EXCLUSIVE!
THE NEVERTEK
"STEALTH STARFIGHTER"
"Tommy, Can You Hear Me?"

In the past few months, I have received a number of interesting letters. Usually, we have made it our policy not to print these letters. However, the last few issues of SNOAR NEWS seem to have touched a few nerves. To give you some insight into the issues we have raised, we will reprint some of these letters in this issue.

A lot of this goes back to our basic philosophy at SNOAR NEWS - "Call the shots as we see them". That has made the newsletter stand out even in its earliest days. There are many people who would prefer that we only print "the good news". Interestingly enough, of the four people who had significant complaints about the last two issues, only one is a paid subscriber. The other three got their issues at no charge (until this issue). The response of our paying subscribers has been very positive. And, that shows that most of the folks who have "paid up" (Continued on Page 20)
Mr. Maddog of Hollywood™ proudly presents

FASHIONS FOR MODELROCKETEERS

"MY 1989 LINE OF ACTIONWARE™ FOR THE SPACEMODELER ON THE GO HAS SOMETHING FOR EVERYONE. SO WITHOUT FURTHER ADO, HERE'S WHAT YOU'LL BE WEARING THIS YEAR...."

"HERE'S NORMAN DRABBLE MODELING THE LATEST IN SERIOUS ROCKETEER DAYWEAR. A HOT PINK COTTON SWEAT SHIRT, MATCHING BAGGY SPORT SOCKS, WHITE BLENDED NYLON JOGGING SHORTS AND HALF-LACED PF FLYERS".

"NORMAN'S CLASSIC HAND IN POCKET STANCE SUGGESTS A NOSTALGIA FOR THE 'GOOD OL' DAYS OF CONTEST ROCKETRY".

"THE FEMME FATALE LOOK IS VERY IN THIS YEAR. HERE THE FETCHING BLONDE BUMSTEAD GETS READY FOR AN INTENSIVE TIMING SESSION IN HER BLACK, LOW-CUT BODY SHIRT, DAY-GLO LIME SPANDEX MICRO-MINI SKIRT, FISHNET PANTYHOSE AND IGUANA SKIN "SHITKICKER" STYLE COWBOY/GIRL BOOTS"

"EVEN RANGE PETS WILL DISPLAY AN UNUSUALLY HIGH DEGREE OF FASHION CONSCIOUSNESS THIS SEASON, WITH...."

"GARFIELD, OLD BUDDY, YOU'RE ON NEXT!
I'M NOT LEAVING THIS BOX UNTIL SOMEONE CONFISCATES HARLON'S LAUNCH CONTROLLER!"

"...SPORTY SUN VISORS IN ASSORTED PASTEL SHADES, TRADITIONAL FULL-CUT SATIN BOXER SHORTS, WITH EARTH TONE DACRON® LEG AND THIGH WARMERS...."

"FOR HYPER-ACTIVE YOUNGSTERS, THE LOOK IS AN AEROTECH BLACK AND YELLOW STRIPED TEE SHIRT, COMPLEMENTED BY PEGGED JEANS AND MARSHMALLOW-PUFF SHOES."

"I'M A PENGUIN... NOT A RANGE PET!
I HAVEN'T BEEN THIS EMBARRASSED SINCE BILL THE CAT USED MY RANGE BOX AS A LITTER BOX!"

"HEY SUSIE... WANNA TAKE A LOOK INSIDE THE PAYLOAD SECTION?"

"SPECIAL THANKS TO CHARLES SCHULZ, KEVIN FABIAN, PEANUT YOUNG & STAN DRAKE, JIM DAVIS, BURT BREATHED, AND BILL WATTSERSON FOR THE USE OF THEIR CHARACTERS!"
Dear Sirs:

Please stop making personal attacks on NAR volunteers. If you don’t, I’ll ……..um…….., well …….. just stop it, o.k.?

P. Jatwick Miller
Bunny Supporter

Dear Sirs:

Wouldn’t it be a better NAR if:

a) Harry Stine was still editing the Model Rocketeer?

b) Kevin Barkes was still publishing the Model Rocketeer?

c) Flying G motors was illegal?

d) We were flying under the Bundick/Kaplow Pink Book rules?

e) NAR members were being suspended for flying high-power models?

f) Jerry Irvine was the prominent high power manufacturer?

Or would it have been better for SNOAR NEWS to have folded 14 years ago?

I thought so………

Norton Franck
Now on a Simmer

Dear Sirs:

Know anyone who wants to buy a good rocket company?

Nomad Corp.

Dear Sirs:

Know anyone who wants to form a good rocket company?

Errectek

Dear Sirs:

Know anyone who wants to become a good rocket company?

MRC

Dear Sirs:

Know anyone who wants to revive a good rocket company?

CMR

Dear Sirs:

Stop picking on Jerry Bovine. He’s a good friend of mine and I can vouch for him personally.

Tanca Brawley

Dear Sirs:

Always remember the words I lived by: Use only under adult supervision. Do not hold in hand. Lay on ground, light fire, get away. May emit shower of sparks.

Orville Carlisle

Dear Sirs:

Just a note for you to know model rocketry has my full support. But I do prefer motors with a kinder, gentler thrust, except when they cut into a thousand points of light. Also, send me information on the LAC so I can sign Dan up.

George Bush

Dear Sirs:

Isn’t it amazing that the same issues that deny my confirmation as Secretary of Defense would make me a shoe-in on the NAR Board of Trustees?

John Tower

Dear Sirs:

You do not have my permission to print this.

Chris Taverns
Dear Matt,

Enclosed is a photo of what I believe to be a competitor for the SNOAR NEWS "Ms. Launch Back" title. What do you think?

Pass this on to J.D.: I truly enjoyed his comments on the new Pink Book revisions article. It is things like the Kaplow Pink Book that lower my motivation to compete.

Keep up the good work in SNOAR NEWS, and how about putting my name in again with the credits? (i.e., how can I be famous if I'm not in SNOAR NEWS?)

Moose

Matt,

Yeah, gimme another round of SNOAR NEWS!

I was very impressed with J.D.'s editorial in the recent issue, and I continue to applaud the newsletter for its behind the scenes disclosures. The stories that are told are the biggest reasons why I stay out of the rocket politics.

In Rocketry,
Moose (Again)

Dear J. D.,

I am a new subscriber to SNOAR NEWS, and just got through reading seven back issues. I just had to write and tell you what a great magazine it is. I got more enjoyment out of those seven issues of SNOAR NEWS than I did out of 70 of AmSpam.

I was involved in model rocketry from '67 to '72 and then dropped out of the hobby when I discovered cars and girls. I recently got back into it as a way of motivating my 10 year old son (Robert, a real fine boy) in science and to have an activity we could share.

We joined the NAR last August, and at that time we discovered high power. That really got my attention. I mean, I thought D engines were as big as they came! I'm glad I never got hold of any G motors when I was 11, or I really WOULD have tried cat-fishing!

