after liftoff. It was the 32nd Titan IV launch. Only seven more of these cold warriors remain.

Delta 287, a 7326-9.5 model, flung NASA's 636 kg Genesis spacecraft into solar orbit from SLC 17A on August 8. Genesis will perform five halo orbits around the L1 point, 1.5 million km sunward of earth. After 2.5 years, the craft will return to earth, depositing a solar wind sample canister in a Utah desert. Delta 287 was the 43rd consecutive Delta II success.

From Russia, Ukraine, and Kazakhstan

Russia's Plesetsk Northern Cosmodrome, where more space flights have originated than any other site on earth, hosted two launches during July-August. A Molniya-M, a 3.5 stage derivative of the timeless R-7 booster, boosted a Molniya 1K comsat into a 12 hour 40,831 x 407 km x 62.9 orbit from LC 43/4 on July 20. A three-stage Tsyklon-3 put a 2,260 kg Koronas-F solar physics spacecraft into low earth orbit (LEO) from LC 32 on July 31. The launch was performed for Rosaviakosmos, the joint Russian/Ukrainian space agency.

Baikonur, Kazakhstan handled both the ISS Soyuz-Progress launch and a military Proton K/DM-2M launch. The Proton lifted off from LC81R on August 24 and put Kosmos 2379, a Prognoz-2 early warning satellite built by NPO Lavochkin, into GEO.

Launch Vehicle News

NASA is thinking about mothballing OV-102 Columbia to save money. The 20-year-old orbiter is too heavy to perform ISS missions.

A Lockheed Martin Atlas V 500-series structural test article core

(Space Launch Report continued on page 10)



Ariane 510 during rollout. (Arianespace photo)



Titan 402B-31 lofts an early warning satellite (Lockheed Martin photo).

Estes "Dude" Review by Rick Kramer

The "Dude", What is it? Why is everyone talking about it? The "Dude" is a seven foot tall inflatable mylar balloon rocket released by Estes in August and is available at your local Wal*Mart or hobby store.

The "Dude" assembles with plastic tube type cement in about an hour. There is nothing difficult or tricky about building it. The instructions are well written and for the most part are clear. The package includes a very nice three piece threaded aluminum 1/4 inch launch rod and a plastic tent stake which you drive into the ground and it holds the launch rod. A large diameter (huge) steel blast deflector and yet another electron beam launch controller are also included. You have to supply the 4 AA batteries.

The real fun is flying the "Dude." After inflating and sealing the air valve you will need an assistant to keep the wind from blowing the rocket and launch rod over. The two launches my "Dude" flew, we found that when your audible countdown reaches 2, your assistant should let go of the rocket and quickly get out of the way. The launch is a real hoot. The rocket does not fly very high, but it is impressive because of its large size.

The little 12 inch parachute that pops out at ejection is quite comical and unnecessary. The rocket gently floats to the ground with the parachute tugging the nose downwind.

Estes 'Dude' Specifications:

Length: 88 in. (223.5 cm)
Diameter: 5 3/4 in. (14.6 cm)
Recovery: 12 in. (30 cm) Parachute
Fins: Nylon
Maximum Altitude: 300 ft. (91 m)
Recommended Engines: D12-3 only
List Price: 39.99

If you are lucky enough to have a "Dude" that holds air for any length of time (mine has a leaky valve) you simply load another D-12-3, re-pack the wadding and parachute and you are ready to impress the folks again.

The "Dude" is definitely a conversation rocket that will be talked about well into the winter months. The Wal*Mart price is \$19.97 and they also have special two packs of D-12-3 motors for \$4.97 Have fun with this one. 🚀

(2001 Hobby Show Report continued from page 5)

Airfix brings back the Saturn-V, Space Shuttle stack, and Orion, all in 1/144, plus the 1/72 Lunar Module.

Heller had a Space Shuttle stack, Ariane 5, and MIR

ZAP had Fiber-Poxy, designed for polyester and epoxy fiberglass bonding.

The aluminum and plastic Unimat-1 was again on display, but from a marketing firm that does direct show sales only. Besides, I've seen the 4 in 1 and 6 in 1 sets on sale at American Science and Surplus for less than their "show special" prices.

