

# MAX-Q

Newsletter of the Huntsville Areas Rocketry Association

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1988 SECTION NATIONAL CHAMPIONS

## HARA SWEEPS NARAM-30

### Club Takes Pennant

NARAM-30 means victory to HARA. From the beginning of the contest season last July to the last event in August, HARA was the leading section and is now the National Champion. Huntsville has captured the pennant from NIRA (who held it for 3 consecutive years) with a record 63,790 points. NIRA was the reserve champions at 36,465 and NOVAAR a strong third with 33,833. ASTRE and VIKINGS rounded out the top 5 in the section race.

The section win comes with the successes of the individual club members. Marty Williams is the number one B Divisioner in the nation and also scored the most points at NARAM-30 while Kathy Kmetz took home the NARAM-30 reserve trophy. The Zunofark team of George Gassaway, Matt Steele and Chas Russell cap-



tured the reserve team position nationally and was the Meet Reserve Champion for C Division and Teams combined. Matt Sias is the NARAM Meet Champion in A Division. Besides these top places, other HARA members also had proud performances. (see page 3)

If the winning points were not enough, HARA was honored to host what many people said was one of the best NARAM's ever. Contest Director Matt Steele received praise from usually negative and discerning critics for pulling it off so well. In every way, NARAM-30 was definitely a winner.

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# Wadding Scraps



## From The President's Pad

*"Better is the ending of a thing than its beginning." Ecclesiastes 7:8*

If a picture is worth a thousand words, then contained here in MAX-Q are 30,000 words about NARAM-30. It would take that much to tell the stories of what happened that week. Instead of writing volumes, I decided to put these pictorials in MAX-Q and let them form the memories.

We will each have our own thoughts of NARAM-30 that are as meaningful to us as the participants in the recent summer Olympics. Except that I can't imagine the Koreans opening the stadium, setting up the field, posting the schedules, and then turning around and sweeping the gold. But in NARAM-30 terms, that is exactly what HARA did. Equally surprising is that two years ago when NIRA was getting their second of three consecutive section championships, HARA hardly existed. Without flying a full contest year in our initial sanctioned competitions, we backed into the reserve position for 1987. Now, head to head against NAR's best, we have come out on top.

My interest in directing the club to the national championship was not totally for points and trophies (but we'll certainly take them!). I recognized early, the impressive potential of this club. From our first meetings and launches (which NAR veteran Matt Steele observed were "too well attended for a typical rocket club") it became clear we would accomplish much. Also, there is this incredible spirit of cooperation in HARA, where everyone's job in the club fortunately coincides with what they like and do best. Our presence in the local civic, aerospace and education community was becoming known through our diverse activities. But it was the NAR community I was concerned about, since they were our modeling peers. I just wanted them to know there was now a club in Huntsville.

As a developing section, compared to the established clubs, how were we doing? I couldn't just go on George and Matt's proud chuckling ("we're doing fine, let's hold a NARAM, hee hee hee"). If we were good and getting better, there was one more thing we needed: recognition.

Although the NAR gives awards for many things, there is really only one way to look like the best club in the nation, and that is through the rocket contests. A club could, for example, teach classes in local schools, develop get-away specials for shuttle and sounding payloads, compile scale data to rival NASA's archives, be on the forefront of rocket design technology, and do all kinds of things I would think a club would try to do, but they would never be acknowledged much unless the club also flies contests. Of course, a club capable of all that would decode the pink book and become contenders anyway. Conversely, a small, competition-only section can maintain attention by regularly grinding out the points. Judging sections by their contest performance is not entirely fair or accurate anymore than is judging a school by their athletic team. Such is the system. So if rocketry is to be a game, deal us in.

Most of the NAR had not ever heard of HARA until the announcement of NARAM-30 was made at NARAM-29. As the year progressed and we developed our contest skills, our points began to show up. I expanded our MAX-Q newsletter exchange with other editors so they would know about us. We had stories printed in the American Spacemodeling and Model Rocket News magazines. NARAM-30 was going to be our big "coming out" to the modeling community.

Well, we "came out" all right. NARAM-30 was

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## MAX-Q

**Burned Out Club President:** Vince Huegele; **Finally back to being just chief cook & bottle washer:** Robyn Steele; **Mr. "20 hours of sleep the entire week of NARAM":** Matt Steele; **The Hard Labor Gang who pulled off a National Championship their very first full contest season:** Jimmy, Sandra & Marty Williams, Crocodile Wayne Hendricks, George Gassaway, Chas Russell, Randy Kelling, John, Kathy & John John Kmetz, Frank & Mathias Sias, Damon & Derek Nolin, Lee Olyniec, Jason Haynes, Bill & John Anglin, Carl Gustin, Wayne, Dana, Matthew & Emily McCain, Chuck Hall, Ed Stluka, Lester & Gloria Johnson, David Reasoner and Commander Cody.

**MAX-Q Contributors:** Matt Steele, Byron Papa, Wayne Hendricks, Ed Stluka

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## Trophies, Records & Warm Feelings



HARA's performance in NARAM-30 is presented in two ways. The full event ratings and flight values are given on page 5. The individual performances and corresponding awards are summarized here. The section championship is implicitly seen.

**Marty Williams** is the national champion and NARAM-30 Meet Champion for B Division. He was the overall leader in NARAM points with 5,201 and ended the year with a total of over 10,000. Marty won four events: 1/2A Parachute Duration (PD), A Helicopter Duration (HD), B Rocket Glide (B RG), and Sport Scale (SS). He was never lower than sixth in any event except for a DQ in B Streamer Duration (B SD).

**Zunofark Team** of George Gassaway, Matt Steele and Chas Russell (representing several European countries) are the reserve team national champions and the NARAM Reserve champions (Team & C Division combined). Their efforts brought HARA 8,206 points for the year. Trophies include wins in Research & Development (R&D) and D International Boost Glide (DIBG), (the heaviest weighing factors) and third in B RG and Giant Sport Scale (G SS), (next heaviest events). Zunofarks also acted as HARA coaches in building, prepping and flying of the contest events all year.

**Mathias Sias** won the NARAM-30 Championship in A Division and ended up fifth overall in A Division with 7,141 points. He won A HD, DIBG, and 1/2A PD

with an impressive number of maxes. Other trophies were a second in SS and a third in B RG. During the banquet, Matt's dad Frank won the grand prize of a trip to next year's NARAM-31 in Virginia. Frank has already informed us that he will be traveling to Virginia as a contestant and not as a spectator as he was this year.

**Wayne Hendricks** is HARA's leading C Divisioner, finishing second at NARAM in C Division and third nationally with a total of 6,243 pts. He won DIBG (actually a tie with Zunofark's with three maxes) and was second in B SD. He also received flight points for his R&D presentation, which is significant because they are rarely given. Wayne is probably the only person who would have a back-up Saturn V to fly to retain fifth place in SS when his first one had a cato and damage it enough that he couldn't fly it.

**Kathy Kmetz** is reserve NARAM Meet Champion in B Division scoring 3,623 pts and third in national rankings in B Division with 6,271 overall. She had two first places (DIBG, F Alt), three second places (PSL, A HD, B EL), three third places (B RG, 1/2A PD, B SD) and one fourth place (SS). That's essentially a trophy in everything. It's too bad she had a DQ in Predicted Altitude (PA). But her F Altitude flight set a new national record in her division reaching 1340 meters.

**John John Kmetz** had HARA's second most points in A Division (4,282). He won B SD, was second in B RG and fourth in A HD. Otherwise, John qualified in every event.

**Lee Olyniec** had several trophies to take home. Two second places is B SD and B RG with three fourth places in B Eggloft (B EL), DIBG and PA were his haul. Lee finished fourth in NARAM and in the Nation for B Division finishing with 4,664.

**John Kmetz Sr.** won the top C slot in B RG. He got two fourth places in 1/2 A PD and A HD. For a late start this year and considering all the time he put into helping Kathy and John John, John finished in the 6th in the nation and second only to Crocodile in HARA ratings.

**Randy and Robyn Team** (Kelling and Steele) made a good NARAM showing, winning A HD with a killer 500 second flight. They picked up fourth in B SD and DIBG and were ninth in NARAM team standings.

*continued on page 8*



# Are We Having Fun Yet?

(clockwise from below) 1. Matt McCain and John Kmetz Jr. help with measuring at the Spot Landing target. 2. Vince Huegele, John Kmetz Sr. and Wayne Hendricks (taking the picture) spent most of the afternoon of the banquet moving 144 NARAM trophies from Wayne's condo to the SARC. 3. Wayne McCain and Ed Stluka setup and took down tables and tents for the range. 4. Equipment manager Jimmy Williams listens to Mark Bundick explain a small problem. 5. On altitude day Robyn Steele input tracking data while Dana McCain operated the ham net base.







# NARAM-30 Results

[Ed. Note: Trophies and points are awarded for 1st through 4th places, so all competitors taking one of those places are all listed here. Additionally, flight points are awarded for all qualified flights. All HARA members who achieved flight points in individual events are listed in Results in bold type according to their performances.]

