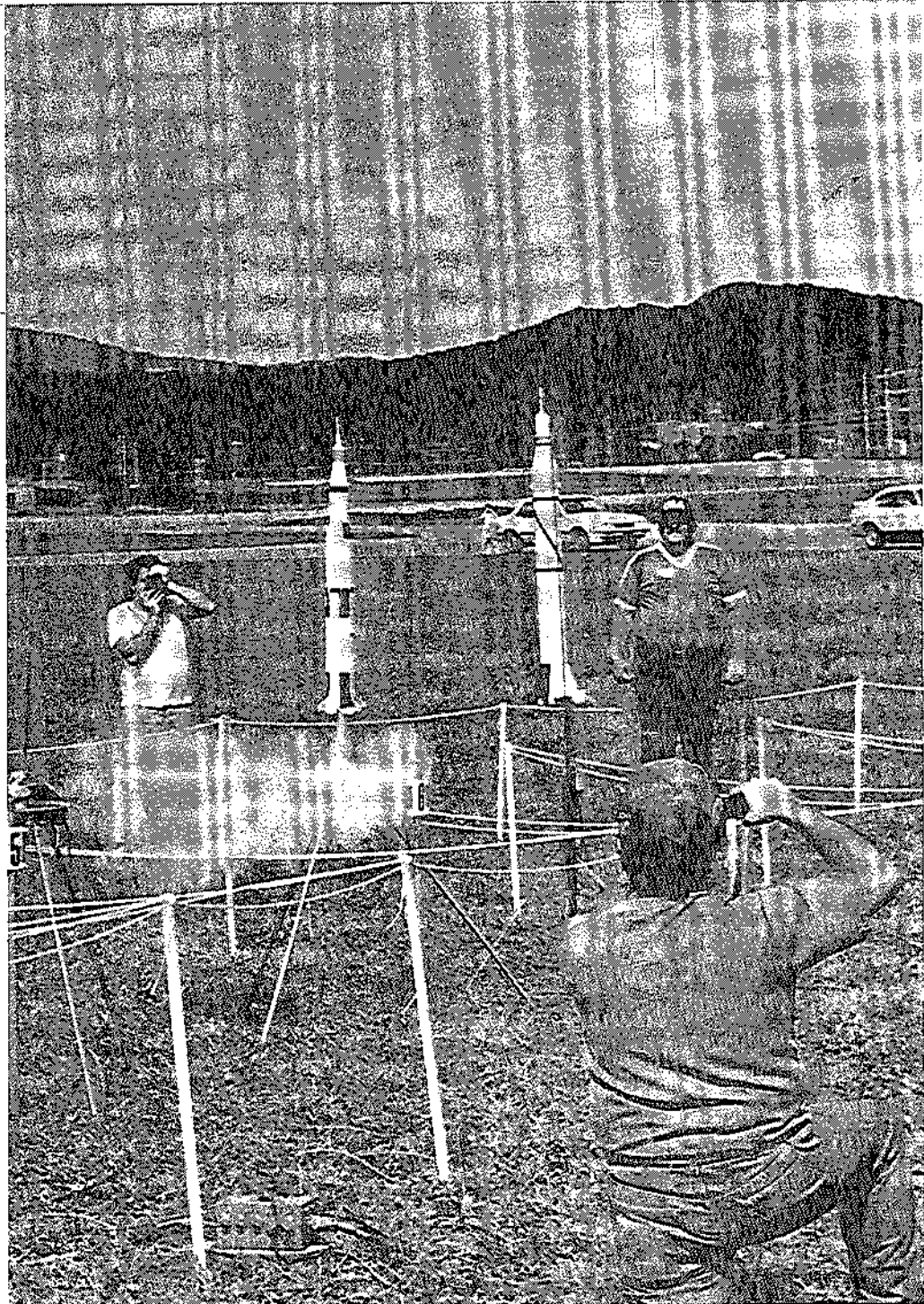


THE LEADER IN SPACEMODELING

NARAM-30: PARTY OF THE DECADE!



Model Rocketry's Longest Publishing, Most Controversial Newsletter!

Oct/Nov/Dec 1988

Volume 14, Number 6



"What Did I Say?"

Last issue, I said that the FAA was flat on their ass. I said that the FAA, the faceless Bureaucracy of people who are supposed to keep the skies safe, couldn't find the time in the past three years to act on the NAR's proposal to raise the model rocket weight limit from 1 pound to 3.3 pounds.

Well, I was wrong.

The FAA found enough time to shut down NARAM-30 for legally flying model rockets. Local level officials made a unilateral decision to stop the flying at NARAM-30, oblivious of the law or the facts.

The FAA isn't flat on their ass; They're f*&%ed up! They're so screwed up they can't read the regulations they wrote! They couldn't get it right, even with the help of one of their own flight safety inspectors (Larry Barklage)! Only a little pressure from Washington (thanks to G. Harry Stine, among others) got things straightened out.

It was an incredible situation, to hear Matt tell it.

Here was the NAR, with its largest (Continued on page 21)

No Credits, Cash Only Please

QUOTABLE

"Estes wants to make big honkin' motors!"

J. Pat Miller, explaining why Estes objected to a proposed 125 gram propellant limit on composite motors, while black powder motors would remain at 62.5 grams.

COVER STORY:0

Liftoff at NARAM-30! An Estes Saturn V, launched by Vern himself, takes to the air on mighty D12 power for the TV cameras and a USA Today photographer. George Cassaway looks on at right, awaiting the flight of his 30th anniversary Juno 1. (Vince Haegele photo)

CREDITS:

Produced by: JD "Mac" Wilbury; Manager: Matt "Lefty" Wilbury; Keyboards: Robyn "Righty" Wilbury; Lead Guitar: Chris "BMW" Wilbury; Drums: George "Zunofark" Wilbury; Lead Vocals and Rhythm Guitars: Tony "Maddog" Wilbury; Marimba: Chas "GLCM" Wilbury; Harmonica: Marty "Bocephus" Wilbury; Backing Vocals: Vince "Vinny" Wilbury, Alan "Shutterbug" Wilbury, Randy "The K" Wilbury, and Dan "The Man" Wilbury; Roadies: Chris "Chemicals" Wilbury, Lee "Oly" Wilbury, Jason "The Dude" Wilbury, and Terry "Wilbury" Lee; Groupies: J. Pat Miller, Wayne Hendricks, Jack Kobzeff, Wasco Schafter, Mary Roberts, Bob Dylan, Jeff Lynne, George Har-

rison, Roy Orbison, Tom Petty, and Billy Preston (he went uncredited on the Beatie's *Let It Be* album, too).

Tony "Maddog" Wilbury appears courtesy of Thin Air Records.

Matt "Lefty" Wilbury appears courtesy of Many Michelob Records.

Chris "BMW" Wilbury appears courtesy of Broken Prezel Records.

Dan "The Man" Wilbury is just happy to appear.

A special thanks to all our fans!

IMPORTANT STUFF

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NARAM-30 Quotable Quotes

You've read the official version of NARAM-30, seen the results, heard the stories. SNOAR NEWS decided to bring you the other side of NARAM, the one that won't get reported elsewhere. Once again, the avid tape recorders of SNOAR NEWS were unleashed upon NARAM-30. Here's what folks had to say:

About the flying...

"F*****ccccckkk!"

Chas Russell after the G110 flight

"What's in it? Only three Fs."

Chris Pearson to incredulous NAR type

"Yeah, they're great motors....too bad we can't get 'em."

Chris Pearson, commenting on the Vulcan Smoky Sams

"Real men don't use sunblock."

Phil "Burns" Barnes

"We need a windbreak. Where's Jim Backlas when you need him?"

Ed LaCroix

"A thermal is like a woman... it gets you all hot, and then leaves."

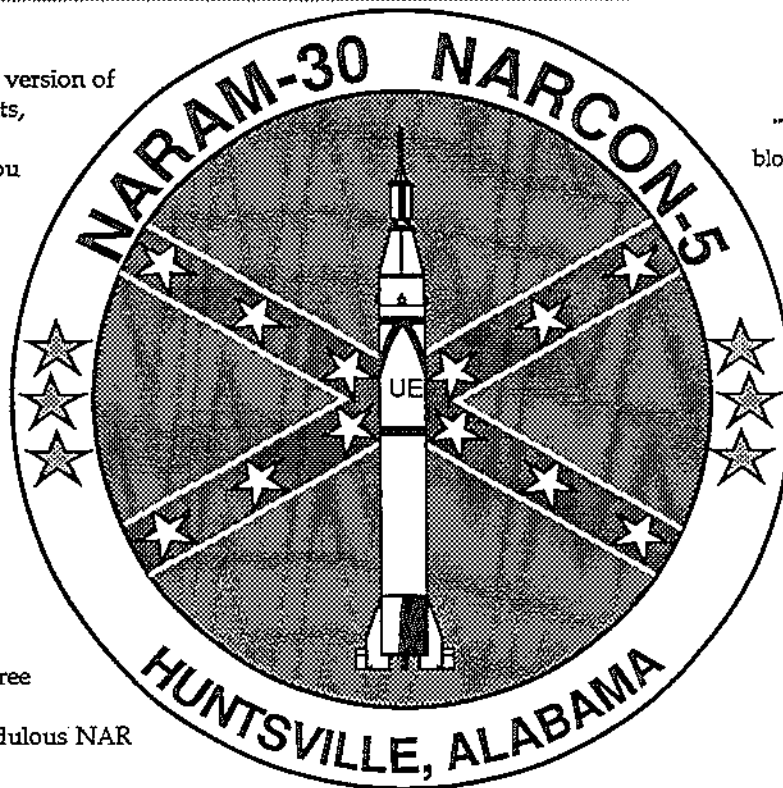
Bob Geier

"Not only that, but you can never find one when you need one"

Matt Steele

"I have the same luck finding a thermal as I do finding a woman. But I think I'll have better luck with a thermal."

Wayne Hendricks



"That rocket has already blown up."

Overheard while looking at Ric Gaff's inflatable Saturn V model.

"Well, it was sure a week full of more fun than any normal human can expect to endure. I hope that Matt still likes model rocketry after all of the work he put into this "fun" hobby."

Bob Hegwood



About the FAA shutdown...

"If any FAA official ever came out to one of my meets and threw his weight around like they did last year or this year, with respect to flights over which they have NO authority, I would REFUSE TO COMPLY. Perhaps I would land in jail, which implies only that the inevitable letter of apology would be accompanied by a large monetary settlement. This is not to criticize your action, Matt, which was clearly the non-confrontational alternative, but I am basically still a child of the 60's, and I take my civil disobedience texts seriously. A right is a right, for all of that. I have no respect for bureaucrats that write regulations and then refuse to read them."
Chris Tavares

"I'm having a bad day"

Matt Steele, before the police chief arrived.

About the Pink Book fiasco...

First of all, it's not pink, it's red."

Jon Rains, commenting on the Pink Book

"I'm pretty stupid . . . quite frankly."

Mark Bundick about the new Pink Book.

"That was an error in judgement"

Mark Bundick about the new Pink Book.

"It is great to know that Mark Bundick was put in his place after all. I had no doubt that the new Pink Book would go down in flames after he got hold of it."