FMA direct was showing a product so new, they didn't even have literature; Co-Pilot Dave. it's a small 4 way sensor that goes on top of your RC airplane. If you get in trouble, you just take your hands off the stick and it levels the airplane. Certainly useful for RCBG trainers as long as you disable it for boost! Makes me wonder of this might work as a guidance system for our models to insure vertical flight.

Wiha showed a new ballpoint hex key with a small clip at the tip that makes it virtually impossible for your cap screw or set screw to fall off while starting the screw. 🚪



A Dude takes flight at a club launch.
(Rick Gaff photo)

Peter Olivola Garage Sale By Bob Kaplow (NAR 18L)

Last night Peter Olivola conned me into picking up all his rocket stuff, as he's getting ready to move. If I knew how much stuff there was, I'd never have agreed to take it. Now I'm stuck with his headache, and need to liquidate it for him ASAP. No reasonable offer refused on anything!

Since the bucks for this go to Peter and not me, and I'll have to mail it to him, the rules are:

1. **Everything must go ASAP!!!**
2. **Checks Only**, made out to Peter Olivola. I don't take American Express OR cash! I might make exceptions and trade for AP!
3. **No Shipping!!!** You can pick the stuff up from me at home (Dundee, all in IL), at work (Downers Grove), at a NIRA meeting, or a NIRA launch (space permitting).
4. **No Reasonable Offer Refused!!!** I've only bounced one lowball offer so far. (Can't blame him for trying...) Based on offers to date, half the Magnum or other vendor current price is a reasonable offer for most of the stuff. Almost anything is reasonable for the built rockets.
5. First come, first served.
6. There is no rule #6
7. I already got first dibs on anything really good! In fact, I bought way too much of this junk. And some good stuff.
8. **Please get this stuff out of my garage!!!**

Those who have already "ordered" stuff, or those about to do so, please let me know if you will be at Watch the Grass Grow this Saturday 10/13 in Harvard, and/or at the regular NIRA launch 10/21 at Green Valley so I can bring the stuff with to the right place. And if you're interested in something but aren't sure, especially one of the "RTF" rockets, let me know and I'll bring them with so you can look at them.

The list is to big for the newsletter, access it at: www.pleimling.org/garagesale or contact me directly at BobKaplow@firsthealth.com 🚪

Vicky House, Loni Howard, Stella Howard, Ken Hutchinson, Mike Jungclas, Bob Kaplow, Judy Kaplow, Dave Ketchledge, Brent Lillesand, Joe Nowak, Kent Ochs, Tom Pastrick, Brittany Piette, Jane Piette, Steve Piette, Jeff Pleimling,

Mike Provenzano, Joe Provenzano, Leo Ringwald, Cally Soukup, Tom Urbas, Tim Urbas, and Mike Ugorek.

Many parents (and several vendors) told me how well run our booth was. This is a real compliment on the quality of work that you folks did. Mike and I may have organized things, but you are the ones who made it work. Thank you very, very much!!

I'd also like to thank Dane Boles and Vicky Luevanos of Quest. None of this would have happened at all without their help, and generosity. Mike and I enjoyed working with Quest, and we hope we have the opportunity to do it again next year! 🚪



NIRA members help some new rocketeers load their rockets on the rack.
(Leo Ringwald photo)

Watch the Grass Grow 2001

Email by David Wallis, RSO

I now have, in my hot little hands, a waiver for Watch The Grass Grow 2001! We are authorized to 7,500 feet MSL, or about 7,000 AGL... which is, I believe, the highest waiver we've ever had at the sod farm. What's truly amazing is that the FAA reviewed, authorized, signed and returned the paperwork in about 4.5 hours! To quote my FAA contact, "... maybe you'd better go buy a lottery ticket!" :-)

So, assuming the weather holds, and we get some people and equipment to Beaver Run, WTGG is a go. I'll be bringing a new L2 cert rocket with, and my trusty little J350... no swamps makes me happy, but I hope the corn's been fed this year.

This will be a BYO equipment for model rockets (G & under), and, hopefully, we'll have the NIRA HPR pads and controller there for the big stuff. I'll also have a few prizes for some fun/kid contests, so bring your kids and their rockets, and we'll all have some fun.

