

Club News and Notes

(Flying) Field of Dreams – Ken Hutchinson sent a message to the NIRA email list on July 12th that said, “The FPD planning committee has approved our use of the East Branch site for rocket launches. Al Gorski has told visitor services to issue us a permit for July 21st (and the other dates too). While I’m not aware of anything that can derail the launch at this point, fate can be fiendishly creative.”

Thanks go out to the Field Search Committee for securing it and to Ken Hutchinson, our Secretary/Treasurer, for also securing the NAR insurance. The launch is scheduled to run our normal times (setup around noon and shutdown at 5 pm).

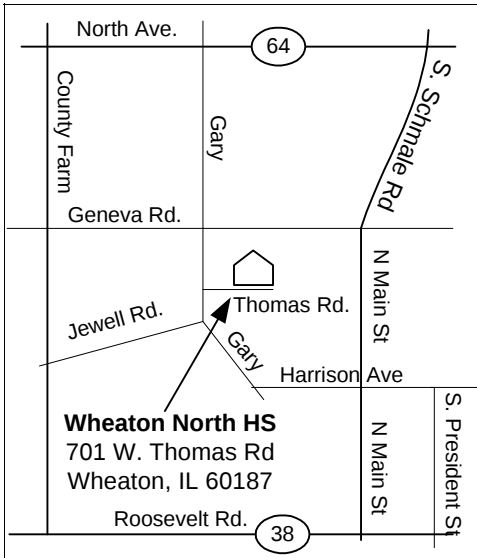
Please note: As Ken pointed out, there might be last minute problems and this might not be our last field change!. Please check the infoline/website/email list before leaving for a launch to check its location.

As was discussed at several meetings, the East Branch site isn’t perfect and while we will discuss other sites with the Forest Preserve it would be a good idea for all members to be on the lookout for possible fields. As we’ve found out yet again, a second field would be handy at times.

Anyone who has a possible non-Forest Preserve location should let Rick Gaff, Ken Hutchinson or another member of the Field Search Committee know about it.

Park Forest R/C and Rocket Demo – The previous Leading Edge mentioned that this demo launch (originally scheduled for July 20th) might be canceled - and it has been canceled...

According to prior participants, this was a fun demo to launch at with alternating sets of r/c planes and rockets. Hopefully the Suburban Aeroclub of Chicago will be able to run one next year.



September Meeting – As usually happens, the Glen Ellyn Civic Center will be closed on our normal meeting date in September. For several reasons, it was decided that it was better to move the meeting location rather than the meeting date.

At this point we’ve scheduled the meeting to be held at Wheaton North High School (map at left) on the same date/time as normal.

Thanks to Martin Maney for making the arrangements with the high school.

Please check the infoline/website/email list before the meeting just in case the location changes at the last minute.

Hobby Show – Mike Jungclas is again heading up the arrangements for NIRA to staff the Rocketry Make-It-Take-It booth at the International Model and Hobby Show (formerly known as RCHTA). Quest will be supplying the kits we will help build again this year.

The biggest change this year is the show has eliminated one of the public days. This year, the show will only be open to the public on Sunday, September 8th. While this is a smaller commitment for the club, it still means that we will need 2 shifts of 14 people each.

With only two club meetings before the show there isn’t much time to prepare. The first meeting is the same time as NARAM and the second is the Friday before the show. If you’d like to help,

(Club News and Notes continued on page 3)

Joint Statement on ATF Litigation - July 4, 2002

posted by Mark Bundick to rec.models.rockets

On June 24, 2002, Judge Reggie B. Walton, Federal District Court for the District of Columbia, ruled on the Bureau of Alcohol, Tobacco, and Firearms (ATF) motion to the NAR and TRA’s civil lawsuit against ATF. ATF’s dismissal motion sought to remove Counts 1, 2 and 4 from the litigation. Our counts contended that:

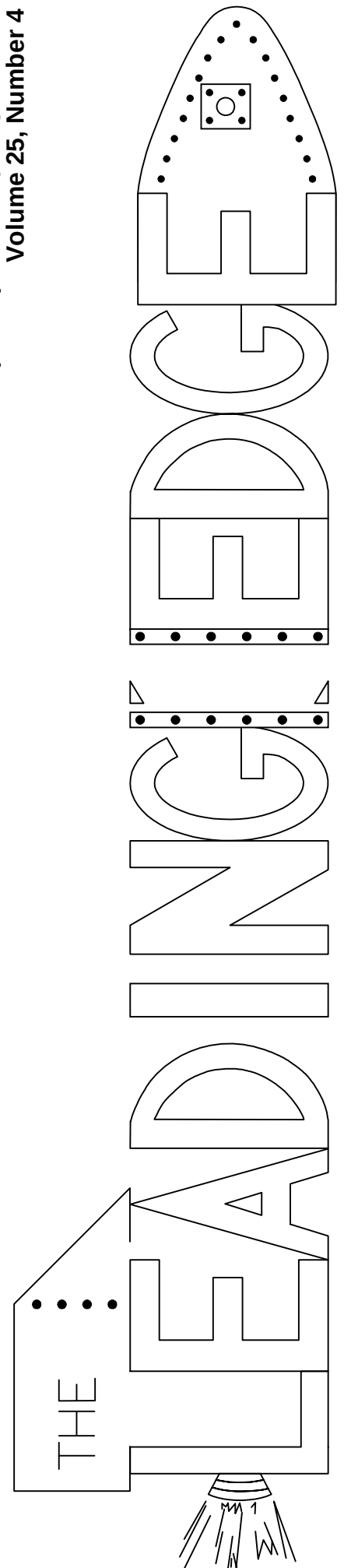
- ATF has not properly determined that APCP functions by explosion,
- ATF’s explosives list improperly published without legally appropriate notice and comment rule-making, and
- ATF’s 62.5 gram limit for exemption from regulation was arbitrary in both its selection and promulgation.

