

THE LEADING EDGE

Newsletter of the Northern Illinois Rocketry Association,
NAR Section #117, TRA #36

Volume 17, Number 1
January/February 1994



T MINUS 1 - NIRA'S CALENDAR OF UPCOMING EVENTS

MONTHLY MEETINGS

All meetings start at 7:30 PM, and include refreshments, entertainment and a brief business meeting. Don't forget a model for "Model of the Month" voting. We need volunteer speakers to entertain the troops after the business meeting, so call Mark Bundick at 708-293-9343 if you can help with ideas or can speak yourself.

February 4 - Regular Monthly Meeting:

March 4 - Regular Monthly Meeting.

OTHER ITEMS OF INTEREST

February 18-20 - National Sport Launch in Dallas, TX. Hosted by Dallas Area Rocket Society. Contact Buzz McDermott at (214) 702-8466 for more information.

March 19 - HPR Launch, Chanute Aviation Center, Rantoul, IL. Launch begins at 9am. Call Greg Smith at (217) 352-9655 before leaving, launch date and time is subject to change.

May 6, 7, 8 - MASCON 1994, Kalamazoo, MI. Convention with speakers, building session, launch, prizes, and lots of fun. Contact Robert Alway, P.O. Box 666, Portage, MI 49081 for more information.

STAFF

Bob Wiersbe - Editor

Mark Bundick - Primary Source of Information

CONTRIBUTORS

Mark Bundick, Jim Cook, Ric Gaff, Bob Kaplow, Steve Koszuta, Kevin Smith, Bob Wiersbe

1994 CLUB LAUNCH DATES

All launches or other activities start at 2:00 PM. BYOL (bring your own launcher). Casualty insurance required or else RSO must inspect and launch your model. Location for our 1993 launches is Community Park in Lisle. Get off Route 53 at Short and head west. If you have questions prior to any launch, call either Mark Bundick at 708-293-9343, or Mike Jungclas at 708-910-1267.

February 20: Building Session at Bob Kaplow's. See map on Page 5 for details.

March 20: Tour of Fermilab or Chicago area Museum. Come to the February or March meeting for details.

April 17: First launch of the 1994 season!

Your address label contains an item of vital information, your NIRA membership expiration date! Please check your expiration date and renew your NIRA membership before it expires. You will not receive any more newsletters after your expiration date has passed!

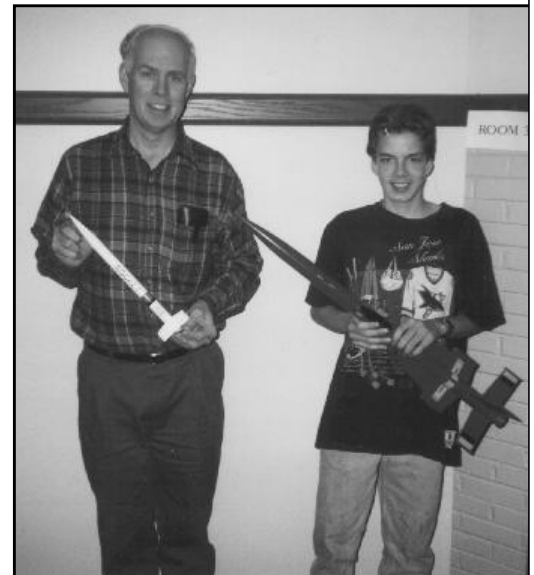
THE LEADING EDGE, published bi-monthly by and for members of the Northern Illinois Rocketry Association, NIRA, NAR Section #117, is dedicated to the idea that Sport Rocketry is FUN! Articles, plans, photos, other newsletters, and news items of interest should be sent to Bob Wiersbe, 1835 Shetland Drive, Wheaton, IL 60187 (or electronically via Internet to hrbob@ixstar.ih.att.com.) Photos will be returned, other material returned if requested. Send membership applications (dues: \$3/year, including a six issue subscription to the Leading Edge) and non-member subscriptions (\$5 per six issues) to Ken Hutchinson, 84 Jefferson Lane, Cary, IL 60013. Any item appearing in the Leading Edge may be reprinted by Sport Rocketry with proper credit given; all other uses require written permission of the Northern Illinois Rocketry Association.

On the Cover - Fire, Smoke, FSI F100's exploding, a large V2, and a crazy person in short sleeves all at the very cold Fall Danville Launch. Photos by Kevin Smith.

MODEL OF THE MONTH

From left to right: Jonathan Charbonneau with his collection of MOM winners from April (Nike-Aerobee), August (Terrier-Sandhawk), and last year (Omega and Superman Glider). November winners Greg Roman (Patriot) and Run Husak (NoName Cluster). December winners Bill Thiel (Generic) and Ron Husak (S.W.A.T.).

See page 6 for the Special Model of the Year Contest!



Freedom Flying

by Bob Wiersbe

For the last 2 years I've been helping a group of 3-6 graders launch rockets they built at a local church club. Last year we flew Quest Pip Squeaks, this year it was the Custom Rockets Freedom. There was a breakdown in communications this year, and the rockets arrived only a week and a half before the launch date. Even so, 12 boys showed up for the launch on October 23.

It was a beautiful fall day, clear skies, but with a pretty strong wind to the northeast. Fortunately, the field we were launching in runs north-south, so I set up the rack in a soccer field in the southwest corner. The unfortunate side was that the north end of the field was surrounded by very tall trees.

The kids did a really good job on the rockets. Some of them had glued the leading edge of the fin to the body tube, but the rockets were still stable. One boy had glued the motor mount in so that the motor was sticking out over an inch, and another added a set of wings about half way up the body tube, but both flew just fine with some clay in the nose.

We gave the kids an A8-3 for the first flight, and kept a B6-4 for the second. I didn't have a chance to fly anything to test the wind before the kids got there, so the first flight landed in a tree at the edge of the field. The wind really got a hold of these rockets, and they were drifting all over the place. One was heading right for the trees, caught a thermal that lifted it over the trees, then made a left hand turn and landed in the parking lot.