Bob Ferrante

"Had I known that three more votes for Scott Hunsicker would've knocked Bunny off of the Board of Trustees, I would've purchased three memberships on the spot just to vote Bunny down."

Bob Geier

"You think it's hot in here? They're roasting rabbit in the Association Meeting!"

Vince Huegele

"I'm surprised that somebody like Mark Bundick didn't propose mandatory drug testing for all competitors."

Chris Martin

In the Association Meeting...

"Any voters abstaining?"

Pat Miller on the floor of the Board Meeting

"Pat, I've been abstaining for too long!"

Chas "Living in Europe Alone" Russell

"It's a great piece of literature."

Pat Miller, referring to the NAR's Financial Statements

"Do we tell them now that we ate the election results?"

Steve Lubliner, after being asked to weed out certain ballots cast before a write in candidate was added.

"If I wanted to go to a political convention, I would've gone to New Orleans."

Vince Huegele, commenting on the Association Meeting

Heard around town...

"Rocketeers have come from across the nation and from several European countries..."

Repeated new media reports, based on an "exaggerated" promo by Wayne McCain.

"Hmmm.. Chas better get stationed for a couple more tours overseas then."

Matt Steele, on hearing the quote above



"This is Rocket City, and these are rocket men."

Dick Curtis, Huntsville TV personality

"Who did the zoning in this town? It's all fast food places!"

Overheard while navigating Huntsville

Big rockets & big fun...

"We'd like to deliver what's already in the catalog before we talk about future products."

Enertek's Bill Stine

"We'd like to thank Wayne McCain for this presentation on Morton Thiokol rocket motors. Wayne is now available to take your orders."

Vince Huegele

"I was out-run by George Gassaway."

Ken Mizoi, who had no excuse



"This is a Best Midwestern Qualified Flight Award KIT!"

Bob Kaplow, Bob Ferrante, and Bob Geier

"We'll give you a refund on the F15's"

Aerotech's Gary Rosenfield

"At Estes, we care."

Mary Roberts

"I KNEW that little section would get a response!"

J. D. McNeil, informed of the above quote

"It's only a dollar more!"

Claude Greenlee at the NAR Auction

"Why does *American Spacemodeling* have a \$40,000 budget, but isn't as big as or as good as *SNOAR NEWS*?"
Gary Raley

"I wish the Broncos could've done better in the Super Bowl."

Vern Estes

"J.D. McNeil was going to be here, but he had to go to Washington DC this week for his security clearance."

Matt Steele, explaining J. D. 's absence

"George Wallace is not Governor any more?"

Chas Russell, reading a welcome letter from the Governor of Alabama, Guy Hunt.

At the NARAM party...

"Oh, sorry, this must be a wrong number!"

Matt Steele to the FAA at 3 AM

"Sometimes, Bob comes early..."

Judy Kaplow

"Chas....don't do that while sitting on my bed!"

Mary Roberts

"Let's fly some big-honkin' engines!"
Connie Pursley

"I look like a cheap floozie!"
Mary Roberts

"What incriminating photographs?"
Dan Kafun

Host another NARAM???

"Cody, the next NARAM we have in Huntsville, you'll be able to compete in C Division."
Matt Steele

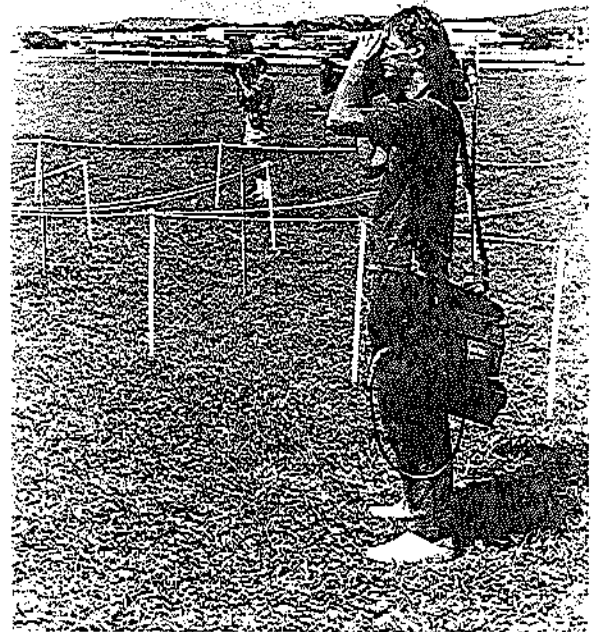
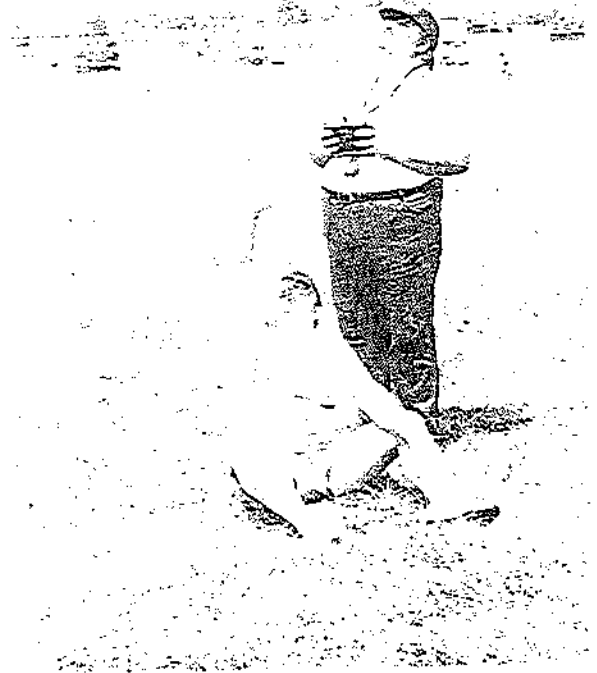
"Congratulations, old buddy, and welcome to the ranks of Former NARAM CDs, also known as the "Never Again Club.""
Doug Pratt

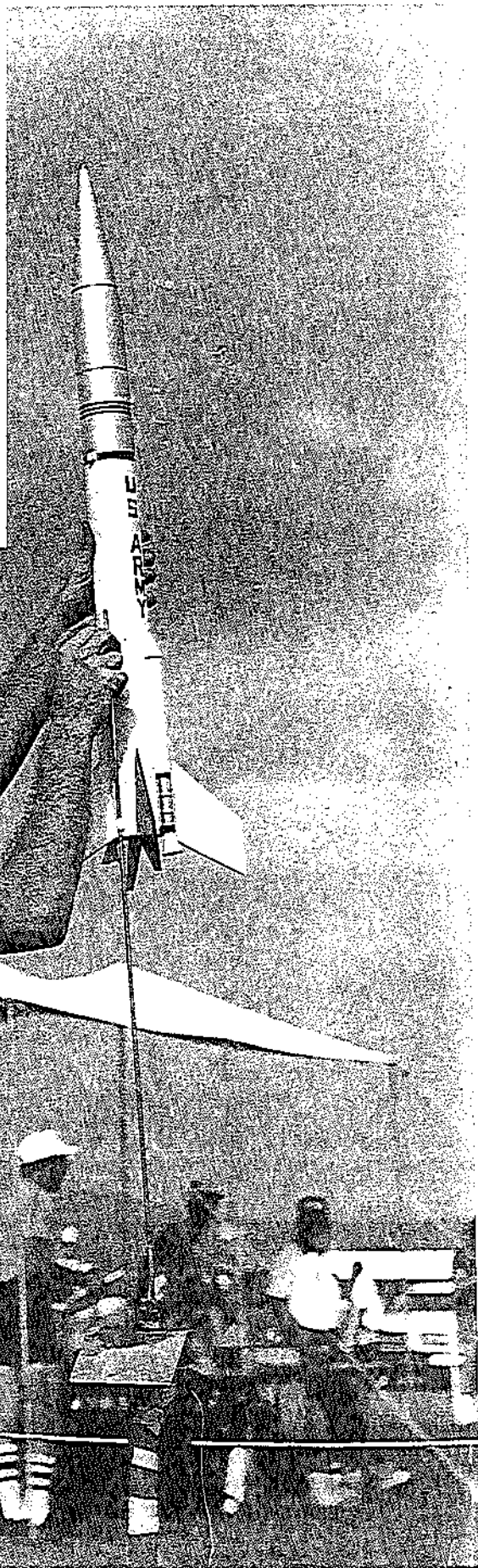
The final word...

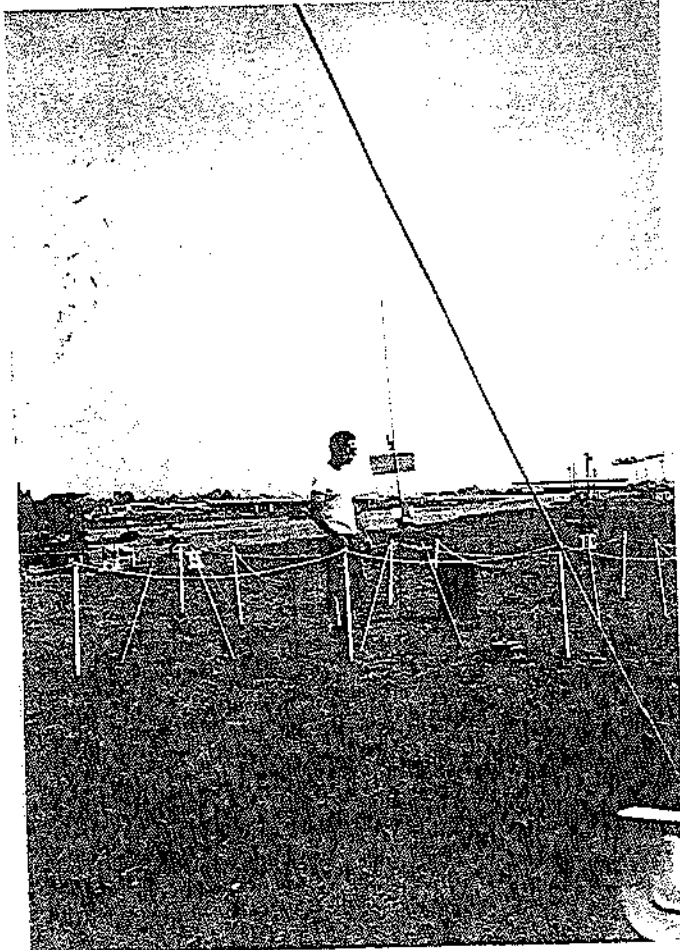
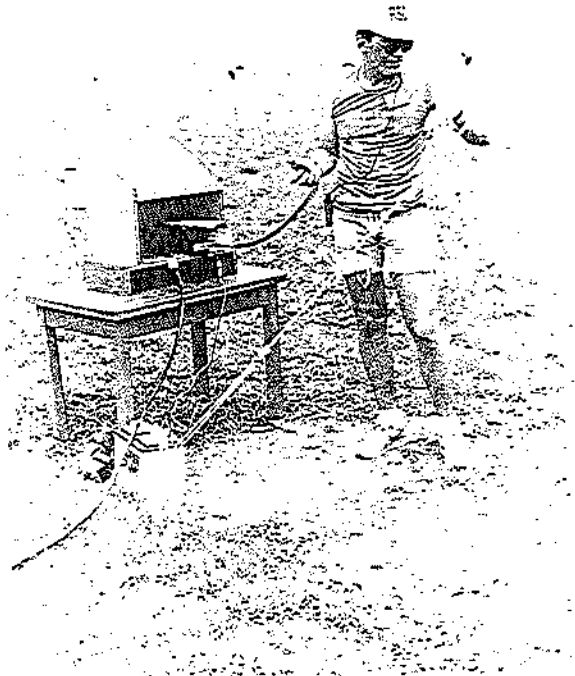
"You can have my launch system when you rip my cold dead fingers from the safety key."
Bob Geier, as the crew began tearing down the range on the final day

And of course, a quote from LDRS...

