

THE LEADING EDGE



MARCH/APRIL 1985

VOL. 8, NO. 2

WINNER OF THE 1984 LAC NEWSLETTER AWARD

**PARK DISTRICT
ROCKETRY CLASSES UPDATE**
by Larry Mika

Here again is the schedule for our classes at the Main Street Recreation Center, Hill and Main Streets, Glen Ellyn. Beginner classes are listed first, followed by the advanced session. Classes will run from 1 -4 PM. Remember to call the Glen Ellyn Park District to get an application.

MARCH 23: B - General Construction by Bunny; A - Designing Models by Bullet Bob Kaplow.

MARCH 30: B - Basic Finishing by Bullet Bob; A - Plastic Model Conversion by Bunny.

APRIL 20: B - Recovery Devices by Tom Pastrick; A - Scale Modeling by Larry Mika.

APRIL 27: B - Designing Your Own Rockets by Bunny; A - Competition Models by Ric Gaff.

Don't miss out on this opportunity to get the "scoop" on how-to's from the club's Jedi Knights. See you on March 23rd.

**COMING TO CHANNEL 11
IN MARCH:
The Greatest Adventure**

The story of man's journey to the moon, and the excitement, dangers, follies, and beauty of America's space exploration program are all recaptured in this special presentation, narrated by Orson Welles, and featuring original NASA footage. Times for presentation include: Tuesday, March 12, 9:00 PM, Wednesday, March 13, 1:00 PM, Saturday, March 16, 9:00 AM and Monday, March 18, 12:30 AM. Don't miss this!!!

T MINUS 1

ROCKETRY CLASS #1 Mar. 23
Main Street Rec Center, 1-4 PM
501 Hill Avenue, Glen Ellyn

TOPICS: Basic Construction,
Designing Your Own Rockets

CLUB LAUNCH March 24
Ackerman Park 2:00 PM
(NOTE: TENTATIVE DATE. CHECK
WITH BUNNY OR RIC BEFORE
HEADING TO THE FIELD.)

ROCKETRY CLASS #2 Mar. 30
Main Street Rec Center, 1-4 PM
501 Hill Avenue, Glen Ellyn

TOPICS: Basic Finishing,
Plastic Model Conversion

MONTHLY NIRA MEETING Apr. 5
G.E. Civic Center 7:30 PM

Last chance to hitch a ride
to MIDCON in Detroit. Final
launch date schedules.

MIDCON III Apr. 12-14
Warren, MI (Detroit area)
A fun model rocket convention
for all!! Contact: Woody
Woo, 24001 Moritz, Oak Park,
MI 48237

ROCKETRY CLASS #3 Apr. 20
Main Street Rec Center, 1-4 PM
501 Hill Avenue, Glen Ellyn

TOPICS: Recovery Devices,
Scale Modeling

ROCKETRY CLASS #4 Apr. 27
Main Street Rec Center, 1-4 PM
501 Hill Avenue, Glen Ellyn

TOPICS: Designing Your Own
Rockets, Competition Models

MONTHLY NIRA MEETING May 3
G.E. Civic Center 7:30 PM

CONTEST NEWS
by Larry Mika

Well, folks, we've managed to change our minds again. We will not be flying NOMID-85 for club points. The current schedule is: Open Meets on May 25-26, June 8-9, and June 22-23. The events are the same:

A RG, B HD, B SD, C SRA, D
ELA, 1/2A BG, A PD.

We are also trying to get Tom Hoelle to hold a regional (MAR) on June 15-16. More info on this as it develops.

Our open meets are tentatively schedule to be flown on Braxton Miller's field discovery. (This is the site of the Northbrook VOR station, for you pilots out there. - Bunny) The field is west of the Half Day Road exit on the Illinois Tollway. Confirmation of events (the CD determines if 1/2A BG includes flexies), unofficial events and flying fields are upcoming. Stay tuned for details.

NIRA voted to hold a record trials/pre-NARAM launch from 9AM to 5PM at the Half Day Road field. All events will be sanctioned for the record trials. All NAR members are eligible to set US Records at this event. Come on out, test your NARAM models and get your name in the Record Books!!