It was really fun to listen to the kids cheer each other's rockets! One boy managed to catch his rocket before it hit the ground and got a big round of applause. Calls of "Dive for it!" were very common. A couple of boys brought some extra rockets, one of them a 2 stager with a LEGO astronaut. He flew it twice, but lost the nose cone and astronaut on the second flight.

There were a lot of separations on the second and third flights, probably half of the rockets had this problem. It looked like the shock cord was burning just above the shock cord mount. Everyone got the rocket

back, but the nose and chutes were long gone into the woods.

Last year my Space Shuttle catoed on the pad, so this year the kids and a few parents were asking me if I was going to do that again. I decided that I'd wake them all up and flew my Mustang with an Aerotech E15-4 (my favorite motor). They really liked the noise and flame, so hopefully they'll remember that flight when we do this again next year.

NAR S&T NEWS RELEASES

from Jim Cook, Secretary for NAR Standards & Testing

In response to National Association of Rocketry (NAR) member requests for improved communications, the Standards and Testing committee (S&T) will now release all new certification and policy announcements via designated individuals to the following online services: America OnLine (AOL), BIX, CompuServe (CIS), Rec.Models.Rockets (Internet Newsfeed), Rocket Calendar newsletter, and the Tripoli Rocket Association (TRA) motor certification committee.

While the number of NAR members using online electronic services is only a small percentage of the overall total NAR membership, we hope they will pass on to their fellow rocketeers. All announcements will still be published in Sport Rocketry magazine. We welcome suggestions for additions to the mailing list, but please keep in mind the criteria that the distribution be electronic and the recipients provide a large readership.

You are welcome to send me mail if you have questions. I will pass them on to the entire NAR S&T committee for answers. Send email to: JimCook@AOL.COM

NAR POLICY ON RELOADABLE AND "G" CLASS ROCKET MOTORS

In response to member questions, NAR Standards & Testing wish to make clear the position of the National Association of Rocketry's position on reloadable rocket motors and G class motors:

1. Reloadable motors with metallic casings with 0 - 160Ns total impulse are considered by the NAR to be "Model Rocket" motors,

independent of what other regulatory bodies may say. (The NAR is a standards and certifying body). As such, reloadable motors are eligible for contest certification. NAR members are still obligated to follow federal, state, and local rules in using these motors.

2. G class motors (motors with 80Ns - 160Ns of total impulse) are similarly considered to be "Model Rocket" motors by the NAR.

NAR S&T TESTING RESULTS FOR OCTOBER 24, 1993

The following motors were certified by NAR Standards & Testings as of October 24, 1993 for use as model rocket motors. Certified total impulse and contest use dates are specified individually below:

Aerotech: D13-4,7,10 (20Ns); F40-4,7,10 (80Ns); G12RC (plugged) (93Ns). These reloadable motors are certified for contest use as of November 1, 1993.

Apogee C4-5,7 (9.5Ns) and D3-3,5,7 (19.5Ns). These single use motors are certified for contest use as of December 1, 1993.

Estes E15-6 (32Ns). This single use motor is certified for contest use as of January 21, 1994.

NAR S&T TESTING RESULTS FOR DECEMBER 19, 1993

The following motors were certified by NAR Standards & Testing as of December 20, 1993 for use as model rocket motors. Certified total impulse and contest use dates are specified individually below:

Apogee C4-3 (9.5Ns): This single use motor is certified for contest use as of March 20, 1994.

Quest B6-2,6 (5.0Ns) These single use motors are certified for contest use as of March 20, 1994.

NAR S&T MOTOR DECERTIFICATION LIST OF 1-DEC-93

To Be Contest Decertified 1-July-94:

The following motors will lose their contest certification as of 1-July- 94, except for contest use at NARAM 36. They continue to be certified for general non-contest use.

Apogee: 1/4A3-2T

Estes: A3-2T,6T

To Be Decertified 1-July-94:

The following motors will lose their NAR certification for general use as of July 1, 1994:

Estes: 1/4A3-2T,4T; 1/2A6-0,4; A3-2T,6T; A8-0; B8-0,7; B14-0,5,7; D11-9.

Centuri: 1/4A4-2M,4M; 1/4A4-3M,5M; 1/2A4-3M,5M; 1/2A6-4; A4-2M,4M,6M; A8-0; B8-0,3,7; B14-0,5,7; C5-0S.

FSI: E5-0,4,6 motors manufactured before February, 1987.

SMI: (all) B4-2,4,6.

U.S. Rockets: (all) E6-0,4,8; E10-0,4,8; E25-0,4,8,12; E55-0,5,10,15; F9-0,4,8; F10-0,4,8; F20-0,4,8,12; F80-0,5,10,15,20; G25-0,5,10,15.

Vulcan: (all) E26-5,7,10; G50-7,10,13.

To Be Decertified 1-July-95:

The following motors will lose their NAR certification for general use as of July 1, 1995:

AeroTech: D7-0,2,4,8; D8-0,2,4,8,12; E6-0, E10-0,2,4,8; E28-0,4,8,12; E50-0,5,10,15; F9-0,2,4,8; F10-0, F15-0,2,4,8, F20-0,4,8,12; F30-0,4,7,10; F41-0,6,9,14; F44-0; F80-0,5,10,15; G25-0.

NCR: (all) E28-0,4,8,12; E50-0,5,15; F41-0,6,9,14; F75-0,5,10,15,20.

Removal of Certification:

The process of decertification of a motor is based on the date of a significant event. Significant events include (but are not limited to):

- The day the manufacturer ceases operations.
- The day the manufacturer informs S&T (or it becomes generally known) the manufacture of a motor has ceased.
- The day the manufacturer fails to submit the motor when requested for triennial recertification.

Once the significant event has occurred, decertification begins. During the decertification period, motors manufactured after the date of the significant event are not certified. Motors manufactured before the date of the significant event remain certified according to the following timetable:

- Contest certification for that motor is dropped at the end of that contest year. A contest year runs from July 1 through June

30 and includes the NARAM at the end of that contest year, which may be after June 30.