I live in the Chicago area (about 45 miles southwest of the city) and plan on attending some meets in the area come spring. Now, I thought I'd probably join NIRA, as they are the closest section to me. However, after comparing SNOAR NEWS to The Leading Edge, I don't have quite the enthusiasm for this as I once did. Although I've never met Bunchick or any other NIRA members, I can tell through the newsletters that they are not quite the kindred spirits I recognize in the pages of SNOAR NEWS. Maybe starting a new section would be the answer. If I do join NIRA, maybe I could offer my services as a spy for SNOAR (that means you have to eat this letter after reading).

Bravo on the article concerning the Pink Book changes! I think you were right on target. Any actions taken by an NAR committee, volunteers or not, should be of interest in the entire membership. It sounds like there were a lot of changes made on the basis of personal preference, with no thought to the rest of the U.S.

I also joined TRIPOLI a couple of months ago, and man are these guys NUTS (me included, I guess). A 22' long 62 lb. rocket with 10,000 N-seconds! I LOVE it! When I win the Lotto, I'm buildin' one. For sure.

I've only seen two issues of the TRIPOLITAN, but judging by those, Tripoli seems OK. I just hope that d**ckhead Jerry Irvine never gets in charge of it. If he is as big a scoundrel as he seems from SN's accounts of him, there should be little danger of that, though. I'd love to meet him one time. He sounds like an @#5% of world class proportions, and he would tend to put the average everyday @#5%^* one encounters into the proper perspective.

Well, I guess I've taken up enough of your time. Thanks for the great reading, and keep flyin' em high!

Sincerely,
R. McBroom

Hi Guy!

After receiving the two issues of "SNOAR NEWS", I immediately decided that I wanted any and all available back issues. So.....here's my order...... The humor is great! It's on my level. The content somewhat compares to the "Hustler" of dressing magazines: outspoken, honest and "after apogee" (down to earth). Keep it up "fella".

Scott Dingman
Dear Editor:

The January-February 1989 issue was a credit, bringing to light a controversy not yet covered in the Tripoliian, which was nonetheless well known to even inactive Tripoli members such as myself. I would take issue with the tone of the article, however, as well as what seems to be a lack of substance in it, in what I hope you'll construe as constructive criticism.

In my opinion Ed Tindell is an honest and straightforward guy, and served with blemishless distinction as Treasurer in the Balianin administration. His personal honorable conduct is such that the ad hominem, castigating attacks of "King Eddie" as reported by your magazine (yet hopefully not concurred in by its editorial staff) are clearly out of place with anyone who has had even a passing acquaintance with Ed, as are the other derogatory epithets. They are uselessly antagonistic.

You have reported for many years on genuine unworthy bovine rip-off artists and maladroit schemers, if you get my mark. All of that is a very good and indispensable public service, and I thank you; but please don't put Ed in that genre. Most people would agree, he's not that type, and your treatment of him so may stem from editorial habit rather than careful reflection. Do you really want SNOAR NEWS to become the Morton Downey show of aerospace technology? As a reader, I sure don't, and perhaps you'll agree too that Ed as Tripoli president shouldered a substantial responsibility, and did so with a program of advancement in mind for the organization.

So the vital question is, "Are the policies Ed promulgates the best?" This is the question I would like to see addressed. Honest debate can be raised as to whether this place or that or this date or that is best for the benefit of all members concerned. Especially in matters relating to the NAR, SNOAR NEWS is certainly an appropriate forum.

Unfortunately, it seems upon reading that SNOAR NEWS did not present a cogent, persuasive discussion of the issues. It succumbed to the habit of ad hominem attack on Ed. Please re-read what you wrote. Did it state clearly why Tripoli and the NAR ought to coordinate schedules? Perhaps a lot of NAR rocketeers were wondering why Tripoli and the NAR should, other than that a few NAR members (in relative percentage of total membership) would like to attend both events. The argument of a Las Vegas site was detached from the whole issue of NAR/Tripoli coordination. It also said that the NAR was somewhat receptive to Tripoli in 1986 and that was not followed through by Tripoli. I was on the Board then, and believe me, the NAR had very mixed messages to us. But, that is a valid issue; sadly, issues weren't elaborated.

These three things were buried in the piece. Surely you could have addressed the issues, straightforwardly and succinctly, without lambasting Ed personally, which seemed like the whole purpose of the piece.

I will teach you an important distinction:

Evil men know the real situation, and seek to conceal knowledge of it from those over whom they seek domination. They deserve all the ad hominem derision and exposure possible, so that potential victims can defend themselves. But men in error don't know the real situation; it is the light of reason, free from derision, which sets the situation in rectitude. And, since no man is at first certain upon whom the truth sits, it is a discussion and discourse sans personal put-downs that has the most constructive results for everyone.

Thank you for reading this out. I wish you the best. It is my own opinion and not Tripoli's necessarily.

Respectfully,
Francis Graham

Dear Francis,

Thank you for your letter. I am glad to see that you think highly of Ed Tindell. I do not. I believe that your limited interaction with him has led to this opinion. The considerable feedback I have been getting indicates a far different story. When I mentioned the title "King Eddie" in the article, it came, not from me, but from an individual whom I had never seen or heard put down any one before! This was quite a revelation, to say the least, and demanded more investigation. Of the Tripoli members I talked to, I found much dissatisfaction with Ed Tindell's way of running things.

I felt that it was quite clear that the reason that Tripoli and the NAR should coordinate schedules. Both organizations are in the rocketry business, separated only by a few newton seconds. I think your assessment of how many NAR/Tripoli members would attend both NARAM and LDRS is low; history showed that when LDRS and NARAM were not in scheduled in conflict, attendance at both events was larger. It may be true that few NAR members (in terms of relative percentage of members) may attend both events. But when you look at who those people are, and the contributions they make to the hobby/spiritual overall, then it does become important to have coordinated schedules. A Chuck Mund or a Korrey Kline has as much to offer a NAR member by being in attendance a Tripoli member.

(By the way, I HATE people who use percentages in their arguments—you can always manipulate them to support your point, but often they're meaningless.)

Matt was on the NAR Board in 1986 and indicates that clear messages were sent to Tripoli about cooperation. I am sorry to hear
that apparently they were not received clearly.

The main issues of the editorial were:
1. LDRS and NARAM were scheduled in conflict with one another. 
2. Tripoli President Ed Tindell wanted the events to be in conflict. 
3. Tripoli President Ed Tindell did not want to move LDRS to Las Vegas because of unjustified personal bias. 
4. Ed Tindell was not being responsive to the Tripoli membership by his actions.

I appreciate your little "lesson", but suggest that it is you who do not know the situation. I have had discussions with many individuals from many places in the country; I receive many letters from people voicing their opinion, and I get input from the NAR Board and hobby manufacturers as well. That's a lot of data points to assimilate. I think I know where I'm coming from.

As always, it is good to step back and examine the issues. Perhaps I did not make them as clear as I should have. If so, hopefully I have clarified the issues here. The editorial was based on pointing out dissatisfaction with Ed Tindell's actions on this subject, not Ed personally.

