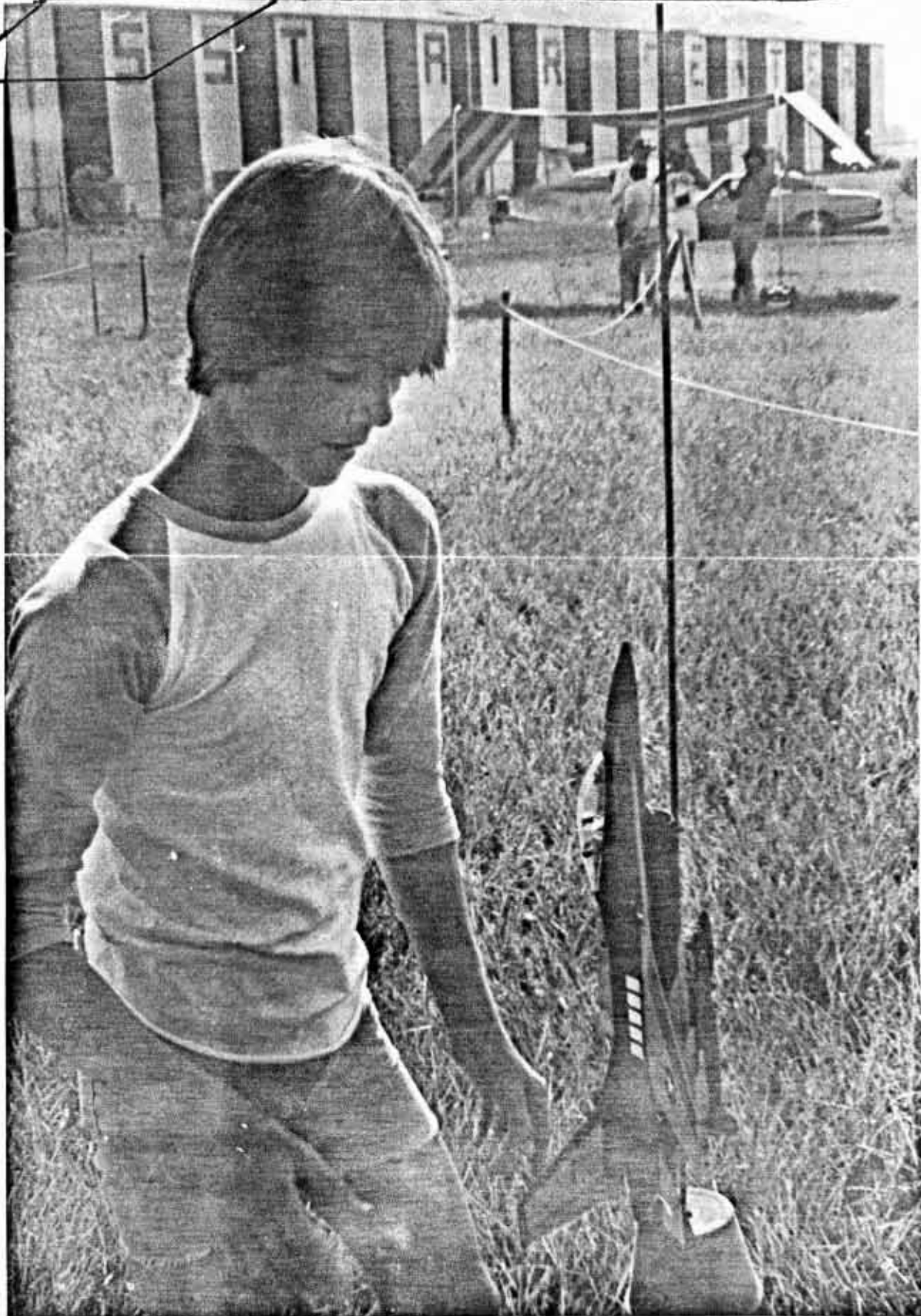


# THE LEADING EDGE



SEP./OCT. 1982 VOL.5 NO.5  
WINNER OF THE 1982 LAC NEWSLETTER AWARD

# ALWAYS A BRIDESMAID. . .

# T minus ONE

NARAM-24 is now history and a darn good meet for NIRA. Once again, we are National Reserve Section Champs, second only to PULSAR. Being second banana is not the worst thing, but this could get a bit monotonous. Almost every NIRA member places in something at the Nats (including yours truly, a perennial NARAM non-placer). Everyone seemed to enjoy themselves, greatly uplifted by Lawrence Bercini of North Carolina. This "wild and crazy guy" hung around with the club all week at NARAM. On the surface, Lawrence (who hates being called Larry) seems strange and bizzare, but on closer examination is really just strange and bizzare! In the span of a short week, NIRA and I gained a good friend. It's this sort of friendship the club should take great pride in.

