

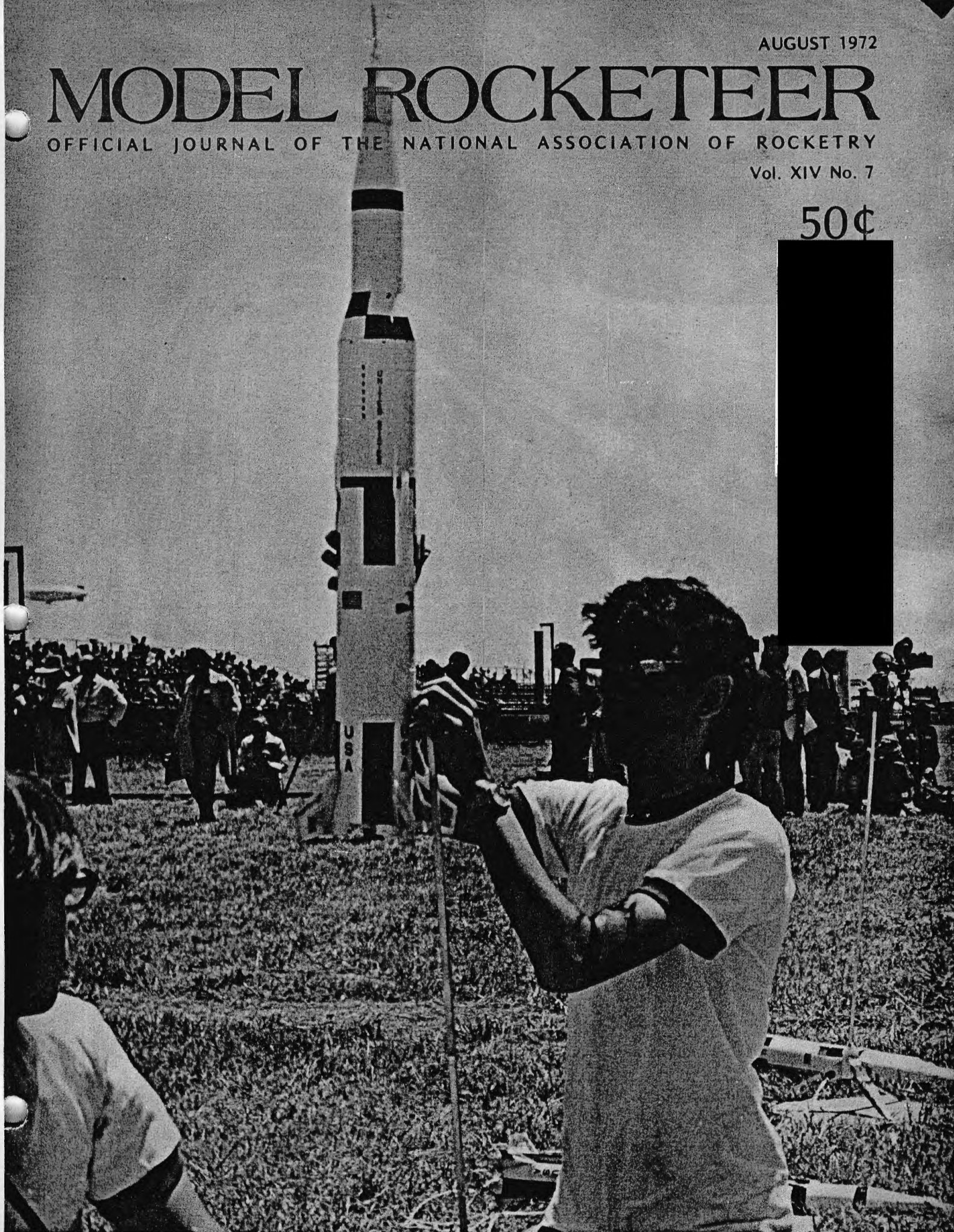
AUGUST 1972

# MODEL ROCKETEER

OFFICIAL JOURNAL OF THE NATIONAL ASSOCIATION OF ROCKETRY

Vol. XIV No. 7

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# MODEL ROCKETEER

OFFICIAL JOURNAL OF THE NATIONAL ASSOCIATION OF ROCKETRY

Vol. XIV No. 7

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## COVER PHOTO

At TRANSPO 72, Paul Gross of the Belair Association of Model Rocketry loads the launch rack. Note the grandstands and the Goodyear Blimp in the background.  
(Photo by Alan Williams)

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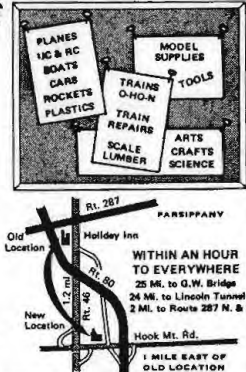
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## EDITOR'S NOOK

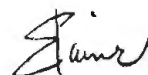
This month, for all of you purists who were offended at last month's instructions for making *plastic* transition sections, there are directions for making them from *paper*. We'd like to remind our readers to send in their construction hints, along with plans and technical articles. Share your knowledge and know-how!

We've been hearing a lot lately from NAR officials and section newsletter editors about satirical barbs and criticism aimed at certain people in the organization. Some of these have, perhaps, been in poor taste (though it is difficult to make a judgment about such things), but we feel that our officials might do well to develop their senses of humor a little more. Certainly a deliberately malicious statement does *not* belong in a section newsletter. We must, however, recognize the right of NAR members to criticize NAR officials, as long as what is printed is the truth (not rumor or hearsay labelled as fact), and as long as opinion is presented as such. We also feel that humor has a place in newsletters, as long as it is not insulting. It seems as though too many of us take ourselves too seriously. We'd better learn to laugh before we tear the organization apart with hatred.

We urge all voting members to study the By-Laws article in this issue and vote. (Non-voting members ought to look it over, too.)

We'd like to thank those of you who've been sending in comments on women in the NAR. Please keep on sending them in.

Special thanks to Joe Cimmino, Alan Williams, and Bob Seufert for help at TRANSPO, and to Jan Blickenstaff for his help in typing, proofreading, and putting together this issue.



Elaine Sadowski

Send questions, ideas and gripes about NAR (don't forget about the "Loudly from a Broken Soapbox" and "If I Wrote the Pink Book" columns!) to:

Robert Mullane  
NAR in Action Editor  
34 Sixth Street  
Harrison, New Jersey 07029

Send technical articles and plans to:

Patrick Stakem  
Technical Editor  
1001 Rockville Pike, Apt. 625  
Rockville, Maryland 20852

Section news goes, of course, to:

Chuck Gordon (until Aug. 10)  
Camp B'NAI B'RITH  
Starlight, Pa. 18461

Any other articles, photographs, cartoons, ideas, etc. go to:

Elaine Sadowski  
Model Rocketeer Editor  
1824 Wharton Street  
Pittsburgh, Pennsylvania 15203

# NAR In ACTION!

## CONTEST BOARD PROCEDURES FOR RUNNING MEETS

by Dottie Galloway, NAR Contest Board Chairman

1. Section sends sanction request with fee to Regional Contest Board, listing:
  - (a) Date of meet and alternate date
  - (b) Place of meet
  - (c) Type of meet (section, area, regional)
  - (d) Events and weighting factor of each
  - (e) Sections participating
  - (f) Number of contestants
  - (g) Host section
2. Regional Contest Board Chairman checks:
  - (a) Is request received 30 days before meet?
  - (b) Is host section chartered?
  - (c) Are participating sections chartered?
  - (d) Is total weighting factor within limit for type of meet?
  - (e) Can requested events be sanctioned for this type of meet?
  - (f) Is fee correct for the number of contestants?
3. Regional CB chairman assigns the sanction number, fills in sanction number on point award sheet (which is mailed to section), holds one copy of sanction, sends one copy of sanction to National CB chairman, and one copy to National Headquarters for publication in Contest Calendar.
4. Contest Director of the meet sends to National CB Chairman for contest materials.
5. National CB Chairman sends material by parcel post or U.P.S., a return postcard included to check on receipt of material.
6. Point Award Sheet (signed by three judges), event cards, and entry blanks must be mailed to Regional CB within 2 weeks of contest, also supplementary paper work such as Drag Race Forms, etc.
7. Regional CB Chairman checks results and mails Point Award sheets to National Chairman for tabulating.
8. Point Award sheets are tabulated on a monthly basis and results (Top twenty in each division, team, and section) are published when possible in *Model Rocketeer*, and *NARlett* (the newsletter for sections). **BE SURE YOU CHECK YOUR STANDINGS—NOTIFY NATIONAL CONTEST BOARD IF YOU QUESTION RESULTS.** This is why results are published—to correct any errors before the National Meet.