I do feel you raised some interesting points, and I would like permission to reprint your letter and this reply in the next issue of SNOAR NEWS. I will also reprint any reply to these comments that you may wish to submit.

Once again, thank you for writing.

J. D. McNeil

Dear J. D.,

Thanks for your letter received today. You close your letter with the paragraph:

"As always, it is good to step back and examine the issues. Perhaps I did not make them as clear as I should have. If so, hopefully I have clarified the issues here. The editorial was based on pointing out dissatisfaction with Ed Tindell's actions on this subject, not Ed personally."

This speaks for itself in a positive progressive way, in my opinion. I'm sure there may be some people who may feel other ways, but I hope that they will consider the facts of the matter.

I also appreciate your letter and I look forward to hearing more from you.

Sincerely,

Francis C. Graham

Dear Matt:

Hi Matt. It has been a long time between either letters or phone calls. I do hope this letter finds you and your family in the best of health. Of course, you realize by now that I am writing for a reason. It seems one of our customers send us a photo copy of your Jan./Feb 1989 issue of SNOAR NEWS. Both Mark Weber and I were able to read your interesting editorial concerning Mark, Reaction Labs, and me. I thought I might take the time to answer some of the points you brought up in your editorial. While I realize you do not have any obligation to print any opposing views concerning your editorial comments, I should think your view of fair play and integrity should allow one from us. Therefore I will ask that you do print this reply in interest of fair play. Thanks.

Let's begin with Mark Weber and Tripoli. A lot of people simply don't know what Mark Weber, J. P. O'Conner, Tom Blazarin, and myself started Tripoli in Mark Weber's living room one stormy night. Actually the dark cloud hit when Blazarin showed up wanting to know how to make rocket motors. Tripoli, before that night in Mark's living room, was a group of people in the Pittsburgh area who were interested in astronomy. Mark and J. P. actually started what everyone now knows as Tripoli. The only thing Tom Blazarin did while there was get axle grease on Jane's (that's Mark's wife) dust cover on her chair. Mark was not forced out of office due to his conduct as you mention, but rather resigned due to the incompetence of Tom Blazarin. It seemed that no matter what Mark and J. P. decided to do concerning Tripoli, Blazarin always had another "better" idea. Basically, Blazarin wanted to run the show from Pittsburgh and tell no one what his intentions were.

Now the card issue. Nobody got caught doing anything. Mark and I were blamed for that fiasco and no evidence was ever publicized. Therefore I must admonish you to keep quiet on this issue unless you have evidence in hand. That will be a little tough since there isn't any. Most likely the cards were sent out by some disgruntled Aerotech customer, or maybe Aerotech themselves. Anyway we didn't do it. Since we are on the subject, Reaction Labs has been blamed for everything from the sinking of the Titanic to the Challenger disaster. I think in some editorial in some obscure newsletter we were even blamed for the national deficit. Well our shoulders are broad and we can take it. We'll take most of the blame for everything except the communist takeover of Mozambique. I guess we could accept some of that considering the fact that we didn't ship rocket motors to anti-communist rebels to shoot down Soviet helicopters. Anyway I think you get my drift. When those nitwits who run Tripoli don't have us to cut down who will they start on next?

Now we are being blamed in your editorial for trying to pull off a coup-de-tat (sic) within the ranks of Tripoli. It seems that Mark is getting blamed for wanting the presidency
of Tripoli. My question to you Matt is WHO WOULD WANT IT? That’s the real joke. How can you overthrow something that doesn’t even exist? Nobody has seen a magazine in five months and nobody knows who runs the organization. Is it Tom Blazanin and his cronies, or is it Ed Tindell and the Texas connection? Nobody really knows and therein lies the problem. If the person (coward that he is) who videotaped the meeting would come forward with the tape, most everything could be cleared up. The meeting at Central Blast I was called by me who is a beneficed (sic) member of the organization. It was called to tell people that they were going to have to get up off their butts if they were going to have to launch elevat ors out of the Mississippi. LDRI started out in the midwest (Ohio) and has continued to move farther and farther west. It seems the hierarchy in Tripoli wants the launch to end up in Rosenfield’s bathtub. The people in California and the far west have Lucerne and Smoke Creek. The people back east have nothing. We (that is Mark Weber and me) thought the people in the eastern part of the United States deserved a place to launch their rockets. THAT was what the meeting was about. Granted we did throw in the subject of free elections. But if that makes the boys of Tripoli unhappy then so be it. Power hungry geeks like Blazanin and Tindell have everything to lose with free elections. I can promise you that if Mark and I had gotten up before that group of flyers and brown nosed Blazanin and Tindell nobody would have heard a word. Mark and I knew nothing of a “Cease and Desist” order from Tripoli. If it exists I would like to see a copy. My words are protected by the Constitution of the United States. It seems that once again the rumor mill has reared its ugly head.

So I suppose that about wraps things up. The only thing that really needs wrapping up is Blazanin in a straight jacket. Of course I hear he wears one to bed anyway. As for Tindell, who can take him seriously? Mark and I are no saints and that’s for sure. But at least we don’t take people’s money like Jerry Irvine and never produce product. I wish everybody could just kiss and make up and all of this backbiting would be over with. That’s not likely to happen anytime soon however. For everybody to kiss and make up would take grown men. There aren’t many of those around these days. And besides, I guess, who in the world would want to kiss Blazanin?

I appreciate you taking the time to read this response Matt.

Sometimes people don’t get “the rest of the story” unless somebody tells them. That is what I have intended to do. I still think SNOAP NEWS is hilarious even though you may ding me or my company. That’s okay so long as I am able to set the record straight. Let me just say that both Mark and I will be publishing our own newsletter and really have some fun. Not only that, but we will be having launches from time to time somewhere in the midwest. Of course, you are cordially invited. You may come up and stay in my home with me and ride along with us. Good luck and best wishes.

Sincerely,
Don Carter
Reaction Labs
ONLY A STUPID BEAGLE WOULD USE A DASH ZERO BOOSTER MOTOR IN A SINGLE STAGE MODEL!

PEANUTS® created by Charles M. Schulz

"Big Brother Knows Best"

by Mr. Maddog

O.KAY, NOW WATCH CAREFULLY ... FIRST APPLY A CYANOACRYLATE-TYPE GLUE TO THE BODY TUBE ENDS TO INCREASE THEIR RIGIDITY AND DURABILITY....

ANOTHER SHOT OF GLUE GOES TO THE REAR CENTERING RING ... ANOTHER TO THE LAUNCH LUG FOR GOOD MEASURE.

PACK IN A FEW SQUARES OF RECOVERY WADDING THEN TIE THE CHUTE TO THE NOSECONE—SECURING THE KNOT WITH A DROP OF GLUE. FOR EXTRA HOLD, ADD A DROP OF GLUE TO THE SHOCK CORD KNOT.

NOW SPIKE THE CHUTE ... FOLD ... THEN WRAP THE SHROUD LINES LOOSELY AROUND IT. THE SHOCK CORD GOES IN... THEN THEN THE FOLDED CHUTE, PUT THE NOSE ON OK AND IT'S ALL READY!