- General certification as a model or high power rocket motor is dropped three years from the date of the significant event.

The only exceptions to the above decertification schedule is as follows:

- In the case of government regulatory action, decertification may be immediate.
- In the case of consumer complaints, safety problems, blind testing failures, or triennial testing failures, NAR certification may be suspended or withdrawn if the manufacturer fails to solve the problem within six months from the date of notification.

It is against the NAR Safety Code to use decertified motors. Use of decertified motors is not covered by NAR insurance and may also be a violation of state and local laws, where applicable.

Once decertification procedures have started, a motor can only be recertified by treating the motor as if it had never been previously certified. The manufacturer must submit the documentation, fees, and motor samples that normally accompany the initial certification of a new motor.

[Editors Note: Since only NAR or Tripoli certified motors can be used at NIRA launches, you will not be able to use any of the motors on the 1994 decertification list after July 1, 1994. NIRA's Rules of the Range will be published before the April club launch.]

Christmas in Carol Stream, or NIRA's Annual Holiday Party by Bunny

There wasn't any snow in the air or on the ground, but the air was still seasonally festive December 12 as NIRA gathered for their annual holiday party. The Bundick's again graciously hosted the gathering, not even insisting everyone check their rockets at the door. In a little over 5 hours, the troops watched some tapes, collected their BT-60 orders and chowed down.

The Koszuta's, all the way from Milwaukee, arrived first, and obviously won the "Farthest Traveled" award. The rest of the attendees, the Kaplow's, the Husak's, Jedi George Riebesehl, Art Peterson, Greg

Roman, Ric Gaff, Kevin Smith, Bob Wiersbe made their appearances and brightened the festivities with food and fun. The Kaplow's also brought the brightest news, their expectations for a third family member due for "splashdown" in May. NIRA's best to Bullet and Judy (and Belker, too, for that matter).

Kevin Smith brought a home tape of the July Chanute launch. Suitably mixed in with the failures and catos were some great HPR flights. Many members lusted for the 90+ temps and no wind, only to be told by Art that he was headed to Florida for the winter. He plans to do some HPR flying with the Tampa TRA prefecture. Art, bring back some good pictures for the Leading Edge! Lucky guy, eh?

Greg Roman's LDRS XI tape provided additional entertainment. Most of us hadn't seen the stars there, i.e some O powered altitude attempts, and "Down Right Ignorant", 895 lbs of rocket. Once Bunny figured out how to fast forward over the "talking heads" parts, and skip directly to the flying, the overall quality of presentation improved.

The troops also picked up their parts of the BT-60 Internet Order. Everyone agreed that thirty-six inches of BT-60 for \$0.60 was a pretty good deal. Bob Kaplow may be trying to get an additional mass order together from Magnum, so give Bob a ring if you are interested in participating.

Bunny did his part for politics by passing out thank you cards to the three people who ran major projects for NIRA in 1993; Ric Gaff for MRFF, Ken Hutchinson for the Labor Day Demo and Mike Jungclas for RCHTA. He also had a card for Bob Wiersbe who jumped in to do the newsletter when the "project from hell" swallowed up Lawrence Bercini. Each card had an "appropriate" button or note pad for the guys, too.

Suitably fattened on the goodies and full of outstanding project ideas for winter workshop fun, the troops dispersed into the darkness, looking forward to 1994's flights, designs and fun. Join us at the next set of NIRA wintertime fun-fests: miniature golfing on January 16, winter building session on February 20, and Fermilab or Scitech tour March 20. See you there!

Monogram Saturn V Kit Review

by Bob Wiersbe

To commemorate the 25th Anniversary of the Apollo 11 landing on the Moon, Monogram has re-issued three of its plastic Apollo models. There is a model of the Command and Service Modules, a Lunar Lander Module, and a 1/144 scale Saturn V. I received the Saturn V kit as a gift for Christmas, and it brought back memories from 25 years ago when I received the same kit.

The parts in the model are good quality, and the plastic is very thick. I didn't have to cut any excess plastic off, except at the tabs. The instructions are very terse, and the painting details seem incomplete. The instructions say to paint it like it looks on the box, but doesn't go into a whole lot of detail about some of the smaller pieces and trim. Anyone who has built the Estes Saturn V will have a good idea what parts should be what color.

The model is made so that each stage can be separated from the rest of the model to simulate an actual Saturn V flight. The stages are held together by a hook and post system, and they seem like they'll withstand some abuse. There is also a tiny Lunar Module that fits inside the payload of the third stage, and the payload bay doors open and close. The Apollo capsule can be separated from the Service Module, and also dock with the LM. It also comes with a base (and 3 tiny men) to display it on.

Construction was very easy, with the only difficult steps being putting the legs on the LM and installing the payload bay doors. Monogram did a good job making sure that the builder can't mess up the assembly by using tabs and slots to align parts.

One thing I like about the kit is the amount of detail on the third stage payload doors and the Service Module. All in all, I'm pleased with the kit. It's solid, looks good, and brings back a lot of fond memories.

My first urge was to convert it into a flying model, but I decided to build it as is, and then go buy another one and convert it. The first and second stages are just the right diameter so that an Estes BT-80 fits inside, and the 3rd stage is roughly a BT-60

inside. The model would probably weigh around 12 ounces, so it would be at the upper weight limit for a D12. It will also need some additional fin area, but this could easily be done with a detachable fin unit (not the kind for a BT-60 though!).

Likes:

Amount of Detail
Quality of parts
Price (\$20)
Convertibility!