## 1/2 A International Parachute Duration

Name	Seconds
<b>A Division</b>	
1st Mathias Sias	360
2nd Phillip Travis	347
3d John Marsh IV	334
4th Donald C. Linder	312
11th John Kmetz Jr.	194
17th John Anglin	35
20th Derek Nolin	20
<b>B Division</b>	
1st Marty Williams	306
2nd Tim Barklage	292
3d Kathy Kmetz	205
4th Upton B. Catherine	198
9th Lee Olyniec	11
<b>C Division</b>	
1st John A. Marsh III	358
2nd Dan Domina	348
3d Barry Saterthwaite	347
4th John Kmetz Sr.	329
10th Wayne Hendricks	240
27th Vince Huegele	117
36th Bill Anglin	20
<b>Teams</b>	
1st Crunch Birds/ Lee Purcell	360
2nd East Meets West	354
3d Jankov/Pavlov	255
5th Randy & Robyn	253
6th Zunofark	240

## B Streamer Duration

Name	Seconds
<b>A Division</b>	
1st John Kmetz Jr.	273
2nd Andy Linder	245
3d William Moser	240
4th Daniel Travis	200
16th Derek Nolin	38
18th John Anglin	31
<b>B Division</b>	
1st Chris Martin	236
2nd Lee Olyniec	219
3d Kathy Kmetz	216
4th Tim Barklage	124
<b>C Division</b>	
1st Terry White	349
2nd Wayne Hendricks	290
3d Dan Domina	277
4th Kay Goforth	267
13th Vince Huegele	191
23d Jimmy Williams	101
28th Bill Anglin	71
<b>Teams</b>	
1st East Meets West	752
2nd Crunch Birds	217
3d Higher Straights	175
4th Randy & Robyn	174
6th Zunofark	111

## B Eggloft Duration

Name	Seconds
<b>A Division</b>	
1st Andy Linder	180
2nd Jean-Etienne LaVallee	98
3d Donald C. Linder	56
4th Phillip Travis	50
8th John Kmetz Jr.	39
9th John Anglin	38
14th Mathias Sias	29
17th Derek Nolin	15
<b>B Division</b>	
1st Wesley Thomas	63
2nd Kathy Kmetz	55
3d Upton B. Catherine	37
4th Lee Olyniec	34
6th Marty Williams	31
8th Jason Haynes	21
<b>C Division</b>	
1st Sid Maxwell	308
2nd Donald L. Linder	194
3d Trip Barber	159
4th Dan Domina	117
6th Wayne Handricks	62
7th Wayne McCain	61
13th Carl Gustin	37
17th Jimmy Williams	33
19th John Kmetz	32
24th Vince Huegele	24
<b>Teams</b>	
1st Dual Egglofters	171
2nd Crunch Birds	147
3d Sweet & Sour	82
4th Jankov/Pavlov	73
5th Zunofark	67
8th Randy & Robyn	34

## A Helicopter Duration

Name	Seconds
<b>A Division</b>	
1st Mathias Sias	187
2nd Andy Linder	118
3d Derek Nolin	114
4th John Kmetz Jr.	108
5th John Anglin	91
<b>B Division</b>	
1st Marty Williams	314
2nd Kathy Kmetz	191
3d Tim Barklage	116
4th Chris Martin	71
5th Jason Haynes	67
<b>C Division</b>	
1st Carl Gustin	486
2nd Dan Domina	237
3d Robert B. Hart Jr.	147
4th John Kmetz Sr.	137
5th Vince Huegele	132
6th Jimmy Williams	131
10th Wayne Hendricks	83
17th Wayne McCain	48
<b>Teams</b>	
1st Randy & Robyn	567
2nd Crunch Birds	313
3d East Meets West	308
4th Lee/Purcell	162
7th Zunofark	77



# More NARAM-30 Results...



## D Altitude

Name	meters
<b>A Division</b>	
1st Phillip Travis	824
2nd John Marsh IV	808
3d Daniel Travis	738
4th Maria Barber	639
11th Mathias Sias	480
13th John Kmetz Jr.	417
17th John Anglin	399

## F Altitude

Name	meters
<b>B Division</b>	
1st Kathy Kmetz	1340
2nd Marty Williams	1274
3d Tim Barklage	980
4th Upton B. Catherine	901
5th Jason Haynes	888
<b>C Division</b>	
1st Trip Barber	2838
2nd Dan Domina	1574
3d Larry Shenosky	1365
4th Dan Kafun	1306
9th Wayne Hendricks	1299
16th Jimmy Williams	874
19th Wayne McCain	812
<b>Teams</b>	
1st East Meets West	1891
2nd Crunch Birds	1805
3d Lee-Purcell	1666
4th Mutt & Jeff	1304
5th Randy & Robyn	1298
7th Zunofark	1121

## Predicted Altitude

Name	%
<b>A Division</b>	
1st William Moser	0.6%
2nd Chris Weaver	1.1%
3d Derek Nolin	1.6%
4th Lisa Barber	2.0%
11th Mathias Sias	16.9%
14th John Kmetz Jr.	24.7%
20th John Anglin	47.0%
<b>B Division</b>	
1st Anne Burgess	1.5%
2nd David Marcinski	6.0%
3d Jason Haynes	8.8%
4th Lee Olyniec	12.0%
5th Marty Williams	27.8%
<b>C Division</b>	
1st Jon Rains	0.9%
2nd Rob Freeman	1.0%
3d Trip Barber	1.8%
4th Fred Gravagna	1.9%
12th Jimmy Williams	8.7%
14th Vince Huegele	19.4%
22nd Wayne Hendricks	19.4%
23d Wayne McCain	21.9%
32nd Bill Anglin	45.5%
<b>Teams</b>	
1st Dual Egglofters	0.0%
2nd East Meets West	0.7%
3d Iron Banana	3.1%
4th Jankov/Pavlov	4.1%
7th Zunofark	12.0%
8th Randy & Robyn	12.2%

## B Rocket Glide

Name	Seconds
<b>A Division</b>	
1st Jean-Etienne LaVallee	219
2nd John Kmetz Jr.	203
3d Mathias Sias	168
4th Andy Linder	135
5th Derek Nolin	119
<b>B Division</b>	
1st Marty Williams	299
2nd Lee Olyniec	134
3d Kathy Kmetz	68
4th Tim Barklage	57
<b>C Division</b>	
1st John Kmetz Sr.	345
2nd Dan Domina	198
3d Trip Barber	149
4th Donald L. Linder	144
6th Wayne Hendricks	111
11th Carl Gustin	81
13th Vince Huegele	58
<b>Teams</b>	
1st Crunch Birds	208
2nd Iron Banana	173
3d Zunofark	163
4th Dual Egglofters	125
6th Randy & Robyn	92

## D International Boost Glide

Name	Seconds
<b>A Division</b>	
1st Mathias Sias	595
2nd Andy Linder	361
3d Lisa Barber	339
4th Joel Burgess	270
5th John Kmetz Jr.	243
8th Derek Nolin	143
<b>B Division</b>	
1st Kathy Kmetz	422
2nd Marty Williams	370
3d Tim Barklage	84
<b>C Division</b>	
1st Wayne Hendricks	810
2nd Phil Barnes	747
3d Jimmy Williams	738
4th Dan Domina	674
6th Vince Huegele	501
9th John Kmetz	298
19th Wayne McCain	22
<b>Teams</b>	
1st Zunofark	810
2nd Lee/Purcell	688
3d Jankov/Pavlov	555
4th Randy & Robyn	506

## Research and Development

<b>A Division</b>	
1st William Moser	
2nd Donald C. Linder	
<b>B Division</b>	
1st Tim Barklage	
2nd Marty Williams	
<b>C Division/ Teams</b>	
1st Zunofark	
2nd Donald L. Linder	
3d Chuck Hall	
4th Martin Catt	
N/R Wayne Hendricks	
N/R Vince Huegele	

Flight points  
Flight points





# And More Results...

## Sport Scale

Name	static/flight	total
<b>A Division</b>		
1st J. E. LaVallee	710/134	844
2nd Mathias Sias	655/147	802
3d Andy Linder	641/148	789
4th Chris Weaver	626/156	782
9th John Anglin	521/153	674
15th John Kmetz Jr.	349/160	509
17th Derek Nolin	325/140	465
<b>B Division</b>		
1st Marty Williams	698/148	846
2nd Jason Haynes	614/173	787
3d Tim Barklage	584/114	698
4th Kathy Kmetz	573/120	693

## Giant Sport Scale

Name	static/flight	total
<b>C Division/Teams</b>		
1st Lee/Purcell	710/160	870
2nd Crunch Birds	682/161	843
3d Zunofark	643/163	806
4th Jankov/Pavlov	665/100	765
6th Wayne Hendricks	579/166	745
8th Randy & Robyn	530/172	702
20th John Kmetz	320/119	439
21st Wayne McCain	300/123	423
22nd Vince Huegele	315/92	407