"Yeah, I know I'm a dick...so what?!"
Jerry Irvine







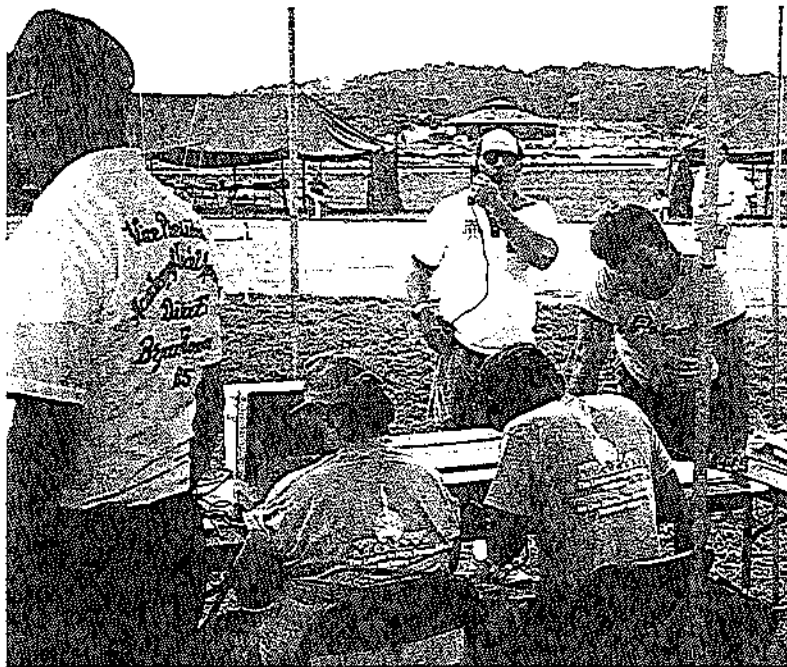
Photos at Left

Top Left: Matt Steele hooks up the Zunofark Team Sandhawk that placed 3rd, while Chas Russell looks on.

Top Right: RSO Chas Russell takes a look at his watch to see if he's baked long enough in the hot Alabama sun. Chris Pearson, John Pursley, and Bob Geier were also RSOs for the meet.

Bottom Left: John Fleischer brought some innovation to the D International Boost Glide event.

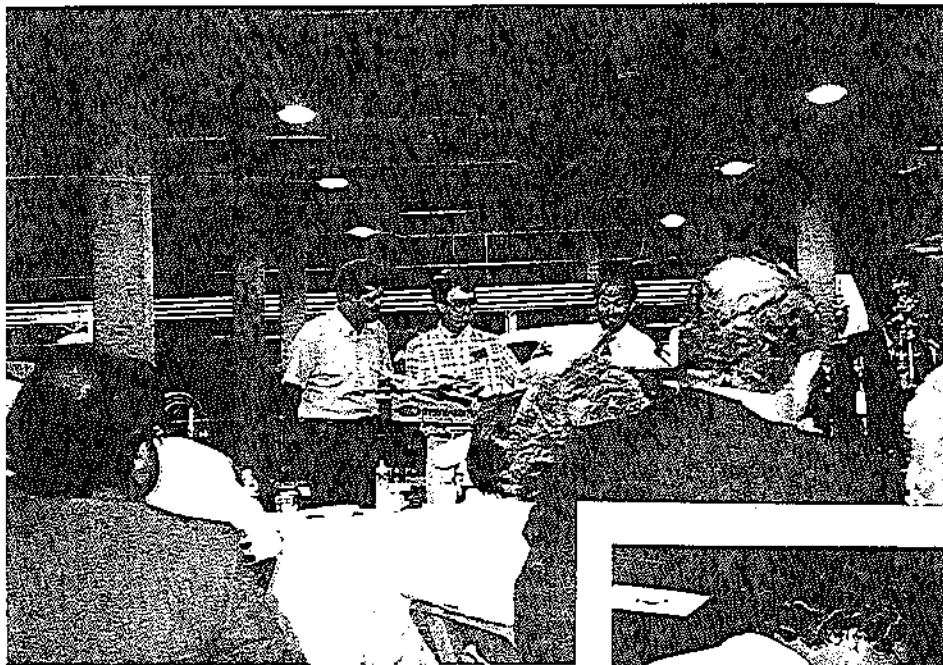
Bottom Right: Always helpful, Bob Ferrante and Marty Williams break into a car to get the tape deck out.



Photos, this page:

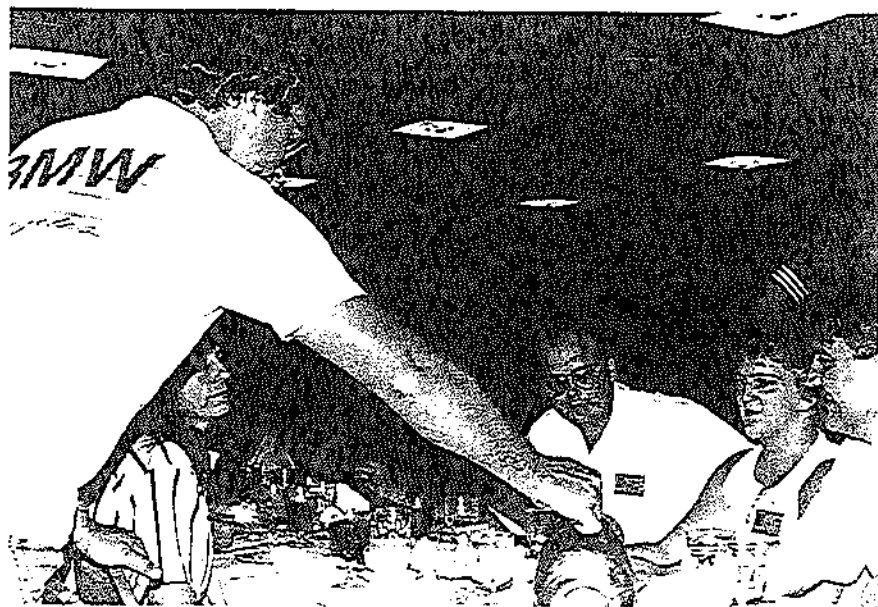
Top: Matt Steele checks out the range, while Jim Backlas checks with Robyn Steele and Chas Russell on the tracking data. Data reduction went so fast, most modelers found out their altitudes by the time they came back to the return table.

Left: "Three Guys Named Bob" (Bob Ferrante, Bob Geier, and Bob Kaplow) present the "Best Midwest Qualified Flight Award". Mark Johnson won the award, nearly hitting the RSO!



This page, right: Chris Pearson, Mary Roberts, Dan Kafun (and his new fiance, Nancy), and Jim Backlas all whoop it up at the NARAM-30 Awards Banquet. The Banquet was held at the Alabama Space and Rocket Center.

Photo Credits: NARAM photos courtesy of Vince Huegele, Dan Kafun, Tom Pastrick, Alan Williams, and Randy Kelling.



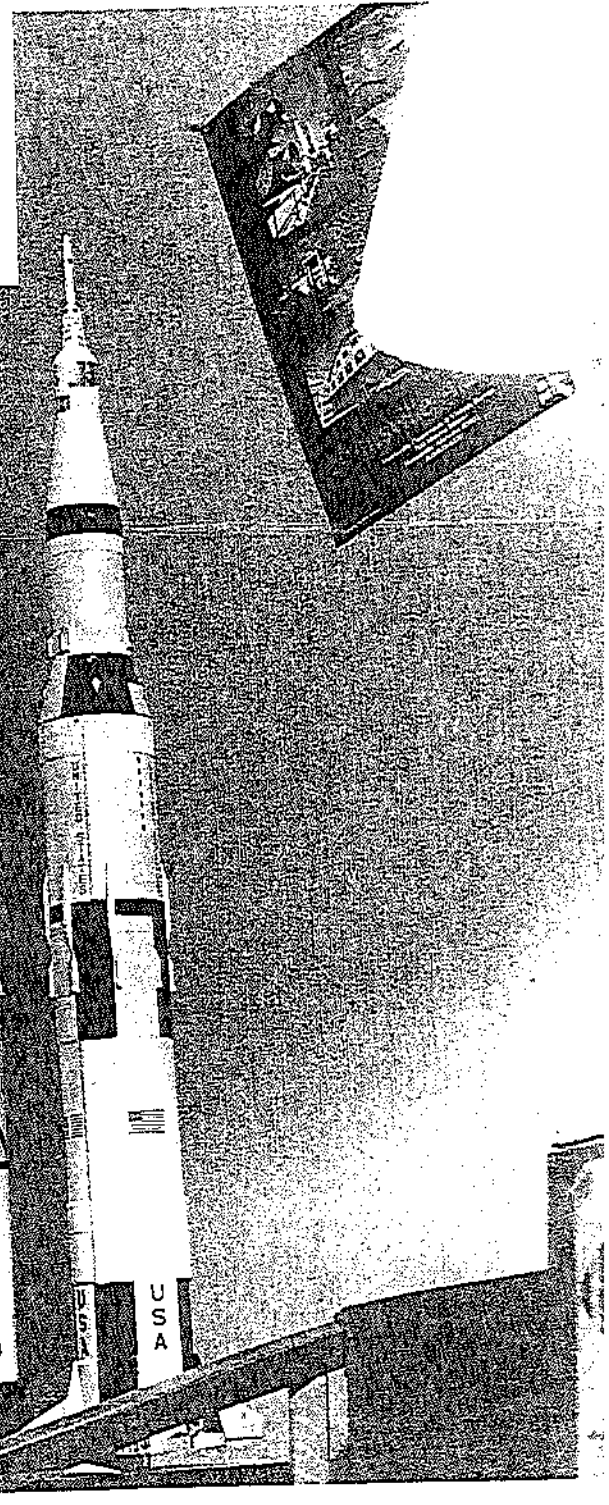
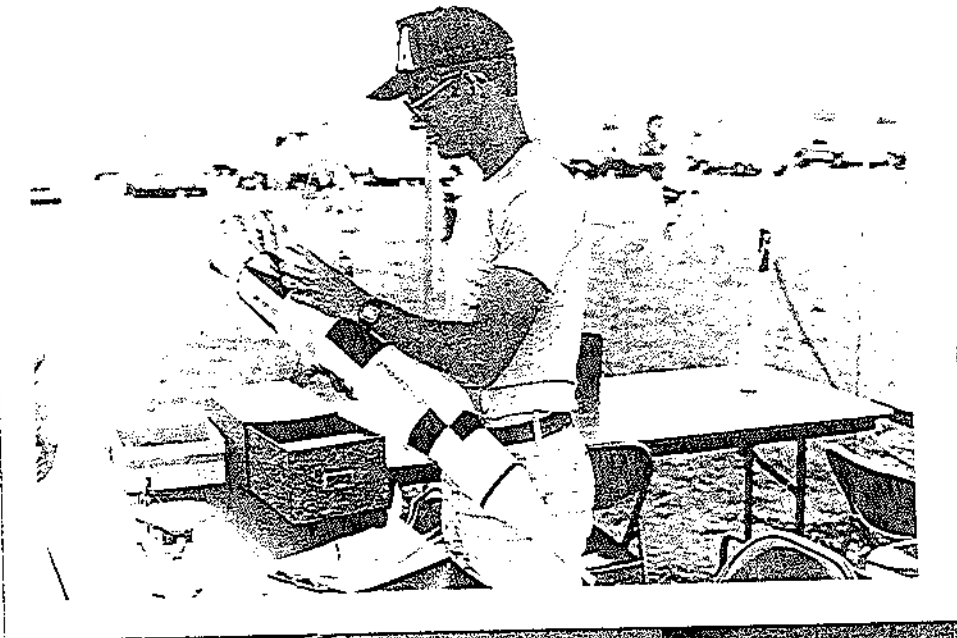
This page, left: Trip Barber closely examines the "Blow Up" Saturn.