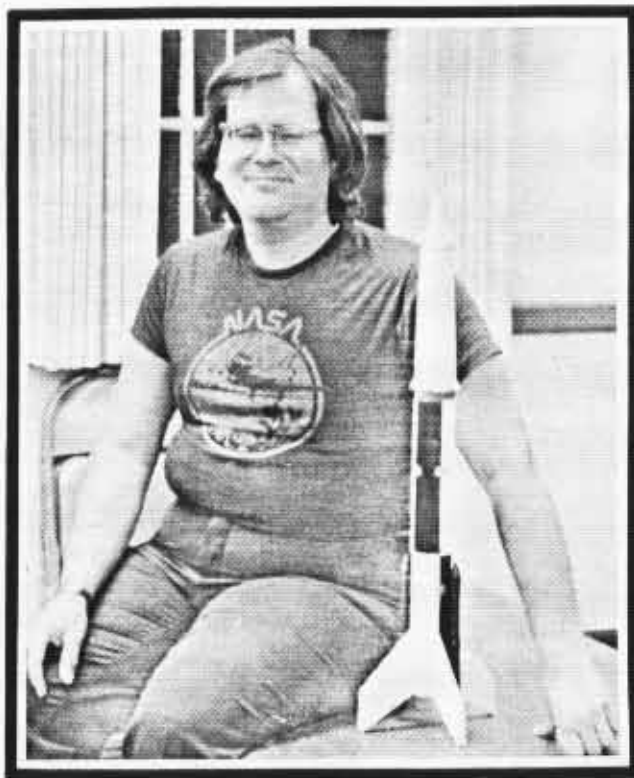
NIRA NEWS

The club voted Bunny and Ric lifetime members of NIRA for their extensive efforts in running the club for many years. NIRA wouldn't be the same without them, so don't forget to thank them for such a super job.

MODEL OF THE MONTH WINNERS



The Model of the Month Winner for January is Tim Marcy and his Centuri SR-71 Blackbird. Congratulations, Tim!



The Model of the Month Winner for February is Ric Gaff and his Astrobee 1500 scale model. Congratulations, Ric! (But it still needs work.)



**THE
LEADING
EDGE**

is published bimonthly by and for members of the Northern Illinois Rocketry Association, NIRA, NAR Section #117, and is dedicated to the idea that Model Rocketry is FUN! Membership dues are \$3.00 per year and include a one year subscription to the Leading Edge. Non-member subscriptions are available for \$5.00 per year. All membership and subscription fees should be sent to: Bob Kaplow, 1628 Waterford Lane, Palatine, IL 60067. Articles, plans, other newsletters and news items of interest should be sent to Larry Mika, 7905 Iroquois Court, Woodridge, IL 60517. Any material published in the Leading Edge may be reprinted by non-profit groups if proper credit is given.

COVER PHOTO: Jerry Schwartzkopf readies his model for flight.

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PUBLISHER - Ric Gaff
HALFTONES - Tom Pastrick
TYPIST - Bunny**

The final meeting of the 1982-1985 NAR Board of Trustees was another marathon session, one of historic importance. Eleven of the 13 Board members gathered at AMA Headquarters in Reston, VA. for two and a half days of intensive meetings. When the history of our hobby is written, this meeting will mark a major milestone by which progress was measured.

Major committee reports took up their usual time. Claude Greenlee's Membership Committee continues to secure discount coupons for member use, door prizes for NARAM, and monitoring of manufacturer support programs. The NAR may also "piggyback" on the successful AMA hobby shop poster program. Claude's work in the Education Committee will see a variety of teacher materials available for sale along with complete lesson plans for classroom activities and instruction.

American Spacemodeling is settling into something of a routine after a few bumpy starts. Still to come is the transfer of this committee to Houston printing and mailing. The magazine is still printed and mailed out of Washington, but John Pursley expects to have everything "home" by May.

Dan Meyer of NARTS presented a 33 month sales history of NARTS products. Apparently, much of the inventory could be cut without affecting sales. Possible options include a special sale of certain items or gradual phaseouts.

Yours truly, in Section Activities, reported that all is well with section renewals. SAC also announced a joint program with the Contest Board to give \$5 off on 1986 renewals to all sections who host a sanctioned competition. A new set of material is ready for those who write HQ requesting

BOARD OF TRUSTEES MEETING, 2/15-17/1985

by Bunny

section formation packets, and a "how-to" booklet on demonstration launches is near completion for existing sections.

Terry Lee's Contest and Records Committee is ready for another Pink Book printing, this time with the book going to all NAR members and containing all updates to the original 1979 version. A new Records Subcommittee is operating, and all Regional Chairmen are up and running. (Let's all give a big hand to the Midwest's own, Jim Zingler, for the good job he's doing. - Bunny)

NARTREK's commander Lawrence Bercini reported good progress on the Second National Convention, this time with expanded workshops and special attention to teachers.

John Worth, Executive Director of the AMA, and Chairman of the Liaison Committee, reported AMA's insurance rates will go up dramatically next year. This is a result of increased claims for model airplane accidents. John did not see any increase for NAR however.