## Parachute Spot Landing

Name	Feet
<b>A Division</b>	
1st Samantha Moser	15'.6"
2nd William Moser	27'.7"
3d John Marsh IV	36'.2"
4th Donald C. Linder	40'.5"
13th John Kmetz Jr.	+100
Derek Nolin	+100
Mathias Sias	+100
<b>B Division</b>	
1st Jason Haynes	64'.9"
2nd Kathy Kmetz/	+100
David Marcinski/	+100
Chris Martin	+100
<b>C Division</b>	
1st Ken Brown	8'.2"
2nd Tina Barber	22'.8"
3d Donald L. Linder	23'.2"
4th Ed LaCroix	26'.6"
5th Wayne Hendricks	35'.7"
7th Vince Huegele	43'.3"
17th Bill Anglin	86'.6"
27th John Kmetz	+100
<b>Teams</b>	
1st Lee/Purcell	37'.5"
2nd Crunch Birds	53'.0"
3d Dual Egglofters	53'.10
4th Higher Straights	63'.3"
6th Zunofark	85'.11
9th Randy & Robyn	+100

## Overall HARA Competitor Standings

Name	preNARAM/NARAM	total
<b>A Division</b>		
5th Mathias Sias	3512/3629	7,141
7th John Kmetz Jr.	2572/1710	4,282
17th Derek Nolin	316/938	1,254
18th John Anglin	508/415	923

## B Division

1st Marty Williams	5484/5201	10,685
3d Kathy Kmetz	2648/3623	6,271
4th Lee Olyniec	3496/1168	4,664
5th Jason Haynes	1958/1052	3,010

## C Division

3d Wayne Hendricks	4203/2040	6,243
6th John Kmetz	2090/1632	3,722
13th Vince Huegele	1646/728	2,374
19th Jimmy Williams	842/720	1,562
23d Carl Gustin	80/800	880
26th Wayne McCain	338/424	762
35th Chuck Hall	0/544	544
48th Bill Anglin	0/168	168

## Teams

2nd Zunofark	4870/3336	8,206
9th Randy & Robyn	440/1392	1,832

## Special Awards

*Estes Space Camp  
Contest Winner*

Mary Beth Lemon

*Gregorek Memorial Award*  
Chris Weaver

*Best Midwest Qualified  
Flight Award*  
Mark Johnson

*NARAM-30  
Appreciation Award*  
Jimmy Williams

*Nartrek Achiever of the Year*  
Bob Hegwood

*LAC Newsletter Trophy  
Ascent from Midgard; Vikings*  
Jeff Gorham, Editor

*President's Award*  
Bob Kaplow

*Galloway Award*  
Art Rose

## NARAM Meet Champions

Name	Section	Points
<b>A Division Champion</b>		
Mathias Sias	HARA	3,629
<b>Reserve</b>		
Andy Linder	NIRA	2,764
<b>B Division Champion</b>		
Marty Williams	HARA	5,201
<b>Reserve</b>		
Kathy Kmetz	HARA	3,623
<b>C Division/Teams Champion</b>		
Crunch Birds	ASTRE	3,808
<b>Reserve</b>		
Zunofark	HARA	3,336





## And Still More ...

### 1988 National Champions

Name	Section	Points
<b>A Division Champion</b>		
Jean-Etienne LaVallee	ASTRE	7,908
<b>Reserve</b>		
Donald C. Linder	NIRA	7,706
<b>B Division Champion</b>		
Marty Williams	HARA	10,685
<b>Reserve</b>		
Tim Barklage		9,263
<b>C Division Champion</b>		
Dan Domina	NOVAAR	7,534
<b>Reserve</b>		
Donald L. Linder	NIRA	6,775
<b>Team Champion</b>		
Crunch Birds	ASTRE	9,494
<b>Reserve</b>		
Zunofark	HARA	8,206
<b>Section Champions</b>		
HARA		63,790
<b>Reserve</b>		
NIRA		36,465

*Trophies, Records & Warm Feelings  
continued from page 3*

**Jason Haynes** claimed first in Parachute Spot Landing (PSL), second in SS and third in PA. His other flights brought him in fifth overall behind Lee O. in B Division.

**Derek Nolin** got to take home two trophies. He was third in A HD and PA. For A Division, he was in the NARAM top ten and HARA's third highest contributor in that division.

**Carl Gustin** hasn't been flying with HARA that long, but the RotaRoc he built at a club session captured first place in C Division. He only entered a few other events, but that C win let HARA sweep the helicopters.

**Chuck Hall** only entered the hardest event and finished third. His master's thesis made a nice R&D presentation and the hefty 544 points made a significant contribution to the section points.

**Jimmy Williams** had so much to do in maintaining the range, it's surprising that he got time to qualify in six events. His trophy was for third in DIBG, prompting the comment to Dan Domina (who took fourth), "You got beat by an old man with one arm."

Of HARA's eighteen NARAM contestants, fourteen

won a trophy. This astonishing performance might make the other four look bad. There will always be the loyal, brave contenders who give their best shot, but finish in the crowd. But upon examining the results and considering this was national competition, these guys were not shabby at all. Getting close, but no cigar were these.

**Vince Huegele** was fourth in A HD most of that day, but dropped to fifth in the final tally. Neglecting a DQ in DIBG wouldn't have moved him out of sixth for that event. He got flight points in R&D (a significant accomplishment as usually only first through fourth places are given and teams are ranked with C Divisioners) and qualified in every event he entered. The door prize he won at the banquet was nice and Sharal also won a door prize, Vince made out like a bandit!

**John Anglin** was also fifth in A HD for A Division. He had good flights, particularly in B EL and SS and qualified in seven events.

**Wayne McCain** did his best in B EL where he was seventh. The rest were flight points for the club. He got a door prize at the banquet too.

[Note: Wayne McCain did take home the "Dead Last But Finished" Mug at the Banquet for Sport Scale. However, this was subsequently protested (the only protest of the meet) by Vince to the Contest Director. Vince proved that he had the lower Sport Scale score by tangling his chute and breaking a fin at landing. Matt happily complied and Vince was awarded his own mug at a later date.]

**Bill Anglin** had not flown in any HARA contests or competitions at all until NARAM-30. It takes a lot of club spirit to start at that level.

The following club members did not fly in NARAM-30, but participated in the 1988 contest season with points to support the club victory: *Colin Reasoner, David and Mark Atkinson, & Dana, John and Scott McCain.*

Additionally, other club members did not fly, but came out and helped with range duties both at NARAM and throughout the year. They make a significant contribution to the club and we greatly appreciate their efforts. These include *Lester and Gloria Johnson, David Reasoner, Ed Stluka, Frank Sias, Damon Nolin, Sandra Williams, and Margaret Gassaway.* HARA would like to recognize their efforts in contributing to our National Championship as well.



# Pats Without Hats



Randall Redd makes strange rockets. To honor NARAM-30 and NAR President Pat Miller, Randall designed several character models featuring the likeness of Pat. They had all been tested and worked, he said. On the last day of NARAM, these models were launched as part of "Pat Millertime." But somehow, the motors provided by Matt Steele didn't work well.

*(clockwise from top) 1. NARAM-30 crowd observes 'Crazy Horse' Miller do a war dance on pad 14. 2. 'Ho Chi' Miller suffers problems. 3. 'Beldar' Miller ruptures his guts in still another mysterious cato. 4. 'Mickey' Miller blows up every which way but loose. [exclusive MAX-Q photos by Huegele]*

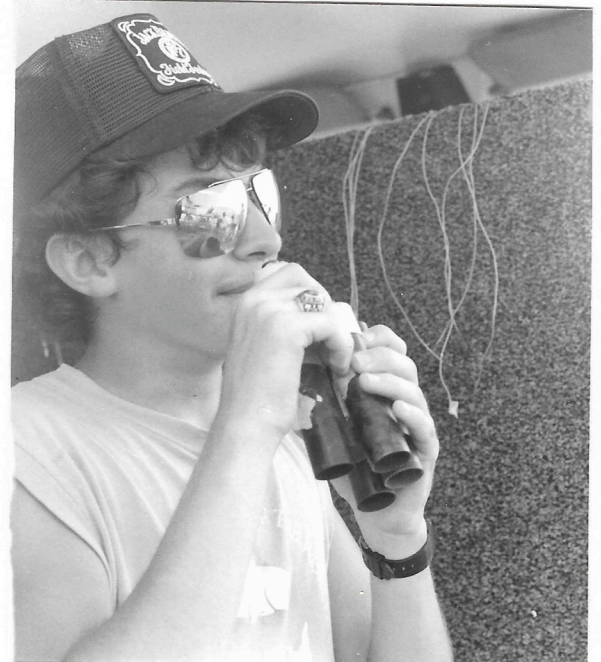
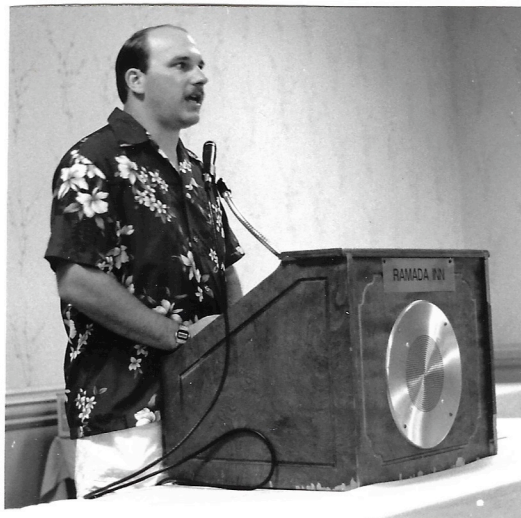




