



THE NAR TRUSTEES MEET IN AIRPLANE LAND!



MARCH/APRIL, 1987
NAR 1985, 1986 NATIONAL SECTION CHAMPIONS

T-MINUS ONE

NIRA'S Scheduled Events

MONTHLY MEETING - March 6, 1987, Glen Ellyn Civic Center, 7:30 PM. Our prez, Ric Gaff, will be bringing a special video on the history of NASA. Be there or be square!! And don't forget your "Model of the Month!"

DEMO LAUNCH - On March 21 at 1:00 pm we will be doing a demo launch for Estes Industries out in Westmont, Illinois (near Downer's Grove). We are doing the launch for Estes in exchange for gift certificates. Details at the March meeting.

MONTHLY MEETING - April 3, 1987 Glen Ellyn Civic Center, 7:30 PM.

SPORT LAUNCHES - Yes, it's almost that time of year again. Yeah!! Come flying season (i.e., spring) sport launches are held every second and fourth Sunday of the month. For those of you who don't have a calendar

handy, the year's sport launch dates are:

April 12 April 26
May 10 May 24

UPCOMING CLUB MONTHLY MEETINGS -

May 1 June 5
July 10 August 7

MASCON-87 - May 8-10, 1987 UM Campus, Ann Arbor, Michigan. A model rocket convention with great activities: workshops, tours, demos, movies and more! NIRA will attend, so make your plans now. Contact:

Huron Valley Rocket Society,
2742 Beacon Hill, Ann Arbor, MI 48104. 313-971-6033

MWRC - Make sure you keep yourself free for Memorial Day weekend, May 23-24, 1987. That's when we will all troop down to Chanute

Air Force Base in Rantoul, Illinois (just north of Champaign-Urbana) for our annual Mid-West Regional Championship. Those of you who made it to NARAM-28 should remember those nice, long runways and that nice, tall corn -- well, the corn will be short now, thus making for a perfect flying field. This year's events are:

Open Spot Landing
C Helicopter Duration
A Streamer Duration
B Eggloft Duration
D Rocket Glider
D Eggloft Altitude
A Boost Glider
Plastic Model Conversion

For more information contact:
Ric Gaff, 331 Third Street, Northfield, IL 60093, 724-2975

NARAM-29 - The dates for this year's NARAM are August 2-7, 1987 in Orange County, CA. Word has it that NIRA so far has more points than any other club in the country. Keep it up troops!! NARAM events are:

1/2A Parachute Duration
C Helicopter Duration
A Streamer Duration
B Eggloft Duration
D Rocket Glide
D Eggloft Altitude
A Boost Glide (No flexies)
Sport Scale (A Division)
Scale (B/C Division)
Research & Development and
Plastic Model Conversion.

PORTERFIELD BY JOE MARTIN



MODEL OF THE MONTH WINNERS

JANUARY



Our Model of the Month Winner for January is Mike Hausner with his Xarconian Destroyer. Congratulations, Mike!

FEBRUARY



The Model of the Month Winners for February are Don Linder the younger with his TP-roc for A/B Division and Harlan Pell and his whatever for C Division. Congratulations, we think.

THE LEADING EDGE

is published bi-monthly by and for members of the Northern Illinois Rocketry Association, NIRA, NAR Section #117, and is dedicated to the idea that Model Rocketry is FUN! Membership dues are \$3.00 per year and include a six issue subscription to the Leading Edge. Non-member subscriptions are available for \$5.00 per six issues. All membership applications and subscriptions should be sent to Bob Koplow, 1628 Waterford Lane, Palatine, IL 60074. Articles, plans, other newsletters, and news items of interest should be sent to Barb Bundick, Editor, 1523 Cleveland Street, Evanston, IL 60202. Any material in the Leading Edge may be reprinted if proper credit is given.



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NEWSLETTER OF THE
NORTHERN ILLINOIS ROCKETRY ASSOCIATION
1985 AND 1986 NAR NATIONAL SECTION
CHAMPIONS

THE NAR TRUSTEES MEET IN AIRPLANE LAND!

AMA Headquarters, Reston, Virginia, was the site of the February 13-15 Winter Board of Trustees meeting. Reston is getting to be a popular and historic spot on the traveling trustees' road show. Two years ago in Reston, the Barber Commission report was presented and the Safety Code re-written. This year, further changes in the NAR By-Laws will have greater impacts on NAR members who want to fly HPR models. Additionally, major budget and committee changes were made by the Board. Trustees in attendance were Vern Estes, Ed Muccio, Claude Greenlee, Chris Tavares, Pat Miller, Mark Bundick, John Worth, Matt Steele and Howard Kuhn.