The Board also reviewed the current state of NAR finances and found all quite well. Doris Mayer's salary will go up as will funds for American Spacemodeling. The NAR's cash balances have never been better, and a dues increase is unlikely, at least for another year.

The big topic, and one that consumed 10 1/2 hours, was the report of the Blue Ribbon Commission on High Power Rocketry. Commission Chairman Trip Barber gave an excellent

presentation reviewing the and findings in his report. Board then went into close session to review all aspects of the report. What came out of that discussion was a revised definition of a model rocket motor, a model rocket and broad changes to the Safety Code.

Two changes in the NFPA definition of a model rocket motor will be made. The motor will contain no more than 62.5 grams of propellant and to have minimum burn times such that average thrust is limited to approximately 80 Newtons or less. A model rocket will contain no more than 125 grams of propellant at liftoff and weigh no more than 1,500 grams. Changes were also made in the Safety Code to tighten up wording on launch conditions, the firing system and launcher, payloads and misfires.

The practical effect of these changes will allow NAR members to fly G class engines and fly rockets in excess of 1 pound limits without fear of losing their NAR membership. The Trustees felt that the Commission's technical data clearly demonstrated no significant increase in the hazards to persons and property from these increases. The potential benefits from improved telemetry and photographic payloads, the gains on performance in high altitude vehicles and improved, elaborate scale models were worth the administrative effort to enact the changes with all regulatory authorities.

However, these changes will not be immediate. The NAR's study and Board's action are the first steps in effecting changes at NFPA, FAA and HIAA. Only when these changes are complete will NAR members and others begin to completely enjoy the benefits of expanded limits on model rockets. While the

complete process make take three to five years, some limited opportunities to fly larger, more powerful model rockets may be available within 12 to 18 months. Look for details in upcoming issues of American Spacemodeling.

The Board took a bold step forward in Reston. The definitional and Safety Code changes came only after long and careful research. With the research and discussion behind the NAR, the 1985-88 Board can be expected to be aggressively pursuing implementation of these changes to the benefit of all rocketeers.

Don't forget to vote in the upcoming election. See you February 1986 in Phoenix?

DEAR MR. KNOW-IT-ALL

Dear Mr. Know-It-All; This season, we have to fly B HD a lot. Can you give me some tips?

Certainly, Bullwinkle! Remember that you're actually building an autogyro. It has vanes to slow its descent. The object of the event is duration, which means light weight, maximum boost altitude and high rotation speed. Most people use a **Rose-a-roc**; plans are in the August 1983 Model Rocketeer.

Here are some modifications for better performance.

1. Don't use lead weight in the nosecone.

2. Use a 1/8" dowel and launch lug. The 3/16" is too heavy.

3. Use a 3/4" wide strip of adhesive mylar, not 1" Trim Monokote. Visibility is better, Mylar is lighter, it sticks better, and here's the big

secret. The Mylar, if left in the deployed position for storage, doesn't like to bend. That means it will act as a device to flap open the rotors without those 3/16" rubber bands. Yes, it really works! You still need 1/8" rubber bands to pull the rotors out to the sides, but the mylar will open the flaps.

4. Glue the nosecone to the dowel. Make sure you don't drill the hole all the way through the NC, because you don't want the dowel sticking out the top.

5. Use posterboard for the hinge disk. Glue it on a 1/8" launch lug as in the "freewheeling option". The nose cone acts as the upper stop. You don't need a lower stop; it adds weight.

6. Use 1/32" balsa for the rotors. Round the free end of the shorter rotor halves. The mylar will let it droop about 15-20 degrees, and that gives very high rotation. An airfoil isn't necessary, and is actually a hinderance with 1/32" balsa. The rotors are under a lot of stress, so don't sand them thinner.

7. Use cotton thread to sew the 22 gauge wire to the hinge disk.

8. Connect the upper part of the 1/8" rubber bands to the launch lug/rotor assembly, NOT to the nose cone.

9. Make two large exhaust holes. Small holes spit motors.

10. Fins should be 1/32" plywood. Use the fin pattern in the plan.

These tips are good for starters. Before NARAM, I plan to privately publish the plans for my **Mikaroc HD** model. I'm positive this model will do for

HD what Larry Renger's **Sky Slash** did for BG. It's extremely difficult to build and it must be perfect, like a scale model, but it will outperform any design currently used. Watch for it.

Remember to give me your questions!

THE NEW ESTES CATALOG

A review by
Ric Gaff

Even after 12 years in this hobby, I find I still enjoy perusing a new Estes catalog. While not quite the same thrill of discovery I enjoyed before high school, it can still be a pleasure.