NIRA also won something even more impressive than the Reserve Section Championship, the LAC Trophy for the best newsletter of the year. The Rockwell Trophy is a rotating one; we have to give it back next year, unless we win again. (HAH! We'll see about that! CH, Editor, MWR) In the meantime, the trophy is ours, and is something we can all be proud of. The "Leading Edge" is in truly great company, even cosmically transcendental company.

Many people in NIRA helped make this a better newsletter with their articles, plans, ideas, etc., and I thank you all. Three people in particular showed the issue-after-issue dedication needed to make the "Leading Edge" a winner. Mark Bundick kept contributing and pounding away at the typewriter. Tom Pastrick's custom halftone photographs could make any editor look good. And Bob Kaplow keeps the mailing list in order and collates like a machine. Keep it up, guys. We make a good team together.

Now that we've won the LAC award, we can sit back and relax, right? WRONG! For NIRA, the LAC Trophy is not a goal. It's a signpost telling us we are going in the right direction. Let's keep it moving, together, as a club.



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## CLUB CONTEST

Bong Field, WS

Sept. 25

9 AM

Events: **SEE COW-1 BELOW**

Contact Bob (934-1160)  
or Ric (724-2975) for details and  
directions to Bong.

## MONTHLY NIRA MEETING

October 1

Glen Ellyn Civic Center

7:30 PM

Fall events planning session; Bunny  
will demonstrate how to make your own  
wadding.

## MONTHLY NIRA LAUNCHES

Ackerman Park, Glen Ellyn.

Contact Ric or Bob for exact dates.



## **COW-1**

SEPTEMBER 25, 1982  
BONG RECREATIONAL AREA  
BURLINGTON, WISCONSIN

A PARACHUTE DUR. OPEN SPOT LDNG.  
B BOOST GLIDE ODDBALL  
PLASTIC MODEL CONU. LAS VEGAS DUR.

NOON FEE-ALL DIVISIONS

AWARDS - RIBBONS

QUESTIONS?

CONTACT: W.L. MILLER  
6261 S. LOOMIS RD.  
WATERFORD WI 53185

(414) 895-6534

COVER PHOTO: Kevin "Killer" Kuczek  
prepares to fly his first place  
Plastic Model at NARAM-24.

# MODEL OF THE MONTH WINNERS



The July Model of the Month winner is Paul Radavich with his Estes Soaring Eagle. Congratulations, Paul!



The August Model of the Month winner is Mark Schmitt with his CMR D-Region Tomahawk. Congratulations, Mark!



## THE LEADING EDGE

is published bimonthly by and for members of the Northern Illinois Rocketry Association (NIRA), NAR Section #117, and is dedicated to the idea that Model Rocketry is FUN! Suggestions for articles and plans are welcome. Articles, plans, other newsletters and news items of interest should be sent to the editor:

Ric Gaff  
331 Third Street  
Northfield, Illinois 60093

Any material in the Leading Edge may be reprinted if proper credit is given.

### LEADING EDGE STAFF

Editor	- Ric Gaff
Halftones	- Tom Pastrick
Mailing List Keeper	- Bob Kaplow
Typist	- Mark Bundick

### CONTRIBUTORS

PAT PETERSON  
MARK BUNDICK  
TOM PASTRICK  
RIC GAFF



# THE DRAWING NARAM

Don't let the title fool you into thinking we blew off rockets to become addicts in sunny Florida. I nicknamed NARAM-24 "The Drug NARAM" because of its strangeness, occasional absurdity and underlying effect of enjoyment. (You left out danger, Pat. - RG)

Most NIRA members arrived too late on Sunday to make an appearance at the field. However, stories of underwater launch pads, splashdown recoveries and fire ants gave us something to look forward to. The contestants' meeting brought out some complaints on Superroc rules and the soon-to-be-familiar field boundary rules.