# Scenes From NARAM-30

*(clockwise from right)*

1. Kathy Kmetz, John Kmetz Sr. and Jr. and Marty Williams are issued eggs for lofting. 2. Qualified eggnaughts are retired to the debriefing carton. 3. Marty savors the aroma from composite casings. 4. Matt Steele kicks off the contestants meeting. 5. Room 122 became the Sport Scale hanger and a nightmare for judges.  
[ photos by Huegele ]







(clockwise from left)

1. Kathy Kmetz get help from dad as she loads her winning F altitude model before her record breaking 1340 meter flight. 2. George Gassaway helps John Anglin prep an egglofter. 3. NARAM-30 A division champ Mathias Sias takes a break. 4. Martin Catt discusses solar ignitors with Estes rep Mary Roberts. [photos by Huegele]





# The Best & Worst of NARAM-30



## **Best Comment made about HARA**

To Jimmy Williams: "Boy, you HARA people really stick together!"

## **Worst Attempt made by a bureaucrat to throw his weight around**

FAA official from Huntsville Airport calling the police to shut down NARAM-30 for "flying in violation of our waiver". When shown the regulations that permitted us to fly legally without a waiver, he still refused to back down and let us continue flying.

## **Best attempt to correct the FAA official's screwup**

Larry Barklage who is with the FAA Regional offices in Louisiana spent 2 hours on the phone to the Birmingham, Atlanta and Washington offices to get the mess corrected. In addition, Harry Stine in Phoenix called Senator McClain's office, and between Larry, Harry, Pat Miller, Matt Steele, Barb Bundick (our NAR attorney) and Mary Roberts, the NAR once again scored a victory over the FAA. (We have since received several apologies from the FAA in Washington and have been told to contact them directly should we need a waiver in the future.)

## **Best Comment after the FAA screwup**

"Did you think to ask them for a 3.3 lb waiver while you were at it?"

## **Best T shirt to come out of the FAA shutdown**

"NAR 2; FAA 0"

The Range Store sold 92 of these within 2 days!

## **Best way found to fight the heat & humidity on the flying field**

A NAR mug filled with coke and ice available at the Coke Wagon/Range Store for \$1.00.

## **Worst attempt by the competition to knock out HARA competitors**

Mark Johnson's model that pranged and wrapped itself around Vince Huegele's ankle (which showed us the best dancing style of NARAM incidentally). Mark won the Best Midwest Qualified Flight Award for this one.

## **Runner up**

Donald Linder (the Elder)'s F altitude bird that went unstable and tried to take off John John Kmetz's leg.

## **Also in the running**

NOVAAR adding Jon Rains to their section roster to get more points.

## **Best flying done at NARAM**

Marty Williams scored 5,201 points at NARAM, winning the B Division meet championship (and outscoring every other competitor regardless of age division).

## **Best party animal of NARAM-30**

Chas Russell of the Zunofark Team finally made it to bed at 6:30 am Saturday morning (after the victory party in Mary

Robert's room) following the awards banquet.

## **Running a close second**

Matt Steele, also of the Zunofark's, went to bed at 4:00 am after the same party; then had to get up at 6:45 am, 15 minutes after Chas came to bed, to run the Internats flyoffs. (Fortunately for Matt, Robyn was sleeping at home with Cody!)

## **Best doorprize won at NARAM**

Frank Sias of HARA won the GRAND prize of a free trip to NARAM-31 in Virginia next year. Frank has decided to attend as a contestant next year rather than a spectator, so look for him to be doing some flying during the contest season!

## **Most Ironic Doorprize Won at NARAM-30**

Vern Estes who founded Estes Industries, won a North Coast Corporal kit.

## **Turnabout is Fair Play**

Matt Steele of NCR won an Estes kit and gift certificates.

## **Most doorprizes won by a single family**

Tie between Art, Janet & Harry Rose, who each won a doorprize and John, Kathy & John John Kmetz.

## **Worst Mistake Made in Scoring at NARAM**

The award for Dead Last But Finished was erroneously awarded at the Awards Banquet to Wayne McCain for Giant Sport Scale. It rightfully belonged to Vince Huegele who was subsequently awarded his mug at a later date. (Let's get the record straight!!!)

## **Best Looking at the Awards Banquet**

Kathy Kmetz in her gorgeous pink dress.

## **Runner Up**

Marty Williams who looked pretty sharp in his suit.

*Knock'em dead HARA!!!*

## **Worst Hat (???) Worn at NARAM**

Claude Greenlee, whose reputation for being strange continues to grow with each NARAM he attends. (He's a NAR Trustee, what do you expect!!!)

## **Most Quotable Quote Made by a HARA member**

Wayne Hendricks: "I have the same luck finding a thermal as I do finding a woman. But I think I have better luck with the thermals."

## **Best recovery vehicle**

Clyde "Williams", who gave his best for the club.

## **Second best recovery vehicle**

Williams' Volkswagon who learned to chase flexies down and bring 'em back alive, usually with Crocodile hanging out the window!

## **Worst attempt to convince people that he did not want to attend the 1989 Internats in Rumania**

George Gassaway who won both Radio Control & Boost Glide with 3 maxes in each on Saturday, in the Internats flyoffs.





## More Best & Worst of NARAM-30

### **Best sacrifice made for the club**

Jimmy Williams, who tried really hard to give his left arm for HARA (and ended up with 12 stitches after a confrontation with a belt sander on Wednesday night). *I know that the club asked for sacrifices during NARAM week but don't you think this was going a little too far???*

### **Best sweep of a single event**

A Helicopter, where HARA members took 8 out of 16 places, including a first place in every division (See results)

### **And for an encore**

HARA members took 7 out of 16 places in D International Boost Glide, again including a first in every age division. (See results)

### **Best way found to cool off after a hot day on the flying field**

The Ramada Inn swimming pool. (Just ask Kathy & John John Kmetz!)

### **Best T shirt seen at NARAM**

Matt Steele was seen wearing a T shirt that read: "There is no problem that cannot be solved by a suitable application of high explosives."

### **Greatest distance traveled to attend NARAM**

Chas Russell of the Zunofark Team who came from Belgium to Huntsville by way of Ft. Worth, TX. (Our sole representative of the "several European countries" that were mentioned in all the news coverage.)

### **Still Pretty Far Away**

Steve Lubliner, who drove from California, & Fritz Gnass, Peter Cook & Taras Tataryn who came from Ontario, Canada to attend the festivities.

### **Best news coverage ever at a NARAM**

The 3 local television stations featured NARAM-30 on their Sunday, Monday, Tuesday and Wednesday broadcasts. In addition, we were covered in the August issue of Southern magazine, the Monday edition of the Huntsville Times and the Monday edition of USA Today. *Hey, we're famous, folks!!*

### **Best Sport at any NARAM in recent memory**

Mary Roberts of Estes Industries.

### **Running an awful close second**

Connie Pursley, NARCON Director.

### **Best item offered at the NAR auction**

Dinner for two with Mary Roberts. Highest bidder was Jon Rains with a \$50 bid (which proves the statement about Mary being the Best Sport).

### **Best new NAR trustee elected to the Board**

Connie Pursley.

*Way to go Connie!!! The Board needs a little class!*

### **Best attendance by corporate sponsors**

By virtue of being in Huntsville, we had more corporate sponsors attend the Awards Banquet to present awards than any other NARAM (at least in recent times). Attending were Cal Wiggins, Vice President and General Manager of Morton Thiokol, Ernie Fleming, also of Morton Thiokol, Fred Garcia of Rocketdyne, Don Reed of United Technologies and Don Barnes of Aerojet General. Also attending but not recognized (much to our regret) at the banquet was Niles White of Atlantic Research Corp. We really appreciate these corporate sponsors and all the support they give the NAR.

### **Best attendance at an Awards Banquet**

The NARAM-30 Awards Banquet, held at the Alabama Space & Rocket Center had 200 attendees!

### **Best participation at a NARAM in 17 years**

NARAM-30 had 173 participants- the biggest since NARAM 13! (And seems to have effectively refuted Mark McReynold's opinion about NARAMs in a recent issue of AmSpam!)