Budget analysis kicked off the meeting. The NAR posted an adjusted net for 1986 of about \$7,700, or 11.5%. This was in line with the estimated made at the NARAM Board meeting. For 1987, the projected net is \$9,400, 9.7%. Increased expenses will be incurred for **American Spacemodeling** and the move of Headquarters to a new location.

Funds were transferred into the NAR's Self Insurance Reserve, or SIR. The SIR covers the first \$10,000 of any insurance claim arising from a model rocket accident. This year

marks the first time the NAR and AMA have a signed contract outlining the rights and responsibilities of each concerning insurance. Counting the 1986 contribution, there is now a total of \$13,000 in the SIR. The Board voted to allocate any excess insurance funds to the SIR.

Additional allocations were made to several NAR projects. Last year, NAR President Pat Miller incurred over \$4,400 in expenses serving the NAR. The Board voted to cover up to \$5,000 of Pat's expenses. In effect the Board recognizes Pat's functioning as the NAR's Executive Director by covering these expenses. \$2,000 was allocated to a "Retailer Mailing". Sales of **AmSpac** rose when color covers were introduced, but the number of shops carrying the magazine has been declining. This mailing will promote the new and improved **AmSpac** and the NAR License Station to over 2,000 hobby shops nationwide.

Section Activities has completed a number of targeted mailings as well. These mailing suggest how to form an NAR section to clusters of members in areas where no section exists. This effort has resulted in new sections all over the US. A total of \$800 was allocated to cover the costs

of printing and postage. A final \$600 went for what has been labeled the "Tupperware Project". Adult NAR members would follow up the targeted mailings in selected areas. These volunteers would be supplied with NAR materials and paid for their transportation costs. The objective of this effort is to further spur section formation and section activities.

Three major committee changes were announced and approved at the meeting. Chas Russell of the Contest Board found himself reassigned overseas within two weeks of assuming the chair. After some minor tasks, Chas will be passing the Contest Board over to Bunny, who returns to Contest and Records after a 5 1/2 year "retirement". To make room for the Contest Board work, Bunny steps down from both Section Activities and the HQ Automation Project. Ed Muccio, Southland Regional

KAPLOW'S KITTY BOUTIQUE
(for all your cat's rocketry needs)

introduces its new
catnip-flavored talsa!



Parts is not parts to your cat.

rustees, cont.

manager, takes over the helm at SAC; Scott Hunsicker, NAR Treasurer, will pick up the slack in HQ Automation.

While those agenda items would have made for a normal Board meeting, the Board had to consider the Barrowman Commission Report on High Power Rocketry. This Commission was chartered to investigate the impact of allowing NAR members to fly rockets beyond the new safety code, the possible relationship between the NAR and a similar HPR organization, and impacts on our current insurance and manufacturer relationships. After an hour presentation from Jim Barrowman, Commission Chairman, the Board went into a 9 1/2 hour executive session to discuss the report's recommendations.

The Commission's findings surprised no one. Our insurance arrangement with AMA is a key barrier to encompassing HPR directly within the NAR. But they found HPR to be very similar to model rocketry, but with a safety record yet to be

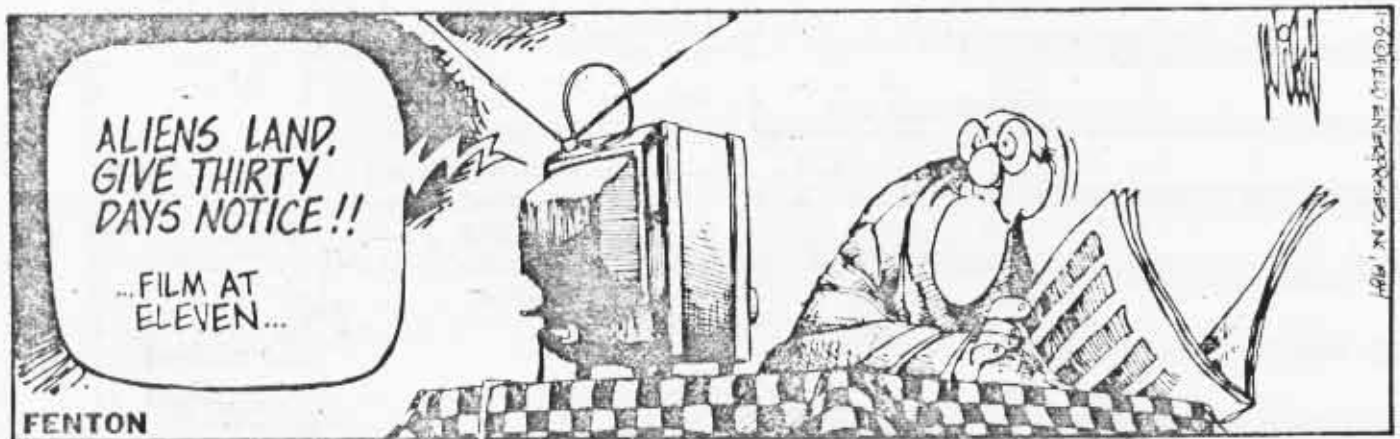
fully established. They noted a disturbing trend toward experimentation with motors. There was also confusion among commission members as to the definition of HPR. This confusion persisted among Board members during discussions. Finally, the commission studied the possibilities of the NAR testing HPR engines.