So what's new you ask? Skill Level 1 kits continue to breed like rabbits, (Sorry, Bunny and Barb.) outnumbering all other skill levels. Five new SL1 kits have been added. They are: the **Vector**, **Laser**, **Astro**, **Sunbird** and the **Pulsar**. Maybe if we had won 4 National Chamionships, they might have named it NIRA! Oh well, it's only a SL1 kit. I'm not going to describe these kits in detail. As SL1 kits, there isn't much detail to give!

There are 5 new SL2 kits: the **Foxfire** (13.6" long, BT-50, standard motors), claims to be yet another fighter from the violent Estes future. The **Searcher** (21.25", BT-20, standard motors) is a model with the appearance of a two-stage sounding rocket that doesn't look half bad. A **Flying Saucer** (3.3" long, 7.65" dia., standard motors) is all plastic version of the venerable old Centuri saucer. Small, but lots of promise for kitbashing. The **Neptune** (17.37", BT-55, standard motors) is the largest model introduced and comes with a surface-to-air missile look.

New Skill Level 3 kits also number five. Several are semi-scale models. The **SR-71 Blackbird** (19", BT-50, standard motors) comes in an unknown scale but is clearly smaller than the old Centuri version. Looks like a pretty good model. The **Starhawk** (19.35", BT-50, standard motors) represents some peace keeping ship used by some futuristic "Hill Street Blues", 'up against the planetoid hairbag'. The **Marte MK 2** (18.25", BT-20, standard motors) represents a semi-scale model of Italian air-to-ship missile. It certainly is the most unusual looking of the new kits. I like semi-scale kits! The **D-Region Tomahawk** (35.5", BT-60, D12's), as NAR competitors know, is a venerable sounding rocket much modeled (and mangled) by modelers. This large model probably won't have the detail a perfectionist would want, but at this size, who cares! The **Nebulon Warrior** (16.5", BT-20, standard motors) is another model of a futuristic warship. Where are the 747's and the Cessna 150's of the future? How about a futuristic Concord carrying passengers to New Europe?

There are no new SL4 or 5 kits. Besides, who could afford them?

The last (and least) new kit is the **Guild Heighliner** from the movie "Dune." The movie was a dud and so is this kit. It's just an ordinary SL1 kit with delusions of grandeur. Two good things about this kit: (1) It's available only as part of a starter set, and (2) it is a peaceful (more or less) future spaceship (however little it looks like one).

ROCKETIP - Chinese finger prisons can be used to connect sections of superrocs.

One nice touch in this catalog is the inclusion of short **Tech-Tips** in various spots. They give quick, if rudimentary, information on construction, flying, recovery, etc. It's not a technical manual, but is better than nothing. The new Estes catalog should be available at your local hobby store. Look for it if you haven't gotten one via mail.

NIRA VISITS THE CERNAN EARTH & SPACE CENTER

by Ric Gaff

The idea of space travel is probably a popular dream for all of us. It's one of the reasons we fly rockets or enjoy science fiction. Unfortunately, most of us will never go into space. (Unless you're a Senator, that is!) A film currently showing at the Cernan Earth and Space Center (Triton College in River Grove) is certainly the next best thing to being there. The film is a 360 degree presentation of "The Space Shuttle: An American Adventure", and it is breathtaking!

From the first moment, the film **TOTALLY** engulfs you in image. Only you and the film seem to exist. It almost literally puts you at the scene. From the liftoff of the space shuttle (close enough to be flattened, if you were really there) to earth shots and space walks in orbit, the experience is incredible! The film itself is composed of film from several shuttle missions and attempts to show a "typical" mission. Included are the salvage of Solar Max and the first untethered space walk.

The turnout by club members and their families was quite impressive. Frankly, it was better than I could have wished for! Unfortunately, due to

some misunderstandings, were unable to obtain the group discount. Money was supposed to be paid in advance for a minimum group of 30. I would estimate that we had at least 30 people.