(Joint Statement continued on page 7)

July/August 2002

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Volume 25, Number 4

THE OFFICIAL JOURNAL OF THE NORTHERN ILLINOIS ROCKET ASSOCIATION (NIRA)





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July/August 2002

NIRA Officers

President – Rick Gaff
Vice President – Cole Arntzen
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Leading Edge Staff

Editor – Jeff Pleimling
Production – Julie, Beth & Brian Pleimling

This Issues Contributors

John Boren, Jonathan Charbonneau,
Norman Dziedzic, Rick Gaff,
Tim Johnson, Mark Kotolski,
Bob Wiersbe

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

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

or emailed to leadingedge@pleimling.org

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Ken Hutchinson
82 Talcott Avenue
Crystal Lake, IL 60014-4541

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

Email list: <http://groups.yahoo.com/group/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 (check the board in the lobby for the room number).

August 2

September 6 (At Wheaton North HS - map on page 3)

October 4

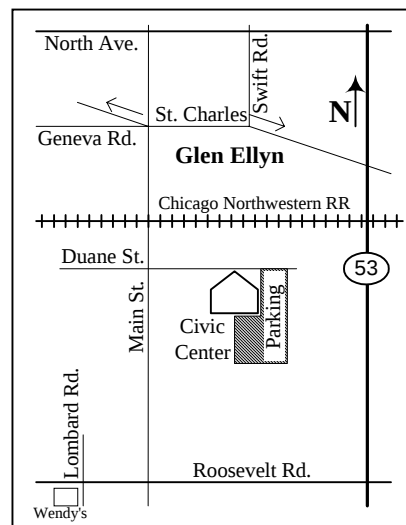
November 1

December 6

January 3, 2003

February 7

March 7



CLUB LAUNCH DATES

Launches are BYOL (bring your own launcher). Call the NIRA infoline for pre-launch information: 630-830-1587.

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!

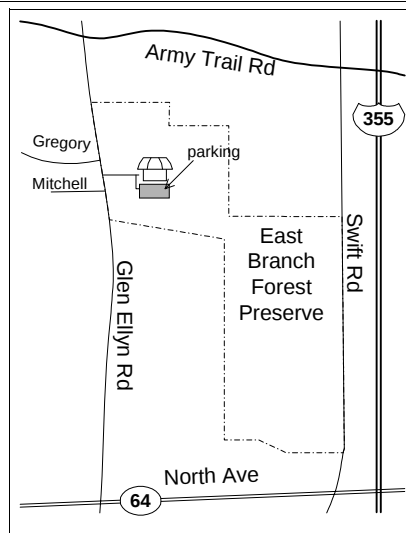
July 21 - Location: East Branch Forest Preserve

August 18 - Location: East Branch Forest Preserve

September 15 - Location: East Branch Forest Preserve

October 20 - Location: East Branch Forest Preserve

November 17 - Location: East Branch Forest Preserve



Model of the Month Winners!

June – John Boren and his winning, but uncovered, upscale LadyHawk, two motor, RC delta wing rocket glider (a Dr. John Kallend design). There were no youth entries. (Rick Gaff photo)

July – Chuck Swindler won the Adult division with his PML Tethys. Cody Pinchot shows off his excellently detailed Quest Navaho AGM. (Jeff Pleimling photo)

Body Tube Cutting Jig by John Boren

When ever a precision cutting action needs to be made I try not to rely on model craftsmanship alone. Instead, I take the time to build a special jig to help me make those precise cuts, and in the long run, save time. I recently decided to build some rocket designs from my youth. The first one being the Star Ship Excaliber. I needed to cut a couple BT-5 body tubes in half down their entire length. Now I could of drawn two parallel lines down opposite sides of the tube, gotten out an Exacto knife, and started cutting, but instead I built a simple jig to do it for me. Power tools, I can't live without them. The more tools you've got the better. My Band Saw is the most used power tool in my shop.

The jig presented her can be made in about ten minutes with scrap material found in your wood-bin. The jig can also be scaled up or down depending on the tube size that needs to be cut.

The following wood sizes were used for my BT-5 body tube jig: two pieces of 3/8" square balsa 5 1/2" long, one piece of 1/8" Plywood 2" x 5 1/2", one small piece of 1/32" plywood measuring 5/8" x 1 1/4". None of these wood sizes are critical except for the 1/32" plywood since it's just about a perfect-match to the saw blades cutting width.

The construction of the jig starts by first gluing one of the 3/8" square balsa sticks on top and along of the right side of the 1/8" plywood. Place a piece of BT-5 body on top of the 1/8" plywood and to the left of the 3/8" balsa stick. Using the body tube as a spacer, glue the second 3/8" stick to the left of the body tube. Measure the distance between the two

sticks and place a mark right in the middle. Line up your band saw fence so the blade will cut right down the center of this mark. Make this cut 5/8" long.