Dislikes:

Instructions
Painting Details

Directions to The Kaplow's:

Bob & Judy Kaplow
35W525 Parsons Rd
Dundee, IL 60118
(708) 428-1181

From Northwest Tollway exit Route 31 North (just west of the Fox River). Take 31 north about 2 miles to 72. Then continue as follows:

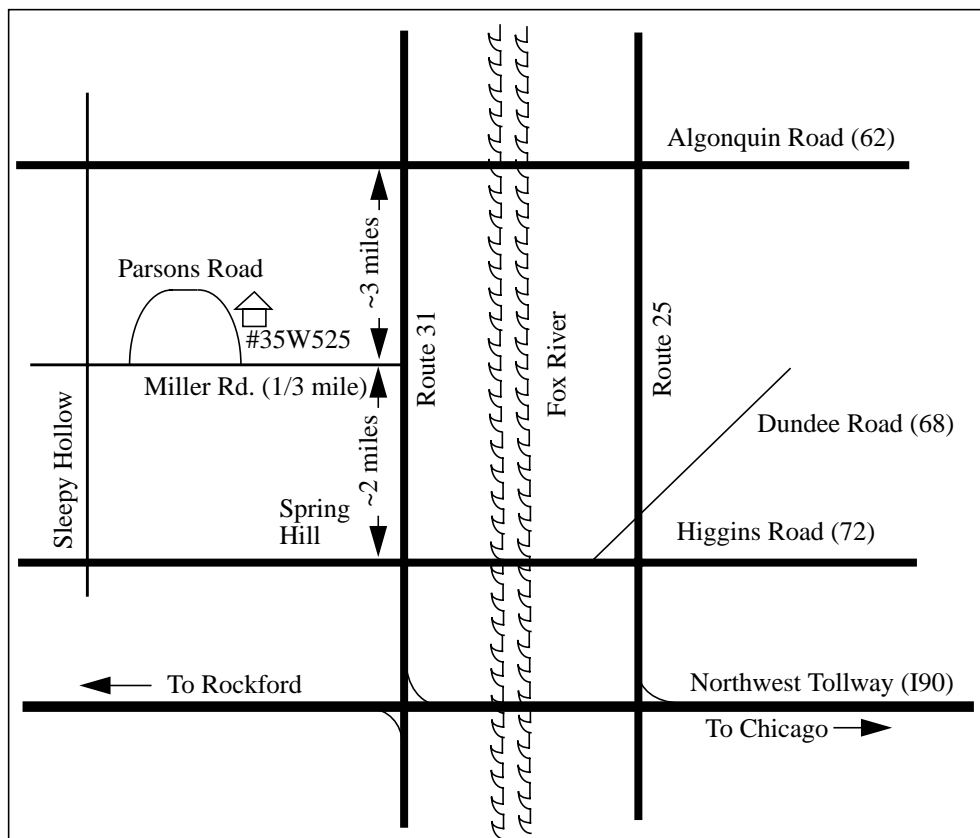
From 31 and 72 go just over 2 miles north on Route 31 to Miller Road (there is a

marked T intersection sign identifying Miller Road just before the road itself, and a small green sign at Miller Road. There is also a street lamp to light the intersection at night.). Take Miller road left and up the hill about 1/3 mile. Take Parsons road Right to the third house on the right.

Coming from Lake Cook Road, take it west until it dead ends at Algonquin Road. Take a right there, thru downtown Algonquin, and across the Fox River. Then turn left on Route 31 and continue south as follows:

From 31 and 62 go just under 3 miles south on Route 31, past the old schoolhouse. The next street is Miller road (there is a marked T intersection sign identifying Miller Road just before the road itself, and a small green sign at Miller Road. There is also a street lamp to light the intersection at night.) Take Miller road right and up the hill about 1/3 mile. Take Parsons road Right to the third house on the right.

You can also take either Dundee Rd. (68) or Higgins Rd. (72) west. Dundee Road dead ends into Higgins in East Dundee. Then take Higgins west to 31 and follow the directions from 31 & 72 above.



Sic Gloria In Transit Mundi or 1993 In Review

by Bunny

As a club, NIRA must have more nervous energy than any other rocket club in the country. We just can't seem to sit still. If you look back at 1993, you'll see that you, the NIRA membership, have accomplished a lot, and have a lot to be proud of.

January brought out our athletic side. Bowling was the sport of choice, and the Slouber contingent once again clearly out-classed the rest of us sporting wimps. February gathered the troops at the McKiou Basement for some building, an RCRG design fest and munchies. It must have also drained our supplies. In March, we attacked American Science and Surplus coming away with odds and ends to stock our already overstuffed workshops.

April found us in Lisle's Community Park, our new home, for the first full year of flying there. A windy launch didn't deter us from many good flights. In a trend that was to continue all year, we got good press coverage. Louise Beecher of Pioneer Press produced excellent coverage of our launch

that brought us many phone calls and some new members. May, we attempted our first spring Demo Launch. This time, press coverage was provided by the Naperville Sun. June rolled in on the heels of our third annual Midwest Regional Fun Fly, MRFF. We got in over 350 flights, squeezed a waiver out of the FAA, and shut down the picnic just in time to avoid the only rain of the weekend.

July found the NIRA gang "on the road". The ride is thankfully brief to Rantoul and the CIA launches at Chanute AFB. I-57 got a path worn in it by year's end, as these launches were many NIRA members ONLY opportunity to fly waived launches. Many thanks to the fine folks in CIA for keeping us informed and opening their arms to us. August brought a traditional NARAM visit to Maryland and the NARAHAM's fine Nats for many NIRA old timers. Our local "Chicago RCRG Mafia" did some traveling of their own. In Muncie, IN, they swept all three spots on the AMA Spacemodeling team and won themselves free trips to Poland for the 1994 World Champs. Best of luck there, guys. Our Labor Day Demo celebrated its 30th birthday in typical festive NIRA fash-

ion. We flew nearly 200 rockets in 2.5 hours. As if we didn't have enough of demo launches, we also put in a presence at the Fox Valley RC Show.

October continued our regular club launches, and some fine demo work for the YMCA in an impromptu demo. Some folks trooped off to the Danville HPR Launch, but were greeted with cold temps, snow and few engines due to the regulatory situation in HPR these days. November saw us break our previous RCHTA records for rocket building, as we exhausted our supply of Pegasus kits before the show closed. Finally, in December, we counted our blessings and relaxed at the annual Xmas party.

But now we can start all over! 1994 awaits you, your rockets and your participation. We look forward to greeting 1995 with yet another fun filled year of activity for NIRA. Make sure you check our T Minus One calendar for all our events. See you there!