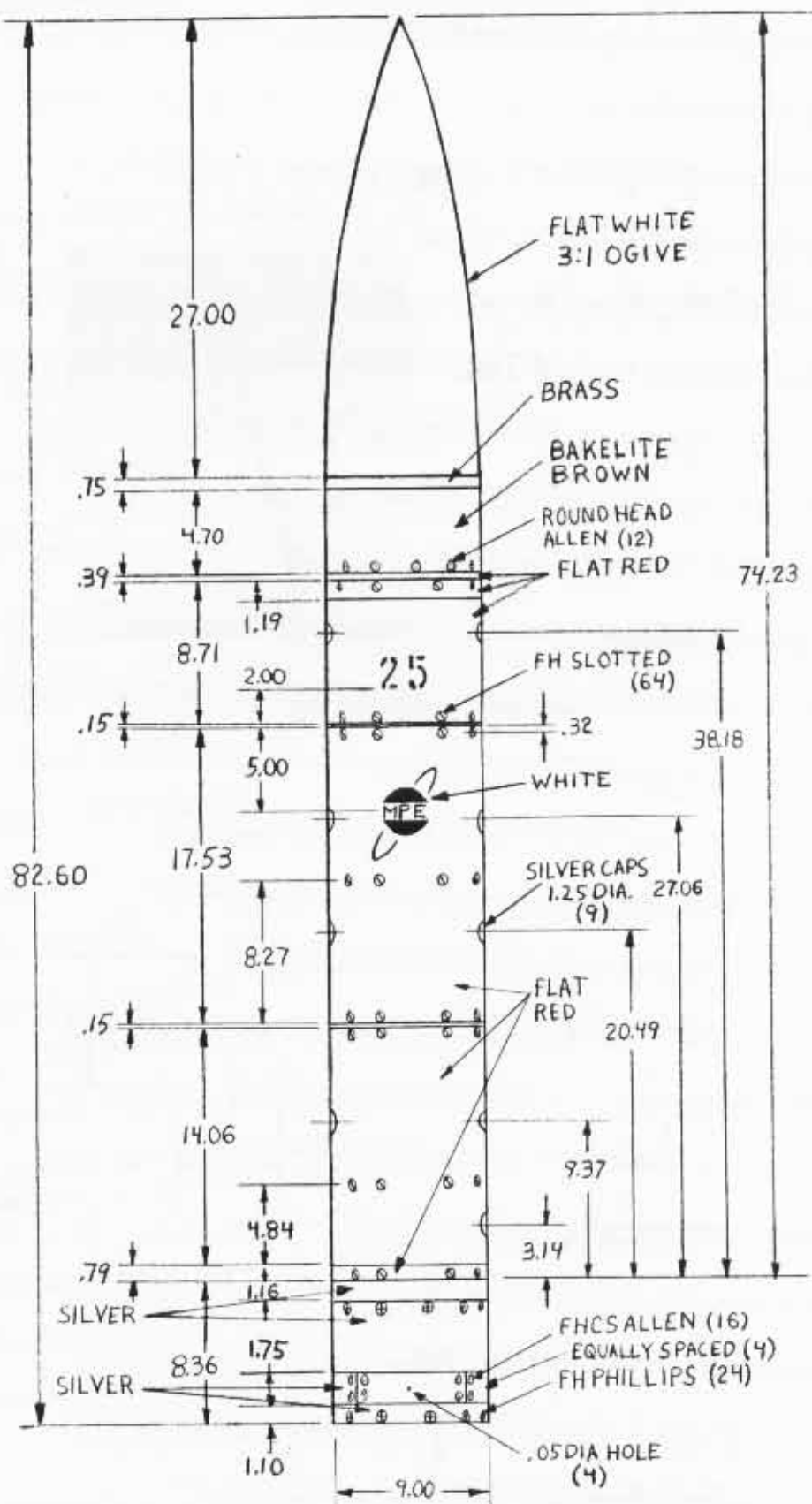
Tony Lentini deserves our thanks for informing us about the film and for arranging the group reservation. Without it, we wouldn't have seen the film at all! Other shows will be shown in the future, and you can bet I'll be there!



NIKE TOMAHAWK PAYLOAD SECTION ROUND 18.261 A

by Larry Mika

This is just a redrawn version of Don Larson's work. The data presented here is much more accurate than the plans in the 2/74 and 5/83 Model Rocketeer.