Round the edges of the front end of the 1/32" plywood with a piece of sandpaper. This will help the body tube to pass on either side of the Plywood during the cutting process. Glue the 1/32" plywood piece into place making sure it lines up with the end of the 1/8" plywood and is at a 90-degree angle to the base of the jig.

The only thing left to do is to cut a slot through the right side of the jig about 1/4" in front of the 1/32" plywood to accept the band saw blade. I like to use 1/8" wide blades for cutting my tubing since the cut out in the jig will be smaller. Adjust the band saw fence so the cutting blade lines up with the 1/32" vertical piece of plywood and start cutting your tubes.

To use the jig I hold the jig against the fence with my left hand and push the body tube through with my right hand. ☺

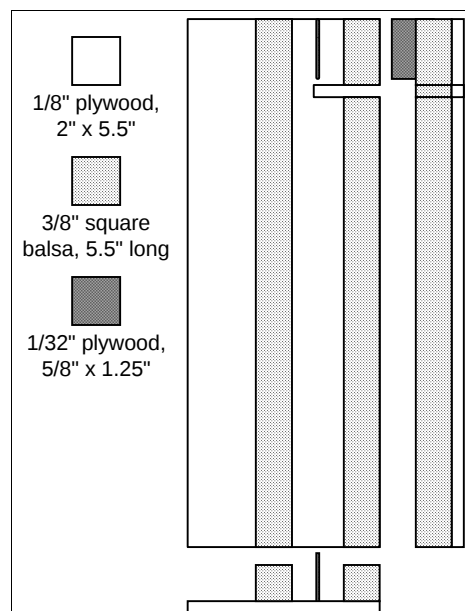
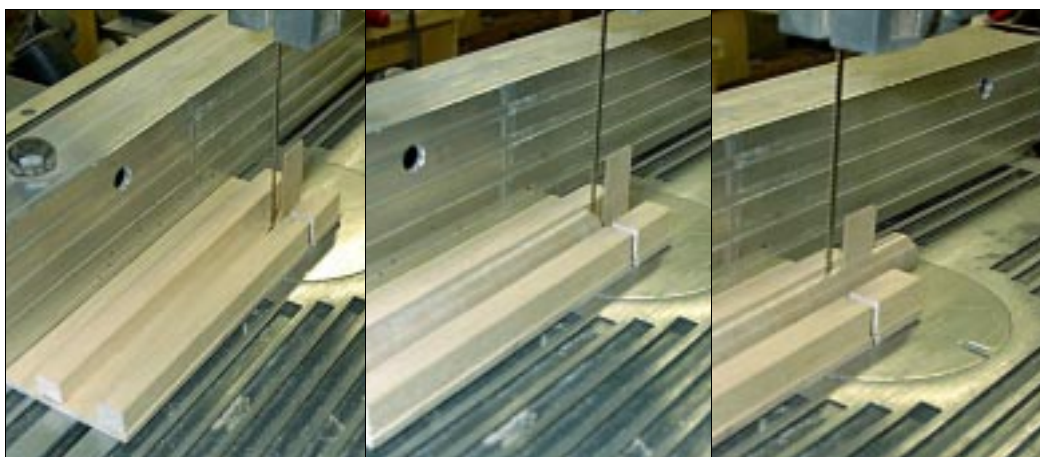


Figure 1: a 1/2 scale drawing of the jig.



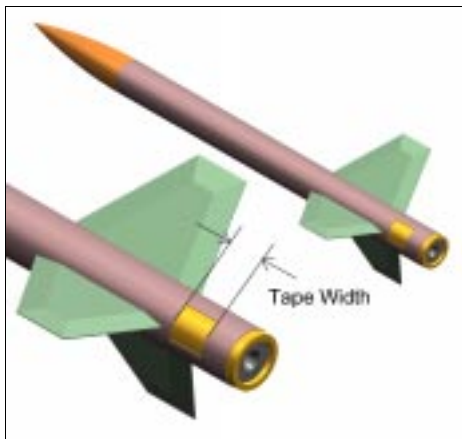
left to right: The jig in place on the band saw, a tube prior to cutting, a tube being cut. (John Boren photos)

Minimum Diameter Motor Retention Concept by Norman Dziedzic, NAR #72426

With the contest season upon us, minimum diameter models will be flying in droves. As the body tube also serves as the motor mount, there is no room for an engine hook so how do you retain the motor in these slim line beauties?

The old friction fit method can work but a spit motor means a DQ quicker than you can say Pink Book. You can tape the motor to the aft end of the body tube but I've always found this a little messy with trying to get the tape to lie flat on two different surfaces.

The method shown here was inspired by an article posted to rec.models.rockets by Donald Qualls.



Basically, you extend the aft end of the body tube beyond the fins and cut two openings in the tube as shown. The openings should be just slightly wider than the tape you will use to hold the motor in place. Then Insert the motor into the tube until it is flush with the aft end and wrap tape around the tube at the location of the slots. The tape will grip the motor through the slots and serve as both a thrust block and ejection retainer. For small motors, 1/4" masking tape

should be fine. As this design is scaled up, wider tape and perhaps three openings will be required. The Body tube surface should also be sealed where the tape will be placed so that the tape can be removed easily without peeling off the outer layer of the tube.