The Commission's recommendations were also not surprising. They suggested allowing NAR member the opportunity to fly HPR, but under certain controlled circumstances. In particular, model rockets and HPR should not be mixed. The NAR should also continue discussions with the HPR organization, Tripoli, but not bring HPR activities into the NAR. Finally, the testing of HPR engines should be studied by the NAR.

The Board accepted these recommendations, virtually unchanged. The biggest debate centered on the status of insurance if someone mixed HPR and model rocketry. The bottom line

there is mixing may invalidate your insurance. The Board developed and took straw votes on the By-Laws amendments required to put this change in place; all passed. The Board also adopted the policy to not allow mixing of HPR and model rocketry. Mixing can be avoided in the following ways. If HPR and model rockets are to be flown on the same site, 48 hours must pass between the launches. If flown on the same day from different sites, those sites must be at least 3 miles apart. If you remember "48-3" you remember the basic policy on no mixing. Finally, the Board directed Jack Kane of S&T to continue to investigate the ramifications of testing HPR engines. Jack's report is due to the Board at the NARAM meeting.

After 22 hard working hours, the Winter Board meeting came to a close. Much was accomplished, and with the NAR membership over 4,200 members and still growing at 75 per month, there will be more work to come in 1987.



IN CASE YOU MISSED THE LAST MEETINGS

BY BARB BUNDICK

The biggest news item from the January and February meetings is, of course, the election results. In case you are wondering, our officers for 1987 are:

Pres: Ric Gaff
VP: Lawrence Bercini
Secy/Treas: Bob Kaplow

For President, Ric received 11 votes and Barb Bundick received 1. For Vice President, Lawrence received 7 votes, Don Linder the elder received 5 votes and Tim Marcy received 1. For Secretary Treasurer, Bob Kaplow received 12 votes. Mike Hausner won Model of the Month. A break down of votes for that contest is not available.

We have a new librarian for the club: Jerry Wexler, our newest member, was volunteered by his son Aaron for the job. Yes, NIRA does too have a library! We have

copies of many Estes technical publications to help you build better and better models. Contact Jerry at 831-2765 for further information.

As you may have noticed, we have two Model of the Month winners in February. No, Harlan and Don did not tie. It's just that the ugly-roc competition was so popular that we had to break the competition into divisions in order to give all eager competitors a chance. News on the models: Don Linder's Toilet Paper rocket is self-explanatory. Just be glad he did not have time to paint it as planned. Harlan (the Obscure Rocketeer) Pell's model actually has a history behind it. Rumor has it that Harlan's rocket glider is a CHAD creation from a (dead?) Super-Roc, and that he actually beat Terry Lee with the thing! Will wonders never cease?

Finally, all those who attended the January 24 showing of The Dream is Alive (and there were many) report that they had a grand old time. The Henry Crown Space Center at the Museum of Science and Industry is definitely worth a visit. They believe in "hands-on" exhibits, like the one where you dock your own spaceship with another. They also an exhibit which simulates a real shuttle launch, with seats rattling and everything. The five story Omni-Max theater is breath-taking as was the movie, which takes you up into space with the shuttle astronauts. Particularly noteworthy are the wonderful aerial photographs taken from the shuttle. You feel like you're in space, looking down at our beautiful earth. The current movie playing there is about the Grand Canyon. It's probably well worth seeing.

PINK BOOK REVISIONS IN PROGRESS

BY BOB KAPLOW

The 1987 Pink Book Revision Committee will be revising the 1979 Edition of the United States Model Rocket Sporting Code. There have been two minor revision done since 1979, one for the 1982 reprint and again for the reprint in 1985. The Committee's chairman is

George Gassaway. Two NIRA members, Lawrence Bercini and Bob Kaplow, are committee members. You should contact them with questions, suggestions or comments.