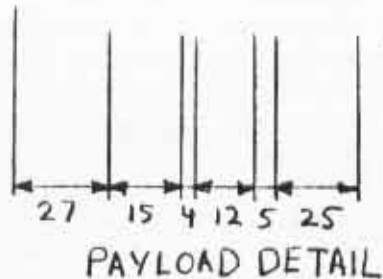


ALL DIMENSIONS IN INCHES

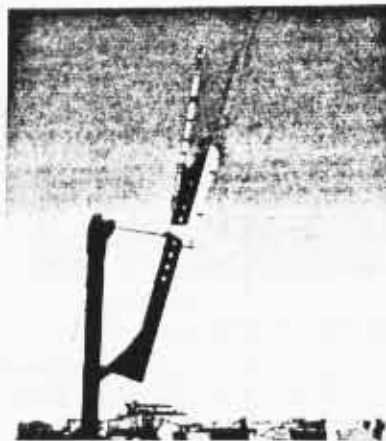
LM/85

NIKE-STEALTH SPORT SCALE PLAN

BY BOBBY BROWN
GRADE 5



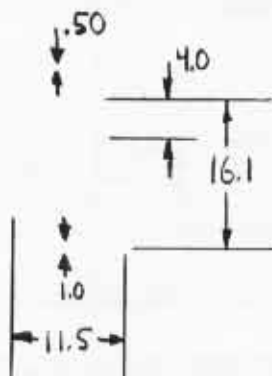
48 FLATHEAD
PHILLIPS SCREWS



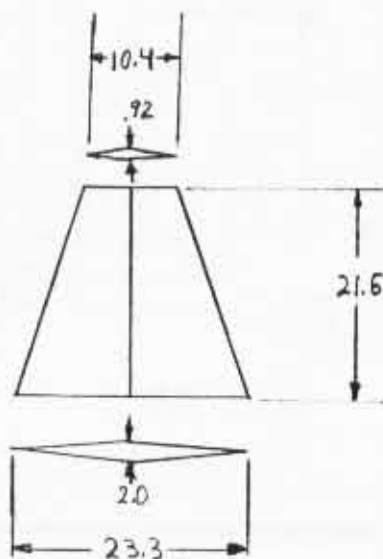
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WELD
LINES
(2)

WELD
LINE

SHROUD

CHAD INC.

We offer a line of fine rocketry products, due to be released the first of April.

John Paul Jones Cone - A revolutionary payload capsule. Eggloft - \$3.95; Dual Eggloft - \$5.95; Kat Loft - \$7.95; Trusteeloft - \$9.95)

Thermal Gun - Effective up to 500 meters away. Works best on opponent's models which must be returned to qualify. Kit - \$119.95; Assembled - \$169.95

10 Tesla Magnet - "Spot Landing Helper". Three inches long, fits BT-20, runs off two watch batteries. Skylab didn't have one. Do you? - \$14.95

Wizard of Ozmitter - On landing, a synthesized voice cries, "Auntie Em! There's no place like home." Add 4% sales tax in Kansas. - \$11.95

4F Tracking Powder - 4 oz., previously sold under the brand name "Nitetime". Can be used to prime pistons. - \$4.95

San Fernando Valley Igniters - "Fer Shur Shots" - \$.95/pk.

Combination Monokote Iron and Bamboo Steamer - \$13.95

Earth (Dirt) Repellant Spray - \$2.95

Wind Repellant Spray - \$3.95

Fire Ant Repellant Spray - \$10.95

Earth, Wind and Fire Ant Repellant Spray - \$17.95

Bat Range Utility Belt - used by "Jedi" Batman at the 1956 NARAM. - \$32.95

Cold Stuff - Fast wintertime repairs. - \$3.95

Flexible Clay Model - Can be painted and shaped like any scale model. Comes complete with a "Yea, this is just my boilerplate" T-shirt (specify S, M, L, XL) - \$42.95

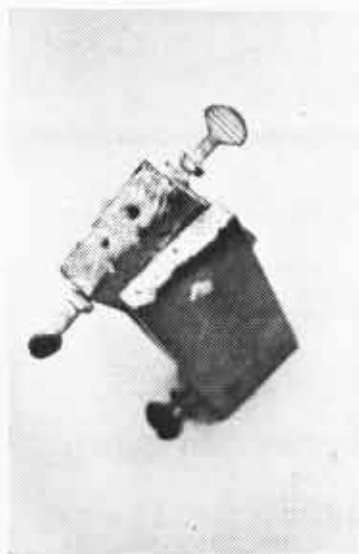
Body Tube Spirals - left over from making body tubes without spiral seams. - \$.50/pk

Replacement Fins - \$5.00 each

Adhesive Grain - Simulates balsa grain on plastic parts. - \$1.95

Rub-On Fingerprints - Perfect for scale models. - \$.95 ea.

WHEN THE BEST IS TOO EXPENSIVE - GET CHAD!