Please note that I have not tried this method yet so you may want to

test it out before committing that contest model to it. If you do use this method, please drop me a line at ndzied1@interaccess.com to let me know how it worked out. ☺

(Club News and Notes continued from page 1)
please contact Mike Jungclas via email at:
r.m.jungclas@lucent.com

June Model of the Month contest –
John Boren - upscale LadyHawk (Adult Winner)
Martin Schrader - Scrappy Fighter (scratch)
Jonathan Charbonneau - Astron Shrike
Todd Bavery - Binder Design Horizon
Rick Gaff - Launch Pad Falcon
Bob Kaplow - Tasmanian Devil
Ken Goodwin - UFO (built from a Wendy's Spring Salad container)

July Model of the Month contest –
Chuck Swindler - PML Tethys (Adult Winner)
Cody Pinchot - Quest Navaho AGM (Youth Winner)
Victoria House - Estes Hijax ☺

Space Launch Report for May-June 2002 by Tim Johnson

One dozen space launches occurred between May 1 and June 24, 2002. These included two flights each Ariane and Proton and single flights by NASA's space shuttle, Boeing's Delta 2, China's CZ-4B, Israel's Shavit, Russia's Kosmos 3M, Sea Launch's Zenit 3SL, Eurockot's Rockot, and Lockheed Martin's Titan 23G.

A roof collapse at Baikonur's massive Building 112, the former N1/Energia/Buran processing facility, killed eight workers and damaged or destroyed the stored Buran 1.01 orbiter on May 12. The building will be demolished.

Boeing rolled out its second Delta 4 at its Decatur, Alabama rocket factory on May 23. Lockheed Martin performed a second and final propellant loading of its first Atlas 5 at Cape Canaveral in mid-May.

ISS/STS

Space Shuttle Endeavour flew to the International Space Station (ISS) mission in June. The STS-111/ISS-UF2 mission carried seven astro-cosmonauts, including the three-person Expedition 5 crew consisting of Valery Korzun, Peggy Whitson and Sergey Treshchev. Along for the ride was cargo in the Leonardo logistics module and the Mobile Base System for the ISS robotic arm.

Endeavour lifted off from KSC LC39A on June 5, docked with ISS on June 7, undocked June 15, and landed at Edwards AFB on June 19 after rain scrubbed two KSC landing attempts. Endeavour returned with the Expedition 4 crew. Daniel Bursch and Carl Walz of that crew were in space for a U.S. record 196 days.

Arianespace

Arianespace continued its busy launch year with two Ariane 4 flights from Kourou ELA 2. Ariane 42P (L4112) flew the V151 mission on May 4, putting the 3,084 Spot 5 imaging satellite into sun synchronous low earth orbit (LEO/S). The rocket flew northbound and was visible from the North American seaboard. Ariane 44L (L4113) put 4,680 kg Intelsat 905 into geosynchronous transfer orbit (GTO) during the V152 mission on June 5. It was the 71st consecutive Ariane 4 success.

Proton

Krunichev's Proton flew twice. A Proton-K/DM3 put 3,650 kg Direct TV-5 into a high-perigee GTO from Baikonur LC81/23 on May 7. It was the 23rd International Launch Services (ILS) Proton mission and the 22nd success. On

June 10, a Proton-K/DM-2M put 2,600 kg Express-A1R into a similar orbit from Baikonur. This was a non-ILS mission for the Russian Satellite Communications Company (RSSC).

Boeing Launch Services

Recently organized Boeing Launch Services (BLS) used two launch vehicle types during the period. Delta 291, a Delta 7920-10L with 2.5 stages and a stretched composite fairing, put NASA's 2,934 kg Aqua into LEO/S from Vandenberg AFB SLC 2W on May 4. The \$952 million mission suffered a setback when one of Aqua's primary instruments failed a few days after launch.

On June 15, the eighth Ukrainian/Russian Sea Launch Zenit 3SL/DMSL boosted 4,850 kg Galaxy 3C into GTO for BLS from the Odyssey launch platform at 154 degrees West on the equator. It was the first Sea Launch mission since March 2001.

Other Launches

A Chinese CZ-4B put FengYun 1D and HaiYang 1 into LEO/S from Taiyuan on May 15. An Israeli Shavit launched the Ofeq-5 spy satellite into a rare retrograde (westward) LEO from Palmachim AFB on May 28.

Russia launched Kosmos 2389 into LEO on a Kosmos 3M from Plesetsk on May 28. The third Eurockot Rockot/Briz-KM orbited two Iridium satellites from Plesetsk on June 20.

Titan 23G-14 boosted 2,234 kg NOAA-M and a Star 37XFP solid upper stage on a suborbital trajectory from Vandenberg AFB SLC 4W on June 24. After coasting to

apogee the Star 37 ignited to put the satellite, renamed NOAA-17, into LEO/S. 🚀



A Zenit from Sea Launch boosts Galaxy 3C into orbit from its floating launch platform. (Sea Launch photo)



Endeavour lifts off for the International Space Station. (NASA photo)



Shavit with the Ofeq-5 spy satellite (Israel Aircraft Industries photo)

Animal Motor Works Certified by TMT - ROL Newswire June 25, 2002

(ROL Newswire) -- The Tripoli Motor Testing Committee (TMT) has announced certification of a new rocket motor manufacturer, Animal Motor Works, Inc. (AMW). AMW will be marketing nine propellant types (seven colors). Motors and reloads will be manufactured in 38mm, 54mm, 75mm, 98mm as well as two new sizes: 102mm and 150mm.