## DUTIES—NATIONAL CONTEST BOARD CHAIRMAN

1. Appoint and coordinate Regional Contest Boards
  - (a) See that Regional Chairmen are kept up to date with new rulings and information
  - (b) See that Regional Chairmen have up to date listings of sections (for sanctioning meets).
  - (c) See that Regional Chairmen have sufficient funds and supplies to fill sanctions, etc.
  - (d) See that Regional Chairmen give monthly report of transactions (due 15th of each month).
2. Make Up Reports
  - (a) File quarterly financial statement to Treasurer.
  - (b) File quarterly reports of transactions, etc. to Trustees.
3. Fill Contest Material Requests (See that printed material is available).
4. Rule on questions and clarify rulings on pink book. Chairman may consult with Regional Chairmen before making final decision
5. Publish Top Twenty—Each division, team, section.
6. Assign Team Numbers (After 1 July 1972):
  - (a) Send Team application to low NAR # member of each team.
  - (b) Check off of listing as renewal is received.
  - (c) Team may not receive points as a team unless it is registered.

Dottie Galloway

*Dottie has been a NAR member since 1965. Along with her husband, Howard, she received the Distinguished Service awards at NARAM-10 and MARS-VI. She became NAR National Contest Board Chairman on January 1, 1972. Dottie has been involved in Girl Scouting for 30 years in a variety of positions starting with just a plain scout. Along with Howard, she trains German Shepherds and conducts weekly ceramics classes.*

# NAR NEWS

## FROM THE CONTEST BOARD

When notices were sent concerning the regionalization of the Contest Board, that all contest material be purchased from the National Contest Board, it was hoped that sections preplan the amount of materials they would need for the year—or six months—or some such time period. It is apparent that some sections are ordering just enough for specific meets. This defeats the purpose two ways—1) you may not order in time to get your materials early and 2) the cost of sending small quantities is prohibitive. Therefore the Contest Board will have to give people two choices:

- 1) Send for at least a minimum order set by the Contest Board (\$5.00),
- 2) Pay mailing costs on a less than minimum order (\$1.00 UPS charge)

The goal of the Contest Board is not to make money, but also it is not to cost the NAR money. We want to pay our own way, so that the NAR can provide other services for its membership.

Also, because of the change in chairmanship, and the subsequent delay in filling orders, some materials were sent with a charge slip. We will not be able to do this in the future—so be sure that your check covers your order so as not to delay your order.

\* \* \*

The Contest Board has made a ruling on **PLASTIC MODEL COMPETITION**, Rule 29.1. A commercially-available plastic model must be a rocket-like vehicle. It may *not* be a boat, automobile or any other plastic model that is other than rocket-like in nature.

\* \* \*

## TRUSTEES' MINUTES AVAILABLE

A complete set of the minutes of all Board of Trustees meetings held in 1971 can be obtained for \$7.50 (to cover copying and mailing) from NAR Secretary Jay Apt (15 Line Street, Cambridge, Mass. 02138). These are 120 pages long and contain all committee reports, Treasurer's financial report, etc., as well as the minutes themselves. Please make checks out to Jay Apt and allow six weeks for delivery.

\* \* \*

## CORRECTION

In the May *Model Rocketeer* we stated that a section needs only one senior member to charter. This is incorrect. There must also be either another senior or leader member.

\* \* \*

## NARVA EDITOR NAMED

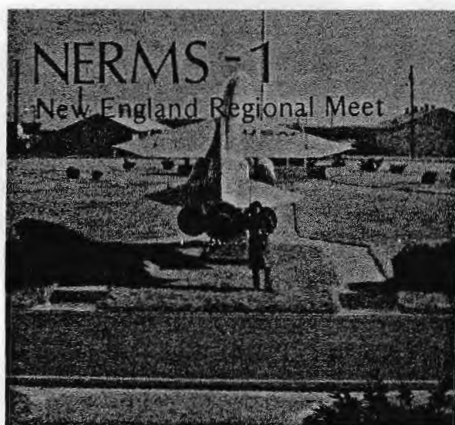
Roland Gabeler, Southeastern Area One Director, has announced the appointment of Jim Penney as editor of the NARVA newsletter. The newsletter is now issued quarterly (it was formerly a bi-monthly publication), and it will be distributed over the entire Southeastern region instead of just Virginia.

\* \* \*

## NAREC ADDRESS CHANGE

NAR Events Commission Chairman Lindsay Audin, has announced a change of address. To contact him, write:

Lindsay Audin  
c/o Barbara Waugh  
General Delivery  
Millwood, New York 10546



by Trip Barber  
Photographs by Pat Griffith

Northern New England's first year of serious model rocket competition reached a high point on the weekend of May 7th and 8th when the first annual New England Regional Meet, NERM-1, was held at Otis Air Force Base on Cape Cod, Massachusetts. This was the first major meet held north of Connecticut since NARAM-5 in 1963. The two host sections, MIT Model Rocket Society and the New England Rocketry Federation, have been alternating as hosts for a series of area meets and record trials in the Boston area all year, trying to broaden interest in serious competition in the area beyond the 25 or so active modelers in the two clubs, and to attract rocketeers from nearby states to compete against them. Only seventeen contestants finally registered for NERM-1. This was unfortunate: the facilities at Otis are among the best on the East Coast for hosting model rocket contests, and the personnel there were very cooperative. The flying field was a mile wide, over two miles long, and totally flat, and the Air Force provided a barracks near the field for sleeping accommodations at no cost to the participants. Lt. S.D. Hickerson of the Special Services office at Otis did a very good job of supplying all of the Air Force support that the meet needed to run smoothly.



NERF's Paul Vandall was first in overall points. Here he holds his Streamer Duration bird.

The meet activities began on Friday night with most of the contestants wandering around the big base for an hour or more looking for barracks 1312. Once everyone had found the place, Contest Coordinator Trip Barber and NERF President Pat Griffith explained the schedule and displayed the prizes that had been donated by manufacturers for the overall point winners. Estes had provided Citation Bomarc and Mini-Bomarc kits (most appropriate, since Otis is a Bomarc base), Mini-Brute kits, and Patriots; Centuri gave a Saturn V and a Space Shuttle; Plastruct donated three \$10 gift certificates.



John Kane prepared to launch his beautifully detailed ASP. He took first place in D division Scale with it.

The flying began at 9:30 Saturday morning with Sparrow B/G. Paul Vandall flew a Bumble Bee for the best time in this event, 138 seconds. The Barber team (Trip Barber, Bob Parks, Guppy, and Chris Flanigan) had an unusual second-place flight with a flop-wing that fell off the pod at 30 feet up and circled over the launch area for 104 seconds. Paul V. followed this victory with a second one in Hawk B/G, his Space Dart remaining aloft for 154 seconds. John Swift won ABC division with 157 seconds. At about this point, MIT's six-year-old launch panel chose to expire, leading to more than an hour's delay while repairs were made. For the rest of the meet, firing was accomplished by touching two wires together. Class O Drag Efficiency, with tracking done on a 450-meter baseline using the MITMRS 6X elbow scopes, was the next event. The Barber team, flying out of a Kuhn-type thrust augmenting launcher, took first with 136 meters. Paul Vandall then won Pigeon Eggloft with a record-setting 438 meters, using an Estes D.12 and a CMR egg capsule on a shroudless body tube. The Barber team won the final event of the day, Swift RG, with a 66-second flight using a flop-wing design. Paul Vandall actually had the best flight in this event, 100 seconds with a Groundhog, but the prevailing high winds made it land so far away that he could not find it, even though there were no rocket-eating trees around.

Like Saturday, Sunday was warm and clear, but windy. Competition began at about 10:00 a.m. with Class 2 Streamer Duration. Walter Raudonis' tiny BT-5 rocket with a long mylar streamer was by far the best entry of the day in this event, getting a time of 118 seconds. There were only two qualified flights in the next event, Eagle RG—Bernard Biales' big flexwing, which worked for the first time in eight attempts and turned in a record-setting 54 second time, and an entry by the Griffith team (Pat Griffith, Paul Gattoni, and Kevin Kalunian), which did 40 seconds.



Andy Kerber holds his boost/glider, which can glide about three minutes with an A engine.

After Eagle, and while the Scale contestants were prepping their models, Roger Powell flew a number of kit models in a demonstration for Enerjet and Centuri, and Pat Griffith responded with flight demos of some Estes kits.

The final event of the meet was Scale. George Flynn, Peter Pretzer, and David Publicover had spent seven hours the previous night going over the six entries and were standing by to judge for flight characteristics. John Kane took first place in D division with a small ASP after the other entry, the Barber team D-Region Tomahawk, was DQ'd for an unstable flight. The Griffith team won in ABC division with an ARCAS, followed by Ken Brodie with an ASP, Walter Raudonis with an IQSY Tomahawk, and Andy Kerber with a Nike Smoke.

The trophies and prizes were presented back at the barracks after the range was taken down. To no one's surprise, Paul Vandall was number one in overall points, with 309, followed by John Kane, the Barber team, and Walter Raudonis. Everyone who came agreed that NERM-1 had been a fun meet and hoped that NERM-2, to be held next May, would be bigger.