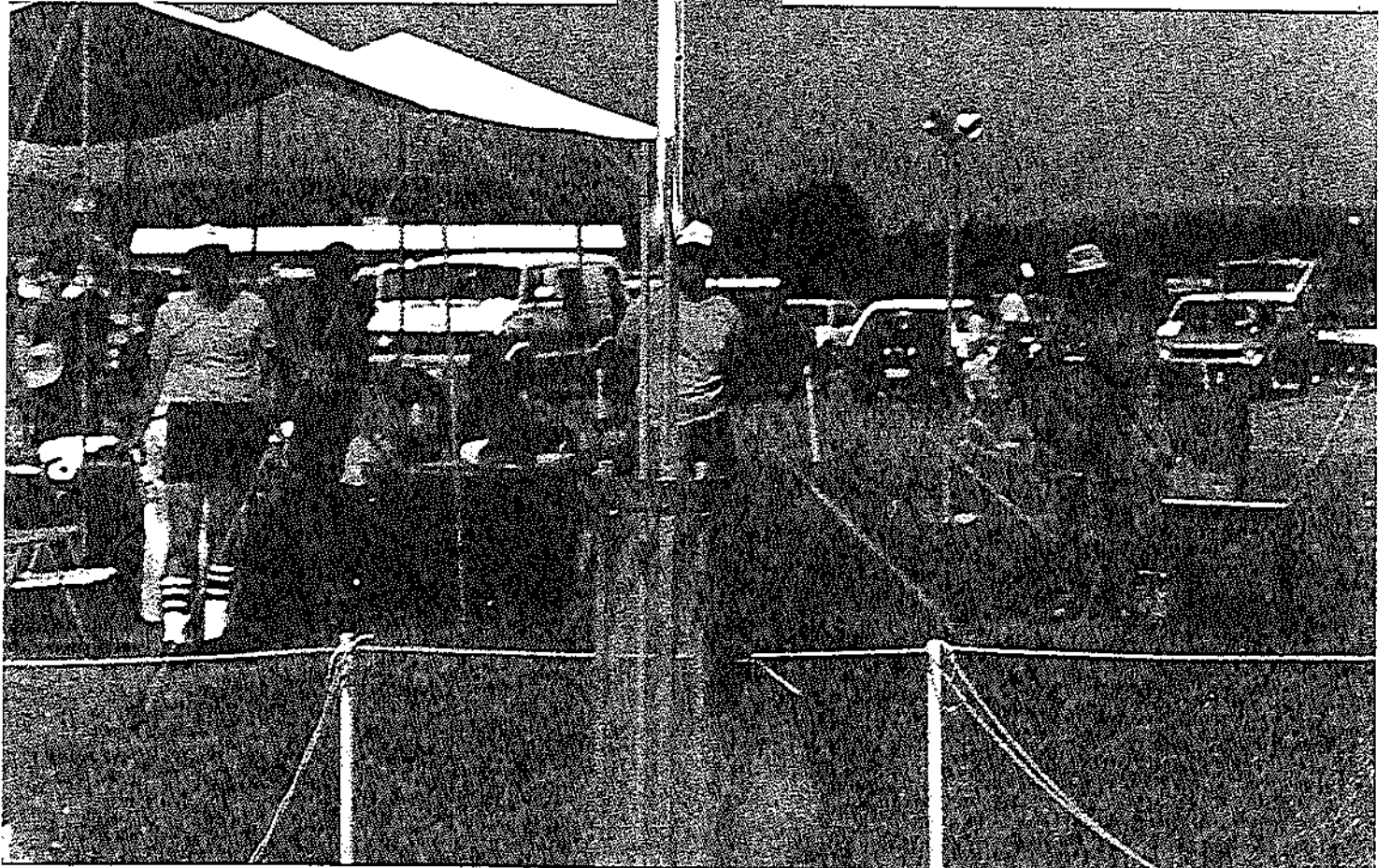
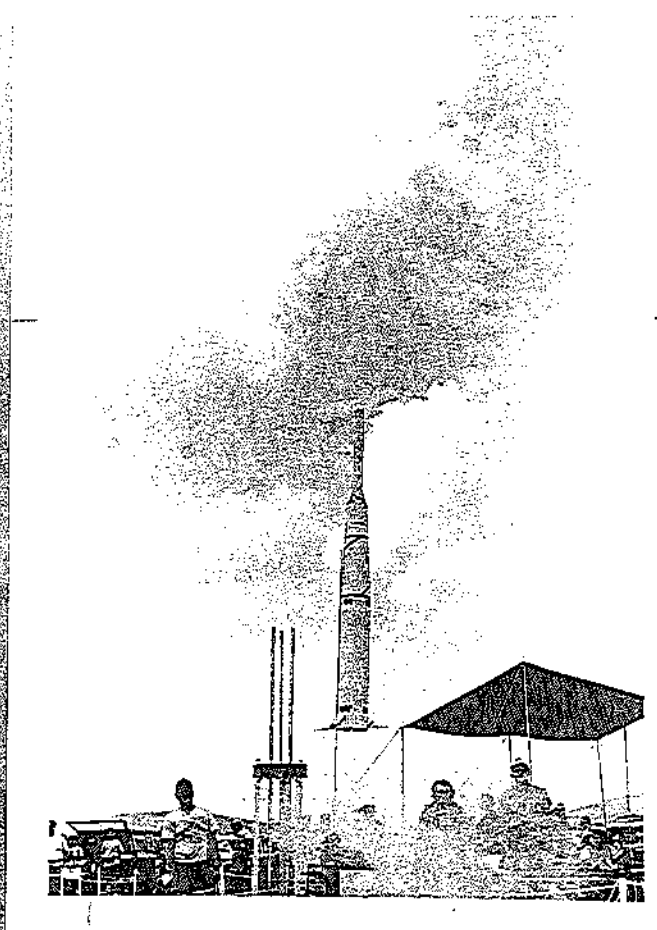
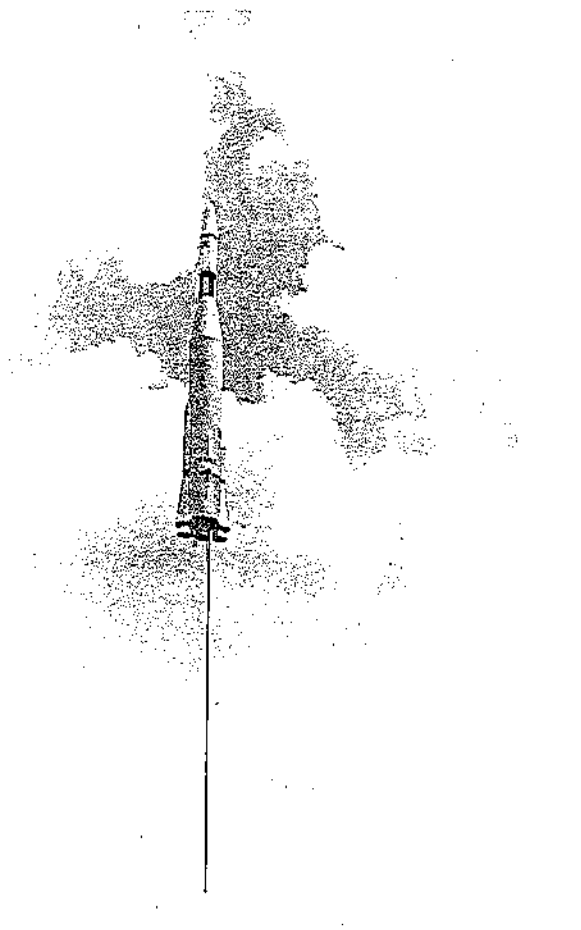
Below: It was a Sport Scale jungle, even in A and B Divisions.

Opposite Page, Top left: Fred Williams' Atlas Agena lifts off.

Top Right: Sid Maxwell's Thor Delta lifts off.

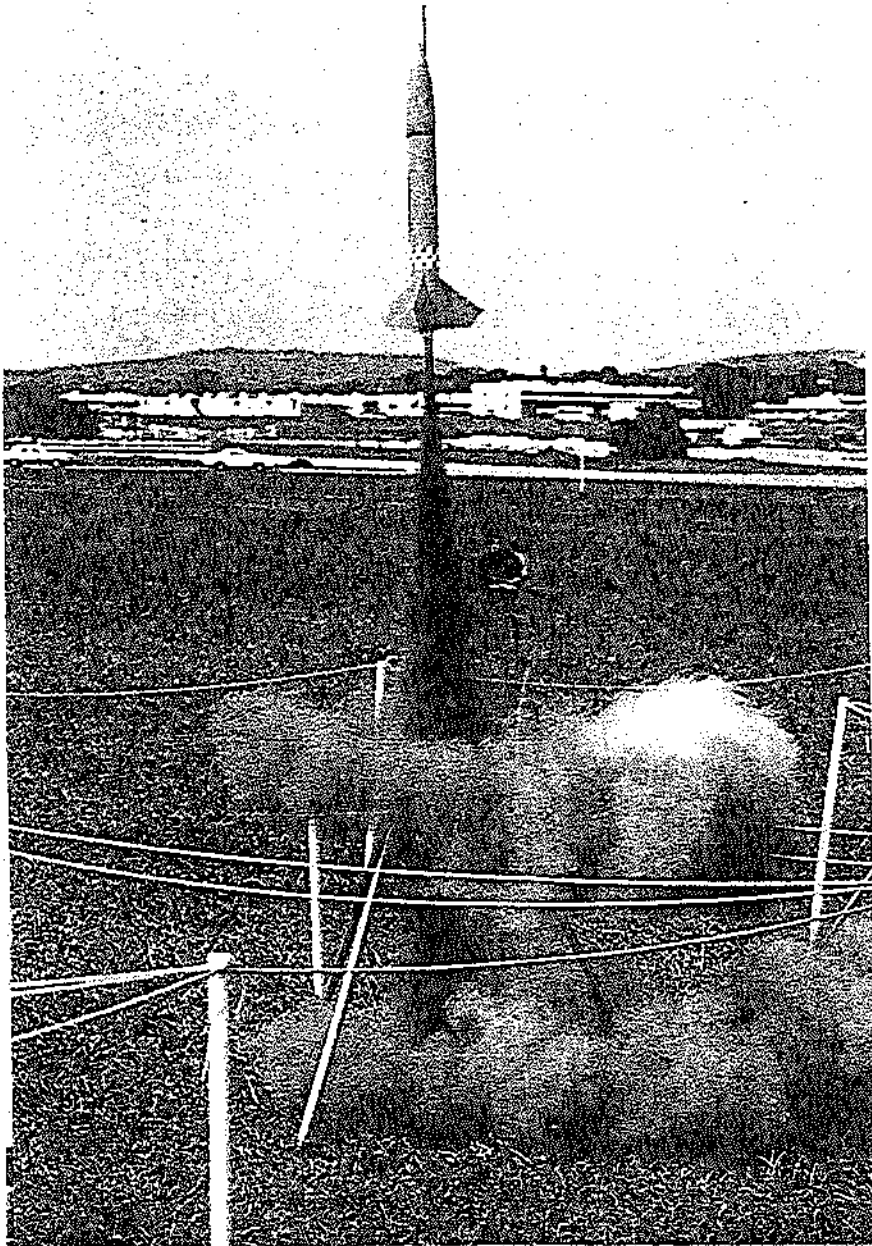
Background: Bob Ferrante, Dan Kafun, and Chris Pearson watch an LTV Scout take to the air.