This revision won't be as extensive as the 1979

version, but many rules will be changed. The primary goal, as stated by NAR President Pat Miller and NAR Contest Board Chairman Terry Lee, is "to make contest flying easier and more fun for newcomers to get started in." The second major goal requires

reducing manpower requirements to run a meet. The final task in this revision is to close up any loopholes, eliminate ambiguities and remove nit-picking rules.

What follows is a summary of items discussed by the Committee so far. Remember, nothing will be official until the next printing of the Pink Book. If you see something you don't like or don't understand, contact Bob or Lawrence.

Seasoned competitors probably could have guessed that the biggest, most difficult topic undertaken concerns the **Return Rule**. In 1979, a major change was made to duration flight scoring. Previously, contestants were allowed only one model, and the best of two flights counted as your score. The flight had to be returned to count. Our current rules, changed in 1979, were supposed to make the more consistent flyer the winner. Unfortunately, the rules almost always force the contestant to build two models, make two flights, and often be willing to lose one model to be competitive in an event.

Several possible changes could occur here. Some committee members favor no return rule at all. Others want all models to be returned. Several bizarre compromises have been

proposed, from counting a no return as 50% of its flight time, to counting a returned flight for twice its time if you chose not to make a second flight. Pat and Terry have requested a rules change so that contestants don't have to build two models, make two flights and lose models to be competitive, but a solution hasn't come up yet.

The number of meets in a competition season, as well as the number of events at a given contest will be reduced. This will make it easier to get everything flown at a meet. Some arrangement may be made for contestants who fly more than the limit of contest factors. Currently, when you've flown your 12 contest factors, you're done and cannot continue to fly.

Only one timer will be required for duration flights. Two will be permitted, but no longer mandatory. This alone will halve the manpower requirements for most meets.

Weight limits for individual events will be eliminated. The only limits will be the Safety Code, and manufacturers' recommended liftoff weights for the motor(s) being used. This change eliminates the hassle of weighing models at check-in.

FAI events will be sanctionable in official NAR competition. These will be

flown exactly under FAI rules, and will replace the current "international" events.

Superroc rules were changed from poor to bad in 1979, and from bad to worse in 1985. For the moment, we are rolling back to 1982. They will no doubt be changed from there.

Events to be dropped include Quadrathon, Altitude Efficiency, and Design Efficiency. New events to be added include Craftsmanship, Dual Eggloft, Ping Pong Ball Duration, Precision Duration and Precision Altitude. There may be a problem with Ping Pong Ball Duration due to the flammability of ping pong balls.

At this point, the outlook does not seem promising for a new Pink Book to be in print and in the hands of the members for the 1987-88 Contest Year. The Committee's 16 members make agreement on any issue rare. The return rule shows no sign of a compromise that will please even half of the members. Many rules changes proposed just don't make sense, show a lack of understanding of what the current rules are, or are dangerous or illegal. Still we move on, hoping to meet a deadline with a rule book that will be good for the NAR and competition for the next five to ten years.

1987 ESTES CATALOG REVIEW

by Ric Gaff

The new Estes Catalog is now available and has a number of interesting new kits. So let's see what's new.

Seven new Skill Level (SL) 1 kits have been added. The **Skinny Mini** and the **Long Shot** are both lnnnnng, but easy to build models. The **Skinny** is a 29 inch mini motor model and the **Long** is a 41 inch standard motor model. Both look quite good. The **Transtar Carrier** has a small payload section and is futuristically styled. The **D.A.R.T.** is one of the largest new SL 1 kits; it also has futuristic styling. The **Skyhook** is a flashier version of a kit that was popular in the "old days". (I'll say. I flew mine for years until a landing broke off the fins. - Bunny) The **Phaser** is a "high performance" sport model that is guaranteed to be lost by anyone foolish enough to launch it at Ackerman Park! Lastly, the **Ninja** is a small streamer recovered model. It wins my "Dune Award", given each year to the new kits having the least reason for existing.

More semi-scale models lead the list of new SL 2 kits. The **Bullpup 12D** is a small version of the U.S. Air Force air-to-air missile, but makes for a nice sized model in BT-55.