The Griffith team took first place with their scale ASP.



# Transpo 72

by (in alphabetical order)  
Jan Blickenstaff and Elaine Sadowski  
Photos by Alan Williams

Vice President Spiro T. Agnew was among the hundreds of thousands of people who saw the NAR in action at TRANSPO 72. The NAR, along with a group of other performers, took part in a specially organized air show held in the Vice President's honor on Saturday, June 3. Although notice of the show was short, the van crew (headed by Roland Gabeler) and the launch crew (headed by Howard Kuhn and Bill Werre) came through and put together a flawless rocket launch just as they did during the entire ten-day exposition.

NAR launches, ranging from one to five minutes in length, presented various aspects of model rocketry. The Space Age Panorama featured scale models showing the development of rocketry from the V-2 to the Saturn V. A demonstration using Alphas powered by engines from 1/2A to D showed the variety of engine thrusts available. Big high powered birds were flown during the shorter time periods. A special launch of Cinerocs on May 26 resulted in three good aerial views of TRANSPO.

The National Aeronautics and Space Administration donated the van (normally used to transport sounding rockets) which served as rocket prep area, launch crew headquarters and storeroom. The van crew took care of storing, prepping and repairing the demonstration models and maintaining the launch equipment (as well as making sure all requisition forms were filled out properly).

Howard Kuhn made the launch crew assignments, kept the shows on schedule, and handled transportation from the van to the grandstands. The launch crews were made up of members of the twelve participating sections: Annapolis Association of Rocketry, Belair Association of Model Rocketry, Harford Area Space Modelers (HASM), Metropolitan Area Rocket Society (M.A.R.S.), National Association of Rocketry Headquarters Astro-Modeling Section (NARHAMS), Northern Virginia Association of Rocketry (NOVAAR), Randallstown Rocket Society, Scorpius Rocket Club, Southern Maryland Area Rocket Team (SMART), Star Spangled Banner, Vikings Rocketry Society, Wheaton Rocket Association.

The NAR's booth was a donation from the United Exposition Service Company through Norm Ward (NAR Public Affairs Chairman) with tables, signs and displays provided by local NAR members and literature and models from the manufacturers. A special NAR flyer was printed for TRANSPO listing local sections, explaining model rocketry and the NAR, and advertising local hobby shops which sell model rocket supplies.

The booth crew enthusiastically sold the NAR and model rocketry to the thousands of kids and parents who stopped at the booth. Plans, NAR Handbooks and an all-new NAR Model Rocket Starter Kit were sold to new as well as to more experienced modelers. This kit was a basic model rocket with instructions for building a launcher but without engines. Almost 200 of these kits were sold. A jar of peanut butter sitting among the display models was a real attraction, and without the NAR's supply of rubber cement the NAA wouldn't have held together long enough to last through TRANSPO.



(L. to R.) Pat Stakem, Ed Pearson, and Diane Pearson prepare to welcome visitors to the NAR's booth at TRANSPO. Members of the booth committee (headed by Jan Blickenstaff) usually worked in two-hour shifts, talking non-stop to the thousands of visitors. Note the National Association of Rocketry sign, which was made of red Monokote and required much effort to remove.

Even before TRANSPO closed on Sunday June 4, hobby shops which had advertised in the NAR's TRANSPO flyer were reporting sellouts in model rocket supplies.

Under a wing of the C-5A cargo plane on the last day of TRANSPO, the launch crews (who didn't have a performance to give that day) set up a static display of a model rocket range and passed out NAR literature.

An informal party was held at the van on Saturday evening and the whole NAR TRANSPO crew feasted on hot dogs, watermelon and soda pop. After the food, a plaque was presented to Joe Cimmino, the man who engineered and co-ordinated the entire NAR effort at TRANSPO and made it a huge success. The crew then gave him three cheers.

During the free-for-all frisbee game which followed "Ole Ed" Pearson (Educational Committee Chairman) became the NAR's only TRANSPO casualty when his nose was broken by a runaway elbow. Claiming no pain, he is recovering cheerfully.

Sunday night after TRANSPO was closed for the last time, the booth was dismantled by three people while the Mylar sign was pulled off by another eight people. As the booth displays and literature were being delivered to the van, winds gusting up to thirty miles per hour were recycling the recycled cinder and ground glass parking lots, cutting visibility to thirty yards.

The NAR made good use of its part in TRANSPO. Hundreds of thousands of people (parents, kids, Estes club members, teachers, foreign visitors, basement bombers and engineers) who knew little or nothing about the NAR or model rocketry discovered our hobby and organization through the booth or the NAR's part in the air shows. Even as early as one week from the close of TRANSPO, NAR Headquarters reported a pickup in memberships, many directly linked to TRANSPO.

The NAR would like to thank all those who helped at TRANSPO, especially those manufacturers (Centuri, CMR, Cox, Estes, FSI, MPC, SAI, Vashon) who donated models, engines, technical literature, catalogs, and handouts which made possible the launches and booth displays.

Thanks also go to the United Exposition Service Company for their donation of the booth; AD-Tech advertising service for composition and layout of the NAR TRANSPO pamphlet; Wheaton Hobbies and Arts of Wheaton, Md. for donating modeling supplies; NASA for supplying the van; and special thanks to all the sections and NAR members who worked for the NAR and to the parents who gave their support at TRANSPO 72.



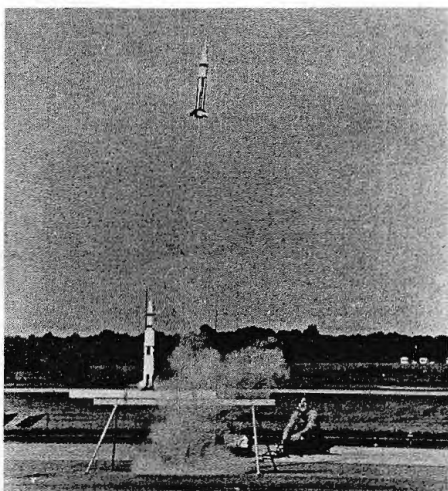
Roland Gabeler, head of the van crew, did a good job in spite of the pressure of daily demonstration launches. Here he takes out his frustrations on one of the radios used by NAR TRANSPO participants to keep in touch with each other.



The interior of the NAR's van was cluttered as TRANSPO drew to a close.



Another air show participant was the U.S. Army Helicopter Flight Demonstration Team, the Silver Eagles. This helicopter was named "Bozo the Clown".



NARHAMS' Tom Lyons fires a Saturn 1B.

# PAPER TRANSITION SECTIONS

Article and drawings by Andrew S. Elliott.

Andy Elliott, NAR 7419, is a student at the Massachusetts Institute of Technology. He was the editor of ZOG 43 for two years, and the winner of the first LAC Newsletter Award.

Conical transition sections have many applications in model rocketry. They can be used for drag reduction, as scale interstages and shrouds, even as a substitute for fins (a la Jim Barrowman). Sooner or later, almost every rocketeer has a need for one. The table and equations with this article provide an easy method of constructing accurate transition pieces from paper. Paper transitions, although not as strong as balsa, are more exact and present a smooth surface for finishing. The equations and table are self-explanatory, but a few tips are in order.

The dimensions of the completed transition piece are shown in Figure 2. The diameter of the larger body tube ( $d_1$ ), the diameter of the smaller body tube ( $d_2$ ), and the length of the shroud ( $L$ ) should be known. To derive the layout of the shroud on the paper, (Figure 3), first compute  $Y$  from equation 1. Using this, compute  $Y/L$ , then use the table to find  $\sin \alpha$ . Equations 3, 4 and 5 describe the necessary angle and dimensions. When cutting out the shroud, don't forget to leave a gluing tab about  $1/8$ " wide, as shown.

Several papers are suitable for the shroud. If close tolerances have to be maintained, as in scale work, "Strathmore" brand smooth finish paper is recommended. This paper was found to cut and roll easily, and it has no grain. Any art store should be able to supply it. For normal applications, heavy weight bond paper will work well. Cut the transition ring (Figure 4) from card stock.

Pre-roll the shroud on the edge of a table before gluing it to itself. Add the transition ring to the large end of the shroud after it has dried. Glue should be used very sparingly, as too much will shrink and wrinkle the paper. Assemble the transition and the body tubes as shown in Figure 1. If the inner tube is the engine mount, use two sets of centering rings instead of one. The small ridge on the shroud can be filleted with an acetate-type glue. Again, go lightly.

Do not glue fins to a paper transition; it is not strong enough to hold them. If the transition section is also to be the fin shroud, first glue it to the body tubes. Then carefully cut the necessary number of slots in the paper and glue the fins to the inner tube. After these joints are completely dry, fill in the paper-fin joints. The fillets should be built up from three or four layers of glue to avoid the shrinking problem.