THANKS! I APPRECIATE HAVING A SMART BIG BROTHER WHO CAN TEACH ME ALL THESE THINGS!

I THINK I'VE NOT STUFFED MY FINGERS TOGETHER!
The NEVERTEK Advanced Rocketry Concept:
- NO Wadding!
- NO Balsa!
- NO Tubes!
- NO Fins!
- NO Nuthin'!

BUT...
- 17,000 Brochures!

And you thought Vaporware was just for computers!
Construction, Care and Maintenance of your High Power Launching System
By Chris Pearson

Introduction

I'm sure that all of us who got our start in standard model rocketry remember our first launching system. For me, as it probably was for many others, it was the old Estes Electro Launch. That thing probably drove more people out of the hobby than any single other item. Others got ahold of the Guide to Launching Systems and built their own system to use. But we were all pretty much stuck with something like the Tilt-a-Pad, or Porta-Pad for flying the rockets off of. Most of the club launchers were nothing more than a 2 by 4 with rods and blast deflectors stuck in them, with no elevation or azimuth control. A great step backwards! I have seen more variations in launchers and electrical systems than I can remember, ranging from doorbell buttons, Hot-Shot batteries and clay pots to pneumatic actuated systems (yes!) to ones using telephone wire and exhaust ducted pads with deluge systems.

The following article will try to examine some of the problems uniquely encountered with large high-power vehicles and their related launching systems along with some suggestions and recommendations on where to get materials and supplies.

System Design

It's quite obvious that the same type of launcher that you used to fly competition or sport model rockets is not going to be able to support that three pound G powered vehicle, no more than your Pola-Pulse is going to be able to ignite that 12 motor cluster. So you have to first think about what you want your launcher to do. Back when I was flying competition, I had a 35mm camera tripod and head that took the 1/8" rod, deflector and various other specialized components. I probably would not have flown anything more than 8-12 ounces on it safely. For up to one pound, you can use a 3/16" rod. With the new NAR regulations, up to 3.3 pounds can be flown, and this is going to require something much more substantial in diameter, length and strength. And for anything more (like the true LDRS rockets), it is mandatory.

Launch Rods

Actually the most important part of the launcher, it is best discussed first. Chances are you have already built the rocket you are planning on flying on this pad. If you are building large, high-power rockets and putting 1/8" lugs on them, then you should be shot. This is dangerous and foolhardy. Weight is not so much the deciding factor in launch rod length and diameter, but motor impulse. As the motor impulse increases, so should the rod diameter and length. A good set of examples are as follows:

<table>
<thead>
<tr>
<th>Motor Type</th>
<th>Rod Diameter</th>
<th>Minimum Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-C</td>
<td>1/8&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>D-E</td>
<td>3/16&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>E-G</td>
<td>1/4&quot;</td>
<td>48&quot;</td>
</tr>
<tr>
<td>H-I</td>
<td>3/8&quot;</td>
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<td>I-L</td>
<td>1/2&quot;</td>
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<td>96&quot;</td>
</tr>
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These examples should be used in conjunction with the total weight of the vehicle also. There is no definite rule of thumb to use in these matters, but it is always better to over-build than under-build. You wouldn't fly an G powered rocket with balsa fins, would you? So don't go flying a G powered rocket on something made for no more than C motors!

I shouldn't have to mention pop-lugs, because no one should be as so foolhardy to even attempt using them on large
high-powered rockets, but I'd better. Don't do it! Pop-lugs (for those who don't fly competition) are launch lugs that are removable, and stay on the launch rod after a launch, thus reducing the aerodynamics drag of the vehicle. They have no place on a high power rocket. I have seen many failures on F powered competition models, and would not like to see such a scene with a G or larger rocket.

Now you ask, "Where in the world am I going to get a 4 to 8 foot launch rod?" Materials for this sort of thing are found at any sheet metal shop, or industrial job shop. You can take your pick from black metal (the least expensive) to hard stainless steel (the most expensive). Any sort of steel can rust (quickly) if not properly taken care of. The black oxide coating (hence the name "black steel") protects it from oxidation until it is used. Any composite motor exhaust will corrode this metal faster than you can imagine, and if not cleaned and oiled after the launch, will quickly become ruined. For this reason, stainless steel is probably the material of choice. Try to find some short lengths in the vicinity of the length you want, as the shop will charge you a cutting fee in the $20.00 to $35.00 PER CUT range. Better to take home a piece longer than you need and cut it to length. You can get the rods in just about any diameter you need, so it is best if you get two or three different diameters (if your pocketbook can afford it). Now you ask "OK, so I've got six foot lengths of the stuff, how am I supposed to cart it around?" Well you can just carry it unprotected, taking the risk of impaling someone out on the range, or fabricate a carrying tube out of PVC pipe and some end enclosures, that are available at any plumbing or hardware store. This works great, as I've been using them for many years. It also makes year-end cleaning and storage easier, as I will go into later. "But the size of my Porsche won't allow me to take a six foot rod to the range" you complain. This is why God invented taps and dies. By cutting the rod in half, or thirds, and tapping and threading the ends, you can cart the rod(s) around in much less space. It might be best if you allow a machine shop to do this task, as one needs specialized machine tools for a job this size. After a day of flying one must clean the rods used, especially if they are steel. This can be accomplished using steel wool and water. After you've cleaned the rod, take a rag soaked in motor oil or WD-40 and wipe the rod several times. This will remove any residual exhaust crud, soap or water. Make sure you get some into any threaded sections. It would also be a good idea to shoot some WD-40 into the threaded sections. Put the rod back into the PVC tube, or wrap it in newspaper, and store it upright, inside the house. After the flying season is over, you can provide extra protection for the rods by pouring about one cup of motor oil into the tube and rolling it around. Just make sure you wipe the rods clean before the next launch session.

More recently, some people have begun to use composite materials for launch rod use. At the 1985 internats, I used a 1 1/4" x 48" hollow carbon fiber launch rod to fly the demonstration rockets with. This rod is commonly used for model airplane cable tunnels. If larger sizes could be obtained, this could eliminate much of the cost and problems that large metal rods have. It might be difficult to obtain them, but the advantages (light weight, no flex, corrosion free) would outweigh the disadvantages.

Launcher Stands

You really can't use the same type of system that the smaller model rockets use, such as plastic and wood Porta-Pads or Tile-a-Pads. Even D powered models have a hard time with a Porta-Pad. Steel and aluminum is the only way to go in this case, and unless you've got a friend who's a machinist (doesn't everyone?), this might run into some bucks. You obviously need something to support the launch rod, and yet provide some sort of rod-tilting ability. The answer is a camera tripod with a special adapter to mount the launch rod. This allows tilting in one axis, while the entire mount rotates in the tripod base. The rod is secured into the mount with stainless steel Allen head screws. The mount is then, in turn, secured into the tripod pedestal with the same type of screw. The blast deflector is made of aluminum and stainless steel, and is also secured to the tripod pedestal. The pivot assembly is protected at lift-off by a primary deflector. This deflector is simple 1/8" sheet steel, painted with flat black engine enamel, and oven-baked. All of the launcher parts can be protected from motor exhaust in this fashion, or if you've really got the time and bucks, you can have the launcher components oxide coated or powder painted. If you don't think that a motor exhaust can do that much damage, are you in for a surprise! If you are using any sort of screw-threaded fastener, get ones made from stainless, or else you'll be replacing them after every launch.