### **Best flying vegetable at NARAM-30**

Sparky, the flying asparagus flown by Rob Freeman, made his appearance at NARAM once again. Sparky is an old NARAM veteran.

### **Absolutely the Worst Giant Sports Scale Model to show up at NARAM:**

Ric Gaff's inflatable Saturn V (which actually flew...sort of) (See pictures)

### **Best rocket imitation of a NAR President**

The "Miller Rockets" in honor of J. Patrick Miller, our esteemed President, were built and sent by Randy Redd of WARP in SLC, Utah (who is known for having a bit of a WARPed sense of humor). Included in the 6, which actually had a facsimile of Pat's face and ears on the rocket, were Mickey Miller, "Beldar" Conehead Miller, Crazy Horse Miller, Shawn Dervish Miller, Ghandi Miller and Ho Chi Miller. They flew as well as Pat can be expected to fly. (Which means most of them catoed!) (See "Pats Without Hats" photos)

### **Competitor most worried about NARAM-31 after attending NARAM-30**

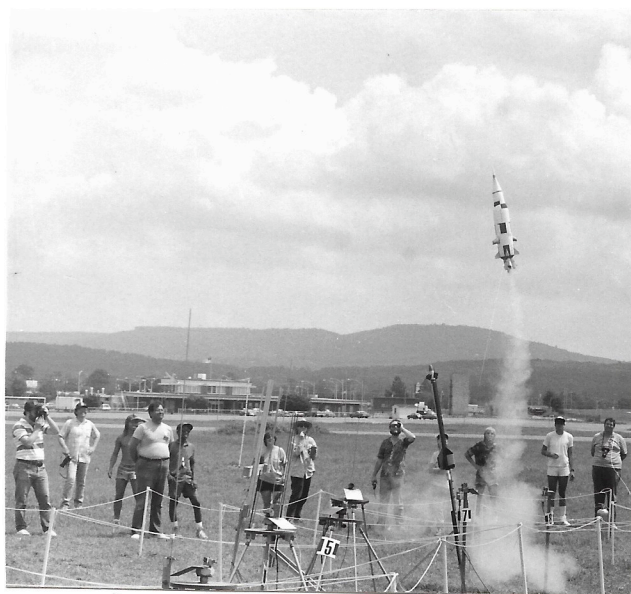
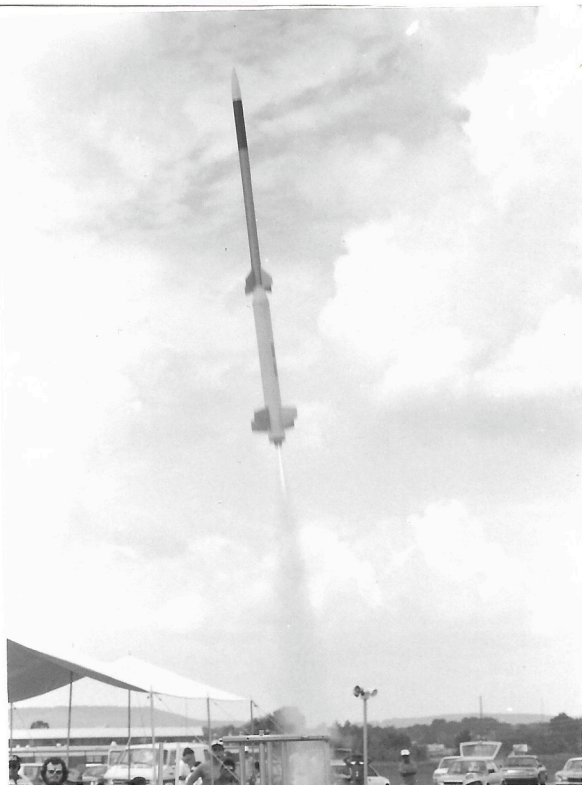
Trip Barber, NARAM-31 Contest Director

*Face it...We're a hard act to follow!*



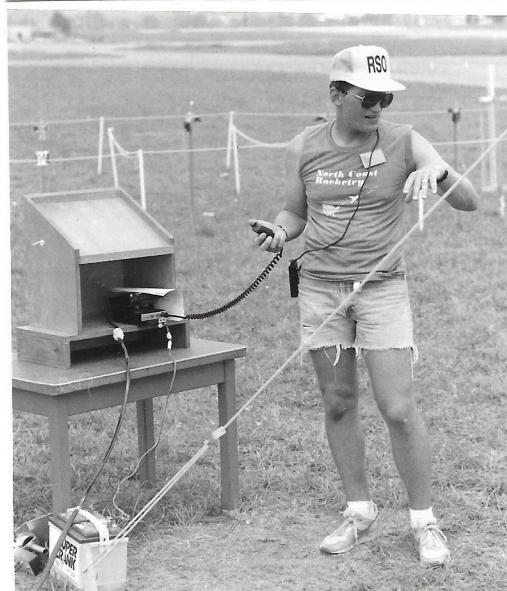
*clockwise*

Ric Gaff prepares to "blow up" his inflatable Saturn V while Edward LaCroix tries not to be embarrassed. 2. Check-in official Trip Barber goes through the formality of an inspection before giving Gaff the "thumbs down". 3. But Gaff interpreted "thumbs down" to mean "push the button" and the Saturn flew okay. 4. George and Matt display the lazy man's way to Internat qualification. 5. A giant sport scale Nike takes to the air.



# NARAM-30





*clockwise*

1. Raise your hand if you're sure, Mary Roberts. Behind her is John Cato, inventor of the D12. 2. Wayne McCain spoke on Huntsville Thiokol operations and products. 3. Even large parachutes didn't drift at NARAM. 4. Marty Williams and Wayne Hendricks check the skies. 5. The RSO shift must have fatigued the wrist of Chas Russell.



# HARA Members & Countdown



• Anglin, Bill & John 4449 Millvale Dr., 35805	534-7971
• Atkinson, David and Mark 3111 Holly Hill Rd 35802	882-0505
• Baggett, Clay 8151 Oldfield Dr. #10 35802	881-2953
• Buddington, Patricia 194 Shelton Rd #11; Madison	461-3955
• Chambers, Richard 1901 Polk Dr. 35801	539-1448
• Clark, Al & Chris 124 Liza Lane, Madison, 35758	772-8466
• Dennis, Jay • Dooling, Dave • Ferguson, Steve Rt 9 Box 528; Athens 35611	
• Gassaway, George and Margaret P.O. Box 59012; Homewood, AL 35259	879-3649
• Gustin, Carl 4963 Mountain View Pky; Birmingham 35243	
• Halbritter, Markus 9016 Cannstatt Dr., 35802	883-5299
• Hall, Chuck 3120 Andros Dr., 35805	883-6369
• Haynes, Jason Rt 4, Box 200, Scottsboro 35768	
• Hendricks, Wayne (HARA Treas.) Box 4922, 35815	n/a
• Hoffman, Luke 6509 D Whispering Pines, 35806	837-6467
• Huegele, Vince, (HARA Pres.) 11108 Argent Dr., 35803	881-2904
• Johnson, Lester & Gloria (HARA Sec) PO Box 5491, 35814	837-3640
• Jordan, P.R. & Adam 3614 Greenbriar Dr., 35810	852-5649
• Kelling, Randy P.O. Box 153, Mt Olive AL 35117	
• Kmetz, John L., Kathy & John Jr. Rt2 Box 468 Lacey Springs, 35754	883-7378
• McCain, Wayne, Dana, John, Scott, Matt & Emily; 4209 Nolen Ave., 35801	536-224
• Mitchell, Timothy 3303 Belcrest 35801	
• Nolin, Damon & Derek 10001 Willow Park Dr., 35803	880-8197
• Olyniec, Lee 1109 Hood Ave, Scottsboro, AL. 35768	259-0173
• Papa, Byron 6319 Robin Hood Lane, 35806	837-1206
• Reasoner, David & Colin 3103 Holly Hill, 35802	883-7629
• Russell, Chas 3741 Longstraw Dr., Ft Worth, TX 76137	
• Sias, Mathias and Frank 871 Moontown Rd, Brownsboro, 35741	852-8771
• Sin, Peter 3014 Thurman Rd 35805	536-6716
• Smith, Henry 3709 Vogel Drive, 35810	
• Snyder, Chris 14009 Percivale Dr. 35803	882-1905
• Steele, Matt (HARA VP), Robyn & Cody 13011 Branscomb Rd., 35803	883-6020
• Stluka, Ed & Thomas, Michael 2802 Brett Rd, 35801	852-3850
• Stubblefield, Katie 1714 Sandlin Ave., 35801	534-5359
• Swenson, Decia	881-3743

## Countdown

OCTOBER:	1-2 Oct; US/USSR Meet Wallops Island, VA 8 Oct; Rocket City Classic #7 City-wide contest 20 Oct; Meeting 7:30 PM 22 Oct; SEDS demo, UAH
NOVEMBER:	17 Nov; Meeting 7:30 PM 19 Nov; Turkey Shoot: NAR Regional (See events below)
DECEMBER:	Happy Holidays!!! 8 Dec; HARA Christmas Party 7:00 pm, (dinner) Location TBD

Meetings are held at the ASRC  
Please be on time or you won't get in.  
Meet at the back door near the  
Pathfinder display.  
Launches are held at the Old Airport  
unless otherwise announced.