A final hint—balsa transition pieces are sometimes more suitable than paper ones, e.g., for payload sections. If you use a balsa transition, try a little Monokote and these equations, and you'll have an instant finish.

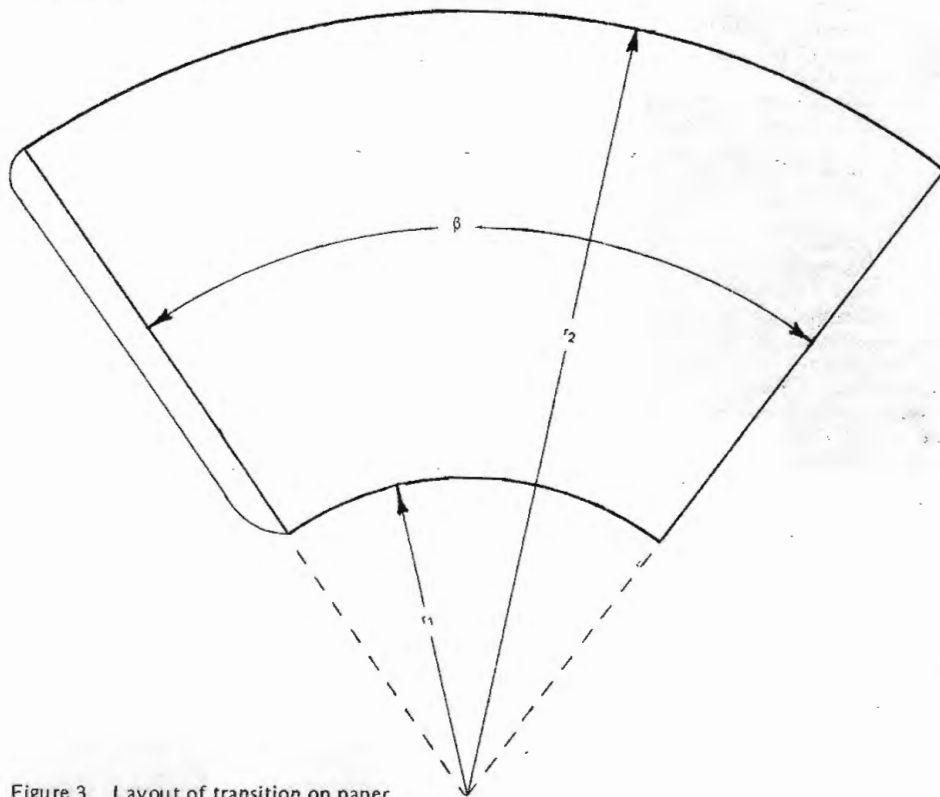


Figure 3. Layout of transition on paper.



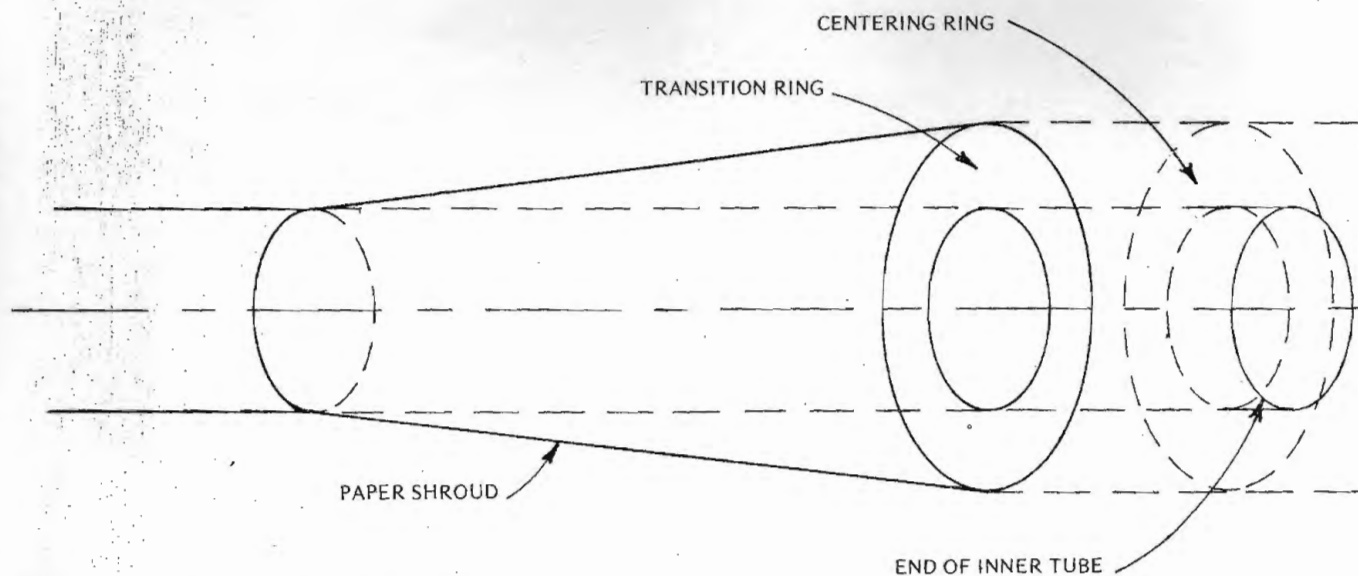


Figure 1. Typical set-up of transition in a model.

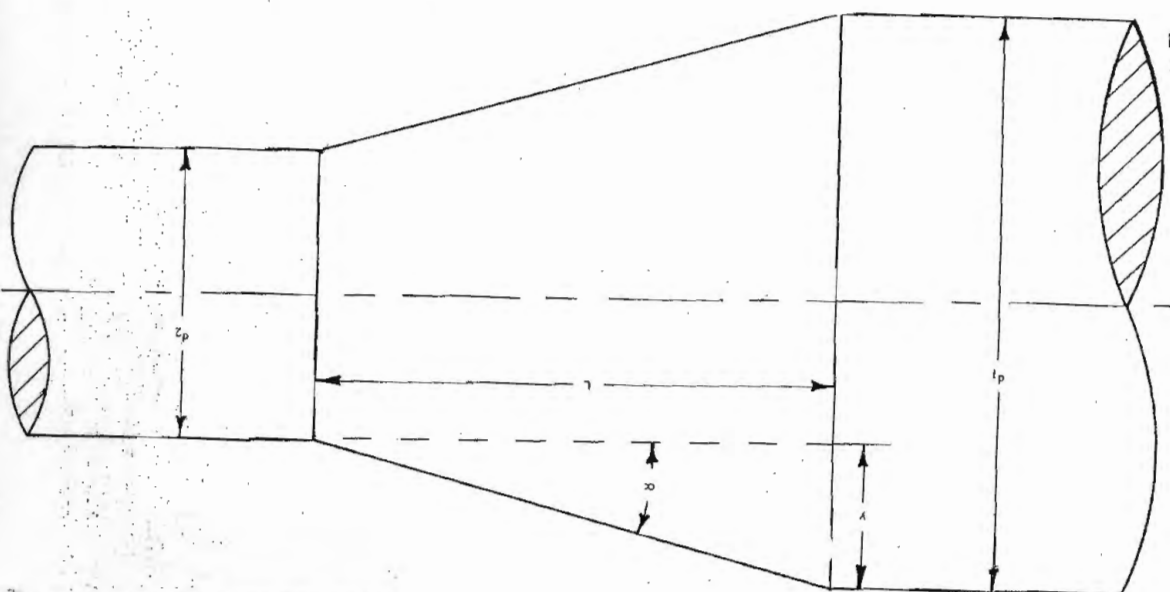


Figure 2. Principal dimensions of completed transition.

All sines given in four places, rounded off where necessary.