Below: A launcher pivot machined from aluminum. This unit was built to accept up to a 1/2" diameter rod.

One obviously doesn't have to use fancy tripods for stands. Many rockets are launched simply by sticking the rod in the ground and throwing a garbage can lid under it for a deflector. However, if you want the greatest amount of control on lift-off parameters, some sort of stand is necessary. The ones that were used at LDRS for several years were made out of simple 3/4" conduit, yet were easily broken apart into four pieces for transport and were strong enough to be stood on. However, they had no tilting ability, but could...
accommodate any size of launch rod. Everyone has their own idea of what they want their launcher to look like, and I've seen people cast one out of concrete. Others have ducted blast pits and elaborate electronic hookups. Like I said earlier, one must design their launchers for the application. In my case, the launcher stand is a 10E tripod, designed to carry a television camera head up to 150 pounds. The tripod head was not used, although I've seen several launchers, most notably the Tripoli launchers which make use of the adjustable tripod heads. So you can see that I don't have any fear of it being too small for any rocket I plan on flying on it. This came about after my previous launcher stand was destroyed at LDRS-5 by a K powered rocket. Too much weight and thrust bent the stand legs beyond repair. At that point, I knew I needed something bigger and better.

Depending on what size rockets you are going to be flying, it might be advisable to devise some manner of securing the pad legs to the ground. This can be accomplished with large screw eyes and tent stakes. Use a soft-faced hammer to drive the stakes into the earth though, or else you will wind up shattering the spikes. For those of you real macho types, one can resort to sandbags or cinder blocks.

Standoffs

The area of standoffs is a much underrated subject. A standoff prevents your rocket from sitting directly on the launcher deflector itself. This may be necessary for various reasons, such as preventing ignition clip lead short out, ease of hooking up the leads, keeping the

Top: A heavy duty stand, combined with a large blast deflector, offers maximum stability and safety.
Center: Chris's "custom" standoff includes a fin guide to prevent the bird from spinning on the rod.
Bottom: Simpler, yet very effective standoffs can be constructed from steel. The Allen head retaining screws are stainless steel to prevent corrosion from ruining the unit.
motor nozzles over the deflector, and others. It is understood, however, that the old method of sticking a piece of masking tape or using a clothespin just won't cut it with higher power (read much heavier) rockets approaching weights of over three pounds. Something much more substantial is needed. What I recommend is nothing more than a 3/4" thick piece of 1" x 1" square steel stock. A hole slightly larger than 1/2" has been drilled in it, along with another smaller hole drilled perpendicular to the larger hole, and tapped to take a 1/4" x 20 stainless steel hex head bolt. This standoff is of course made primarily for a 1/2" rod. Ones for smaller rods can be made, but the 1/2" one has enough leeway to be used even on a 1/4" rod.

If you don't want to bother to make something like the custom standoff, a small "C" clamp can be used just as effectively. Another good use for clamps like this is to secure the lead wires to any part of the launcher you desire. This will prevent the weight of the leads from pulling the igniter(s) out of the motors or the chucks off the leads. Standoffs have other uses, such as keeping the blast deflector where you want it, keeping the rocket from spinning on the rod, which is very beneficial when using first motion switches on stagger launch systems. Standoffs take as much if not more abuse from the rocket motors at takeoff than the blast deflector does. They get really trashed real quick. It is a good idea to use stainless steel bolts for them, or you will be replacing them after every launch. I have actually seen standoff bolts bent with the force of some motors.

Deflectors

The blast deflector in times past was used primarily to prevent the motor exhaust from striking the ground and posing a fire hazard. Today, it is primarily for preventing

Top: Here's another variation of standoff, incorporating a clamp. Center: C Clamps work for a variety of uses. Bottom: Use an Allen key to position the standoff.
the motor exhaust from hitting any other part of your custom made big-buck launcher. The primary deflector is used to deflect the direct motor exhaust away from the pivot. It should be constructed of ordinary 1/8" sheet steel and painted high-heat flat black. The secondary deflector is to keep the motor exhaust from the rest of the launcher tripod base. It is not a good idea to allow the motor blast to strike a flat plate perpendicular to the rod, ala the old Estes deflector, as this allows the back-blast to char the underside of the rocket real fast. You want to get the motor flame away from the rocket bottom. In the past I've seen people use large pipe elbows to channel the exhaust away from the rocket base, and it works quite effectively. Others use blast channels or ducts to accomplish the same.

**Tools**

Many people go to the launch range and don't bring any of the necessary tools that one needs for flying. This includes such fundamental items as sandpaper for the ignition clips (although a automotive points file works much better). You should take out to the range all the necessary items needed for complete operation of your launcher and ignition system. For the system mentioned in the article, this includes a 3/4" combination wrench, a 1/2" hex key, along with two other sizes. Other items you should bring, and have (not in your range box but in a tool box which is kept near the launcher) are: masking tape; duct tape; a pair of needle nose pliers; a pair of wire cutters; a small combination screwdriver set; sandpaper; a points file; a hammer; spare keys to the launch electrical system; spare ignition clips; spare standoffs; spare electrical system ignition leads; a can of silicon spray; and some rags. If the toolbox you chose is big enough, you can transport your electrical system in it.

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Top: A view of two secondary deflectors.
Center: You have to have the right tools to do the job right.
Bottom: Be sure and use the tools once you get to the field.
The purpose of having a range toolbox at the pad is twofold. First of all, if you have anywhere near the necessary distance from pad to launch panel (250 feet or more) you are going to have to do a lot of hot-footing if you forget something like a screwdriver, and have to go back to your car to get it. Also, it protects all the necessary launcher goodies from motor exhaust, which will corrode the steel tools in nothing flat. It's a good idea to have doubles of each of the allen keys, as they are cheap to purchase and get easily lost in the grass. It would be pretty embarrassing to end the day and discover you can't break down your launcher because you lost the one tool needed to do it. Protect your tools and clean them after the launch, or they will corrode.

After The Launch

I know from experience, that the first thing you want to do after the launch is clean up, kick back, and grab a brew. You figure that you can always put your equipment away and clean it up tomorrow. Usually what happens in this case is that it gets forgotten about until the day before the next launch, and then its panic time getting it ready. By then, the damage has already been done. Composite motor exhaust is very corrosive and especially so for untreated aluminum and steel. Steel launch rods can corrode to junk within a couple of weeks. So, after you've gotten two or more days of range grime out of your hair, and had that first beer, the following few steps will protect your investment (yes, investment!) and insure your launcher will be in tip-top condition for the next launch. The first and easiest thing to do is simple wash everything in soap and water and allow to air dry. Steel wool the rods and coat them with oil. Wipe off the ignition leads and either clean or preferably replace the ignition clips. There! Its done! Now you can veg out in front of MTV for the rest of the night, secure in your knowledge that your launcher is clean and ready for the next launch.