Model of the Year Contest!

NIRA is starting the New Year off with a bang by running the first ever Model of the Year Contest! The idea is to vote for your favorite youth and adult model from the Model of the Month winners of 1993. The models with the most votes will be declared the winners, and the owners will receive a pack of Estes E15 motors!

The rules are simple: Look over the list of winners from 1993, then vote for one (1) Youth model, and one (1) Adult model. Write the model and owner names on a postcard and mail to: Bob Wiersbe 1835 Shetland Drive, Wheaton, IL 60187. Be sure to include your name and address on the card.

What's in it for me, you say? Glad you asked! From all of the ballots received, 1 name will be picked at random and the winner will receive a pack of Estes E15 motors! So even though you may never have won Model of the Month, you still have a chance to win a prize!

Entries must be received by March 4, 1994. Winners will be announced in the March/April issue, and prizes will be awarded at the April meeting. Winners need not be present to win (but it'd save us the \$\$ to mail the motors to you!). Only 1 entry per member, duplicates will be discarded, and only the first entry received will be counted. Send your entry in today!!

1993 Model of the Month winners

Month	Youth	Adult
January	Winners Unknown	
February	Todd Peterman, SR71 Blackbird	Ken Hutchinson, Nike-Tomahawk
March	Ron Husak, Patriot	Bill Thiel, Thunderhawk
April	Winner Unknown	Jonathan Charbonneau, Nike-Aerobee
May	Winners Unknown	
June	Winners Unknown	
July	Ron Husak, Black Brandt II	Ken Hutchinson, Viking II
	Andy Linder, Boost Glider	
August	Ed Thiel, Cheetah	Jonathan Charbonneau, Terrier-Sandhawk
		Bob Wiersbe, Hi-Tech H45
September	Ron Husak, Rocket Glider	Bill Thiel, Honest John
October	No entries	Mark Bundick, Atlas-Centaur
November	Ron Husak, NoName Cluster	Greg Roman, Patriot
December	Ron Husak, S.W.A.T.	Bill Thiel, Generic

Manufacturer Profile:
Balsa Machining Service
 by Bob Wiersbe

Can't find the right size nose cone to make that scale model? Don't want to turn it yourself? Balsa Machining Service (BMS) has the answer for you! BMS can make nose cones, bulkheads, and transitions to fit tubes from 0.19" to 3.938" in diameter, in lengths from 2.5" to 12". There are 3 types of nose cones available: Conical, Parabola, and Ogive.

BMS is owned and operated by Bill Saindon in nearby Lemont, IL. Bill came out to the January NIRA meeting to present his services and display some of his products, and to talk about how he got started in the business.

Bill is an engineer by trade, and spends most of his time writing software. He also has a CNC machine in his garage (which is what he uses to make the parts). Bill became a BAR (Born Again Rocketeer) a couple of years ago when he found an old Estes catalog while cleaning out his garage. When Bill looked at what they were charging for balsa parts he figured that they were either making a lot of money, or it was a lot harder to do than it seemed. After getting into the business himself, he says it's a little of both.

It didn't take Bill long to decide to start his own business, but it took him a while to find a source of quality bulk balsa at a good price. Bill says hardest part is program-

ming the machine to make a new shape, and it sometimes takes a couple of hours to get the shape right.

Bill brought a display case filled with different size nose cones, transitions, and bulkheads. He also had a BT101-BT80 transition section we could handle, and mentioned that he was thinking of running a special on it. A transition of that size costs \$16.00 in quantities of 5 or less, which is \$5 less than the same transition LOC/Precision offers.

The size of the parts is not limited to Estes body tube sizes, BMS can make anything for any size tube up to 3.938 (Estes BT101). So for those of you looking for a 29mm nose cone for a minimum diameter bird, BMS can do it! BMS can make custom parts too, but they take longer to do. BMS will also make parts from basswood at an extra cost.

The price depends on the diameter and length of the part. For example, an 8 inch long conical nose cone for a 29mm tube would be \$4.50. If you're thinking that a custom made part has to be more expensive than commercially available parts, guess again. BMS prices are very competitive. For example:

Estes BNC-50Y - \$3.15, BMS - \$1.50
 Estes TA-5060 - \$4.38, BMS - \$2.50
 Estes NB-50 - \$1.93, BMS - \$0.95
 LOC 3.9-2.56 Transition - \$21.00, BMS - \$16.00
 Aerotech 1.9" Nose Cone - \$6.45, BMS - \$4.50

So, if you're looking for a special length nose cone in a larger size, or you have an odd diameter tube that you need a nose cone for, BMS can help you out. There is no minimum order, and orders are usually filled within 2-3 weeks. For a catalog and ordering instructions, send a SASE to:

Balsa Machining Service
 1002 Florence St.
 Lemont, IL 60439
 (708) 257-5420

Where Were We?
from Bunny

Reports from Leading Edges of Long Ago

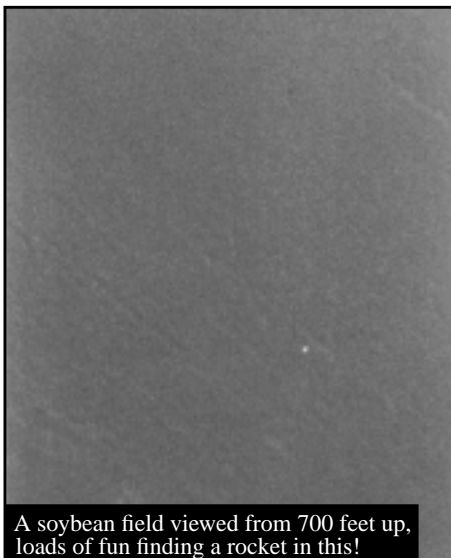
10 Years Ago - Jan/Feb 1984

We closed out the 1983 flying season with another cold launch, Mark Schmitt's new RCBG being the feature attraction. Bunny treated us to "Getting Started in Boost Glide". Ric Gaff told about the joys of winter launches, but we never took him up on it.