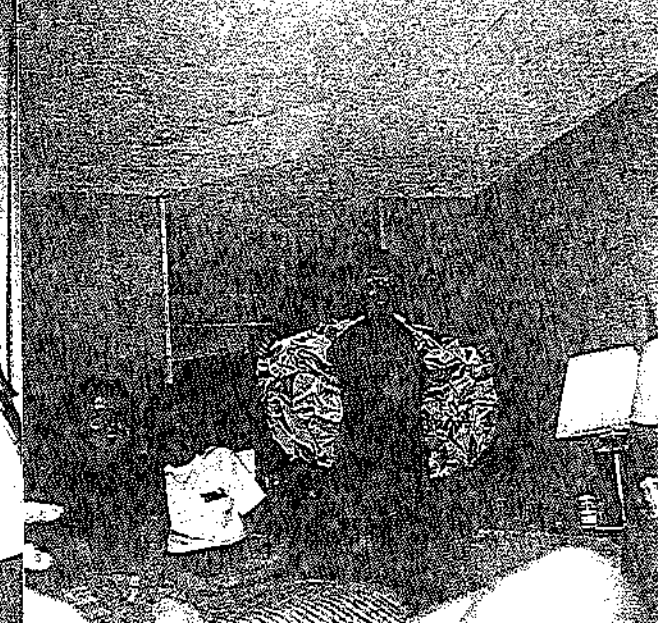
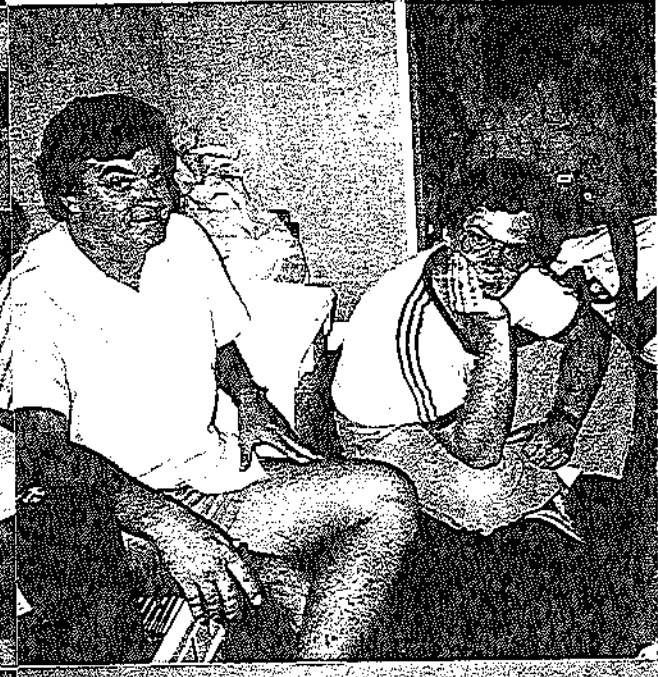




This page, left: An NCR Thunderbolt powered by a Smoky Sam motor takes off. These motors were not available for sale, since Vulcan has not had them certified by the NAR.

Below and opposite page: What's a NARAM without a party? Mary Roberts donated her room for the annual blowout. As you can see, there was plenty of fun to be had!

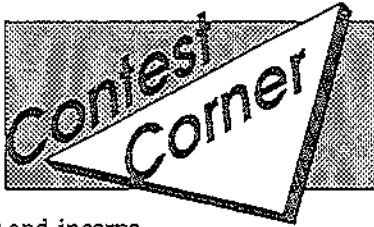




Truth ...or... Bullshit You Decide Which is Which!

Your 1988 Pink Book
Plain Text by Mark Bundick
Italics Comments by JD McNeil

The 1988 Pink Book Revision Subcommittee, led by Robert Kaplow, has completed its task. Their hard volunteer work produced an outstanding rule book that is easier to read, contains fewer loopholes and incorporates new, exciting events. My thanks to Bob and his fellow subcommittee members for a super job!



Yeah, sure. It also contains rules that makes meets longer, harder, and more dangerous to fly!

Now on to the new rules. First, wherever applicable, the new NAR-HIA-NFPA Safety Code was used. This means the 1500 gram weight limit and 125 gram propellant limits were placed throughout the Pink Book.

But it doesn't really, if you read further on.

By incorporating the new Safety Code, weight limits for individual events were dropped. All contestants must comply with the manufacturer's recommendations on liftoff weight. Failure to do so is a Safety Code violation. A 500 gram limit will still apply to all performance events and Plastic Model. Other craftsmanship events are limited to 750 grams. Members should also note that until changes to the applicable Federal Air Regulations go into effect, FAA waivers will be required for any flights in excess of 453 grams.

These new restrictions on the weight limit were never voted on by the committee; they were mandated by Kaplow and Bundick. Like a number of important decisions about the new Pink Book, these two simply "had it their way". It really didn't matter if they rigged the voting (by region) or if they legislated the rule changes, they saw to it that their agenda got through. Remember, the 750 gram limit is from the man who was "terrified" of G motors.

A "Local" meet with contest factor equal to one, was established. This contest will be flown like a section meet, but without the section meet's restrictions on participation. NARAM got a permanent contest factor of 8, a rough average of recent NARAM's. Eliminated was the old rule allowing NARAM CD's to alter event rules if the Contest Board approved.

New rules govern radio control usage on NAR contest fields. Academy of Model Aeronautics (AMA) frequency control procedures are recommended, and RSO's now are charged with enforcement as part of their general safety duties.

Catos on a second flight no longer result in a disqualification. Catos on any flight can now be reflight or accepted at the contestant's discretion. DQ's for static reasons, like not putting your NAR number on the model, were eliminated.

Contestants now get an opportunity to fix the error.

Tracking rule changes benefited from Bob's experience in these events. The tracker specifications were reformatted into a single rule, making it easier to understand if your theodolites qualify. Baselines must now be between 25 and 200% of expected altitudes, instead of a fixed 300 meters or longer. "Track lost" and "track not closed" were defined. Contestants now get to re-fly these flights, provided they complete the flights in the time allowed for tracking events. If you still fail to get a tracked flight, but are qualified on all other counts, you will receive flight points. Finally, all altitudes from multiple station tracking systems will be averaged to determine your score. In the past, only one closed set was used.

Well, that's if you call his experience worth anything. The added restrictions on the baselines will make setting up tracking even harder, making less people want to do it. Notice that the rule is open ended, as how high do I "expect" a F Egglofter (oops, Roc Eggloft... another ode to simplicity) to go? 50 meters? 200 meters? 1000 meters? Just another brilliant move to make things easier on all concerned.

The Pink Book contains Geoff Landis' program for computing altitudes. Bob modified this program slightly for efficiency and readability. NAR members with home computers can now type in the program and, after testing, be assured of accurate data reduction. If you're too lazy to type the program, but have a modem, the program is available in CompuServe's MODELNET forum.

Under timing rules, a single timer is all that is required. This reduces manpower required to run a contest. Additional timers can be supplied by contestants if they wish. Rules regarding separation were removed from individual events, and consolidated here in Rule 15.

Of the general rules debated by the Subcommittee, the return rule question generated the most ideas and controversy. First, the Subcommittee voted to award flight points to contestants with a no return, assuming all other aspects of the flight were qualified. They then debated over a dozen possible options concerning the required return of models, including requiring no returns on any flight and requiring returns on both flights. A compromise position eventually emerged to return to the pre 1979 rules.

This was no compromise... this is what Kaplow and Bundick wanted. The two prime choices, return and no return, never met head to head by themselves. Instead, return and other solutions were grouped so that the "return rule" would come out the winner. Despite what they claim, the "no return" option was never given a fair shake. Do you call going back to 1979 rule progress?

Contestants will receive a score based on their best returned flight. Scoring duration events this way means that in

many cases, contestants need only make one good flight to place or win. Under the current "sum of two flights" rules, contestants striving for top places were forced to make two flights regardless of their first flight performance. The Subcommittee's compromise should reduce the flying required to be competitive, reduce the number of models required to compete, and encourage technical innovations in dethermalizers.

Until you look at the weighing factors, which mean more events per contest, and then you realize that the new book requires MORE flying than the old book! What the new rules will do is discourage competition altogether.

The Contest Board will be closely monitoring the effects of the new return rule and will take action if required.

However, they won't take any action on it for a year, just because.

The following events were deleted: Design Efficiency, Altitude Efficiency, Quadrathon, and all International Duration events. International events, now called "Multi Round Maximum", were absorbed into their regular events by listing the "maxes" for them and adding two to regular weighting factors. The Provisional Events Subcommittee will continue to study the inclusion of FAI events in NAR contests.

This is another brain child... Multi Round events are only worth 2 additional WF!

Predicted Altitude and Duration got split into three events. "Predicted" class events work like the current rules. "Set" class events required the CD to set a value in the contest sanction. Contestants then try to achieve this duration or altitude. "Random" class events let the CD select the value randomly at the contest.

"Random" Altitude and Duration... doesn't that just excite you? Talk about a "home field advantage" event!

Superroc events, another source of controversy, were sent back to their 1982 form. Maximum lengths were incorporated, and minimum performance requirements dropped.

Dual Eggloft Altitude, an event dropped in the 1979 revision, returns. The principal change to the 1979 rules includes a required check of the recovery system to insure it will stand the stress to be encountered.

Helicopter Duration models using flexible rotors are now illegal. Also, HD models can flip once during descent. The previous rules were unclear as to the legality of such a maneuver.