Y/L	SIN	Y/L	SIN
0.02	0.1999	0.52	0.4613
0.04	0.3997	0.54	0.4751
0.06	0.5989	0.56	0.4886
0.08	0.7974	0.58	0.5017
0.10	0.9950	0.60	0.5145
0.12	0.1191	0.62	0.5269
0.14	0.1386	0.64	0.5390
0.16	0.1580	0.66	0.5508
0.18	0.1771	0.68	0.5623
0.20	0.1961	0.70	0.5734
0.22	0.2149	0.72	0.5843
0.24	0.2334	0.74	0.5948
0.26	0.2516	0.76	0.6051
0.28	0.2696	0.78	0.6150
0.30	0.2873	0.80	0.6247
0.32	0.3048	0.82	0.6341
0.34	0.3219	0.84	0.6432
0.36	0.3387	0.86	0.6520
0.38	0.3552	0.88	0.6606
0.40	0.3714	0.90	0.6690
0.42	0.3872	0.92	0.6770
0.44	0.4027	0.94	0.6849
0.46	0.4179	0.96	0.6925
0.48	0.4327	0.98	0.6999
0.50	0.4472	1.00	0.7071

#### EQUATIONS

Equation 1.  $Y = \frac{d_2 - d_1}{2}$

Equation 2.  $\sin \alpha = \sin (\tan^{-1} Y/L)$

Equation 3.  $\beta = 360 \cdot \sin \alpha$

Equation 4.  $r_1 = \frac{d_1}{2 \sin \alpha}$

Equation 5.  $r_2 = \frac{d_2}{2 \sin \alpha}$

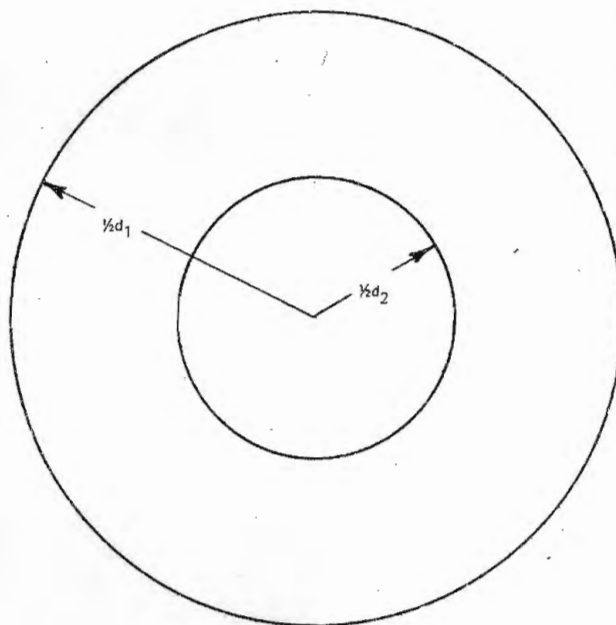


Figure 4. Ring dimensions.

# Proposed Amendments to By-laws

Prepared by  
Manning Butterworth

## 1. Change Article II to read:

### *Article II. Purpose*

The purpose of the National Association of Rocketry, hereafter called the Association, shall be to aid and encourage by all suitable means all people interested in model rocketry and its related sciences. The Association shall

- (a) establish, enforce, modify and publish standards and rules relating to the construction, operation and safety of model rockets and model rocket products;
- (b) prepare, collect, correlate and disseminate by publication or otherwise, facts, information, articles, books or other literature pertaining to model rocketry, and shall engage in, encourage, and promote the educational aspects of model rocketry;
- (c) establish and maintain means of communications with its members, committees, other functions, and its affiliates, and shall collaborate or affiliate with other organizations whether scientific or otherwise, in any manner and to any extent which, in the judgment of the Board of Trustees, will best aid in accomplishing its objectives;
- (d) strive to promote and improve the image of model rocketry with the general public and with all levels of government, and shall cooperate with all levels of government to the end that model rocket activity may be conducted without undue restriction;
- (e) encourage membership in the Association, establish local chartered sections, and promote the growth of the Association;
- (f) engage in and encourage organized model rocket activities as the Association or the Board of Trustees may from time to time deem necessary or desirable in connection with this article;
- (g) promote an increasingly wide interest in the scientific techniques pertaining to model rocketry, encourage research and experimentation; and the Association may buy, hold, or convey real and personal property to that end.

*Justification:* This amendment attempts to define an achievable set of goals which are consistent with the past character and present intentions of the Association and which may provide guidance in originating future programs. In view of the fact that NASA and NAEC expend considerable effort to provide information on rocketry and astronautics in general, the above goals have been restricted more closely to model rocketry. Also, the amendment commits the Association to policies of membership growth, of organized model rocket activity, of communication with the membership, and of attempting to safeguard the right of members to fly model rockets, all of which are goals of importance to the members.

## 2. Change Article III, Section 1 to read:

The membership of the Association will be comprised of (a) citizens of the United States regardless of where they may be residing, (b) organized groups of U.S. citizens, (c) citizens of other nations who may be residing in the U.S., and (d) citizens of other nations that do not yet possess an organized model rocket club affiliated with the respective FAI-member national aero club.

*Justification:* This would permit military service personnel, embassy personnel, exchange students, etc. to become members, as well as exchange students and other foreign nationals residing in this country, including visiting professors, educators, and professional people. Also, part (d) will encourage the further international development of model rocketry by

helping those countries with no national organization for model rocketry.

## 3. Change Article III, Section 2 to read:

*Section 2:* The membership of the Association shall comprise the following classes: (a) Senior Membership, (b) Leader Membership, (c) Junior Membership, (d) Honorary Membership, (e) Manufacturer and Corporate Supporting Membership, and (f) such additional classes as the Board of Trustees may deem it appropriate to create.

and change Article XI, Section 3 to read:\*

*Section 3:* The Membership Committee shall have as its duties the promotion of membership in the Association, the procurement of membership applications and other promotional materials, the certification as to class of a potential member, the conduct of membership campaigns under the direction of the President, and the recommendation to the Board of Trustees of new membership classes as deemed appropriate and desirable from time to time.

*Justification:* This amendment adds flexibility to the membership classes and enables the Board to define new ones as the need arises. Examples might be one-day or short term membership and certain types of group memberships. It seems natural that the Membership Committee have authority and responsibility for recommending such new membership classes. Also, the amendment assigns to the Membership Committee the responsibility for membership applications, flyers, etc. to ensure that these very important items are not neglected as they sometimes have been in the past.

## 4. Replace Sections 7 and 8 of Article III with a new Section 7 to read:

*Section 7:* Manufacturer and Corporate Supporting members shall be limited to those firms who manufacture, produce, distribute, or sell model rocket engines, kits, parts, components, accessories, and/or equipment and those firms or organizations who are interested or involved in rocketry, astronautics or their allied fields, including the educational aspects thereof. The Manufacturer and Corporate Supporting Membership shall comprise the following subclasses:

- (a) Donor Member; the dues for Donor Members shall be \$25;
  - (b) Patron Member; the dues for Patron Members shall be \$100;
  - (c) Sustaining Members; the dues for Sustaining Members shall be \$500 and over.
- and renumber succeeding sections of Article III appropriately.

*Rationale:* This amendment obviates any decisions by the NAR of what dues should be charged for this type of membership in any given case.

## 5. Change Article III, Section 12 to read:

*Section 12:* For conduct prejudicial to the objectives, reputation and property of the Association, or for failure to observe and abide by the Safety Code of the Association in all non-professional rocket work, a member of any class may be censured, suspended or expelled by a Committee of three Senior members in good standing appointed by the President, provided notice of the charges against him and of the time and place of the meeting at which they are to be presented be published and distributed to him by mail not less than five (5) days prior to such a meeting, and provided he be given the opportunity to be heard in his own defense. Any member of any class charged with violation of the Safety Code of the Association shall be automatically suspended from membership until the meeting of the Committee at which his case is to be decided, providing the time of suspension is not longer than one (1) year from the date of suspension until the date of the hearing. No person, once having been admitted in good faith as a member of the Association, shall be denied the right to continued membership except for the above reasons and

through the above procedure, or except for non-payment of dues.

*Rationale:* This amendment permits far greater flexibility in handling cases of alleged misconduct since members of the committee could be selected to be near to each other and to the accused member thus facilitating the gathering of the facts and the meeting for the hearing. It might also be thus possible to include on the committee an individual personally acquainted with the accused member and/or his alleged acts, for example a senior advisor of the member's section if he belonged to one.

and change Article V, Section 6 to read:

*Section 6:* At any meeting of the Association, twenty-five (25) or more voting members shall constitute a quorum for all purposes except as otherwise provided by law.

*Justification:* This amendment provides the opportunity for all voting members to participate in the making of decisions which may affect the whole Association. The members who attend a meeting of the Association may not represent the wishes of the whole membership, yet at present they have the power to act for the whole membership.

## 11. Append the following to Article VI, Section 1:

"The elected members of the Board of Trustees shall include at least one member from each of the six geographical Regions. Should the voting membership as a whole fail to elect a Trustee from among the nominees who reside in some one or more of the six geographical Regions, the ballots cast by the voting members of that Region shall be counted to elect a nominee who resides in that Region."

## 6. Insert Article IV, Section 2 as follows:

*Section 2:* Membership shall be in effect for a period of one year after payment of dues and shall be renewable in the same month each year thereafter.

*Rationale:* To prevent inequities which can arise from a calendar year membership plan and insure equal benefits to all members regardless of when they join. This plan is presently in effect.

## 7. Add Article IV, Section 3 as follows:

*Section 3:* A family membership plan shall be offered in which one member of a family shall pay the full dues and receive the *Model Rocketeer*, and the dues for each additional member of the same immediate family who does not receive the *Model Rocketeer* shall be reduced by an amount equal or approximately equal to the cost of supplying a member with the Association's newsletter.

*Justification:* The amendment would have an important meaning for those families with a number of prospective or current members that are on a limited income, and for inducing new family members to join as they become older. This plan is presently in effect.

## 8. Add Article IV, Section 4 as follows:

*Section 4:* Members defaulting in payment of dues will be dropped from the membership rolls after a one month period of grace.