5 Years Ago - Jan/Feb 1989

NIRA members poked about the Central Blast 1 HPR launch, and closed our the 1988 flying season with a cold gray affair featuring A Parachute Non-Duration. The Damon corporate takeover battle that led to Estes' eventual sale was heating up. Alan Jones presented interesting data on D Altitude options. We also ran some Atlas sport scale data.

An ASTROCAM view of Chanute Air Force Base.



A soybean field viewed from 700 feet up, loads of fun finding a rocket in this!

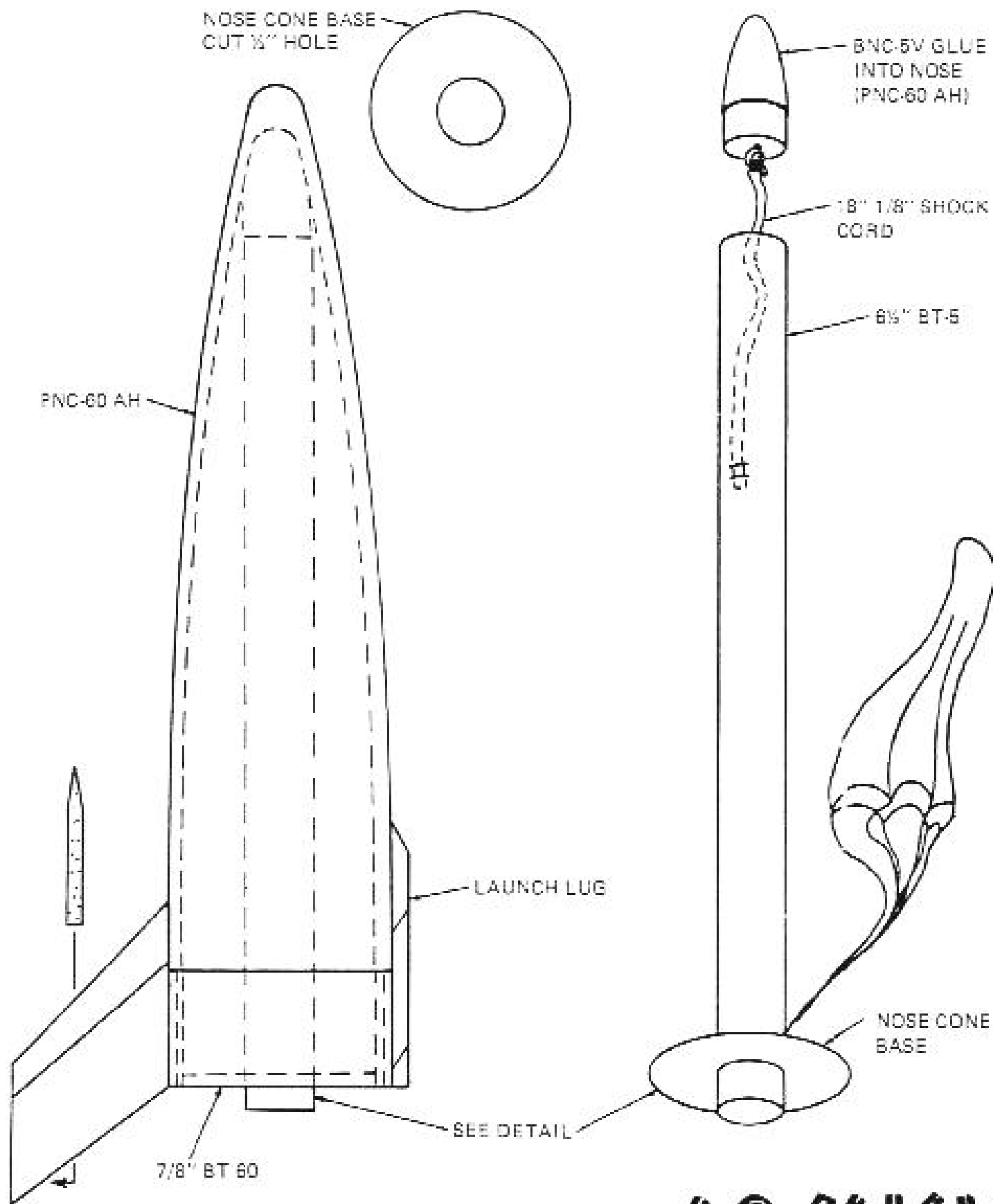


Small children and rockets are easily lost in a bean field!



Greg Smith of the CIA

(Astrocam photos from Bob Wiersbe)