Listed slowest to fastest, TMT approved formulations are as follows:

Skidmark Squirrel
Black Bear
White Wolf
High Performance
Red Rhino
Purple Parrot
Green Gorilla

Standard
Blue Baboon

At this time five motors have received TMT Certification and have been certified for immediate use:

Motor	Hardware	(Diameter mm-Ns)
J500-20A	Standard	38-650 (Adj. Delay)
K470-P	Standard	75-1700
L1111-P	Standard	75-3500
M1850-P	Green Gorilla	75-6000
M3000-P	Standard	75-7600

Next to be tested will be additional 38mm motors as well as initial 54mm and 98mm motors.

Manufacturer information will be available soon at www.animalmotorworks.com 🚀

TARTAR

A sport-scale model of the Navy missile
Designed by Mark Kotolski (NAR 35707, TRA 3609), Plan #05018C

Parts List:

- A. Nose Cone, BNC-5W
- B. Body tube, BT-5 x 7.5"
- C. Thrust Ring
- D. Forward Strakes, 1/32" Basswood (4 needed)
- E. Main Fins, 1/32" Basswood (4 needed)
- F. Launch Lug, 1/8" x 1/4" (2 needed)
- G. Screw Eye
- H. Nose Weights (small washers)
- I. Shock Cord, Kevlar, 15"
- J. Streamer, 1" x 18"

Recommended Motors:

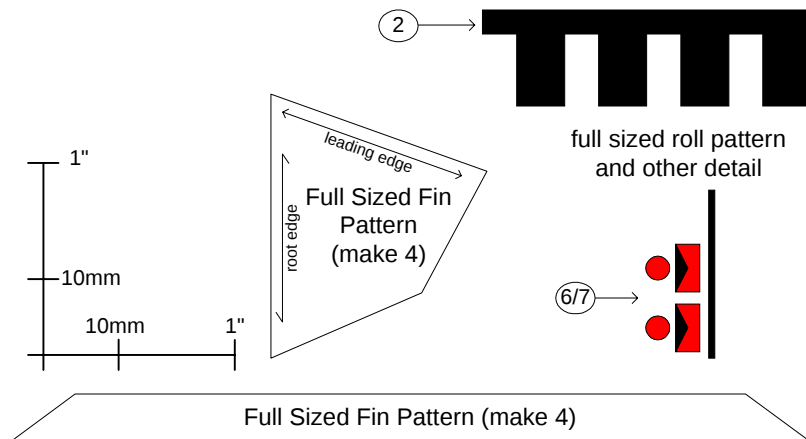
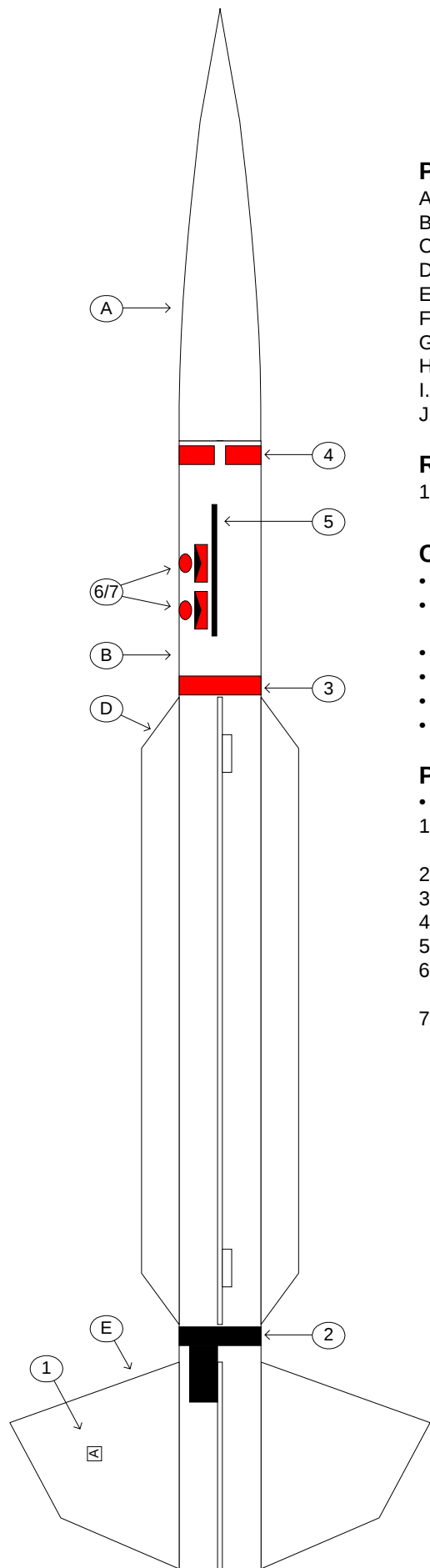
1/4A3-2t 1/2A3-2t 1/2A3-4t A3-4t

Construction:

- There is a 1/4" gap between the strakes and the main fins.
- Tie Kevlar shock cord to thrust ring before glueing thrust ring into body. Glue thrust ring in, allowing 1/4" of motor to be exposed.
- A short length of elastic shock cord may be tied to the Kevlar cord, but is not needed.
- Glue the two launch lugs to a strake joint.
- Nose eight may be needed. If so, use small washers under the screw eye.
- Epoxy the fins to the body tube.