*Rationale:* This differs from the present Section 2 in omitting the requirement for a second renewal notice. This practice is not followed now anyway, and the AMA, when it tried it, found that it did not help.

## 9. Change Article V, Section 1 to read:

*Section 1:* Business meetings of the Association shall be held at least once every year at a time and place to be determined by the Board of Trustees.

and change Article VII, Section 2 to read:

*Section 2:* The officers of the Association shall be elected from and by the members of the Board of Trustees at the first meeting of the Board of Trustees following the Trustees' election.

and change Article X, Section 1 to read:\*

*Section 1:* The Nominating Committee shall consist of three (3) Senior members in good



standing who are appointed by the President at least sixty (60) days prior to the date of an election of members of the Board of Trustees. It shall be the duties of this Committee to prepare and submit to the Board of Trustees at least thirty (30) days prior to the election a slate of at least six (6) nominees for the Board of Trustees.

**Rationale:** An annual meeting would permit members to discuss the operation of the Association or other issues of especial interest with the officers and Trustees and to submit motions on a more timely basis than at present. The last two parts of this amendment serve simply to remove the references to a "triennial meeting" in order to be consistent with the first part of the amendment.

10. Change Article V, Section 4 to read:

**Section 4:** Votes cast by mail shall be mailed to the Secretary at his official address as stated on the ballots. Only such ballots as are delivered to him prior to the stated time of the meeting shall be received and counted. However, those members who have not cast their vote by mail may vote in person at the meeting.

and change Article V, Section 5 to read:

**Section 5:** The Secretary shall cause ballots for voting upon such propositions as shall be submitted to any meeting of the Association for its decision to be sent to each voting member at least fourteen (14) days prior to such a meeting. The Secretary shall cause ballots for voting upon such propositions as may originate in any meeting of the Association to be sent to each voting member within sixty (60) days of such meeting.

and change Article X, Section 1 to read:\*

**Section 1:** The Nominating Committee shall consist of three (3) Senior members in good standing who are appointed by the President at least sixty (60) days prior to the date of an election of members of the Board of Trustees, and who shall be selected to have as wide a geographical distribution as possible. It shall be the duties of this Committee to prepare and submit to the Board of Trustees at least thirty (30) days prior to the election a slate of at least nine (9) nominees for the Board of Trustees including at least one (1) nominee from each of the six geographical Regions.

**Rationale:** The effect of this amendment is to assure that each Region of the country can be represented in the making of decisions of policy by the Board. It may affect the membership of the Board, but it does not affect its structure or the number of Trustees, and it allows the full voting membership of the Association the maximum freedom in selecting its Trustees consistent with the aim that all parts of the country be represented on the Board.

12. Change Article VI, Section 2 to read:

**Section 2:** Five (5) or more members of the Board of Trustees shall constitute a quorum.

**Rationale:** The present number is three (3) and it seems questionable that such a small number should act for the full Board. It would perhaps be more appropriate in such cases for the meeting to be held as a meeting of the Executive Committee whose actions are subject to the subsequent ratification of the Board.

13. Append to Article VI, Section 3 the following:

"Notice of all meetings of the Board of Trustees shall be sent by the Secretary to each Trustee at least thirty (30) days in advance."

**Justification:** If too short a notice is given, a meeting of the Board of Trustees may fail to achieve a quorum. The above time limit should enable a quorum to be assembled and yet not delay a meeting unduly long. Situations demanding quicker attention may be dealt with by the Executive Committee.

14. Change last sentence of Article VI, Section 6 to read:

"Such minutes shall be kept by the Secretary and shall be made available to the membership within sixty (60) days of such meetings or such actions."

**Rationale:** This would provide for an informed membership which is necessary if an-

nual meetings of the Association are to be maximally productive.

15. Change Article VIII, Section 4 to read:

**Section 4:** It shall be the duties of the Treasurer to collect all dues and assessments; to care for the funds of the Association, and to make all financial reports as required by these By-Laws. Any disbursement of the funds of the Association shall be made by the Treasurer, and all checks, drafts, notes, and orders for payment of the funds of the Association shall be signed by the Treasurer.

and delete Article XIII, Section 1.

**Rationale:** By permitting disbursement of NAR funds only by the Treasurer the Association is better able to keep track of and control its expenditures.

16. Change the second sentence of Article IX to read:

"The Executive Committee shall be able to exercise any power granted to the Board under these By-Laws, but a full and complete report of the actions of the Committee shall be sent to the Board within fourteen (14) days of the date on which such actions were taken, and no action of the Executive Committee shall be binding unless ratified by a two-thirds vote of the Board members present and voting at the next regular or special meeting of the Board."

**Justification:** The requirement for notification within two weeks of actions by the Executive Committee (which is presently in effect) insures the cognizance of the full Board of any changes of policy made by the Executive Committee and hence facilitates dialogue on such changes so that the best interests of the Association may be served.

17. Change Article X, Section 1 to read:\*

**Section 1:** The Nominating Committee shall consist of three (3) Senior members in good standing who are appointed by the President at least sixty (60) days prior to the date of an election of members of the Board of Trustees, and who shall be selected to have as wide a geographical distribution as possible. It shall be the duties of this Committee to prepare and submit to the Board of Trustees at least thirty (30) days prior to the election a slate of at least six (6) nominees for the Board of Trustees.

**Rationale:** The principal change made by this amendment is the requirement that the President appoint a Nominating Committee with a broad geographical base. The aim is to promote the possibility for an equitable representation on the ballot of the various parts of the country and to insure that qualified persons are not overlooked for the simple reason of geography.

18. Change Article X, Section 2 to read:

**Section 2:** Nominations may be made independently by any voting member in good standing either by mail or from the floor at a meeting of the Association.

**Justification:** The attendance at a meeting of the Association is inevitably limited both numerically and geographically. The acceptance of nominations by mail insures that no qualified person need be passed over for this reason.

19. Add Article X, Section 3 as follows:

**Section 3:** The Secretary shall cause to be sent to each voting member at least fourteen (14) days prior to the election a ballot comprising all nominations for members of the Board of Trustees.

**Rationale:** This section is intended to insure that all future elections are conducted in a manner that affords each voting member the opportunity to exercise his right to vote. The provision is simple and does not encumber either the Association or the voting member with any complex or time consuming procedures.

20. Change Article XI, Section 3 to read:\*

**Section 3:** The Membership Committee shall have as its duties the promotion of membership in the Association, the procurement of membership applications and other promotional materials, the certification as to class of a potential member, and the conduct of member-

ship campaigns under the direction of the President.

**Rationale:** The additional responsibility which has been assigned, viz. "the procurement of membership applications and other promotional materials" evidently has not, as one might have thought from the phrase "promotion of membership", been charged in the past to the Membership Committee. The importance of applications, flyers, and so on argues that attention to them be ensured; it would seem appropriate that such attention be given by the Membership Committee.

21. Append to Article XI, Section 6 the following:

"The Liaison Committee shall include a sub-committee for liaison with members of the model rocket industry on matters of mutual interest."

**Rationale:** It may be desirable to have a body whose sole responsibility is to conduct discussions with the model rocket industry on matters of mutual interest and it may be preferable, at least in some cases, to work with manufacturers via a single committee rather than many separate committees or individuals.

22. Change Article XII, Section 2 to read:

**Section 2:** The LAC shall consist of seven (7) Leader members and one (1) Trustee. The Leader members of the LAC shall be elected biennially from the Leader members of the Association by the members of the Association for a term of two years, or until their successors are elected. The incumbent LAC members shall organize and execute the election of their successors. The Trustee member of the LAC shall be appointed by the President of the Association.

and change the first sentence of Article III, Section 11 to read:

"Excepting in election of members to the LAC in which Junior Members may vote, voting on all matters related to the business of the Association shall be restricted to Senior, Leader, and Honorary Members of the Association as well as a single vote from each Manufacturer Member and each Corporate Supporting Member."

**Rationale:** Extending the franchise to Juniors in the LAC elections may increase their feeling of involvement with the Association and perhaps increase interest in the full election process among those nearing voting age. Two year terms of office provide more time to tackle and complete large scale projects which sometimes flounder when a LAC member leaves after only one year in office.

23. Add Article XII, Section 5 as follows:

**Section 5:** In the event of vacancy in the LAC by death, resignation, removal, or failure of election, the Chairman of the LAC may appoint any Leader member of the Association to fill the unexpired term subject to the ratification vote of a majority of the LAC.

**Rationale:** It is felt that this contingency ought to be provided for, and the above procedure, which is analogous to that for the Board of Trustees, is consistent with the present responsibility of the LAC to conduct its own election.

24. Add to Article XII the following section:

**Section 6:** Any member of the LAC who is elected to the Board of Trustees during his term of office in the LAC must resign from the LAC upon his election as Trustee.

**Rationale:** It has apparently been the intent of Article XII that the LAC enjoy a large degree of autonomy; this may be compromised if one or several LAC members were elected as Trustees while still members of the LAC. Two year terms of office as proposed above would increase the chances that such a circumstance might arise.