What if they flip twice? What is a flip.. 180° or 360°? Another rule that wasn't needed.

Boost Glider models must have rigid wings. Flex wings got their own event, Flexwing Duration.

Of course, flexwings must be easier to fly than fixed wing models, as the weighing factors are significantly less.

Also, the old events names, i.e. "Sparrow BG" instead of "A BG", were reintroduced. I must admit I have a bias in favor of these old names.

The old names really add to the simplicity of things, doesn't it? This alone shows how far Kaplow let the book get away from Miller's original directive to keep things simple. And, Bunny and the other incompetent old fashioned non-flexie flyers got their way, effectively killing flexwings in competition.

Craftsmanship events got some interesting changes. In

Scale events, inert or static rounds can now be entered. Eliminated from Scale measurements was fin thickness. Many modelers had difficulty obtaining this data, and it was difficult to insure close tolerances in judging.

Pop lugs, since they remain attached to the launcher, are no longer considered to be part of the model. Your scale model need not be judged with the pop lug in place. Second flights will now be allowed, so if you want to increase your flight points, you can fly a second time.

Sport Scale got divided into three events. Regular Sport Scale contains no restrictions as to model size. Peanut Sport Scale models must be less than 30 cm. tall, or contain a body diameter no greater than 2 cm. Giant Sport Scale models must be longer than 100 cm. or contain a body diameter greater than 10 cm. Judges will now be allowed to closely examine Sport Scale models after judging for similarity in outline. This gives judges a chance to inspect models for craftsmanship more closely.

Of course, the Giant Sport Scale models can't weigh more than 750 grams!

In Miscellaneous Events, Spot Landing models which land more than 50 meters from the target may receive only flight points. There were several cases where all contestants tied for first place by landing more than 50 meters from the spot. Drag Race rules now call for a flyoff for 3rd and 4th places. And finally, ties and flight points can be awarded for R&D entries. This gives R&D judges more flexibility in awarding similar scores to projects of similar score.

No article can outline every detail on every change. I strongly suggest you take the time to read your Pink Book thoroughly before heading to your next contest. As always, I'd be happy to answer any questions you might have. And while this revision is history, the process of changing rules will go on. My Regional Chairman and I will be closely monitoring your comments and suggestions, and we will continue to adjust the rules by vote and publication in *American Spacemodeling* whenever we find better ways to fly model rocket contests. Go to a contest and have some fun!

The bulk of this text was already written prior to the Association meeting at NARAM-30. Many of the modelers at NARAM voiced objections similar to the comments I made above. A number of the rules were changed as a result of pressure by the membership. Bundick and Kaplow thought they had gotten their way, since the book had been printed. Instead, they ended up with egg on their face, when at least four major portions of the book were changed (the return rule, the tracking set up restrictions, the event names, and the weighing factors per contest). There are still other things that need changed, as you can see from my comments.

As a result of the problems the Kaplow Revision Committee created, a number of changes must be undertaken to insure that this fiasco never happens again. The membership as a whole MUST be afforded an opportunity to preview the proposed changes and comment on them before the rules go into effect. Had the membership been privileged enough to do this in 1988, the Pink Book would not be in the shape that it is in.

By far, the Kaplow Pink Stink Book is the most controversial book ever written for NAR competition, given the way it was legislated in place. It has already assured itself a place in NAR infamy.

Ask Roger Rocket!!!



Dear Roger,
How can I get ahold of
Enertek now that they are out
of business?

Bamboozled in Bagwan

If you hold the Enertek brochure to a mirror and upside down, you can detect a hidden phone number in the folds of Bill Stine's shirt. If you call this number, it is answered by someone who CLAIMS to be Lonnie Reese, who quizzes you on model rocket trivia. Those true faithful who can answer all the arcane questions correctly shortly receive in the mail a ticket to a small island off Mineral Point, Wisconsin. (A corner of the ticket is marked LICK HERE., SUCKER!)

Dear Roger,
What's the difference between using microclips or flashbulbs next to your igniter?
The Jetex Kid

Microclips are those cheap little copper clips that corrode after the first launch and fall off when you need to hook up a model quickly. Flashbulb ignition uses old photographic flashbulbs attached to the igniter wick to inject an element of uncertainty into the ignition process since you never know when you will get just enough current to set them off. It also provides something for launch system designers to add into their systems to jack up the price. "Flashbulb safe" means that the flashbulbs probably won't hurt the launcher...

Dear Roger,
I just received the fall issue of Estes' Model Rocket News, which I was actually mildly impressed with. But did anyone notice the ad on the back for the Crusader swing wing glider? Item number two declares proudly "Yet rocket has real MASS!" (emphasis theirs). What gives? I thought all rockets had real mass?

Young Cosomonaut

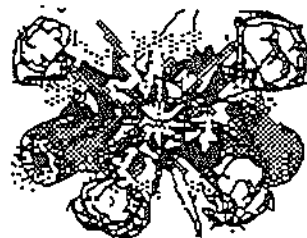
No, this is just another way of saying "yet another kit glider that flies like Russian bathtub".

Actually, it is reassuring to find out that Estes finally came up with a rocket with real mass - those things I've been flying with imaginary masses were really a pain to track. Accolades to the R&D people at Estes!

Dear Roger,
I wonder what would happen if you soaked an F100 in water and then lit it?

George Roos

It would go KER-SLPASH!



Dear Roger,
Does model rocketry and witchcraft have anything in common?

Mike Banks
Salem, Mass

Of course! Did you know that model rockets can have spells cast on them? The most famous spell ever cast on a rocket was the Howard Kuhn Memorial Sprint Pinwheel Curse. I had an Estes Sprint that flew fine until the day Howard told me, "That design is unstable. I was hit by one that was doing pinwheels once." Ever since then, my Sprint has done pinwheels for no apparent reason. I have also managed to pass this curse on by telling the story of it to another modeler who never had a problem with his Sprint until he heard my story.

Nya-ah-haaa - yer all cursed now!

Dear Roger,
Wasn't it possible to ship Class B motors via UPS for a while? What happened?

Tripoli Ed

For a while, about two years ago, one could ship up to a certain amount of Class B motors via UPS using the 1.3C exemption. This was technically a loophole of an existing regulation, and UPS didn't seem to care. When Reaction Labs (Don Carter, Mark Weber) got wind of this, they pitched a bitch with every regulatory agency possible, as they said they were working at getting some laws changed that would allow shipping of Class B motors. In actuality, the new law would have hurt their business (if they really are in business) as they have always touted that their motors were cheaper than either AeroTech's or Vulcan's, and since everyone had to pay the same shipping charge, they came out on top. The 1.3C regulation allowed people to buy the superior and more reli-

able AeroTech or Vulcan motors instead of the Reaction Labs motors. UPS rescinded the ability to ship 1.3C, although when they are shipped airfreight, they still use the 1.3C label. The cost of H motors to ship is about \$20, so it is a good idea to get more than one at a time.

Me, I only order one Class B motor at a time, but hey, when it's an N3500, what can you say?

Dear Roger,

Does where you live influence how likely you are to have a cato?

Chris Mertin

Yes it does. The rotational velocity of the earth causes the internal swirling of the exhaust before the gasses exit the nozzle which causes a restriction inside the motor which causes an overpressure within the casing which causes the cato. As a result, people who live in Houston are much more prone to experience catos than those who freeze their tush off in Minneapolis.

Dear Roger,

I just heard of FSI, and like, WOW! Is their F100 really an F? I would think that with a "100", the motor would be a G!
Ann Drake

No, 100 newton-seconds would be a G engine. F engines run from 40.01 to 80. The F100 is a REAL low F. The "100" is the average thrust designation. If the F100 were a full F (80 N-sec) then the burn time would be 80/100, or 4/5 second. The only problem is that the 100 isn't accurate either. According to the "official" NAR charts, if the F100 were labeled accurately, it would be a 41 N-sec F32 with a burn time of 0.7 seconds.

FSI engines have been chronically mislabeled over the years. Until recently, the F100 was actually an E, and the E5 was actually a D. Back around 1976, FSI used to make an E that was a D, a D that was a C, a C that was a B, a B that was an A, and an A that was a B!

Dear Roger,

After several years of intense research, I have completed my thesis on the "Nanoshuttle". This paper is 1,000 pages long and covers the design of small, small, small shuttles, RC airplanes, and gliders. It covers the following areas: Trajectory Analysis, Orbital Mechanics, Reentry Simulation, Aerothermodynamics, Structural Analysis, Guidance and Control System Design. It is available to you at the special price of \$150. Are you interested in a copy?

Tip Vortex, USMC

Yes! For years I have been hoping for help with my orbital mechanics and reentry. Or, alternatively, I need help getting my parachute to come out.

All reasonable questions - from fashion, food and drink, stereo, sports cars, dating, taste, etiquette, sex, and rocketry - will be read here at our offices. The most provocative or stupid ones will be published from time to time. To get your question answered, write Roger Rocket c/o SNOAR NEWS at the address on the masthead.

Pass Me Another Miller, OK?

Well, J. Pat just had a new son, John Patrick Miller. We here at SNOAR NEWS would like to congratulate the Millers on increasing the NAR membership by one. Here's what others had to say:

"Congratulations. ANOTHER J. Pat Miller? Don't tell me, you want to keep the dynasty going until the world is actually ready to name hospital starships..."

Doug Pratt

"Congratulations Pat and folks! In honor of your new arrival we have decided to make him an honorary SNOAR member - aren't you excited! <snicker>

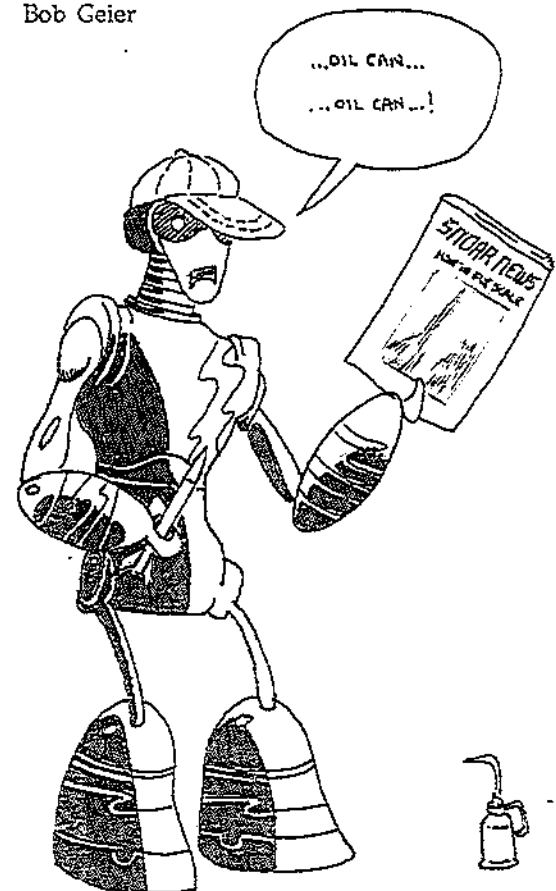
Chris Johnston

"Look...I've seen what SNOAR NEWS has done to you! I don't want any of that for young John Patrick!! Cripes, next thing you'll know he'll want to fly the damn things. Everybody knows model rocketry is a nasty habit!!