1989 Contest Schedule and events  
to be announced in next issue.

## Turkey Shoot Events

Sport Scale	Multi Round A HD
B Streamer Duration	Multi Round B RG
B Egg Duration	Predicted Duration
Precision Duration (30 sec)	

321 Mountain Gap Road, 35803	
• Tansy, John and Brian 133 Cedar Lane; New Market, 35761	
• Tygielski, Mark 406 Green Acres, 35804	837-7486
• Wagschal, Dick 6206 Rime Village 35806	837-9325
• Williams, Jimmy, Sandra & Marty 3203 Fairacres Rd., 35803	539-4801
• Williams, Ron 109 Fair St, Chattanooga TN 37415	n/a
• Williamson, Mike P.O. Box 322; Madison 35758	837-1853
• Wingate, Jason 2908 Azalea Circle, 35805	539-6707
• Yeager, Carl & Jeff 4316 Shelby Ave. 35801	539-2839





## ...and More Wadding Scraps

### Trajectories

- *Marty Williams* has infiltrated Wilson's Hobby Shop for HARA. He's working there part time and knows what you want and how to get it for you.

- *Jimmy Williams'* arm is improving after its run-in with a belt sander during NARAM. Who else has scars from that week?

- *Lee Olyniec* has transplanted a bit of HARA to College Station, Texas, where he is attending Texas A&M on a 4 year ROTC Scholarship. Write to Lee at Box 6696, College Station, TX 77844

- Congratulations to *Vince and Sharal Huegele* for surviving five years of wedded bliss last August 27th. *Matt and Robyn Steele* just passed the two year mark on September 6th.

- *Byron Papa* has moved to Springfield Drive in Madison.

- *Dave Dooling* is now with D2 Associates, an aerospace writing and promotion service.

- At the September meeting, *Ed Stluka* won the door prize of an MRC Sidewinder kit by correctly naming the date of the last successful shuttle launch (STS-24). It was easy, since apparently he had a payload on that mission. *Wayne McCain* won a poster by giving the date of the first shuttle flight.

Have you looked in the JC Pennys Christmas catalog? They have Estes kits and launchers. You can get a Saturn V for only \$59.99 (some assembly required, batteries not included.)

*Special thanks to Pat Saucier and the Alabama Space and Rocket Center for providing a meeting place for our monthly meetings.*

WHEN YOU VOTE IN THE  
NOVEMBER ELECTIONS,  
REMEMBER THAT MAX-Q  
ENDORSES BILL AND OPUS.

*From The President's Pad; continued from page 2*

more than anybody asked for. Good weather, light winds, endless thermals. National records, personal best times, high scores. Meticulous organization, automatic operation, flawless execution. Good people, good flights, good times and rockets, rockets, rockets.

They know there's a rocket club in Huntsville now. We're not only here; the points say we're number one. We have earned our recognition with credibility. But we're not just a passing nova. There is still too much ahead to do, more than just contests. HARA and the NAR are progressing so well, I have to think that the best times for model rocketry are even yet to come. Whether HARA is just in the ranks or leading them, we continue *ON ASCENT*

*Vince Huegele*

### Rockets in Jeopardy

A week after NARAM-30, Vince Huegele got a call from the research department of the Jeopardy game show. They had seen the story in *USA Today* and wanted to verify some information about NARAM before using a question on the show. Now they have it. Are you ready Don Pardo? In the category of Transportation, the final Jeopardy answer is:

"The national championships for this sport were held on pads in Huntsville, Alabama in August, 1988."

Since this clue has not been used yet, MAX-Q cannot reveal the correct question lest someone gain an advantage on the show. We will, however, give you some hints of what it is not.

"What is fussing about the pink book?"

"What is skunk spraying" (almost the same thing)

"What is Pat Miller Head Lofting?"

"Who is Mary Roberts?"

Now that we've heard from Jeopardy, it shouldn't be long before Vanna calls.



# The Fight For The Finish



## A series on painting and finishing model rockets Part II

by Byron Papa

(Ed. Note: HARA member Byron Papa is a professional homebuilder and remodeler. His expertise in home-crafts have been published in *Fine Homebuilding*. Applying that expertise to rocket building, Byron presents this series of articles. We think this represents a broad advancement in documenting a technique.)

### Priming and Sanding

Most to-be-painted surfaces need some sort of primer, sometimes for the sole purpose of adhesion (aluminum, zinc), and sometimes, as is the case with porous materials like wood, to provide an easy to sand coat(s) that will "hold out", or seal the surface from the final top-coats.

Wood and paper will usually get rough when painted the first time. Their fibers tend to swell and stand up on end when contacted by a liquid, thus creating a sandpaper-like feel to the touch. Since this will happen with most any type of paint, and since your spackled surface is still far from acceptably smooth, it's important that the primer be very sandable, and many primers are designed to be just that. Primer will help you shape the surface so that when the enamel top-coat goes on, you'll be painting smooth primer, not wood or paper.

I've used a couple of different primers for rockets. Earlier in the game, I'd use fast-drying white alkyd primers. These are widely available and are usually intended for stain sealing and spot priming on house interiors and furniture. They are heavy-bodied, fairly flexible and work with fewer coats, but don't sand very well unless they're allowed to dry overnight. Ordinary slow-drying (12 hour) alkyd primer is another possibility; it's very flexible and sands better, but is generally not available in spray cans, is a bit heavy and still takes too long to work with.

My choice is automotive sandable lacquer-base primer/surfacer. No paint I've ever used sands more easily and fully without clogging the paper. It speeds up the finishing process significantly, usually being sandable in about 15 minutes after application. Though mostly intended for auto body work, it's perfectly acceptable to use on wood and paper. It is very thin, however,

and most of what comes out of the can evaporates, so it takes a lot of coats. It's also more brittle than the alkyd primers. It's usually available in light gray, red and sometimes black. I mostly use light gray.

If you want a good-looking finish job, you'll have to spray the paint. It's no use going through all this trouble if you don't spray. You don't need any spray equipment at all; just use spray cans.

When buying spray cans, there is an important consideration. Many manufacturers have gone to a revolutionary new patented spray valve called FANSPRAY.

These valves spray the paint in a flat, fan-shaped pattern, just like a professional spray gun. This type of spray pattern is much easier to use (especially for beginners) and applies the paint more efficiently. The valves can also be rotated so the fan spray can be changed from vertical to horizontal. To top it off, they are much easier to press and hold down than the old type. They are blue in color and don't look much like a standard spray valve. About the only drawback is that they tend to clog more after their initial use: the problem is worse with certain paints (lacquer is the least trouble-prone) FANSPRAY valves bring a great improvement to spray paint and I don't recommend buying cans without them.

Always try to spray outdoors with your back to the wind. Don't breathe the vapors; they're toxic. A paint respirator is expensive (about \$30), but if you build a lot of rockets, you should consider getting one. An ordinary dust mask will filter out solid airborne particles (spray mist), but won't do much for the vapors. You can also try holding your breath while spraying, then backing away to breath fresh air.

I always use a paint stick to paint my rockets. It is simply a spent rocket engine glued to an 18 inch dowel. A 3/8" dowel will work for standard and mini engines and a 5/8" fits a D casing. Just ream out most of the old propellant, pour in some glue and shove in the dowel. When it's dry, hook the engine in the rocket's motor mount and you've got a handle on the rocket.

Although FANSPRAY valves offer the choice of vertical or horizontal fans, for rockets I always spray with a vertical fan, so I'm moving the can from side to side, instead of up and down. Usually they come already adjusted to the verticle mode. To switch to horizontal, use long nose pliers to turn the valve a quarter turn--most cans provide instructions.

Use general rules of spraying paint. Always start moving the sprayer (can) before you pull the trigger, start spraying beyond the target (rocket) and pass the target up before releasing the valve. Instructions usu-



ally say to hold the can 8-10 inches away, but I hold it more like 4-6 inches and move the can faster. This way, I waste less paint. If you've never sprayed much paint, it will take a while to get the knack of it.

For a typical rocket, I start by coating the edges of the fins. Next, I coat the remaining fin area and follow up on the tube. The nose cone can be primed on the rocket or separately. If it's plastic, primer isn't really necessary, except to improve and smooth out the mold line. If you do prime it, sand it first to promote adhesion. If it's foam, sand it very lightly, so as not to get through the skin.

I normally spray 2-3 coats of primer before the first sanding. Each coat is extremely thin, so that's not a whole lot of paint. Let it dry between coats; when one coat turns from gloss to flat, you're ready for the next. If you're out in the sun (a natural baking oven), that only takes a minute or two.