25. Delete Article XIII, Section 2.

**Justification:** Simple disuse. Purchases that are made are not made in this way.

26. Change Article XV to read:

(Continued on page 12)



These By-Laws may be amended at any regular or special meeting of the Board of Trustees, or at any regular or special meeting of the Association, by a two-thirds vote of the votes cast, provided that a ballot containing the proposed amendment be sent each Trustee or voting member at least fourteen (14) days prior to the meeting at which it is to be presented for a vote. Amendments originating in meetings of the Board of Trustees are subject to a ratification vote at the next regular or special meeting of the Association by a two-thirds vote of the votes cast provided ballots are sent to the voting members as above."

**Rationale:** As the NAR is a truly national organization, it seems entirely proper that the By-Laws of the Association reflect the consensus of the entire voting membership and not only those able to attend a meeting of the Association.

\*In a few cases above, more than one amendment is proposed for the same section of the By-Laws. Should more than one amendment to the same section be passed, the following order of supersedure applies: item 9, the third part (amendment to Article X, Section 1) is superseded by item 17; item 17 is in turn superseded by item 11, the second part, item 20 (amendment to Article XI, Section 3) is superseded by item 3, the second part.

The amendments in items 11 and 22 above shall, if passed, apply only to elections held after January 1, 1973.

Renumbering to maintain consecutive order of articles and sections which is necessitated by the passage of amendments proposed here shall be implied by the passage of said amendments.

## USE THE BALLOT BELOW FOR YOUR VOTE



# CONTEST alendar

July 15-16, 1972—Shawnee, Kansas. Name: Heart of America Regional Meet-II (HARM-2). Host: Midwest Rocket Research Association 168. Events: Roc Eggloft, Robin Eggloft, PeeWee Payload, Class O Parachute Duration, Hawk Boost/Glide, Sparrow Boost/Glide, Sparrow Rocket Glider, and Scale. Contact: Mark Pemberton, 10911 West 70th Terrace, Shawnee, Kansas 66203.

July 22-23, 1972—Richmond, Virginia. Name: Richmond Rebel Rousers Rocketry Meet. Host: Vikings 203. Events: Class I Parachute Duration, Single Payload, Scale, Swift Rocket Glider, Class O Streamer Duration, Robin Egglofting, Swift Boost/Glide. Contact: James F. Penney, 8308 Lansdowne Road, Richmond, Virginia 23229. Telephone: (703) 270-4015.

July 29-30, 1972—Bossier City, Louisiana. Name: S284-SM-3; Section 284 Section Meet-3. Host: Ark-La-Tex Model Rocketry Club 284. Events: Quadrathon, Sparrow Rocket Glider, Class 2 Streamer Duration, Parachute Spot Landing, Hornet Boost/Glide, Drag Race, Design Efficiency. Contact: L.A. Gililand, 1903 Christine, Bossier City, Louisiana 71010. Telephone: (318) 746-1159.

August 11-13, 1972—Long Branch, New Jersey. (Not definite at press time), a shore resort on the world famous Jersey Shore. Name: POVERTY-1. Host: "Lunar Tics", the Union

County 4H Model Rocketeers, NERO (North Essex Rocketry Organization), and Pascack Valley Section 143. Events are uncertain at this time. They will be fun! They will come from the "Phillipsburg Little Black Book of Rather Odd Events", the Pink Book, and the imaginations of the sponsors. There will not be: Scale, R&D, or tracking events (too much work). In addition to rocket flying, there will be a beach party, a picnic, maybe a road rally, surfing, low cost housing, lots of prizes, trophies, ribbons, etc., home movie shows, discussion groups, lots of surprises, and fun for all. Bring the whole family along! If you can't get to NARAM-14, come to POVERTY-1. For more information write or call Bob Mullane, 34 Sixth Street, Harrison, N.J. 07029 (phone (201) 483-2372), or call Gary Bossong, (212) CL2-8997.

August 26, 1972—Fort Wayne, Indiana. Name: HOOSIERS EXTRA LARGE LAUNCH-1 (H.E.L.L.-1). Host: Summit City Aerospace Modelers 282. Events: Class OO Parachute Duration, Plastic Model, Class 2 Underwater Streamer Duration, Sparrow Boost/Glide, and Sparrow Rocket Glider. Contact: Tom Hoelle, 2231 Charlotte, Fort Wayne, Indiana 46805 (phone (219) 484-5755).

This is strictly a state wide launch for Indiana!

September 2-3, 1972—Bossier City, Louisiana. Name: DIRT-1 (Delightful Invigorating Record Trials). Host: Ark-La-Tex Rocketry Club 284. Any event may be launched. Contact: Tom Sullivan, 1905 Christine Avenue, Bossier City, Louisiana 71010 (Phone (318) 746-9461).

September 16-17, 1972—Highland Park, Illinois. Name: ETR-2 (MERA-TIROS Regional). Events: Hornet Boost/Glide, Condor Boost/Glide, Sparrow Rocket Glider, Hawk Rocket Glider, Class 2 Streamer Duration, Class 1 Parachute Duration, Pee Wee Payload, Robin Eggloft, Research and Development. Contact: Bob Finch, ETR-2 Contest Coordinator, 415 Lambert Tree Road, Highland Park, Illinois 60035. (Phone (312) 432-8996).

## BALLOT

for Amendments to the NAR By-Laws

As provided in Article III, Section 11 of the By-Laws, "voting on all matters related to the business of the Association shall be restricted to Senior, Leader, and Honorary Members of the Association as well as a single vote from each Manufacturer Member and each Corporate Supporting Member."

To cast your vote by mail this ballot or a facsimile thereof must be mailed to the Secretary of the Association

Jay Apt  
15 Line Street  
Cambridge, Massachusetts 02138

and must be received by him no later than 5:00 P.M. (E.D.T.) Friday August 4, 1972. Your address label from a current *Model Rocketeer* must be affixed to the ballot or the ballot will not be counted. Those persons who do not cast their vote by mail may do so in person at a meeting of the Association which will be held at NARAM-14.

The numbers on this ballot correspond to the numbers of the proposed amendments which appear on pages 10, 11 and 12.

	In favor	Oppose		In favor	Oppose
1.	<input type="checkbox"/>	<input type="checkbox"/>	14.	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	15.	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	16.	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	17.	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	18.	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	19.	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	20.	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	21.	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	22.	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	23.	<input type="checkbox"/>	<input type="checkbox"/>
11.	<input type="checkbox"/>	<input type="checkbox"/>	24.	<input type="checkbox"/>	<input type="checkbox"/>
12.	<input type="checkbox"/>	<input type="checkbox"/>	25.	<input type="checkbox"/>	<input type="checkbox"/>
13.	<input type="checkbox"/>	<input type="checkbox"/>	26.	<input type="checkbox"/>	<input type="checkbox"/>



by  
Charles Gordon

#### MID-AMERICA REGION

Mid-America Regional Manager, Manning Butterworth, announces the appointment of Harold Mayes as the Kansas State Department Head for Section Activities. Mr. Mayes' address is 712 S. Kansas Ave., Olathe, Kansas 66061. He assumes the post in Kansas formerly held by Larry Loos who, during the past year and a half as State Department Head for both Kansas and Missouri promoted the formation and growth of contest activity and a number of sections in those states. Regrettably, Mr. Loos has had to leave his position due to an Air Force assignment to England. Many thanks to Larry for his excellent work and good luck to Harold.

#### A REMINDER: To All Section News Contacts

The Editor of NAR SECTION NEWS will be working this summer as a camp counselor in upstate Pennsylvania. All correspondence for NAR SECTION NEWS mailed between June 25 and August 10, 1972 ONLY, should be sent to:

NAR SECTION NEWS  
c/o Charles M. Gordon  
Group Leader Boys I  
Camp B'NAI B'RITH  
Starlight, Pennsylvania 18461

#### NARAM-15 NOW

In just a very few weeks NARAM-14 will be held in Seattle, Washington, sponsored by the South Seattle Rocket Society Section. Even so, now is the time to start planning for NARAM-15.

This past year many comments both pro and con were heard from members throughout the nation on the site selected for the NARAM. In reply to a member's complaint on the Seattle site in the April 1972 issue of *Model Rocketeer*, NAR President James Barrowman, in the May, 1972 *Model Rocketeer*, named the five main items that must be considered in the selection of a NARAM site. They are:

- A willing and capable host section.
- An adequate flying field.

- Reasonably convenient and adequate housing.
- A willing sponsoring facility such as NASA, U.S. Army or Air Force, or a large company.
- It is also best if there is a major city within 50 miles for ease of transportation.

Another problem that has come up in the planning and selecting of NARAM sites is the lead time available. This means that the further in advance that possible sites are submitted, the more time there will be to select one that will be acceptable to the most NAR members with the fewest complaints. As Mr. Barrowman mentions, a site that cannot meet the points listed above is not a possible NARAM site.