3 FINS 1/8" BALSA GLUE
TO BT 60 ONLY

IGNYX

FULL SIZE BY: P.C.CONNER II

Some shots from RCHTA 1993

Bob Kaplow at the Sport Rocketry/NAR Booth



Andy Gnidziejko of Custom Rockets Company



"New" Estes Products



Mary Roberts of Estes Industries



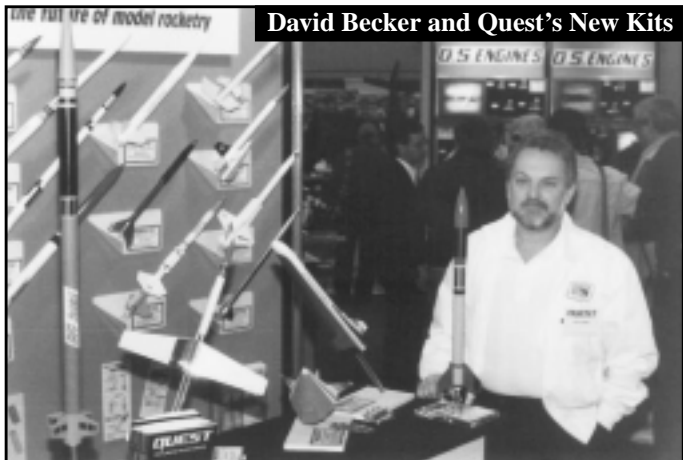
All photographs by Steve Koszuta

North Coast Rocketry Display



NCR see-thru Patriot, F30 and G50 motors, & Shuttle

David Becker and Quest's New Kits



Richard Rau of THOY



This is most current NIRA member list. Last updated 12/13/1993. Please look it over and send any corrections to Ken Hutchinson. To be used for contacting NIRA members for club business, not for soliciting outside business.	504 Eagleview Drive Carol Stream, IL 60188 708-665-1950	35W525 Parsons Rd #933 West Dundee, IL 60118 708-428-1181	6033 Sheridan Road,#33J Chicago, IL 60660 312-561-8098	8932 Tamaroa Skokie, IL 60076 708-933-1158
Michael Alterio 1128 Lakewood Elgin, IL 60123 708-695-4474	Edward J. Franckowiak 28W563 Lester Street West Chicago, IL 60185 708-231-9418	Douglas Kirk Rt. 9, Box 810-S Canyon Lake, TX 78133 512-899-3290	Todd Russell Peterman 335 West Scarborough CR Bloomington, IL 60108 708-307-1655	Kleve J Slouber 8950 S. Archer Avenue Willow Springs, IL 60480 708-839-0440
Jay Apt 808 Shorewood Drive Seabrook, TX 77586	Rich Frank 1524 North Columbia Naperville, IL 60563 708-420-0888	Terry Kosel 901 Corey Lane #120 Wheeling, IL 60090 708-255-2861	Art Peterson 354 Parkview Elmhurst, IL 60126	Kevin J. Smith 516 Redwood Road Bolingbrook, IL 60440 708-739-5785
John Barrett 644 North Oak Park Ave. Oak Park, IL 60302 708-848-4179	Mark Frier 2245 Timber Trails Road Lisle, IL 60532 708-961-3340	Steven J. Koszuta 306 East Wilbur Milwaukee, WI 53207 414-481-6341	Bill Piva 7306 Poplar Lane Darien, IL 60561	Bill Spadafora 5 Granby Street Saugus, MA 01906
Lawrence Bercini 6033 Sheridan Road,#33J Chicago, IL 60660 312-561-8098	Richard Gaff 3175 Norwood Court Streamwood, IL 60107 708-483-2468	Rich Kozlowski 1038 Whitchurch Court Wheaton, IL 60187 708-260-0189	Aaron Phillips 1531 College Avenue Wheaton, IL 60187 708-688-7419	Bill Thiel 3911 Eagle Lane Rolling Meadows, IL 60008 708-394-8434
Craig E. Blohm 16151 South 84th Place Tinley Park, IL 60477	Marshall Goldsmith P.O. Box 241 Northbrook, IL 60062 708-272-0199	Don L Linder 600 West Helen Road Palatine, IL 60067 708-359-4341	Mary Jo Porter P. O. Box 2497 Naperville, IL 60567	Ed Thiel 3911 Eagle Lane Rolling Meadows, IL 60008 708-394-8434
Mark Bundick 1350 Lilac Lane Carol Stream, IL 60188 708-293-9343	Vincent Gordon 563 East Avenue Streamwood, IL 60107 708-837-9223	Tim Marcy 8660 Honey Rock Road Three Lakes, WI 54562 708-668-7156	David Price 611 East Prairie Avenue Wheaton, IL 60187 708-665-1507	Dale Toberman 1017 Southport Lisle, IL 60532 708-963-7277
Eric Burmester 343 South Addison Villa Park, IL 60181 708-833-7793	Mike Guslick 711 Highway C Grafton, WI 53024 414-377-4428	Jay Marsh 3227 Pine Needles Road High Point, NC 27265 919-869-4844	Matthew Price 611 East Prairie Avenue Wheaton, IL 60187 708-665-1507	Zach Vicha 7044 North Rockwell Chicago, IL 60645-3209 312-973-2484
Jonathan Charbonneau 417 N. Main St. Apt 7 Glen Ellyn, IL 60137 708-665-7281	Jim Hall 201 Arnold Avenue Aurora, IL 60506 708-896-6535	Kevin McKiou 6 South 211 Cohasset Rd Naperville, IL 60540 708-717-5830	Thomas Price 611 East Prairie Avenue Wheaton, IL 60187 708-665-1507	Robert E. Wiersbe 1835 Shetland Drive Wheaton, IL 60187-8952 708-690-5442
Andrew Christensen 852 Stonebridge Court Palatine, IL 60067 708-358-2425	Jasper Hausner 1914 North Eastwood Dr. Arlington Heights, IL 60004 708-870-1217	Steven P. McNicoll 1851 S. Sunkist Circle DePere, WI 54115 708-208-9341	George A. Riebesehl, Jr. 1732 Bristol Walk Hoffman Estates, IL 60195 708-843-3444	The following people did not renew their NIRA member- ship last year:
James H Christensen 852 Stonebridge Court Palatine, IL 60067 708-358-2425	Roger Heidlauf 4122 North Bell Chicago, IL 60618-2914 312-478-3839	Carry Mika 1446 Fairway #302 Naperville, IL 60563 708-369-1618	Ben Roberto 762 Oakwood Drive Westmont, IL 60559 708-323-9199	Jim Brankin Eddie Burke Stephen J. Carrera Dan Green Mark Holle John M. Lewis Robert Lyon Jason Macconnell Dale March Rick McBroom Robert D. Nelson Julia A. Pask John Reiger Chuck Reiss Robert Stott Mark Wakely Steve Wise Brian Wruck Ron Zorn
John Christensen P.O. Box 2339 Glen Ellyn, IL 60137	Thomas Hulina 6 S. 650 Avon Court Naperville, IL 60540 708-355-0770	James Pat Miller 2518 Ridgecrest Garland, TX 75041 214-278-9865	Mary Roberts 1295 H Street Penrose, CO 81240 800-525-7561	Check your mailing label for the year and month your NIRA membership expires. You will see an Expiring Message on your label the issue before your member- ship expires.
Donald Cvetko 4N539 Kingery Highway Bensenville, IL 60106 708-766-6745	Ronald C. Husak 2633 South Home Avenue Berwyn, IL 60402 708-788-2111	John Miller 2926 Sheridan Woodridge, IL 60517 708-964-3475	Greg Roman 695 Bryan Elmhurst, IL 60126 708-941-7445	Renewal information is on Page 2.
Mark Eastman 1421 15th Street NW New Brighton, MN 55112 612-636-2827	Ken Hutchinson 84 Jefferson Lane Cary, IL 60013 708-516-1654	Gary Morris 662 W. Thunderbird Trail Carol Stream, IL 60188	Kyle Saginus 1101 Washington Lockport, IL 60441 815-838-5675	
Nichole Eastman 1421 15th Street NW New Brighton, MN 55112 612-636-2827	Richard Mike Jungclas 2504 Woodlyn Dr. #201 Woodridge, IL 60517 708-910-1267	Sam Mulvey 4595 Zepplin Drive Hanover Park, IL 60103 708-359-8432	Gregory Schmidt Box 2928 Des Plaines, IL 60017 708-432-2827	
Marty Fackelman 211 Stanhope Drive, #C Willowbrook, IL 60514 708-655-2419	Brian Kaczor 12432 Baker Road Manhattan, IL 60442	Andrew Newman 34 Joslyn Drive Elgin, IL 60120	John Schwarz 2300 Beau Monde Tr,#104 Lisle, IL 60532 708-961-1657	
James E. Foster	Paul Kaczor 12432 Baker Road Manhattan, IL 60442	Peter G. Olivola 12 Central Ave. Nyack, NY 10960-1902	Mark Seppelfrick 1021 North Elmwood Drive Aurora, IL 60506 708-892-9472	
	Robert G Kaplow	Harland Harper Pell	Moshe Slegel	