J. Pat Miller

Best be careful with those SNOAR jokes, Pat, lest we follow the example of the Estes Corsair and "slip in, commit acts of despicable piracy, then vanish again into the interstellar void!"

Bob Geier



Go, Baby, Go!

Now You Can Own

The Rocket That Flew Overseas!

absolutely free!! (sort of)*



Experience the exhilaration of a model rocket that can fly farther than you ever thought!

Experience the power of hundreds of thousands of horsepower!

Experience altitudes over 35,000 feet!

Experience airports with extremely rude customs officers!

These are just some of the thrills you can experience with the new MWC "Baby". And to prove how well it performs, we took one and flew it from the U.S. to Yugoslavia and back!

MWC

Model Wrecked-by-Flyer Corp.

"You'll never know what we'll try next!"

* This rocket flew overseas under special test conditions in the cargo bay of a commercial Boeing 747. No engines were used at all. This test was conducted by extremely affluent modelers. For financial reasons, don't try this at home, kiddies, unless you know dad's American Express number.

Top Competitors, 1987-88

Name	NAR #	Section	Total
<i>A Division</i>			
1- LaVallee, J. E.	39244	471	7,908
2- Linder, Donald C.	35892	117	7,706
3- Moser, William	38831	486	7,608
4- Linder, Andy J.	43406	117	7,454
5- Sias, Mathias	43745	403	7,141
6- Weaver, Chris	41889	203	4,841
7- Kmetz, John Jr.	44762	403	4,282
8- Barrett, Patrick	43642	205	4,124
9- Moser, Samantha	40761	486	3,729
10- Burgess, Joel	36016	203	3,592
11- Gottung, Marshall	43234	471	3,312
12- Hinote, Kevin	44076	475	3,132
11- Travis, Phillip	44551	117	2,882
12- Moser, Aaron	42471	486	2,789
13- Moser, Thomas	44739	486	2,694
14- Travis, Daniel	44550	117	2,128
15- Burgess, Mary	39998	203	2,474
16- Barber, Lisa	31154	205	2,046
17- Baxter, Andrea	35488	IND	1,896
18- Burgess, Andrew	43073	203	1,853
19- Baxter, David	35489	IND	1,758
20- Barber, Maria	36952	205	1,497

B Division

1- Williams, Marty	35301	403	10,685
2- Barklage, Tim	44211	475	9,263
3- Kmetz, Kathy	44761	403	6,271
4- Olyniec, Lee	35214	403	4,664
5- Haynes, Jason	43119	403	3,010
6- Catherine, Upton	40970	475	2,573
7- Everson, Jamie	36669	427	1,194
8- Burgess, Anne	44704	203	1,061
9- Martin, Chris	PEND	337	963
10- Thomas, Wesley	46046	IND	672
10- Everson, Patti	PEND	IND	672

C Division

1- Domina, Dan	50570	205	7,534
2- Linder, Donald L.	35893	117	6,775
3- Hendricks, Wayne	17818	403	6,243
4- Barber, Trip	4322	205	4,606
5- Hunsicker, Scott	26555	480	3,970
6- Sexton, Jim	35936	461	3,862
7- Kmetz, John Sr.	43113	403	3,722
8- Wilfong, Roger	36404	463	3,104
9- Moser, David	28979	486	3,077
10- Wolf, Dan	24516	136	2,886
11- Nienast, Al	28820	369	2,724
12- Gorham, Jeff	27382	203	2,648
13- Zingler, Jim	28818	369	2,593
14- Rice, Larry	33323	113	2,555
15- Hegwood, Bob	42031	487	2,477
16- Weaver, Ken	44000	203	2,414

17- Huegele, Vince	37502	403	2,374
18- Kowaleski, Mike	37608	461	2,234
19- Bernaches, Robert	29996	480	2,216
20- Moser, Barbara	29190	486	2,197

Teams

1- Crunch Birds	T471	471	9,670
2- Zunofark Team	T048	403	8,470
3- Lee/Purcell	T241	203	7,138
4- Dual Egglofters	T002	117	6,231
5- Jankov/Pavlov Team	T205	205	5,484
6- Higher Straights	T343	475	5,204
7- Iron Banana	T588	117	4,337
8- East Meets West	T100	205	2,324
9- Brown & Brown	T205	205	2,031
10- J&P SRB's	T005	471	2,002
11- Robyn & Randy Tm	T403	403	1,832
12- Ace Disaster Company	T026	308	1,572
13- Mutt & Jeff Team	T120	427	1,437
14- Honeymooners	T811	461	1,350
15- Maverick	T011	IND	1,194

Sections

	#	Total
1 HARA	403	64,054
2 NIRA	117	36,507
3 NOVAAR	205	33,875
4 ASTRE	471	28,080
5 Vikings	203	27,705
6 SMMRC	486	22,032
7 Red Stick Rocket Society	475	21,532
8 FT WORTH	480	17,588
9 HUVARS	463	9,068
10 Carolina Skywriters	461	7,885
11 CMAR	477	7,410
12 CSAR	113	6,035
13 DARS	308	5,845
14 W W A R	369	5,605
15 Magic II	377	5,381

Please note:
These results are
unofficial, and
not approved
by the NAR
Contest Board.



From Your Sometimes Sober Editors

(Continued from Page 2)



with one of its largest national meets ever, shut down!

But, here's the rest of the story, as Paul Harvey says.

NARAM wouldn't have had any problem, had it not been

for someone outside the FAA

that got the whole thing rolling.

Just to give you an idea of what we're up against, we'll let the culprit tell you in his own words what he thought he saw. Here's the text of a letter that was sent to the FAA the week after we got the clearance to fly. (*My comments are in italics*). The individual writing the letter is a member of the Huntsville City Police, and also happens to be a private pilot.

Mr. John Hardy
Flight Standards District Office
6500 43rd Avenue North
Birmingham, AL 35206

Dear Mr. Hardy:

Just before noon this date, Investigator T. Quillin and I observed a group of people on the Old Airport properties in Huntsville involved in an organized event in which rockets were fired into the cloud cover, and in a short time the empty housing would reappear through the clouds as it floated back to earth. (*Matt says this just wasn't true.*)

According to the Huntsville Weather Bureau, the cloud level we were observing was at 4000 feet AGL. Talking to the participants we learned the rockets sometime reached 9,100 feet. (*I wonder who he was talking to?*) We were present later when the cloud cover had moved aside, and as a pilot, I would estimate some of the shots were in the range of 3,500 to 4,500 feet. The participants agreed the shots were in this range.

Recognizing an extreme hazard (*what extreme hazard?*), I phoned Huntsville Aviation to advise them of the rockets flying in the same airspace, and at altitudes even higher than the average flight level of aircraft arriving and departing Huntsville. We also called all the small airports to alert them of the hazard and give them a chance to avoid the area. (*So this is where all the fun started! This guy writing is a private pilot who teaches safety courses. You'd think he'd know the law!*)

When speaking with the FAA Facility about the hazard, we were advised a waiver had been denied to the group and that they should not be firing in violation of any airspace. (*Of course, the NARAM was not flying in violation of any airspace*)

I then notified the Legal Department of the City of Huntsville that missiles (*huh?*) were being launched from City property into controlled airspace without the consent of the FAA, thus no provisions existed to separate missile and aircraft using the same airspace. (*Of course, he was wrong*

about this.) I was advised to get with Mr. Ralph Stone who works for Huntsville Parks and Receptions and does all the scheduling of the Old Airport properties. The City's folder indicated that the club had made application to use the airspace, however, the club failed to advise the City that it was denied. (*This was the 3.3 pound waiver for larger rockets.*) Mr. Stone and I went to the Old Airport and confronted Mr. Matt Steele about the waiver denied by the Federal Aviation Administration. He asked that we meet with him and other club officials in Room 122 of the Ramada Inn and give them a chance to work out the problem with the FAA. He indicated they had encountered the same problem before and that they had a club member that was a FAA official who could straighten things out right quick.

Investigator Quillin, myself, and Mr. Stone met the club officials at the Ramada Inn as they requested. There we were introduced to Mr. Larry Barklage who was on the phone screaming at someone and insisting to talk to someone else. This went on for sometime and through several individuals on the other end of the line. During the break periods when he was waiting for people to come to the phone, he handed me a business card that identified him as Larry E. Barklage, Aviation Safety Inspector, Flight Standards District Office #62, 9191 Plank Road, Baton Rouge, LA 70811 - Phone (504)356-5701, FTS: 687-0755.

Mr. Barklage explained to me that the FAA did not know beans about what they were doing and that he was ashamed to be affiliated with the same organization.

He had in his possession a copy of some FARS and was pointing out that the club did not even need permission to fire the rockets under the current rule.

After talking with several people, Mr. Barklage ultimately spoke with Mr. Craig Smith in Atlanta and an agreement was worked out to allow the event to continue.

Mr. Barklage pointed out over and over that the Federal Regulations were written in such a manner that they failed to applied to this club and that they have a legal right to fly their missile into any altitude as long as they weight less than one pound. (*That's true, sucker!*)

The FAA and NTSB have developed a sophisticated system to provide safe flight conditions for those traveling by air. Extensive efforts are exerted to protect an individual's right to a reasonable expectation of safety. However, it appears at this point that additional thought and control should be given to an unmanned missile and the hazard presented when the explosive matter (*I think he was looking at the tracking powder when he made this comment.*) is hurled into the airspace of passenger carrying vehicles without proper clearance and separation.

According to the club members, the rockets travel at speeds close to 250 miles per hour. The same sources declared the vehicles are capable of reaching 9,100 feet altitude. I personally saw the rockets penetrate a cloud cover that would have obscured an aircraft, balloon, or glider had there been one present above the cloud level. I observed a scheduled air carrier cross the south end of the activity on its way into Huntsville International Airport. I also watched as a Piper Cherokee circled the event and rockets were fired far above his altitude. (*Yeah, and all three were so endangered by these groundless charges that they crashed and burned on impact with these "missiles".*)

Perhaps the regulations should address the vehicles in some manner other than "weight." Using the weight limitations provided by the regulation, the rocket flyers are able to enter controlled airspace, yet they are uncontrolled.

The City of Huntsville is pleased to host organizations having regional and national meets. We hope our facilities are adequate and the participants enjoy their stay with us. At the same time, we are concerned for the safety of those arriving by air travel and we appreciate the efforts of the FAA and others charged with that responsibility.

Let me personally express appreciation for the FSDO Birmingham and the Control Tower - Huntsville for the professional and calm handling of the situation as it existed here today. Mr. John Lawrence and Mr. Lloyd Alley both acted with great care to work out an extremely dangerous situation and offer the maximum protection to air travel across our city. We are indeed fortunate to have the safety programs provided by these individuals and lend ourselves to further their cause.

(Yes, these individuals were so professional that they infringed on the law, and denied the NARAM rocketeers their legal rights. It's good that they were calm and collected in this EXTREMELY DANGEROUS SITUATION.)

Hopefully some arrangements will develop to allow proper control of airspace used by all vehicles, either manned or unmanned. Over the years we have observed the FAA make sound, common sense decisions to mold the regulations into a sophisticated safety tool. I am sure reasonable attention will be paid to this problem.