Things to do after the flying season is over, or at least once a year, are as follows: You can steel wool or wire brush all the exposed aluminum surfaces to get the accumulated crud off them. Give the rods a thorough cleaning, paying special attention to the threaded ends. Wash off all parts of the launching pad, base and tripod (or anything else you might have) with soap and water. Wire brush all screw threaded items or replace them if necessary. Replace the ignition clips, and clean the ignition lead wires. It might be necessary to cut off the last 1/2" or so if the wires are really damaged. Wipe off all the electrical system wires. Clean out the tool box and pay special attention to the tools. Clean them and wipe them in WD-40. Wipe all the wires and exposed electrical components with silicone spray. Wipe off the outside of the toolbox with a wet rag. As a final step, spray everything with silicone, that you haven't previously oiled. Replace any supplies you might have used during the flying season, such as tape, sandpaper, ignition clips and such. If you are going to make any repair or modifications to your system, start thinking about them now instead of two weeks before the first launch of the new year.

Replace the batteries (if any) in your continuity systems. Wash off the range battery, clean off the terminals and coat with vaseline. You should put the battery on a trickle charger during the off months, or else you will have a useless battery come spring. These charges supply a steady 12 volts DC but at only a few fractions of a amp. This keeps them up to charge and prevents lead sulfides from forming on the plates. A trickle charger can be purchased at any hardware store. If you have a regular automotive charger, you can give your battery a shot of 2 to 5 amp charge for no more than 24 hours once a month to keep it in top notch shape.

At Other Launches

With the advent of the national-type of high-power launches, it has become unnecessary in some cases to take your launch system along all the time. It would be really hard to ship something like a 6 foot rod on an airplane (although Matt has done it). Many flyers ship their rockets and purchase motors at the site to fly. In the case of launches like LDRS, basic launching facilities are provided. If you need anything special like clip extensions, clip whips, special hookups for stagger systems, you'd best bring it yourself. Don't expect things of this nature to be provided! Some launches, like the ones in California, provide nothing more than desert and a demand for an entry fee. Its best to discover ahead of time (if possible) what facilities, if any, are provided for the flyer. If none are available, you might team up with a few other people to use their system, rather than bringing your own.

Below: Use one of the standoffs to set the height for the secondary deflector. The secondary deflector absorbs the brunt of the rocket's exhaust and flame, so it should be positioned to protect the rest of the launcher as much as possible.
In Conclusion

As you can see, the flying of high-power rockets is a little more complex than that of regular model rockets. You don't have to invest a fortune to fly the big ones, although, if you are going to fly specialized types of vehicles, you might have to spend a good chunk of change to get what you need. Most of the cost in the launcher shown in this article would have come from machining costs. The launcher electronics were about half the cost of the entire system. It is easy to have over $1000 invested in a full launching system, as is in the system described.

Flying high-power rockets isn't hard, if you have the right sort of support equipment, and this includes a launcher and electrical system. Taking proper care of it is one of the most important parts of using it. Having everything function properly while on the range makes it a joy to fly those big ones, instead of biting your nails worrying if everything is going to work when you press the launch button. Make sure it will work right.....be prepared!

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89 NAR Board of Trustees Meeting

by Chas Russell

The NAR Board of Trustees held their Winter meeting the weekend of February 10-12 1989 in Reston, Virginia. Twelve of the thirteen trustees were in attendance, which made for some interesting discussions and exchanges during the 21 hours or so spent in formal meetings. Many more hours of shooting the breeze occurred during meals and in the wee hours when normal people sleep. The Insurance Committee met face-to-face with AMA representatives Friday afternoon in an attempt to defuse an AMA proposal that threatened the agreement that allowed NAR members to receive insurance coverage for model rocket activity under the AMA's insurance. The details appear below, but let it suffice to say that NAR members can get AMA insurance. Two other significant actions taken by the Board were: a "brain-storming" session to set long range goals for the association and realignment of NAR dues— the first dues increase since 1982.

The AMA will provide insurance to all NAR members who purchase an AMA Youth Affiliate for $7. The coverage is for $500,000 and is the same as an AMA member would receive while flying model rockets. The Youth Affiliate membership avoids tax questions raised about one non-profit organization “selling” coverage to another. Of course, this will complicate things as a NAR members will have to write the NAR for membership and the AMA for insurance, but it does make affordable insurance available. The AMA membership year runs from 1 April to 31 March and is a potential problem with the NAR's “12 months from application” membership. This insurance would cover model rockets only, as it is not a full AMA membership. Insurance for sections is still being worked on, but it was made clear that non-NAR/AMA rocketeers that attend a section launch cannot fly their models. An insured NAR member may, however, fly the model for the “walk-on” and the section will be covered. The NAR Insurance Committee was authorized to continue discussions with their AMA counterparts to iron out the details. Don Lowe, the AMA President, attended two days of the US/USSR Competition last year and it is felt that he developed a positive impression on the NAR, which helped in the insurance negotiations.

The Board authorized funds to obtain a new motor test stand that will use a portable lab-top computer and an analog-to-digital conversion card. The test stand should be operational by August. The current stand is showing its age and it is hoped that the new set up will be more flexible due to its portability. The computer could also be used at NARAMs for data reduction. Additionally, the Board is looking at purchasing three trackers like those used at NARAM-90. Mark Bundick stated that Jimmy Williams' trackers were the best he had ever used. These would be part of the permanent NARAM equipment. Trip Barber, the NARAM 91 contest director, briefed the Trustees that planning and preparation for the meet was going smoothly.

The Board will explore a proposal that NAR HQ accept credit cards. If an acceptable banking arrangement can be obtained, it may be possible to pay your membership and place NARTS orders using plastic. Range store sales at NARAM-90 reached record levels in part due to the use of North Coast Rocketry's credit card machine. It appears that modelers would readily charge large purchases at the range store instead of paying cash, so perhaps accepting credit cards at NAR HQ will entice new rocketeers to join.

On the international scene, the news was disturbing. As reported earlier in SNOAR NEWS, Rumaria has not paid its FAI dues for two years, so the World Championships may be moved or cancelled. The NAR was asked to consider hosting the World Championships, but with a commitment for Moscow in '90 and an existing bid to host the 1991 Championships, there wouldn't be sufficient time to raise funds or find new sources of donations. Also of concern to international competitors is the latest move by the financially strapped National Astronautical Association (NAA), the US representative to the FAI. Instead of buying a $10 FAI stamp, competitors may end up having to join the NAA at $15 a year. An FAI stamp is also required to file a world record.

A majority of the discussions on Saturday dealt with setting long-range goals for the NAR. The idea was to present these goals to the committee chairpersons who would then respond to the Board with comments on how to reach the goals. The Board met at the AMA's headquarters building in Reston starting 9 a.m. and ending well after midnight. Five major goals were set with short term goals identified and discussed. The long range goals are: 10,000 NAR members by 1995, a non-subsidized magazine by 1993, the NAR picking up 50% of team members' cost for international competition by 1995 and 10% of NAR members involved in competition by 1994, NARTS sales of $50,000 by 1995, and increased national exposure of the NAR in the news media.