Heard On The Street

Rumors and such, with apologies to the Wall Street Journal

Impending Arrival - Congratulations to Bob and Judy Kaplow, who announced recently their family would be expanding by one in May. NIRA's best to the parents to be!

Had a Screw Loose - A March 25 Atlas Centaur failure has been traced to a improperly torqued screw. The screw limited the precision oxygen regulator of the Atlas's pumps. Flight loads loosened the set screw and motor performance dropped to 66% of normal. The Centaur stage was unable to make up the difference, and the Navy satellite is now stranded in the wrong orbit.

Joint Ventures - Japan and Germany have formally signed an agreement for a joint orbital mission. The \$93.5 million agreement will result in microgravity experiments being lofted on a Nissan M3S-2 booster. Germany is acquiring and modifying a Russian capsule to carry the experiments.

CCA, RIP - California Consumer Aeronautics, a small HPR parts supplier known for their 8" diameter tubing and cheap 8mm movie cameras is going out of business.

ESA Notes - ESA unveiled strategic plan changes to its space programs extending into the next century. The Hermes mini-shuttle is officially dead, replaced by an Apollo like capsule. The vehicle will be larger than either Apollo or Soyuz, with a heavy cargo return capability and spots for four astronauts. It will be lofted by the Ariane 5 heavy lift booster currently undergoing development. The ESA space station, Columbus, is a Spacelab derived unit, but with the project revisions, size will be reduced from prior versions by 27%. Also under development will be an automated transfer vehicle to move cargo and experiments around the proposed space station.

Locally Connected - Bunny has "obtained" an old IBM XT computer with hard disk and 1200 baud modem. NIRA members will be assisting him in the creation of a local NIRA bulletin board system (BBS). We hope to have some rocket related software, NASA GIF images and late breaking NIRA news available on line by mid-spring. Watch for the introduction of NIRA's BBS in our next issue.

Please Hold For The Next Available Flight - A planned November 17 launch to Mir to conduct a crew switch has been postponed until this month. The move is designed to save money in the crumbling Russian space agency. The rescheduled flight will also feature only two cosmonauts instead of the normal three man crew.

Cleared for Launch - An Air Force investigation into last year's Titan IV explosion has cleared the design of any major faults. The explosion was eventually traced to improper repairs on the solid rocket boosters, and not to any inherent design problems with the Martin Marietta built bird. Titan IV flights, principally of Air Force recon satellites, will resume shortly.

Kilroy Was Here - A recent congressional visit to the Baikonur Cosmodrome was made to determine if the facility would support an international space station's operations. Baikonur has been subjected to extreme budget cuts with the Soviet Union's breakup, and reportedly has been the target of extensive vandalism as collectors sought memorabilia. The visit reassured congressional leaders and staff that the facility would be capable of maintaining launch rates required.

It's a Boy! - NIRA Congratulations to Steve and Marie Koszuta on the birth of their son Nathan! He was born Friday January 14th, 1994 at 10:53pm, weighs 7lbs 15oz and is 22 inches long. Nathan's big sister Lauren is reported to be "very excited" about the event.

1994 Election Results

The votes are in, the results final! All the incumbents won, with only 1 write in vote for Belker The Wonder Dog for Safety Officer. The 1994 NIRA Officers are:

Mark Bundick - President

Ed Thiel - Vice President

Ken Hutchinson - Sec. Treasurer

Bob Kaplow - Safety Officer

Manufacturer News

FROM ESTES INDUSTRIES: We believe that "E" quality problems have been fixed in production runs after 12/15/93 (Batch code 12X15). The runs prior to that had a propellant density problem. This existed mainly in batches prior to December 15th.

We apologize for these problems and as always will make good on any damages related to them. In our opinion, the problem is not related to weather conditions nor shipping difficulties. We also are not responsible for the recent earthquake in California even though some might want to believe that <grin>.

Clyde Lestage, Mike Hellmund

NIRA Classifieds - Bunny's Computer Stuff For Sale: (1) three button Logitech mouse with software - \$15; Original Shareware/Public Domain disks (not copies): \$1 each: VGA Mah Jongg, two different Mah Jongg Tile Sets, 1,000 Windows Icons, IconMaster (icon editor), TAPCIS (two disks), Classic Games, Arcade Games, Organize! Personal Information Manager (PIM), Mailing List Manager. Delivery FREE to NIRA meetings or events; others pay postage. Contact Mark B. Bundick, 1350 Lilac Lane, Carol Stream, IL 60188-3369, 708-293-9343.



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