If you have club HPR equipment, please let me know who you are, what you have, and if you're coming. In addition, we'll need (as far as I know), some 100' extension cords and a couple car batteries. If I'm leaving something out, let me know.. 🚗

(Space Launch Report continued from page 8)

stage fuel tank failed during a late June qualification test in Colorado. The test included dummy strap-on boosters.

Boeing erected the Delta IV CBC pathfinder stage at SLC 37B in mid-August. The company now claims 60 commercial launch agreements for the new rocket.

China's Shenzhou-2 orbital module reentered over the Pacific on August 25 after 260 days in space. 🚀

Mid-America Rocket Festival & October Fly contest

I just wanted to extend an invitation to you and all the other NIRA members to the Mid-America Rocket Festival & October Fly contest.

These events are being held October 27th and 28th in Elsebery, MO. (45 mi NW of St. Louis)

We are having our 2 day high power launch (Mid-America Rocket Festival) along side of our NAR regional competition (October Fly). We are planning on having separate range-heads opened for contest and high power/model rocket fliers.

We have a **huge**, flat, farm field that will accommodate rockets up to and including M motors. We have a 6500 ft waiver with windows to 14,500 ft (AGL). There will be camping allowed at the site and a nearby lodging facilities.

WTGG 2001 Information/ Directions to Beaver Run

Normal NIRA field rules will be followed. All "complex" rockets must go through the RSO safety check before going to the pad. Of course, with a 7000 foot waiver and lots of space, this is the time to bring out the big stuff that you can't fly at Greene Valley. Otherwise, there's nothing to do but sit around and watch the grass grow.

The only other rule for the sod farm is **do not drive on the grass**. This includes freshly seeded areas that may just look like dirt. Please follow our signs and only drive where directed. We usually don't know where we'll be set up until we get there and survey the field. Please clean up any mess and use biodegradable wadding.

Directions to Beaver Run Sod Farm:

The sod farm is located north of Harvard, IL just off Route 14, and just south of the Wisconsin border. The best way to get there from the Chicago area is to get to take I90 west to the Marengo exit, and then follow Route 20 west to Route 23. Take 23 north into Harvard. 23 meets with 14 at the south end of Harvard.

Alternately, take Route 14 (Northwest Highway) all the way into Harvard. This will take you through Palatine, Barrington, Cary, Crystal Lake, and Woodstock.

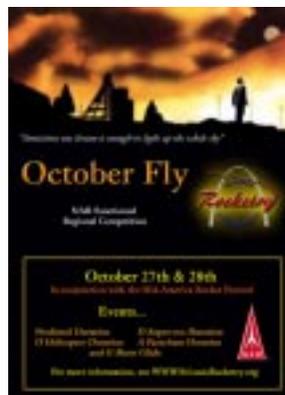
Once you are heading north/west on 14 you need to go to and through Harvard which is only a few miles south of the Wisconsin border. As you continue on 14 beyond Harvard you will pass the large Motorola factory on your right. Once you pass the factory start looking for Yates Road on your left, about 2-3 miles past the factory. Turn left (west) on Yates and continue to its end, a tee intersection with Lilja road. Turn left (south) on Lilja, follow it around a 90 degree bend to the right and the Beaver Run Sod Farm will be on the right about a quarter mile past the bend. Look for our signs to see where we are flying that day. Do not drive on any grass or freshly seeded areas, stay on the dirt road only. 🚗

The NAR competition events will be:

- G Boost Glide
- A parachute duration
- D Superoc duration
- Predicted duration and
- D Helicopter duration

I hope you and your brethren are able to attend. It promises to be a fun weekend.

Dan Schneider,
St. Louis Rocketry Association
<http://www.stlouisrocketry.org>
🚗



Confused Stages – Stage 21

by Jonathan Charbonneau

In stage 10 of my series, I had explained optimum weight. Optimum weight is dependent upon the engine used. It is different or a D12-7 then for a C6-5. Changing the weight isn't always practical, however. But don't despair, for there's a complement to optimum weight. Want to guess the name of this Batman's Robin? If you guessed optimum thrust, you are absolutely right.