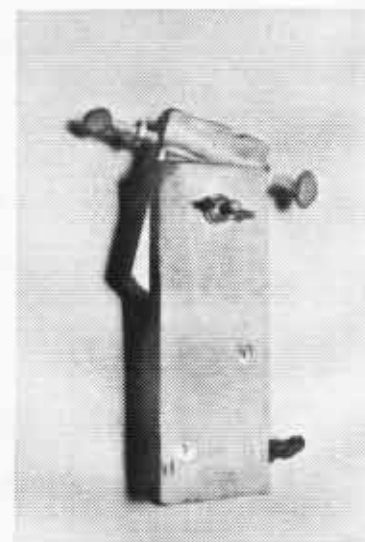
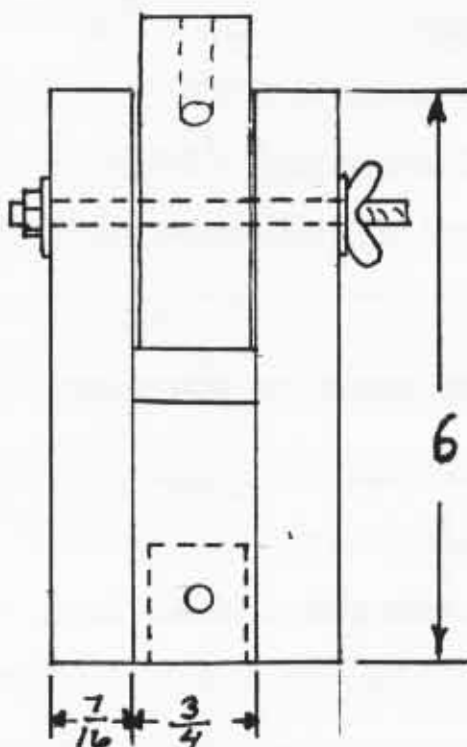
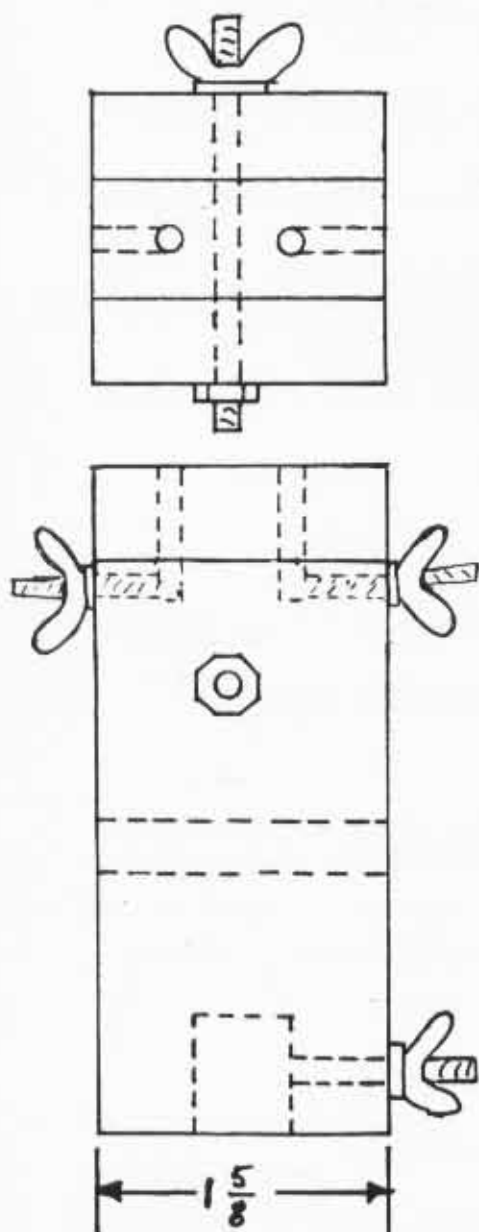
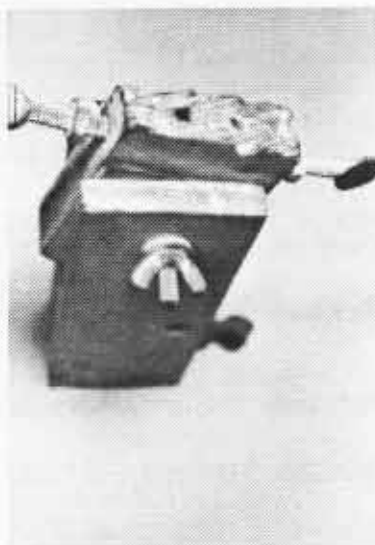
A FULLY PROGRAMABLE LAUNCH PAD

Designed by Tom Pastrick
Written by Ric Gaff

If you are a regular attendee at NIRA's club launches (and you should be!), you will have seen Tom Pastrick using a spiffy launcher. It's a pad that can be tilted and rotated in any direction. Thus, the Tom Pastrick Programable Pad, or "TPPP" for short, is presented for your approval.

This design is an updated version of one designed many years ago by Les Butterworth. The original version was used to make launch racks more flexible. They needed to be adjusted for wind conditions. Tom's version is for a single pad. The pad has provision for two rods, $1/8"$ and $3/16"$, and sits on a $3/4"$ dowel. The dowel is sharpened and pounded into the ground. This feature makes the "TPPP" a variation of the "power tower" dowel launchers many NIRA BG freaks use.