I have not published the name of the man who wrote this for his own protection. I know what some of you out there might do to him.

What an incredible letter! It just goes to prove that 30 years of safety and hard work can go down the drain with the efforts of one misinformed, overzealous bureaucrat! The guy doesn't have to be part of the system to screw things up! Is it any wonder we haven't gotten the weight limits raised with people like this around? It's scary, isn't it?

Then you have the FAA people, who basically told us "You can't have a waiver 'cause you need one". When confronted with the FAR's allowing us to fly legally, they basically said, "NO!" Until we could use the NAR's political muscle in Washington, we were going nowhere. Eventually, Larry Barklage and Harry Stine got the ball rolling.

So, there's a lot more to this fight than meets the eye. Pat Miller thinks that this "egg" on the face of the FAA might have a silver lining. The FAA, in their embarrassment, might push through the legislation that they have been sitting on their duff for the past three years. Only time will tell, but the NAR will be renewing its efforts to get the skies "opened up."

"I don't FEEL tardy..."

Yeah, this issue is a little late, due to the infamous post-NARAM blues. Still, this would've been one of the three month issues, in order to make things work out to six issues a year. We'll be back in mid-January with another 24 page issue, which will become our standard issue size.

Happy Holidays!

J.D. McNeil

Buyer Beware!

An independent test was recently conducted for SNOAR NEWS on two U.S. Rockets' G motors. Summarized below are the results of the tests:

	<u>Claimed</u>	<u>Actual</u>
Motor 1		
Designation	G35-?	G31-∞
Total Impulse	120 n-sec	91 n-sec
Specific Impulse	230	160

Note: Delay stopped burning about 2 seconds after burnout; ejection charge did not go off.

Motor 2		
Designation	G30-8	G21-22
Total Impulse	120 n-sec	89.5 n-sec
Specific Impulse	230	160

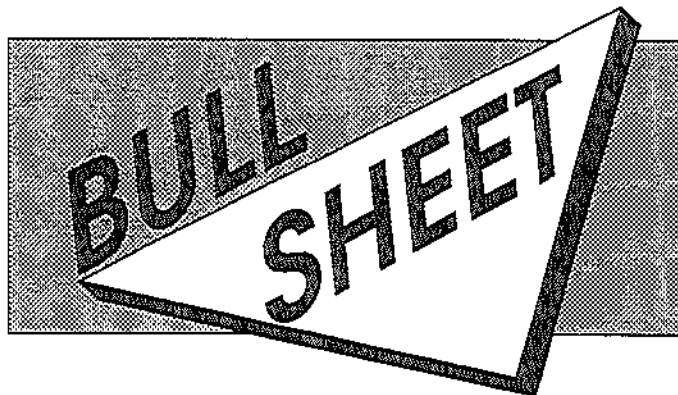
Note: Delay train burned clear, i.e. no smoke

Think twice before using any uncertified motor, sports fans!!!

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ON ILLEGAL
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Enertek has called it quits. Apparently they were unable to convince any bank or financial lending institution to lend them additional capital. There were a number of people (17 as we understand it, at \$10,000 each) who lost their investments in Enertek. Enertek had anticipated on getting 50 such people, and part of the problem was the failure to get that first \$500,000 in financing. In the end, Enertek didn't have one piece of production merchandise in their warehouse. Most everyone that ordered got a check back that read "Company out of business-sorry!"

The new NAR Board of Trustees consists of Chris Tavares (MA), Matt Steele (AL), Bryant Thompson (CA), Mark Bundick (IL), John Pursley (TX), Connie Pursley (TX), Ed Muccio (KY), Pat Miller (TX), Chas Russell (TX), John Worth (VA), Claud Greenlee (MO), Jack Kane (MA), and Vern Estes (CO). The Officers are Claud Greenlee (Treasurer), Chris Tavares (Secretary), Mark Bundick (Vice President), and Pat Miller (President). Your votes certainly did count, as Bundick barely made the tally this time. I'm sure he's sweating it for the next election.

It looks doubtful that the next World Spacemodeling Championships will take place in Rumania. Seems that the Rumanians haven't paid their FAI dues in the past two years, and didn't show up at the December FAI meeting in Paris. With things touch and go, Howard Kuhn is contacting the USSR to see if they would be interested in hosting the meet. The USA is not interested in hosting a 1989 meet, due to the lack of time to raise funds.

Speaking of international competition, the USA beat the USSR in the first "Friendship Meet" at Wallops Island, Virginia. Complete coverage will follow in the next issue of SNOAR NEWS.

Flyoffs for the second USA/USSR Friendship Meet have been switched from Huntsville to Allentown. Matt withdrew his offer to host the contest after certain NAR members complained about the Huntsville location. Art Rose has picked up the meet, and will probably host it on the long July 4 weekend.

The HIA (Hobbies Industry of America) is no more; they've changed their name to the Crafts Industries of

America, and asked model manufacturers to go somewhere else. This is a big blow to the NAR, as the HAI was always a big sponsor (such as \$6000 to the last US World Championships).

The NAR membership is inching towards 5000! It seems that the rebirth of the space program with the launch of the space shuttle Discovery is helping the NAR grow. The November figures indicated a total membership of over 4900. It appears that the NAR might break the mark in December or January. The all time NAR membership high was a little over 5100, so you can bet there will be a hell of a party when we go over. Get someone signed up today!

Damon is lurching towards a takeover bid; Estes and Hi Flyer may be spun off as a result. Word is out on the street that if Estes is sold, Monogram might be the likely buyer. It's too early to tell what, if anything, will come of this.

Big motors have been put on hold by the NFPA. At least for the time being, as they tabled the proposal to allow up to 125 gram propellant weight in model rocket motors. The issue will be relooked in the near future, which could make for fun motors in the F & G range. Meanwhile, the NFPA did adopt a restriction of 80 N-sec average thrust for all model rocket motors. That means that the G100 and G125 are out for modelers.

The NAR is exploring an exemption to the current FAR's to allow modelers to fly rockets up to 3.3 lbs. This may be a more expedient way to get things moving until the law is permanently changed.

The LOFT-1 flight was flown from Cape Canaveral, Florida. The payload section was provided by NCR, but Vulcan Systems made the booster after NCR and E Prime failed to reach an agreement on payment. E Prime reportedly stiffed NCR over \$2500 in the deal. Scott Dixon, always one to make a buck at anyone's expense, stepped in and provided an identical booster, based on the NCR design. The only part that E Prime designed, the delayed parachute system, failed to work. No word on whether any further flights are planned. E Prime has failed to win any major contracts to date.

Despite rumors, MRC is alive and well. They've just released a new catalog/flyer with more kits in it.

This is a bit dated, but we understand there was a fire near Jerry Irvine's shop last February. Seems someone got into Tom Johnson's shop and was messing around with a big rocket motor. The motor ignited, which reportedly then ignited several hundred pounds of oxidizer. The fire was brought under control before it spread to other buildings, but the roof and a wall of the shop were gone on the building before the fire could be put out. Don't play with matches unless you have the fire extinguisher nearby...

Happy Holidays to All! See you next year!

New for 1989!

The Big Brute

The perfect high power demo rocket!

Can be flown nearly out-of-sight on F motors, or punch it into orbit on a G! Features slow, realistic take-offs, and is perfect for the new White Lightning motors! Recovery is by colorful 36" rip-stop nylon parachute. The BIG BRUTE also incorporates our new Gorilla Shock Cord Mount System™ (patent pending).

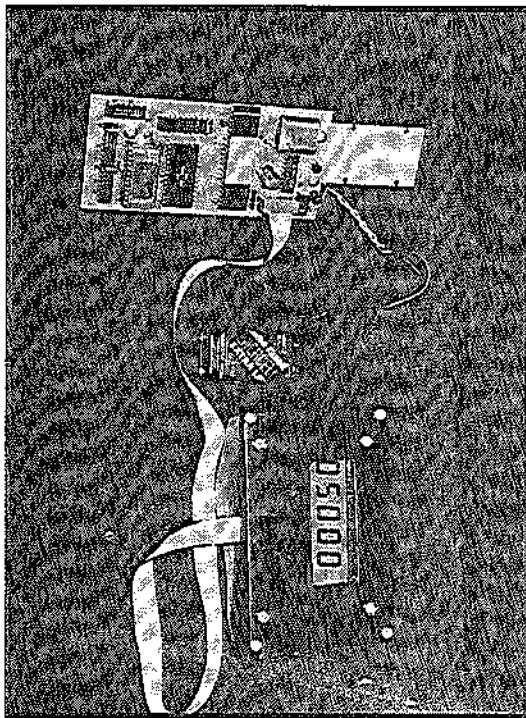
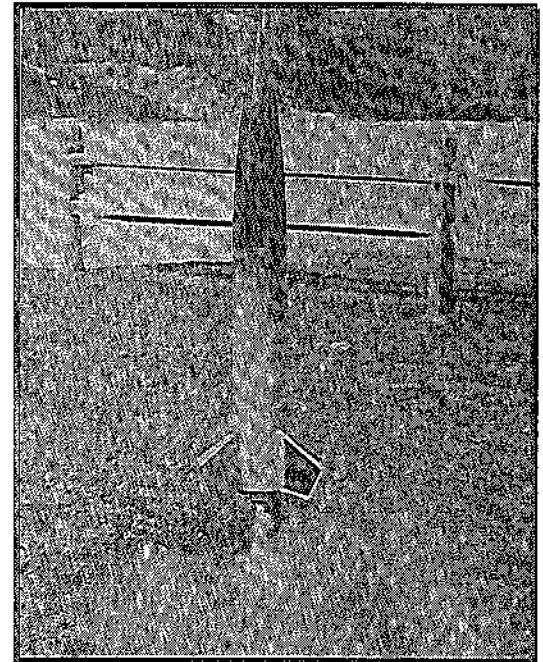
Length: 35" Diameter: 4.0" Weight: 450 g

Recommended motors: F20-4, F25-6, F41-6, F60-6, F80-10, G25-10, G40-10, G60-10, G80-10

Catalog # K-53

Price \$24.00

Holiday Special Price (thru 12/24/88): \$20.00



Electronic Data Logger ALTM-1 & Computer Display Unit DSPL-1

The North Coast Rocketry ALTM-1/DSPL-1 is an CMOS microprocessor system, which will sample the barometric pressure inside the vehicle during flight. The unit stores the altitude data in RAM memory for recall after the flight when plugged into the DSPL-1 unit. The ALTM-1 takes pressure samples in intervals of 0.5 seconds, and can record a total of 1048 samples (almost 9 minutes of flight time). Peak altitude reading or a 1/2 real time display of flight altitudes are available on the DSPL-1. Fits inside of a BT-23 with ease, and weighs less than 8 ounces in flight configuration. The ALTM-1 and DSPL-1 are both powered from the same 9 volt carbon-zinc or alkaline transistor battery. On field calibration of the ALTM-1 is possible to adjust to whatever altitude you are flying from.

Call our order Hotline at
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and ask for Matt or Robyn.

Products in stock will be shipped within 48 hours. UPS Next Day Air service is also available for those last minute Christmas orders.

VISA and MasterCard accepted.



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