Monday morning opened up the meet with Predicted Duration. Ironically, this is a very unpredictable event, and a touch of luck may put anyone into the winners' circle. NIRA fared well, with Ric Gaff taking second in C and Mark Schmitt taking fourth in A. The best way to go in this event appears to be tons of test flights. Some careful thought about your prediction can also make you a winner.

D Superroc followed with another NIRA surprise, Tom Pastrick's first place in C Division. Tome got outstanding altitude from an E5; it was the motor of the day with newer E5's having stronger than normal thrust. There were a lot of crimped tubes here. I still can't figure out why people want to fly this event.

Monday night's excitement was Scale and Plastic Model turn-in. A number of contestants, most notably Tom Hoelle, were rushing to finish their models before the deadline. Tom got an hour's reprieve and turned in a slightly undone Ariane.

Tuesday morning featured  $\frac{1}{2}$ A Int. EG. The weather was erratic, but mostly calm and sunny. Larry London got the only NIRA place here, third in B Division. His second flight flexie maxed, but was really in the air for about half an hour. Jedi and I helped Larry chase it, and the model literally ran us in circles downrange.

Flex-wings dominated the event totally. Not only did they give higher performance, they were more reliable at this meet than Balsa models. The time has definitely come to separate balsa and flexies into separate events, and I'm all for it!

C H/D, as always, was a tough event for NIRA. Mark Schmitt's tissueed Rotoroc, fourth in A, was the only NIRA model to place. The EG Team's Rotoroc did OK on its first flight, but landed in the off-limits cow pasture. The CD wasn't allowing anyone to enter until a NARAM official went with him at the end of the day. Big help.

Tuesday's flying had a lot of strangeness about it. Models shredded fins all over the field (I've almost never seen fins shread, until this meet where it was a common occurrence). Ben Roberto was a victim here, an event made more depressing since his two finned model thermalled for over three minutes. Unstable flexie boosters were also common, with some technical reason given as the cause.



Sandra Cook with her egglofter.

Wednesday brought C Eggloft Altitude. NIRA got back into the swing of things as Larry London's 270 meters won B. Larry appeared to shread fins in the boost, and that might have helped his altitude. Larry used a CMR piston, too. Mark Schmitt took third in A. Dave Cook of San Diego set a new national record, 289 meters, using a custom home-made piston.

B RG had to be the best event of the week for NIRA as four members placed. Mark Schmitt won A, and has definitely emerged as an outstanding RG flyer. Tom Pastrick took second in C with one of his good ol' swing-wings. Ric Gaff took third with one flight; it landed in the d--- cow pasture again! Bunny's "Skokie Swift" landed the BG team in fourth.

Many contestants spent Wednesday night at Disneyworld; I was told it was quite good. I spent the night hearing R&D reports, which were equally good. (That might be going a bit too far. - RG) Geoff Landis and Art Rose had reports on BG's that went right over my head. The Zunofark's report on flexie DT's was good, but on material already widely known to competitors. The Fox Team had a very bizarre report on the future of engines; I liked it for its originality. Larry London and Tony Lentini both placed for NIRA, third and fourth respectively. Personally, I thought they were robbed.

Thursday's streamer flying had some interesting twists, most notably B Div. extremely high DQ rate. I had one good flight, then the same model went unstable. I topped that off by shreading my fins on the last flight. Most NIRA'ites didn't do that bad, but overall; it was a disappointing event. An interesting note was Jim Wilkerson's solid flying that put him on the 1983 US Internats team. A win for an underdog!!!

I got pretty intensely involved in Friday's events, not only because they're favorites of mine, but because my chances for a Reserve Championship depending on doing well in them. My Plastic Model, an F-104, kicked out its engine. Despite the DQ, I was satisfied with its flight characteristics. Mark Schmitt's F-15 flew nicely into second in A, topping off an excellent NARAM for him. Larry London's F-111 also finished second, concluding one of Larry's best meets ever. C Division was a crying shame, with Tom Pastrick's perfect F-104 crashing into a car, and winning Tom the Best Midwest Qualified Flight prang trophy.



Terry Lee with a crop of Helicopter models the cows didn't eat.



Pat Peterson with his F 104 conversion. You won't find this paint pattern in Jane's!

The BG Team's F-104 separated, but the main body nearly glided in. Overall, the Plastic Model competition was very intense, with many outstanding models.