Painting and Details:

- The model is painted white overall.
- 1. The letters A,B,C,D are dry transfer, 1/16" tall, outlined in a black square. Place on one side of the fin only.
- 2. Black roll pattern, 1/8" wide band, 1/4" x 3/8" rectangles placed flush with fin joints.
- 3. Red band, 1/8" wide, placed in front of fin edge.
- 4. Red segments, 1/8" x 1/4", placement is between fin areas.
- 5. Black stripes 1/32" x 7/8", one each side, 180° apart.
- 6. Red rectangles, 1/8" x 1/4" with black triangle, 4 needed, 2 on each side placed towards rear of stripe.
- 7. Red dots, 1/8" diameter, 2 needed each side by red/black rectangles.



First Impressions - Estes Engines by Bob Wiersbe

A few weeks ago I stopped by a local Hobby Lobby to check out their rocketry aisle, and was pleasantly surprised to find the new Estes E9 and C11 in stock. Being a wise shopper, I rifled through all the packs on the hanger and found several mis-priced packs of E9's. All the C11's were priced at \$7.99. I bought packs of E9-4, 6, and 8, and the C11-0, 3, and 5.

If you haven't heard about these new motors, they are both 24mm in diameter. The C11 is the exact same size as the D12, and the E9 is 1/4" longer at 3". The C11 has a total impulse of 8.80N-s, and a burn time of .81 seconds. The E9 has a total impulse of 27.87N-s, and a burn time of 3.09 seconds (all data taken from the NAR web page). The C11 has about the same total impulse as a C6, but delivers it in less than half of the time. The E9 is a "wimpy" E, being at the low end of the E impulse range (20.01 - 40N-s).

The E9 is not a load lifter. It's a heavy motor, and will not be a "drop in" motor for all models that use the D12. However, in lighter, low drag rockets it is an excellent choice. And for those who like long burn motors, this is a winner.

At NIRA's May launch I had the opportunity to try both the C11 and E9. My first flight was a two stage Lightning (by Custom Rockets, BT60) on a C11-0 staged to a C11-5. The motors were

held together using the traditional "Scotch Tape" method. The booster motor lit on the third try (bad clips), and the rocket left the pad in a hurry. It staged with a **very** loud BANG and a nice fireball, and the second stage ignited without any problems. The flight was nominal, the delay seemed to be right, and the model was recovered without any damage.

My first test of an E9 was also in a staged model of my own design (BT-60). It used a D12-0 staged to a E9-6. The liftoff was a bit slow, probably owing to the extra weight of the E9. The model weathercocked a bit before the second stage ignited, which sent the model quite a distance downrange. The D12 had no problem igniting the E9, and that three second burn was pretty impressive. Unfortunately, the parachute got tangled at ejection (I probably didn't pack it right) and the rocket took a core sample several hundred yards away.

I flew an E9-6 in a Maniac that was built for D motors, so I had to tape the motor to the engine hook to make sure it didn't eject. I was a little worried about stability, since the motor was heavy and sticking farther out the back than I would have liked. It turned out that I had nothing to worry about, the model was perfectly stable and didn't even weathercock. The Maniac got way up there, then took it's time coming down, even on a 12" chute. It landed about 100 yards into the cornfield across the street. I flew the Maniac again on another E9-6 later in the day

when the winds had picked up, and it drifted across a stream to the far edge of the cornfield to the west of the sod farm.

I tried a C11-5 in a Custom Rockets Bullet, and it was an excellent flight. Zip, off the pad, a nice coast and the parachute ejected just past apogee. I wanted to try a C11 in my Titan-IIIE, but felt that the winds had picked up too much (okay, I didn't feel like chasing it). The C11 looks like a nice motor for small fields, and fairly heavy rockets.

Rick Kramer flew an E9-4 in his "Blue Plate Special" (a UFO type oddroc). The results were less than spectacular, since it arced over while still under thrust. I don't think this is the right motor for high drag models, or heavier models like a Saturn V. It's a great motor for lighter rockets, or in an upper stage.

It's nice to see Estes come out with some new motors after years of discontinuing the less popular motors. I think that both of these will be popular, though it may take the C11 a while to find its place. ☺

Editor's Ranting and Ravings

No, You're Not Missing 4 Pages - Because of the need to get out time-sensitive information (the launch site for the July launch) I decided that it was more important to get out a short issue then wait for a full sized issue.

Besides the short time-frame, the lack of articles is another reason for this shorter-than-normal issue. Among other things, I'm still waiting for a Mini-MRFF launch report...

Deadline for Next Issue - the deadline is the NIRA meeting in September (the 6th). This is the normal deadline - the meeting day for the 'cover month.' If you're not done by then, let me know so I can work around it until you're finished.

The Leading Edge needs Articles - This should go without saying, but almost all of the articles for the Leading Edge are written by NIRA members. The newsletter needs technical articles, plans, kit reviews, **launch reports**, and whatever else **you** want to write about.

I'd love to print some launch reports from members attending non-NIRA launches. Besides being interesting reading it's also a way to let NIRA members know about other launches.