Although the need to raise dues had not been expected until late '89 or '90, it was clear that the Board was at a decision point. The change in insurance directly affected hundreds of thousands of NAR applications already in distribution in kits, magazines, etc. The Board had been considering whether to reprint more license stations and membership applications or to change to an application pad that the dealer could hang with the kits. Funding for new service programs, improvements to existing ones, and the expansion of the magazine added to the impetus to make the dues realignment. Since the application had to be reworked anyway due to the changes to insurance, it was decided to make all changes at one time. Dues were set at $15 for Juniors and Leader members, and $25 for Seniors, effective April 1st—no feeling! Current members will have the opportunity to renew at the old rate by using a "one time good deal" coupon...
in the March issue of AmSpam. The NAR will also accept existing applications until 31 December 1989.

That about sums up the nuts and bolts of the meeting. What is harder to convey is the mood of the February meeting. The triannual Trustee elections were held last year at NARAM-30 which meant that meetings had to be fitted in after scheduled evening activities during the week. It was soon evident that the balance of power had shifted. Personal conflicts, late hours, and a lack of sleep contributed to many heated exchanges. The February meeting was the opposite with virtually all votes being unanimous. This is not to say there wasn’t any dissent, but it seemed to be a “kinder, gentler” Board meeting—no chairs were thrown. The meeting had its lighter moments as can be seen in “Quotable Quotes”.

One discussion of two sample video tapes received as precursors to possible NARTS products gave birth to comments about a “Leonard Pith Garnell Presents Bad Modroc Videos” line of tapes. Things went downhill from there. The Trustees accomplished a lot on a short period of time and will analyze the effects of the changes and plans at NARAM-31.

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**BAD TASTE COMICS® PRESENTS**

**FRANK THE STEY-PREST CLONE**

WITH KATE, HIS PET CIGARETTES

**NOTE:** FOR NO PARTICULAR REASON, IN THIS EPISODE THE PARTS OF FRANK AND KATE WILL BE PORTRAITED BY DR. ISAAC ASIMOV AND HIS CASIO Q-95M SOLAR SCIENTIFIC CALCULATOR. WE APOLOGIZE FOR THE INCONVENIENCE... AND THANKS FOR ALL THE FISH.

HMM... ER, AH...
WHAT DO YOU THINK ABOUT MY NEW ROCKET... ER... AH... KATE?

THAT'S NOT A PLASTIC MODEL CONVERSION... IT'S MORE LIKE POLYSTYRENE SHRAPNEL WAITING TO HAPPEN!
From Your Sometimes Sober Editors
(Continued from page 2)

want to read the real news.

The real news, the real issues, will continue to get printed, despite the attempts of others. If you think people out there don't want this stuff printed, think again. Pat Miller has done everything in his power to put pressure on Matt to stop criticizing any NAR volunteer. This includes influencing the Board of Trustees through some back-door politicking to take action. In the past, he has used letters of reprimands, and the threat of removing Matt from a committee lead, to influence what SNOAR NEWS' prints. It hasn't worked, of course.

Why would someone want to do this? Because they understand the power of the press. Pat Miller knows that SNOAR NEWS's criticism of Mark Bundick nearly got him off of the Board of Trustees. He knows that the Pink Book fiasco was spearheaded by SNOAR NEWS. He knows the SNOAR NEWS promoted high power rocketry long before it was fashionable.

And, he knows that SNOAR NEWS has removed Jerry Irvine's facade of credibility as a manufacturer. Since he understands the power of the press, and SNOAR NEWS, he would like to manipulate it. But he can't. And he won't.

So read on. We'll try and continue our coverage of controversial issues, policies and personalities. Because we know that's what our subscribers want.

J. D. McNeil

What's all the fuss about Entertech kits not being available? They already have a rocket glider in the stores...

19.99
ENTERTECH JAMMIN' JETS
Colorful 32" flying jet powered by water thruster engine. Hand pump included.
From Your Sometimes Sober Editors
(Continued from page 2)

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What's all the fuss about Entertech kits not being available? They already have a rocket glider in the stores...

Model Rocketry Manufacturers

The following manufacturers have earned the SNOAR NEWS Seal of Approval as being reliable, responsible manufacturers. The Seal denotes that these are generally "good guys" to send your money to. There are other manufacturers out there, but you won't be risking anything with the people below.

AAA Model Aviation Fuels
Large Scale Rocketry Division
RD 6, Box 172, Edwards Avenue
Clarke Summit, Pennsylvania 18411
(717) 586-1759

ACME Rocket Company
Box 28283, Dept. A5
Tempe, Arizona 85282
(602) 838-3629

Apopex Components
11111 Greenbrier Road
Minnieville, Minnesota 55343
(612) 565-4635

Celestial Enterprises
Box 150313
Fort Worth, Texas 76108

Competition Specialties
P.O. Box 452
Vine Grove, Kentucky 40175-0452

DARE Rockets
747 Parkway
Elgin, Illinois 60124
(312) 888-8587

Estes Industries
Penrose, Colorado 81240

LOC/Precision
1042 Iroquois Trail
Macedonia, Ohio 44055
(216) 667-4514

North Coast Rocketry
P.O. Box 240017
Mayfield Heights, Ohio 44124
(216) 883-6020

Tiffany Hobbies of Ypsilanti
P.O. Box 467
Ypsilanti, Michigan 48197
(313) 487-4786

West Coast Rocketry
P.O. Box 2863
Rancho Cordova, California 95741
(916) 366-8928
QUOTABLE QUOTES

From the SNOAR Christmas Party....

"What does Chris Johnston do that he can't attend these parties?"

Chris Pearson

"Oh, maybe he's building rockets!"

Bob Ferrante

"And here's another old SNOAR tradition...ordering a birthday cake for the last person to come to the party!"

Bob Geier, presenting a cake to Chris Johnston

"How can this be? Some sort of scam just went on... I just don't know how!"

Chris Johnston, coming up short after cutting 14 pieces of birthday cake for 13 people.

"We should be striving for a kinder, gentler Association."

Chas Russell

"A D12 explodes in a 1000 points of light."

Chas Russell

"The NAR needs women."

Chas "Single Again" Russell

"If you kill someone, it's cheap. It's when you hurt someone that it's expensive."

C. D. Tavares, discussing the realities of insurance

"You're sick and perverted - I like that in a person."

Chas "I'm on a roll now!" Russell

"I move we do what Pat said."

John Worth, unable to repeat a lengthy motion on the floor of the Board Meeting

"I second what Pat said."

John Pursely

It's a question of what we would do for how much....."

Jack Kane

"Look, if we were reasonable, we wouldn't be here."

Matt Steele

"You're not losing your virginity - you never had it!"