The plans and photos should show you all the details you need. So get into the workshop and get building. Let's see more "TPPP"s on the field in the spring.



**LEADING EDGE
CLASSIFIED ADS**

FOR SALE---OLD MOTORS

What happens to rocket motors when they go out of production or the company folds? Why, they become valuable collectors items! I have a number of out-of-production model rocket motors that are surplus to my own collection. Start or add to your collection with some of the bargains I've got for you! Centuri and MPC mini-B's, MPC and Cox D's just to name a few. A complete list is available. See below for address.

**FOUR SALE
MICROPROCESSOR COURSES**

Heathkit microprocessor courses with completely wired trainer and expansion accessory. List prices over \$1000.00. Yours for \$500.00. I will negotiate and/or break up set. Courses are 6800 based. See below for address.

ROCKETIP - Put your Plastic Model Conversion in a ziplock bag before launch in order to save time picking up the pieces after the flight.

**FOUR SALE
SCIENCE FICTION MAGAZINES**

Over 400 Science Fiction magazines published over the last 20 years. **Analog, S&SF, IF, Galaxy, IA'sSFm**, and many more. Also a large number of fanzines. Prefer to sell entire set but will break up. \$200.00 or best offer. List available. See below for address.

**CRAZY GAFF'S PLASTIC
MODEL SALE CONTINUES!!!**

Buy them before he gets well!!! **MAKE ME AN OFFER I CAN'T REFUSE!!**

REVELL (a) Tranquility Base in 1/48 scale, not "History Maker" series - \$20.00. (b) Nike-Hercules ("History Maker") - \$7. (c) Bomarc ("History Maker"), 1/47 scale - \$7. (d) F16A Fighter, 1/72 scale - \$10. (e) F-15E Strike Eagle, 1/32 scale - \$12. (f) Columbia with booster rockets, 1/144 scale - \$10. (g) SR-71 Blackbird, 1/72 scale - \$5. (h) F-14A Tomcat, 1/32 scale - \$10. (i) Douglas X-3 Stiletto - \$3. (j) Saturn V ("History Maker", partially assembled), 1/144 scale - \$20. (k) F18A Hornet, 1/48 scale - \$5.

MONOGRAM (a) Marauder (Buck Rogers) - \$4. (b) Space Shuttle, 1/72 scale - \$10. **AMT** Apollo Spacecraft, 1/200 scale - \$5. **RENWAL** Nike missile and launcher, two at \$10 each.

LINDBERG (a) Star Probe-Space Shuttle for \$10. (b) Star probe-USS Explorer - \$10. (c) Mars Probe-Landing Module (oldie) - \$20.

Everything must go!

**BACK ISSUES OF
THE LEADING EDGE
AVAILABLE NOW**

Vol. 4, No. 1,2,6. (1981)
Vol. 5, No. 3,6. (1982)
Vol. 6, No. 1,3,4,6. (1983)
Vol. 7, No. 1,3,5,6. (1984)
Vol. 8, No. 1. (1985)
NARAM ISSUE 1983, 1984

Back issues are \$.50 each. Now is the time to complete (or start) your collection of "tLE". Some issues in short supply.

For any of the above items write or call: **RICHARD GAFF**, 331 Third St., Northfield, IL 60093, Phone: (312) 724-2975

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NAR # _____ Birthdate ____/____/____ NIRA use-[____/____]

[] Membership \$3.00 [] Subscription only \$5.00 [] Other

Make checks payable to NIRA. Send to 1628 Waterford, Palatine TWP, IL 60074

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HAS TWO MEMBERS IN THE HIGH TENSION WIRE CLUB!



LARRY LONDON IS A
LIFETIME MEMBER,
BUT MIKA'S ONLY A
CHARTER MEMBER.
FUNNY THING IS WE'RE
THE ONLY PEOPLE IN
THE CLUB. IF YOU'D LIKE
TO JOIN US, JUST WRAP
A MODEL AROUND A WIRE
AT THE NEXT LAUNCH
(MUST BE A D-F MODEL, THOUGH)

WHERE CAN YOU GET
A ROCKET TO LAND ON THE
POWER LINES?

TRY
THE GLEN ELLYN
TOY + CARD SHOP
476 MAIN ST
GLEN ELLYN

TELL 'EM THE PENGUINS SENT YA!

LARRY MIKA
7905 IROQUOIS COURT
WOODRIDGE, IL 60517-3332