About 15-20 minutes after the last coat, you're ready to sand. Use 220 grit again and sand heavily. These first coats of primer are for "surfacing"; although spackling paste got rid of the deeper spiral grooves and wood pores, now you have to flatten out the waves of the tube and close in on the wood's fiber texture. Most of what you've sprayed on so far will be sanded off. You'll be left with a very thin coating that you can see through. The relatively harsh 220 scratches will be hidden by subsequent coats of primer. Wear a dust mask for sanding.

After sanding, spray 2 more coats in the same manner. When dry, these should be sanded more carefully with 320 grit paper.

You're really just trying to remove the 220 scratches, while doing only a little additional surfacing. try not to sand through the primer too much this time, unless you wish to apply additional surfacing coats with 320 sandings. For a truly flawless job, especially in the case of scale models, indeed you probably will want to do additional surfacing, but at this point I usually go to the final primer coat for most models.

I spray one (slightly heavy) final coat of primer followed by a light sanding with 400 grit paper. This final coat is done mostly just to remove the 320 scratches, which would show through the finish coats badly. At this time, if there are any spots down to bare wood or paper, they'll need primer. You should be left with a smooth, uniform coat of primer, ready to receive the finish color(s). It will be smooth but very thin, since most of what went on so far has been sanded off. Your finish enamel won't be able to do any more surface prepping or smoothing- it's there for color and luster- so the shape of the primer will pretty much be the shape of the finish.

## Enamel Painting

I use two basic types of enamel paint (also in spray cans) for my rockets. General all-purpose household enamel, available at paint stores, is easy to use and produces a nice gloss. However, it's not exceptionally durable and tends to clog the FANSPRAY heads after initial use. Automotive enamel is somewhat more durable and dries hard faster, but you can have blemishing problems in humid weather and it's more brittle and cracks easily if the rocket gets dented. The all-purpose enamel is easier to use, so that's what I recommend to start out. Again, watch for the FANSPRAY valves, which will cut your choice down drastically (see listing).

To help solve the valve clogging problem, save the valves as you empty cans. Lacquer primer cans usually work well throughout their lives, so their valves make good spares. You can try to unclog a valve with a needle, but usually it won't be pointed enough and the plastic valves are easily damaged, ruining their spray pattern. Soaking in automotive grade lacquer thinner can help, but be careful; this is dangerous stuff. It's very toxic and flammable. I advise you to stay away from it and save spare valves instead.

I don't advise using lacquer top-coats. They are difficult to fool with and probably won't yield good results for you. I also don't recommend paint from hobby shops. I've yet to see a hobby line of spray paint with FANSPRAY valves, and the small spray cans that are usually available (Testors, Pactra, etc.) are a bad deal money-wise.

Make sure the model is dust free before you begin; there will be no more sanding unless you goof. An old paint brush works well as a duster, if you don't have compressed air. Spray a thin coat first. The first coat has the greatest chance of sagging, so don't take any chances. When it is dry to the touch, spray a second coat, just a little heavier. Successive coats have less chance of sagging because a lot of the thinner dissolves into prior coats which makes the paint tack-up and "thicken" quicker. Spray a total of at least 3 and as many as 5 finish coats of enamel. After each coat dries, look for sandpaper scratches. When they're mostly gone, you have enough paint. The last coat should be sprayed heavy. Do it in the shade and away from any breeze. You don't want the final coat to set up, or "tack" too fast. You want to be able to spray the entire rocket before any drying begins. You want this coat to stay "liquidy" until the spraying stops. If it doesn't, overspray from one area can get onto an already tacky neighboring area and ruin the deep luster. As you finish spraying this last coat, the rocket should be good and wet all over. This is the way to attain a good, even, deep luster on any paint job. The paint is able to "flow", or level out on its own. It also helps to erase any spray texture. To avoid any possible sags at



this point, move out into the sun and/or breeze immediately and continually turn the rocket in all directions (holding the paint stick) to counteract gravity, until the paint sets.

When the paint is dry, you'll probably have a pretty good job, but not a perfect one. You'll probably still see some sandpaper scratches if you look hard enough, and evidence of the spiral groove can probably still be found. But for the most part, it will look *very* good.

### *Special Situations*

Multi-color schemes can easily be attained with spraying by using masking tape. If you're using all-purpose enamel, wait a few hours (even a day) before taping off. With an automotive enamel, an hour should do. Use good tape. Automotive shops that supply car paint usually have some of the best, but I get very good tape at Sherwin-Williams; get the "Professional Quality" grade. Seal the tape well by pushing it down hard against the surface. When spraying the second color, spray a couple of very light, misty coats and let them dry well. Fast-drying light coats like this will have less chance of leaking under the tape and will seal the edge of the tape against later coats, so you can spray them heavier.

For smaller areas on scale models, instead of spraying, you might opt for a free-handed "Cut-in" with a paint brush. For a clean separation, first mark the areas with narrow masking tape and use a single edge razor (available at paint stores) to make a shallow cut. The cut will stop the paint in a straight line as you brush right up to it, making for a near-perfect separation of colors. Use a good artist brush from an art store. They're expensive, but worth the money. Sable is regarded as one of the best types, but I personally prefer squirrel hair.

Besides factory-supplied decals, you can usually find quite an assortment at well-stocked hobby shops, though they won't be intended for rockets. If you're doing custom lettering, use rub ons instead of stick-ons. They're about as thin as decals and look very professional. To align them straight, put a temporary piece of masking tape and follow it.

I rarely use paint sprayers for rockets. But if the rocket is big enough (a spray can won't be able to keep up), or if I want a paint or color not available in a spray can, I might elect to use my Binks #7. It's a general purpose paint sprayer that works with compressed air. Though good for special situations, an air-brush is not the tool for general model rocket painting. They're much too slow. I recommend a conventional sprayer like my Binks with a pint-size cup.

### *Local Paint Suppliers*

#### *Automotive lacquer primer/surfacer and enamel*

**Reid's Auto Color and Equipment**

2801 Governor's Drive

533-4990

Bondo Brand; best price for primer (\$2.50 per can)

**NAPA Auto Parts**

127 Winchester Road

852-6272

Martin-Senour brand; best source for auto enamel

#### *General Purpose Enamel*

**Sherwin Williams Co.**

1812 University Drive

533-2292

get the Super Acrylic Spray Enamel

**Huntsville Decorating Center**

816 Regal Drive

536-4479

Benjamin Moore brand; called "Utilac"

#### *Editors Note:*

Now that you know about all this good stuff to finish rockets with, where do you get it? (Besides the places Byron has listed above.) Any building supply store like West's or Southerlands should have these items, but we would like to call your attention to the newest source in Huntsville. Builder's Square on the North Parkway at Max Luther has an incredible selection of spackle, epoxy, glue and even 600 grade silicon sandpaper. Best of all, they have the lowest prices on everything, particularly desirables like Krylon and Pactra spray paint. Forget Wal-Mart! A trip to Builder's Square will get it all.





## HARA Activities

### *Pizza for Launch*

If you liked the Coke trailer at NARAM-30, you'll love the pizza delivery at Space Awareness Week. The Students for the Exploration and Development of Space (SEDS) at UAH are again this year sponsoring a model rocket contest on Saturday, October 22, 1988. The contest is open to anyone, but directed at encouraging college students to build and fly. The single "predicted duration" event will be awarded in three categories; novice, experienced and school club.

HARA will be providing the launch facilities with SEDS responsible for promoting and coordinating the function. HARA members are invited to compete or just fly but would serve better to also demonstrate some of their more sophisticated rocketry developments (payloads, efficiency designs, high power, etc.) to the collegiate audience. UAH students in technical fields could be stimulated to use rocketry in their studies if shown the right applications. They would certainly appreciate the R&D aspects more than the general public.

Ray Cronice of SEDS has promised free pizza and drinks around lunchtime. HARA members should arrive between nine and ten that morning to get things set up. To us, it will be as informal as a sport launch, but we'll still need you to help. **NOTE:** The launch will be at the UAH soccer fields behind the Engineering building.

The contest/ demo will be the conclusion of an active week of space promotion. John Denver, Harrison Schmitt and Alan Bean are scheduled to visit Huntsville that week as part of this activity.

### *Projects STAR and SOAR Report*

Now that NARAM-30 is over, Ed Stluka and Pat Buddington have a progress report on Students Training in Astronautics and Rocketry (STAR) and the Sub-Orbital Academic Research (SOAR) programs. STAR is designed for local high school or lower grades to develop experiments using model rocketry. SOAR addresses college level proposals.

Ed has coordinated with Johnson High School to accept the BABE-2 payload and act as investigators for the pending LOFT flight. Johnson science teacher, Jane Russell has agreed to form the nucleus for the STAR program in local schools.

"Johnson has a number of rocketeers that are very excited about flying experiments," said Ed. "The teachers are also serious about getting STAR going."

Discussions are continuing to define the details of STAR's operation. An 1989 curriculum will be announced as it is available.