NIRA's Email List - NIRA does have an email list where club information is sent out and where we talk about rockets. It's hosted on Yahoo's Yahoogroups and to join you can either send a blank email to nira-subscribe@yahoogroups.com or go to the list's web site at <http://groups.yahoo.com/group/nira>

Comments/Compliments/Complaints - I really don't get too many. Please let me know if you either don't like something and want me to change or if you do like something and want me to continue - this is **your** newsletter, after all. ☺

Confused Stages - Stage 26 by Jonathan Charbonneau

Have you ever had a rocket sustain damage? If not, you're in the elite minority or haven't flown anything. Most likely you have had the above problem whether you've done any flying or not. It's all but impossible to avoid. Sometimes it happens while going to or from the launch site. Sometimes it's due to an in flight failure (e.g. parachute didn't open or a cato).

Some types of damage can be easily fixed (e.g. broken balsa fins). Others, unfortunately, are severe enough to require major surgery. The latter tends to happen more often with larger rockets in which the "cure is worse then the disease," requiring the whole rocket to be replaced. It doesn't have to be this way, though. There's a vaccine and it is called modulation.

Modulation is a construction technique in which a rocket is built in sections. These sections, called modules, are constructed separately, and then they are assembled together afterwards with fasteners,

screws, or other means that allows for it to be taken apart later. In this way, should the rocket get damaged, at worst, the damaged module will need to be replaced. Sure beats having to trash the whole rocket. Another advantage to modulation is ease of transportation. Some rockets are less likely to break if transported in pieces.

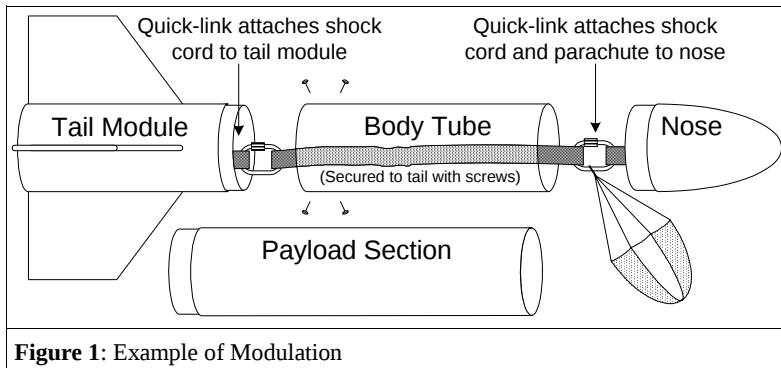
If the body tube is damaged, a new body tube is all that's needed for repair.

If the tail module is damaged, just a new tail module has to be built.

Payload sections can be easily added or removed as the rocketeer sees fit.

Other components (e.g. different tail modules, length of body tube and payload sections) can be interchanged at the rocketeer's whim.

Modulation is very useful and convenient. ☺



Welcome to the Club!

Because of the timing of this issue, printing the new member's names will have to wait until next issue.

Welcome to all of you (currently nameless) new members! 🐵

NAR Standards & Testing News

R79 New Motor Certifications 5 July 2002

The following motor has been certified by NAR Standards & Testing for general use as a high power rocket motor effective July 1, 2002. It will not be certified for NAR contest use as it is not a model rocket motor.

The following is a reloadable motor, certified only with the indicated size casing and manufacturer supplied nozzle, end closures, delays, and propellant slugs. It uses the new "Green Gorilla" propellant.

Animal Motor Works:

54mm x 492mm:

K670GG-P (1751.0 Newton-seconds total impulse, 1014.0 grams propellant mass)

Jim Cook, Secretary for
NAR Standards & Testing

Jack Kane, Chairman

R80 NAR Contest Desertification 7 July 2002

The following motors will lose their certification for use in NAR contests effective July 1, 2002 but are certified for contest use at NARAM 44. They remain certified for general sport flying for a period of three years, until July 1, 2005. Should production of one of these motors be (re)started, contest certification will be restored after a 60 day delay and it will not be decertified for general use.

Notes: Ordinarily, notice of loss of contest certification is made in advance of the June 30 end of the NAR contest year (but not always). A number of manufacturer production changes over the last year forced us to delay this announcement. The end result is to afford manufacturers the opportunity to give NAR contestants the widest array of motor choices.

Aerotech:

D7-RC
E6-4,6,8,P
E6-RC
E7-RC
E12J-R
F10-4,6,8
F13-RC
F16-RC
F23-RC-SK

(Joint Statement continued from page 1)

Judge Walton's ruling states, "ATF's motion to dismiss counts one and four of the amended complaint is denied and granted as to count two on statute of limitations grounds."

This ruling means that four of our five counts in the litigation remain before the Court to be decided.

Count 2, the explosive list publication, was removed due to the statute of limitations being passed; the initial explosives list was published in 1971 and our suit was brought more than six years after that time. However, Judge Walton's ruling also contains a clear message for U.S. federal agencies to follow the proper procedures when promulgating regulatory rules. Quoting again from the Court's ruling:

"It is the Court's conclusion that ATF's pronouncements concerning the non-exempt status of sport rocket motors that use more than 62.5 grams of APCP amount to rulemaking... There being no claim that notice and opportunity for comment were afforded, ATF's motion to dismiss count four of the amended complaint must be denied."

Thus, ATF's arguments against our most important and critical positions have been denied, and our case remains largely intact."