Optimum thrust is the thrust that is most efficient for a given rocket. Any deviation from this reduces performance. Too little thrust is just like having too much weight. Too much thrust is just like having too little weight.

Having the right thrust is very important, so important, in fact, that it is more important than impulse. For instance, the Aerotech Cheetah will fly higher on an E30-7T than it will on an F12-5J, because the F12 is barely strong enough to supply power to this rocket. Too much of the thrust is just canceling gravity. The E30 has more thrust and therefore delivers its 40 Ns of impulse more efficiently than does the F12 at delivering its 43 Ns of impulse. At the other end of the spectrum, the Estes Black Brant II will fly much higher on an E6-8 than on an F24-10W. In this case, the rocket encounters so much drag with the high thrust F24 that much of the impulse is lost to drag. The E6 is much more efficient because of its long burn. The F24 delivers its 50 Ns of impulse too fast for the Black Brant II.

An important thing to note is the fact that in both examples, the engine with the better thrust had **less** impulse than the other engine. Impulse isn't everything. Efficiency is also a factor. Sixty percent (60%) of 40 is greater than twenty percent (20%) of 50.

Conclusion: An engine with more impulse will not always be better. Having optimum or near optimum thrust is also a priority. The impulse differential must be very large (e.g. G12 versus D24) for it to be possibly worth trading thrust for impulse.

Superman's Words of Wisdom

1. Be sure the engine has optimum or near optimum thrust for your rocket.
2. On windy days, use higher thrust but don't use an engine with too much thrust for your rocket to handle. 🚗

For Sale: Aerotech Mantis Pad and Interlok Launch Controller. New. \$60.00 or best offer for the set. This is a great deal – it normally costs \$80.00 for more just for the pad alone. See Jonathan "Superman" Charbonneau at a launch or meeting for more information.

Welcome to the Club!

Carla Ann Christensen, Sue, Eric and Ashley Farmer, Dave and Susan Ketchledge, Andy and Bobbie Montag have all joined NIRA in the past few months. Welcome to the club!
(If I somehow missed your name, please let me know!) 🍁

(Club News continued from page 1)

year. If you'd like to host, or want more info, please contact Rick Gaff, NIRA's President.

Building Sessions – Bob Kaplow has agreed to host the building session in January (details & map in the next issue). Also, at the October meeting, it was agreed that an outing to Adler Planetarium would be a nice change of pace for February (instead of a building session).

This leaves only the March building session without a host. If you would like an 'interesting' group of people descending on your house to build rockets (or talk about building rockets), please talk to Rick Gaff or attend one of the next NIRA meetings.

August Model of the Month contest –
Alex Wallis - LOC Little Nuke (Youth Winner)
Cally Soukup – Custom SAM-X (Adult Winner)
Ken Goodwin – Estes Silver Comet

September Model of the Month contest –
Victoria House - Estes Mean Machine (Youth Winner)
Alex Wallis - Custom Matra
Joe Franck – X-1 (scratch built) (Adult Winner)
Tom Pastrick - Estes Sweet V
Bob Kaplow - LOC Cyclotron
Ken Goodwin – Estes Black Brant
Martin Maney - Spool 1 (scratch built) 🍁

(Message From The NAR President continued from page 1)

I sincerely appreciate the input I've received thus far, and thank members for their patience in these trying times. As always, I welcome any and all of your comments, questions and suggestions.

Mark B. Bundick, President
National Association of Rocketry

Original Notice, September 19 2001

As a number of NAR members have discovered, effective immediately, the FAA has suspended all sport rocketry operations operating under either the notification or waiver application procedures within FAR Part 101.

To the best of my knowledge and understanding, there is no ban on flights involving model rockets -- i.e., models under 16 ounces in liftoff weight and containing less than 113 grams of propellant.

This suspension is only a small part of the immediate changes imposed on the national airspace

NAR Standards & Testing News

R76 Motor Decertifications 9 Sep 2001

The following motors will lose their approval for use in NAR contests effective January 1, 2002. They remain certified for general sport flying for a period of three years, until July 1, 2005.