### *ARTE- Amateur Radio Tracking Experiment*

David Babulski is at it again. He and Wayne McCain are devising a project, ARTE, to launch a radio transmitter in an NCR Hypersonic 2300 rocket kit powered by an I 283-20 motor. The flight is scheduled for July of 89 to be launched in Huntsville.

The purpose of the experiment is to loft a 1 watt VHF FM transmitter into the lower troposphere up about a mile and a half. The airborne transmitter signal will be compared to another transmitter of the same frequency on the ground. A network of ham stations will receive and record the dual signals. Analysis of the data will hopefully reveal radio propagation and refraction effects of the troposphere.

ARTE will require careful coordination of radio operators and sophisticated payload assembly. but with the success of the BABE-2 mission, Dave and Wayne are the men to pull it off. ARTE is proposed as part of project SOAR. HARA is expected to handle launch operations

### *Seventh Annual Contest is a Classic*

The Rocket City Classic, also known as the October Contest, is planned for Saturday, October 8, 1988 at the Old Airport. HARA's oldest tradition will continue even after hosting NARAM-30 only eight weeks earlier.

"We want to play off the publicity of the national convention we held, particularly since we're section champions," said Contest Director, Wayne McCain. "Now we can attract all the local modelers who heard about NARAM, but weren't eligible to be in it. The Classic is to draw casual flyers to come out and see what others are doing in rocketry."

Last year's contest operation by HARA was excellent. After NARAM-30, running the Classic should be easy. All HARA members are expected to have the same responsibilities as last year, with help from the community volunteers. "What we need to work on this year is a little more exposure. We can count on a good contestant turnout if enough people know about it ahead of time." Wayne said. Flying will begin at 10:00 am. HARA members and officials should report an hour early.

As always, the Classic will consist of four simplified events. Models will be timed for Flight Duration, and tracked for Maximum Altitude. Static judging will be for Craftsmanship and Scale. First through third places for each event will be awarded prizes with the best score of the day winning a trophy.



# Sights and Sounds at NARAM-30 or... "What I Did On My Summer Vacation"



by Matt Steele

NARAM-30 was, quite frankly, an unqualified success! Thanks to you, HARA, we pulled off one of the best NARAMs ever. It certainly reflects well on the club, and every individual member of the club. Together with the National Championship Section banner, it says that we know how to compete, and have fun doing it, too!

This was an unusual NARAM, to say the least. One of my biggest worries was that the field would prove to be too small. I had even resisted Pat Miller's suggestion to consider hosting a NARAM because I did not feel that the old Airport was big enough. After visiting Allentown College (the site of three previous NARAMs) and realizing how small that field was, I decided we could pull it off at the old Airport. We selected the events carefully, so that the field would not be an issue. With the help of some good, calm weather, there were very few lost models, and very few complaints about the field.

And, how about that weather? Everyone who came from out of town will think that we have that kind of weather all the time! It will be very hard to convince someone that, no, we don't get record setting thermals every time we fly, or crystal blue skies every time we track. They just won't believe it! George Gassaway keeps asking me what kind of deal I struck to get the good weather; this is after he's gotten rained on the last three times he's wanted to fly after NARAM.

This was the biggest NARAM since NARAM-13, seventeen years ago. Over 175 people registered, and we had 200 at the awards banquet at the Space and Rocket Center. I had done my baseline planning for 100 to 150 people, so you can imagine my surprise (and apprehension) when I got swamped with 23 applications in one day, bringing the attendance to well over 125... and there was over a month to go! I have been to big rocket meets before (NARAM-18, NARAM-21, NARAM-23, and NARAM-28 all had about 120 people attend), but I never thought I would end up running the biggest meet I had ever been too! I think the combination of the Space and Rocket Center, the ability for most folks to drive to Huntsville, and HARA's reputation all helped to attract rocketeers.

It was a record setting meet in more ways than one. Performances in all the events were phenomenal! Over 15 new National Records were set, including an eight minute A Helicopter flight, a five minute B Egg Duration flight, and an amazing series of F Altitude flights in C Division, where the top three places all were over a mile high!

Usually at a NARAM, there is a certain number of protests, and related grumbling. This year I thought I would hear more than at previous NARAMs, since I was in charge. However, there were no protests, and only a few complaints, which was remarkable considering the number of people. I think that is a tribute to HARA's fine organization and southern hospitality.

Every NARAM has something go wrong that characterizes the meet; NARAM-19 had the infamous "Black Thursday" where the trackers didn't work, and they were flying 100

n-sec of events (E Dual Eggloft, D Eggloft, and E Super Roc Altitude!). NARAM-30 will go down as the NARAM that the FAA temporarily shut down. Due to people who are unwilling or unable to read the rules, we lost part of an afternoon of flying. It is a reminder of how close we really are to losing the privileges of flying model rockets, and how easily the bureaucracy can stand in our way. We were right, of course, and got to finish out the meet without further incident. The NAR even profited from the incident; T Shirts that had the NARAM logo and read "NAR 2, FAA 0" sold out at the range store.

The NARAM Range Store did quite well, tripling the sales from last year's record. Once again, NARAM is the best place to do all of your rocketry shopping. NARTS, North Coast, Aerotech, and Apogee were particularly well represented.

The media coverage for the meet was unlike any other NARAM. Each of the major TV stations came out and did in-depth interviews. One station even did a live spot to open their 5:30 newscast. Of course, one of the Estes Solar Igniters misfired in the sequence, but nobody seemed to notice. What they did notice were the high power Smoky Sam and White Lightning flights, the beautiful Giant Sport Scale models, and George's D12 cat!

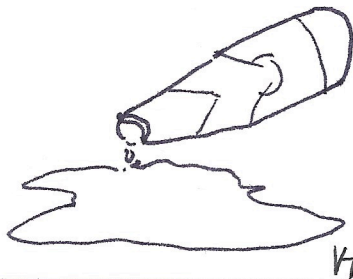
HARA as a whole would've had a good meet in any case, but one person in particular helped make it a great meet. Jimmy Williams saw to it that NARAM-30 had the best range equipment and range set up that any NARAM ever had. Besides building all the launchers, trackers, results boards, flag poles, and one launch panel for the meet, Jimmy saw to it that we had a Coke trailer, tents from the National Guard, a special range tent, and a HARA tent! Trip Barber and Mark Bundick both commented that the trackers were simply the best they had ever used. The bulk of the equipment was purchased by the NAR, so you may get a feeling of *deja vu* if you go to NARAM next year. I was very pleased to have presented Jimmy the NARAM-30 Service Award to a standing ovation at the Awards Banquet. I know he had to keep wiping the tears from his eyes, but everyone knew he had done a super job.

I'd also like to thank my friends from Cleveland, Ohio, SNOAR. SNOAR is the club that I got my start in, back in 1975. For the two months preceding NARAM, Vince Huegele worried about what he would do if I got sick, or was unavailable. I told him, "Don't worry, when the contest gets going, there will be people who know how to run it." There was, as Chris Pearson, Chas Russell, Bob Ferrante, Dan Kafun, Bob Geier, Chris Martin, and Dave Marcinski all chipped in to help out. With the mix of first timers who knew Huntsville well, and the experienced SNOAR members, the meet went off with out a hitch. Thanks, guys!

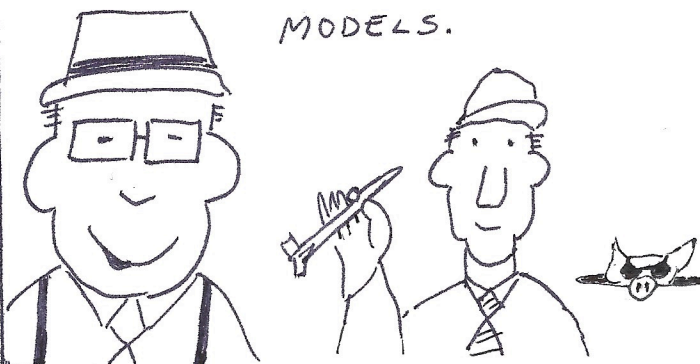
There's a lot of other people I'd like to thank out there, and you all know who you are. NARAM-30 was, without a doubt, the biggest and best NARAM I've ever been to. And, everyone who was there had a hand in it. Thanks!



# BARDLES & JAMES



ED AND I ARE HERE AT  
NARAM-30 TO SHOW OFF  
OUR NEW 'PEANUT' SCALE  
MODELS.



# FREEZE!

SECRET  
POLICE!



YO' IN A HEAP O' TROUBLE!



YOU HAVE THE RIGHT  
TO REMAIN SILENT

THANKS TO US, SGT.  
SWINE, THE AMERICAN  
AIRSPACE IS NOW  
CLEAR AND SAFE FOR  
ALL TO FREELY USE!



THIS IS NOT THE KIND OF  
COOLER BARDLES AND JAMES  
SHOULD BE IN! WE NEED  
YOUR SUPPORT!



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Did Covey

Rick Hauck

Mike Covey