You can read the full text of the Court's opinion online as a 1.4MB PDF file at:

<http://www.nar.org/courttopinion020704.pdf>

While our case obviously has strong legal merits, without the continued and excellent effort of our legal team, Joe Egan, John Kyte, John Lawrence and Marty Malsch, we would not have progressed this far. Association members should be justifiably proud of the extremely capable effort your team has put forth to secure an unregulated sport rocket hobby. Out thanks for the quality effort expended by our counsel.

Even though this ruling is not a final victory for us, it is a major step towards securing the future of our hobby.

Now you can continue the push toward that ultimate goal. If you want to see this effort and success continue, you can do so easily by making donations online to the legal fund at:

<https://secure.consumersinterest.com/nar/NARfrompres9911.html#donorform>

Your contributions are absolutely essential for our effort to succeed. We urge you to make a donation to the Legal Defense Fund today, in whatever amount you possibly can contribute. 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 report them here and in our publications as soon as possible.

Mark B. Bundick NAR President

Bruce E. Kelly TRA President 🐵

F32-5,10,15
F72-5,10,15
G12-RC
G25-5,10,15
G55-5,10,15

Apogee:

B7-4,6,8,10
C4-3,5,7
C6-4,7,10
C10-4,7,10
D3-3,5,7
D10-3,5,7
E6-4,6,8,P
F10-4,6,8

Estes:

A10-PT
C5-3
E9-0

Rocketvision:

E15-4,7
F32-5,10,15
F72-5,10,15
G55-5,10,15

Jim Cook, Secretary for
NAR Standards & Testing

Jack Kane, Chairman

R81 New Motor Certifications 9 July 2002

The following motors have been certified by NAR Standards & Testing for general use as high power rocket motors effective July 1, 2002. They will not be certified for NAR contest use as they are not model rocket motors.

The following are reloadable motors, certified only with the indicated size casings and manufacturer supplied nozzles, end closures, delays (or smoke devices), and propellant slugs.

Animal Motor Works:

75mm x 368mm:

K600WW-P-SM (2500.0 Ns total impulse, 1223.3 grams propellant mass)

75mm x 497mm:

L1060GG-P-SM (3622.0 Ns total impulse, 1918.8 grams propellant mass)

Propellant Key:

GG = Green Gorilla
WW = White Wolf
SM = Produces 10 to 15 seconds of smoke after burnout

Jim Cook, Secretary for
NAR Standards & Testing

Jack Kane, Chairman 🐵



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

THE LEADING EDGE

FROM THE EDITOR....

A few years ago NIRA published a newsletter called *The Leading Edge*. What you are holding in your hand is kind of a clone of that newsletter. Our hope is that we can do as good a job as our predecessors did.

The three main investigators of this revival are: Mark "Bunny" Bondick, Bob Kaplow and myself, Eric Gaff. Mark, or Bunny as his friends know him, is currently Vice-President of the MAR and Contest Board Chairman. I talk about your big shots!! In addition to his MAR work, Bunny also writes a monthly column about competition for the Model Rocketeer. We'll be seeing more articles from Bunny on a variety of subjects in future issues. Bob Kaplow is section activities chairman for Illinois and an inveterate altitude competition fanatic. Bob is currently involved with a project that will bring computer power to the range! Hopefully in future issues Bob will describe his project and also give us the benefit of his experience in altitude competition. As for myself (where's my born? Ah, here it is). I currently hold the office of Midwest contest board chairman and at one time edited a newsletter in Indiana called the *Lost Trek*. Now for me it's back into the h-r-r-r!

Lastly, please don't think that the three of us can do the entire job of putting this newsletter together every two months, we can't!!! This is a club activity and for NIRA members and we need the support of all the NIRA members to make this newsletter work. Do you have plans for an interesting model you would like to share with everyone?

Continued in next column

Articles are also needed for future issues. Articles can be on any subject relating to model rocketry; finishing models, short cuts, anything! George Kitchener Jr. did a review of the new Atlas catalog, how about someone doing the same for the new Centaur or FBI catalogs?

We want your honest opinion of the *Leading Edge*. Do you like what you see here or not? Let us know what you liked or did not like and what you would like in future issues.

N.I.R.A. HOLDS FIFTEENTH ANNUAL LAUNCH
by Bob Kaplow

Last September NIRA held its fifteenth annual Labor Day launch. The show put on by the NIRA members thrilled a crowd of over 500 spectators who had come to Newton Park to watch the second longest running event in model rocket history. The launch was publicized thru the work of Bob Kaplow, NIRA's PR officer, by many area newspapers and radio stations, unfortunately the television cameras were absent this year. The launch system was built and operated by Dale Toberman, with Bob Kaplow narrating the activities on the PA system.

Many different types of rockets were flown. Perhaps the most popular were the scale models, such as the Space Shuttle, and a 4 engine cluster Titan III H-1 flew his 4 engine cluster Titan III H-1 long with his maxi-brute D12 powered Y2 and Honest John. George Kitchener (both father and son) flew large D12 powered models; among them a 4 foot Infinite Loop using body tubes for fins, a scratch-built X-Wing fighter from the movie "Star Wars".

Continued on next page

March/April 1979 - It's the 25th year of the *Leading Edge* and this is the front page of Volume 2, Number 1. After skipping a few years between Volume 1 (1974) and Volume 2 (1979), the *Leading Edge* has settled into regular production since.