C. D. Tavares, discussing the subtleties of insurance

"Can you imagine the NAR President and two Challenger Section members watching Billy Bob and his Peter Meter or Hooter Meter?"

John Pursley

"This sounds like a Metaprovisional event"

C. D. Tavares

And overheard other places...

"We now have continuity on all timers."

Chas "Me and my big mouth" Russell

"Tell Mary Roberts I said she's more fun than a box of sun-ripened D motors."

Mark O'Brien

Overheard at the February Board Meeting.......

"Every time we talk about insurance, it's like trying to solve a Rubick's cube: it takes a lot of time, is very confusing, and we seem to keep looking for the right combination, which is always changing."

Matt Steele

"We've (the NAR) learned some tricks from Jerry Irvine."

C. D. Tavares

"Chris and I found Irvine's place while we were in California. What a dump!"

Matt Steele

"I was watching a TV program about another organization frequently confused with the NAR - the NRA."

John Pursley

"I can take longer if you wish...."

Jack Kane, on an already lengthy report

"I don't think Guppy knew electronics, and built it (the MIT Static Test Stand) anyway."

Jack Kane
Speaking of people in high places, Trip Barber will soon be taking over a position on the National Security Council. No Ollie North jokes, please.

Rumors on the street have it that Jerry Irvine's US Rockets may be in deep financial trouble. Supposedly, he has a large number of people upset with him for...what else, unpaid bills and shoddy merchandise. It seems that he is having a closeout sale to raise enough cash to try and get out of a bind. We'll be watching this one closely, as we can't believe that Jerry will ever get out of the rocketry business.

The World Championships and the USA/USSR meets have been turned upside down by the failure of Roumania to come up with the cash to host the 89 World Championships. The current schedule looks like the USA/USSR competition will be held in May/June 90, and the World Championships in the fall, both near Moscow. Or, it might be the other way around. Then, September 1992 is the date that the World Championships return to the USA. How it really will turn out, no one knows.

It looks as though all the kinks in the AMA/NAR insurance deal have been worked out. One of the toughest areas was the situation where a new, uninsured member comes on a flying field and wants to fly. Under some interpretations of the insurance policy, all insurance for clubs and site owners would become null and void as a result. The approved interpretation is that as long as the model is checked in by an insured NAR member, and flown under the supervision of an insured NAR member, the club and site owner will be covered. That's a great solution, as the problem has plagued the NAR for the past 3-4 years.

Things don't look good for Estes as a result of the hostile takeover by NOMAD Corp. We understand that Estes is to be sold, and a bidder's conference is imminent. If that's the case, it is likely to mean problems for Estes, since the bulk of Estes's profits will be sucked out for years to come to pay off the loan that bought out the company. Needless to say, they are very concerned in Penrose. No word on who a likely buyer would be.

You'll see a new section from Huntsville these days. HARA, the section that hosted NARAM, is still around, but most of the people who made it happen have formed the Rocket City Aces, NAR Section #511. It seems that Wayne McCain, father of the LOFT ripoff, wanted to fly another K powered vehicle in Huntsville under the auspices of furthering education. The majority of the flyers in the club felt that it was a publicity stunt for Wayne. To make matters worse, he wanted $200 from the club treasury to fund it. We suggested that the group that wanted to go fly the K powered thing go do it as a Tripoli section, but that wouldn't have gotten them into the club treasury. The vote to get the project rolling was rigged by McCain to win, so those who wanted to have no part in the project resigned and formed a new club. The only people left in HARA have never successfully flown a G motor let alone a K, so it should be interesting. The new Rocket City Aces will be the top competition section going into NARAM.

The big news out of the NAR is a push for a further relaxation of the restrictions on high powered rocketry. As it seems that C. Harry Stine (don't ya just LUV him?) has sent a letter to Pat Miller explaining that the NAR is the National Association of Rocketry, not the National Association of Model Rocketry. He further goes on to explain that the NAR should relax its restrictions on high powered rocketry further. At Pat Miller's request, Harry will make a presentation to the Board of Trustees in August. Initial actions might be a removal of the 3/48 rule, and coverage of high powered meets in American Spacemodeling. The tougher issues, like insurance and consumer certification, are likely to be investigated by a commission. Considering the NAR's stance eight years ago, this seems to be a considerable change in position.

Tripoli continues on, although the turmoil is evident. Tom Blazina has effectively retired from his Tripoli post, with the publication of the next issue of the Tripoliian. Word from the West Coast is that Ed Tindell has been replaced by Chuck Rogers as Tripoli President, but there is a dispute over whether the Board's decision is binding. New ballots for Tripoli Board members and suggestions for President have been distributed, and are to be tabulated at LDSG-8 in August. It looks like the rocketry might really take a back seat to the political fireworks at this one!

The FAA isn't moving much in allowing three pound models to be flown without waivers. Despite the promises of high level officials, no concrete action has emerged to date. The lawyers have gotten ahold of the thing, and you can guess what that means. Additionally, the guy who is supposed to make the call on the whole deal has a lot to learn about rocketry. Trip Barber personally visited the guy in an effort to add some enlightenment on the subject, and it became obvious that he had not read any of the material presented with the request for waiver. Trip finally invited the guy to the NARAM-31 banquet. His reaction: "I won't get roasted, will I?" We're not so sure. Anyways, Trip declined to attempt to get a waiver, saying he didn't want the national meet to be shut down for the third year in a row because some one at the regional level couldn't read the FAF.

On a related note, the police official that was largely responsible for shutting down NARAM-30 in Huntsville died of a heart attack in February. No further problems have been encountered to date.

Jay Ap! has been named to the crew of the Space Shuttle, scheduled to fly in April of next year. Good luck Jay, and take along a D13 for all of us!
Uh, Why Should I Buy From North Coast Rocketry?

Buy the Brighthawk!

The NCR Brighthawk is one of our most popular kits. Semi scale in nature, it's features a boatload of details, such as teeny weenie little bolts that will drive you crazy when you try and put them in. However, it looks good when you get it done, and you can impress all your friends when you fly it on a White Lightning G60. The Brighthawk will bring you fame, fortune, and girls. Buy at least three and tell all your friends to buy one, too. At $40.00, it's a steal! Just LOOK at the DETAILING in the photo at right!

Length: 42.5"
Weight: 16 oz (or so)
Diameter: 2.7"
Recommended motors: Some Pretty Big Honkers! G60, G50, F50, F42, and Many more!

Here's the Top Ten Reasons Why to Buy From North Coast Rocketry...

10) You can't get anything from Enertek.
9) You can't get anything from Enerjet.
8) You can't get anything from US Rockets that's worth a #35$ &.&.
7) Chris has ties to Hell's Angels, and he'll ask for "favors" if he needs to.
6) Matt has actually touched a thermonuclear warhead at one time.
5) Anyone who operates out of Cleveland can't be smart enough to rip you off.
4) Mars needs women.
3) Where else can you get tubes, motors, kits, payloads, and stuff with plastic money these days?
2) Buying from anyone else would make you a wimp.

AND... the number one reason to buy from North Coast Rocketry is...

'Cause they paid for this ad, that's why!