The second new semi-scale kit is a 1/73 scale (BT-60) model of the **Gemini Titan**, America's first two man spacecraft. The model has a plastic capsule, removable display nozzle and a removable clear plastic fin unit. In a more comical vein is **Der V-3**, a large (2.6" dia.) D powered model with humorous decals. It is clearly a WW 2 big brother to **Der Red Max**. The **Arrow** is another large (BT-60) sport model, but using standard motors. It is unusual for Estes in that it has 6 fins. The last new SL 2 kit is the **Clipper**, a slick two stage model for standard motors.

Fantasy models not only lead the list of new SL 3 kits, they are the list! The **Mini Mars Lander** is a minibrute powered version of the old (and now highly prized by collectors!) **Mars Lander** of the "old days". It looks to be a very interesting model. The **Interceptor II** is an Air Force Interceptor of the future. People who like jets will probably like this kit. The **Explorer** is (the) "Symbol of mankind's greatest dream, this great fusion powered ship is free to explore the universe...". Hot dog! A fantasy model with peaceful intentions! Maybe someone at Estes reads my catalog reviews? The last SL 3 kit is the **Nimbus**, a near space patrol vessel.

The last new kits are two SL 4 models, and are frankly my favorites of the new offerings. The **Geo Sat LV** is a pseudo scale model of a heavy lift satellite launcher, similar in look to the Titan 3C launcher. The kit includes simulated strap-on boosters and a clear payload section with satellite. America's first satellite, Explorer I, was launched on January 31, 1958, from Cape Canaveral. The Estes **Jupiter-C** is a 1/35 scale model of that rocket. This large model with plastic parts and die cut fins looks good to me!

Very new this year are two Apple IIe and IIc model rocket computer programs. "**In Search of Space-Introduction to Model Rocketry**" explains the basics of model rocketry. "**Flight - Aerodynamics of Model Rockets**" explores the principles of flight, aerodynamics and stability. If anyone in the club purchases these Apple programs, I'm sure club members wouldn't mind seeing them at a meeting.

Estes has also designed a new launch pad available only as part of starter sets. The **Lunar Launch Pad** is a lightweight, compact pad using wooden dowels for legs. It is designed ONLY for small models, under 1.5 ounces. Now that's small!

A NEW MODROC MANUFACTURER ENTERS THE MARKETPLACE

BY BUNNY

Model Rectifier Corporation, MRC, a major hobby manufacturer of RC equipment, airplane kits and cars, announced a line of model rocket products at the HIAA Trade Show in late January. What's MRC got for us? And what does this manufacturer mean for the NAR?

For starters, there are two almost ready to fly (ARF) kits. The Mach 5 is your typical Alpha with a plastic fin unit. The Rebel wasn't pictured on the information sheet I go in the mail. Both go for \$6.98. The rest of the kit line, Starfire, Firefighter, Hotshot, Hornet and Wildfire, range in price from \$2.98 to \$6.98. Design-wise, they are about what you'd expect from having only a couple of fin shapes, two body diameters and a couple of nose cone. After they make some headway, I'd expect to see more interesting designs from MRC, if their RC cars are any indication.

Engines listed on the order form range from 1/2A6 to D12. Currently, only the standard size A, B and C motors are NAR certified. I assume the 1/2A and D will come out for S&T approval later. Jack Kane had the standard S&T poop sheets at the recent Board meeting. The data was on a par with Estes motors.

For launch equipment, there's a hand held controller, similar to the Estes version. I think I like the styling of the MRC model better. It also appears a bit larger; it should be easier to hold. The launch pad looks almost exactly like my old Centuri "Powr-Pad", but the literature claims it can adjust to uneven ground. Adjustable legs maybe?

Despite the "Estes clone" appearance, there are some features of interest. The motors will have dark black tracking smoke. For those of us into fire and smoke, this may be a big plus, particularly at demonstration launches. Also, the MRC igniters, called "Power Blast" have additional pyrogen coating for "reliable ignition". Finally, we have the "Remote Repair Station", containing common repair tools and materials. I'm anxious to compare this to the Estes "Emergency Repair Kit".

MRC's entry into the model rocket world is an interesting and exciting development for rocketeers. I'm sure many of you will try out their products come the spring flying season. How's about some "field test" product reports after the flight, guys?





I'M GILBERT GROUNDHOG, HERE TO SEE
IF MY SHADOW'S SHOWING. YUP, THERE IT IS. DRAT - SIX
MORE WEEKS OF . . . WHAT? I OVERSLEPT? WELL,
IN THAT CASE, SPRING IS ALMOST
HERE! TIME TO GET YOUR ROCKET
SUPPLIES AT GLEN ELLYN TOY AND
CARD SHOP! HAVE FUN FLYING
ROCKET GLIDER!



THE LEADING EDGE
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