What can be done about it? The thing to be done now is to start looking for possible NARAM-15 sites immediately. Any section or group of sections wanting to host NARAM-15 in 1973 should start trying to fulfill all five of the above listed points and submit the complete and detailed information to the NAR for consideration.

#### ROCKET DEMONSTRATION AT BOYS TOWN (from "NARGAS NEWS" Vol. 1 No. 10, Mar/Apr 1972)

On May 6, Randy Picolet and John Raley, (both members of the NARGAS Section, 238) journeyed to Boys Town at St. James, Missouri, where the St. Charles Section, SCARE (296), put on two model rocket demonstration events. There are 102 boys at Boys Town and they had 51 at the morning demonstration and 51 at the afternoon one. The boys there are from broken homes or homes where there is no concern for their welfare and Boys Town has been awarded custody by the courts. They range in age from 8 through 16. A large number of rockets were launched in the event and everyone enjoyed it very much. Several model rocket kits were given out to the boys, along with information, literature, and model rocket catalogues, all supplied by the St. Charles Hobby Shop. SCARE is to be commended for putting on two very good model rocket demonstrations at Boys Town, which is located about 100 miles from St. Louis. Nice Work, Fellas!

#### NEW SOUTHERN CALIFORNIA CLUB

A new model rocket club is being formed in Southern California called the "Mile Square Rocket Club". The club meets at Lampson Jr. High on the 1st and 3rd Wednesdays of every month, and launches at the Mile Square Helicopter Base.

Any interested rocketeers should contact Mr. Gary Arcemont, 1117 Marles Drive, Santa Ana, California 92706. (Phone 531-0688.)

#### CONGRATULATIONS ON NEW PUBLICATION

Congratulations to the Dayton Rocket Research Society Section (228 in Dayton, Ohio) on the publication of Volume 1, Number 1 of their newsletter "CORE SAMPLE".

#### 1972 NAR MEMBERSHIP EVALUATION FORM

In 1971, the Leader Administrative Council ran a membership opinion poll. The survey was quite successful (over 1400 responses were received). Many members expressed a desire to see the poll repeated this year. Some of the questions have been changed and some new ones have been added in order to better reflect members' opinions. We hope that you will take the time to fill out this year's questionnaire. It serves as an invaluable aid in serving the membership's aims and desires concerning the organization and helps in initiating changes within the NAR. Please return your completed questionnaire to:

Miss Wanda Boggs  
730 East Dartmouth Street  
Gladstone, Oregon 97027

If you have a specific complaint or request, please give your name and address so that we can reply. (see page 14 for remainder of questionnaire)

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City and State \_\_\_\_\_  
Age \_\_\_\_\_ Zip code \_\_\_\_\_  
Number of years in rocketry \_\_\_\_\_  
Number of years in NAR \_\_\_\_\_  
Are you a member of a section? \_\_\_\_\_  
If so, which one and where? \_\_\_\_\_  
If not, would you be interested in joining or forming a section?  
(Please specify which) \_\_\_\_\_  
How do you participate in model rocketry? \_\_\_\_\_

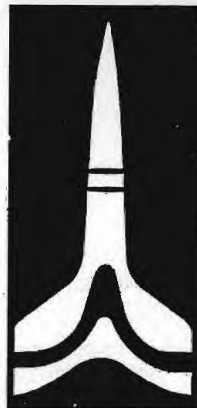
How often have you competed in the present contest year in NAR-sanctioned meets? \_\_\_\_\_ In non-NAR meets? \_\_\_\_\_  
Have you attended any conventions? \_\_\_\_\_  
Have you ever competed in a NARAM or in any way participated in one? \_\_\_\_\_  
If so, when? \_\_\_\_\_  
Have you used NAR Technical Services in the past year? \_\_\_\_\_  
If yes, how was the service? \_\_\_\_\_  
What would you like to see offered through NARTS? \_\_\_\_\_  
Have you corresponded with NAR Headquarters aside from membership renewal in the past year? \_\_\_\_\_

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 SEPTEMBER 22 - 25, 1972

## LOUDLY FROM A BROKEN SOAPBOX

*The opinions expressed in this column are those of the author alone, and they do not necessarily reflect those of the Model Rocketeer or the NAR.*

**MODEL ROCKETRY IS EDUCATIONAL?**  
 by Andy Bennett

According to the NAR By-Laws, the purpose of the NAR is to "aid and encourage... people interested in the sciences of rocketry and astronautics and their allied sciences." When you ask the average rocketeer "What good is model rocketry?" he immediately replies, "It's educational!" or something to that effect. But is this the case in actual practice?

Although we are assailed from every source—among them the late *Model Rocketry Magazine*, the former *NARlett*, the *Model Rocketeer*, and the various manufacturers' catalogs—with information and assurances that the hobby is beneficial to a growing person's education, there seems to be very little action to support these claims.

Where is the emphasis in competition? After all, competition is where the NAR's influence and meaning lie. Here is where the rocketeer exchanges ideas and employs his knowledge. Here is where the emphasis on education should make itself evident.

Events seem to indicate that the opposite effect is prevalent. The emphasis seems to be on

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How was the service? \_\_\_\_\_

What is your best means of obtaining information about the NAR in general? \_\_\_\_\_

Do you know what the Leader Administrative Council is? \_\_\_\_\_

How would you feel about enlarging the LAC to 10 members, three of which would be Juniors? \_\_\_\_\_

Do you know the general set-up of the NAR Board of Trustees and its committees? \_\_\_\_\_

Do you know how to contact Board members? \_\_\_\_\_

Have you ever done so, and what were the results? \_\_\_\_\_

Are you familiar with the Pink Book and its revisions? \_\_\_\_\_

Are there any pertinent changes you would like made? \_\_\_\_\_

Have you dealt with the Contest Board during the past year? \_\_\_\_\_

How was the service? \_\_\_\_\_

Are there any changes you would like made? \_\_\_\_\_

Has the NAR served you as you expected? \_\_\_\_\_

Are there things you would like to do as a member that are not already being done? \_\_\_\_\_

Do you have any suggestions for projects, etc., for the Leader Administrative Council to undertake? \_\_\_\_\_

How do you, as a member, feel you could better serve the NAR? \_\_\_\_\_

Please feel free to make additional comments on another piece of paper.  
 Thank you.



duplication. This "I can copy better than you" syndrome manifests itself in many ways. There is little work done in the way of original design development. After all, who makes his own eggloft capsule anymore? Now all the rocket gliders are going to be Ground-Hogs and similar constructions. Scale events seem to be dominating contests and subordinating the more permanent Research and Development. Not that scale builders are undesirable, but the fanaticism of some of its proponents as illustrated in the already famous KMD dissertation illustrates this over-preoccupation. Now I see that this year's NARAM will run R&D with a weighting factor of 5. Why? Where is the justification for this reduction?

True, many R&D projects are simple works that involve no serious analysis, merely a comparison of performances. I have heard opinions expressed by some more skilled builders complaining about the fact that an inferior rocketeer came away with more points than he did merely by entering a stupid little report in an event where he was guaranteed at least a third place. But these reports are still of value because they lay the background of information for other rocketeers. If he doesn't like the idea of someone else getting those points, why doesn't that self-elevated rocketeer exert a little time and trouble and take those points for himself? After all, he know more about rockets anyway.

The major manufacturers don't seem to be trying to do their part, either. After the initial rush, there were no new technical reports for over three years. They make almost no competition-oriented rockets involving optimization of aerodynamic characteristics. The recent trend toward mass merchandising reflects the turning away from a viewpoint seeing the rocketeer as learning from his activity to one seeing him as another market and a new way to make more money. The recently marketed transmitters are a direct reaction to the efforts of a couple of serious rocketeers.

This lack of concern has been recognized by a number of people, notably Gordon Mandell and Bernard Biales. The word of the 'expert' is accepted as indisputable, especially when it is explained that the secret lies in higher mathematics. The fact that their word can be verified by simple field experiments is often obscured by this threat. What good is the theoretician without the researcher? A case in point is the conflict about this value of the drag coefficient. Although the experts have finally gotten the average CD down to .5 the actual results indicate otherwise. Does anyone really know what it involves? There is plenty of room for research here alone. Why isn't someone doing it? Or, if it has been done, why hasn't it been more widely publicized? Unfortunately, we lose experienced people not because of lack of research as Mandell indicated, but from the fact that they just don't care to do research themselves. Thus the results still come in a slow trickle.

The NAR seems to need a reordering of its priorities and a greater emphasis on the research oriented rocketeer. Although this emphasis must come from all sources, the Contest Director must be the first to recognize the need. You don't encourage research by diminishing its competitive incentive. The serious researcher will keep on investigating but we need the young and inventive, those who know not quite as much about how things work, or are supposed to work, to generate the data for the expert.

AUGUST 1972

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