The decision to examine contest approval was based on consumer complaints per NAR S&T policies. Further input was provided by the manufacturer. For years S&T has removed contest approval at the end of the contest year in which a motor becomes unavailable. This policy was first initiated at the request of contestants and the Contest Board. However S&T policy does allow contest approval to be removed sooner if there are consumer complaints. The fact that the motors are of limited production (mostly for contests), that the manufacturer is the only distributor and that the decision to not produce more was made just after NARAM (the time of largest demand), caused a number of complaints. These complaints indicated that there were not enough motors around to fill the demand fairly for the rest of the contest year.

The failure of an adequate motor supply to meet demand plus the fact the manufacturer does not have any concrete plans to produce more motors in the next six to eight months that would rectify this shortcoming within time periods indicated in NAR S&T Standards permits this action to be taken prior to the end of the year.

The date for this approval change was chosen to permit adequate time for all members to be notified via "The Model Rocketeer" newsletter, to not abruptly invalidate contestant plans for the immediate future, and to permit contestants to choose personal strategies of competing in the first or second half of the year based on their personal motor selection. If the manufacturer does start producing these motors prior to the

by the FAA. Only limited flights under Instrument Flight Rules (IFR) are being permitted for general aviation aircraft at this time. General aviation flights under Visual Flight Rules (VFR) remain suspended. According to information from the Aircraft Owners and Pilots Association (AOPA), ongoing meetings are being held among officials of the FAA, Department of Transportation and National Security Council to discuss when and how these restrictions can be lifted. However, in the opinion of the AOPA, they believe that decision-makers outside of FAA and the Department of Transportation believe the nation still faces a heightened security risk, and that these bans must remain in effect to protect the national security.

I have been understandably unable to reach any of our contacts at FAA HQ to obtain further information. When I receive more information from the FAA specific to rocketry activities, I'll post that information here. I would also request that unless you have a specific waiver applica-

tion which is pending, or which had been previously approved and since denied, that you do not call FAA officials at this time. The Agency is obviously very busy at this time. The NAR will continue our efforts to get further clarity on this situation and report it as soon as possible.

Apogee:

1/4A2-2,4
1/2A2-2,4,6
A2-0,3,5,7
B2-0,3,5,7,9

Jim Cook, Secretary for
NAR Standards & Testing

Jack Kane, Chairman

R77 New Motor Certifications 2 Oct 2001

The following motor has been certified by NAR Standards & Testing for general use as a model rocket motor effective July 7, 2001. It is certified for NAR contest use effective September 5, 2001.

Quest:

6mm x 26mm:

Micro-Maxx II - 1 (0.31 Newton-seconds total impulse, 0.50 grams propellant mass)

Notes: Aside from package labeling, the Micro-Maxx II is distinguished from the Micro-Maxx I by a change from the old plastic casing to a new paper casing.

Jim Cook, Secretary for
NAR Standards & Testing
Jack Kane, Chairman

R78 New Motor Certifications 3 Oct 2001

The following motor has been certified by NAR Standards & Testing for general use as a model rocket motor effective August 19, 2001. It is certified for NAR contest use effective October 18, 2001.

Estes:

18mm x 70mm:

A8-5 (2.5 Newton-seconds total impulse, 3.3 grams propellant mass)

Jim Cook, Secretary for
NAR Standards & Testing
Jack Kane, Chairman 🍁

tion which is pending, or which had been previously approved and since denied, that you do not call FAA officials at this time. The Agency is obviously very busy at this time. The NAR will continue our efforts to get further clarity on this situation and report it as soon as possible.

In the meantime, I would ask NAR members to be patient and comply fully with whatever direction you receive from your local FAA contacts. Additionally, if possible, please email me with a summary of your conversations with those officials, outlining your local situation. These summaries will help me as we move forward to restore rocketry operations in the United States.

As always, I welcome your comments, questions and suggestions.

Mark B. Bundick, President
National Association of Rocketry 🍁



Photos from the 2001 International Model and Hobby Show Make-it-Take-it and Launch.
 (Jeff Pleimling (first 2) & Leo Ringwald photos)



Jeff Pleimling, Editor
 245 Superior Circle
 Bartlett, IL 60103-2029

**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!**