Scale is traditionally the last NARAM event, and it is quite an impressive ending. Tom Hoelle's Ariane edged out the BG Team's D Region for first, and it certainly was a well deserved win. Tom had probably put in a couple of hundred hours more work. B Division was exceedingly close, with the Photon Team's awesome Nike Tomahawk leading my Aerobee 350 by two points after static judging. In the end, the score stayed that way, as both models flew 95 point flights. Kevin Kuzeck flew a  $\frac{1}{4}$  scale D Region to first in A Division.

All in all, NIRA did quite well at this crazy meet, and took our second Reserve National Championship in a row. It was very much a team effort this year as everyone picked up some points here and there (Yeah, we didn't ride in on the Jedi's coattails this year! - RG).

Even more honorable was the Leading Edge's winning the Rockwell Trophy for the LAC Newsletter Award. This was also a club effort, so congratulations, everybody!

A few other miscellaneous comments about notable NARAM-24 events: There were several very tight point races for national championships; Zunofarks vs. Photon in Teams; Tom Pastrick vs. Jeff Vincent for Reserve in C; Dave Gugick and myself in B Reserve, and best of all, Kevin Kuzcek's come-from-fifth-place-behind steamroll into A Division's National Championship. We had fun times with some old and new friends, like Dave Cook and Lawrence Bercini. It was also neat to see the return of the Humblebee Award, symbolic of advancement of the start-of-the-art in EG, to Phil Barnes' work with RC.

See you next year in Houston!



Phil Barnes and Jedi George compare notes on RC EG.



With some help from Sandra Cook, George Cook prepares to fly eggloft.



Pat Peterson getting blown away in 1/2 A EG. Even with flexies, it wasn't his week.



Claude "The Human Fly" Greenlee prepares to fly eggloft.



Laurence Bercini and his 1/2 A BC, "Melts in your mouth, not in your hands!"



Kevin "Killer" Kuczak and his first place 1/4 scale Tomahawk. Proud pa Tom looks on.



Ric Gaff's scale Astrobee 1500 flies off a piston. (A piston?) Dan Winings stands by.



The awesome VAB at the Kennedy Space Center. How could a rocketeer go to Florida and not visit KSC?



"Jedi" George checks to make sure the engine is in the right end of the model.



J. Pat Miller robs Laurence Bercini on KSC tour bus. Film at 11.



No NARAM in the heart of Disney country would be complete without a flying Mickey Mouse, courtesy Laurence "Mr. Strato" Bercini.



Tom Patrick and Jon Rains compare Plastic Model notes.

# ETR 12

The latest version of the "last" ETR came to life over the Fourth of July weekend at Bong Field. Seventeen competitors proved that the Midwest's oldest regional is still alive and well. ETR-12 was really two contests in one. All glider events were flown on Saturday, and all altitude events were flown on Sunday. Fog hampered the start of flying on both days, but in general, the weather cooperated throughout the contest.

A RG flying was ok overall. A and B Divisions didn't produce any flights of note. C Division produced a close race. Tom Pastrick had the best single flight, but couldn't back it up. Al Neinast's small swingwing glided the best in neutral air. Jedi's slide wing, refurbished from a previous NARAM, was second. This event set the tone for the rest of the glider events; don't expect any help from thermals.

B RG again saw few notable A/B efforts. C division's top three placers ended up within six seconds of one another. Bunny's "Skokie Swift" a slidewing with upside down butterfly tail was the winner followed by Al Neinast and Jim Zingler's swingwings. One of the few non-conventional models flown was Martin Huber's canard RG. Influenced by Geoff Landis' work at MIT, Martin tried twice to get the Beakers style model to go up straight. It insisted on doing 15' diameter loops.



The Winners! Al Neinast (C Div.), Pat Peterson (B Div.), and Mark Schmitt (A Div.).

C RG belonged to the flexies. Pat Peterson blew away his second flight to win B Division by a huge margin. Jim Zingler set a new National Record with 7:07 and a non-DT'ed but returned flight. The Dual Egglofters Team had an "old style" flexie. It looked like a standard RG when all its surfaces deployed. Its flight was much faster than a normal flexie, but slower than a normal RG. They finished second.

F RG has been a standard ETR event for many years, and it always attracts attention. Pat Peterson, flying what has to be the ugliest booster in the world, won B Division with a flexie. Mark Schmitt gave him cause to worry when he brought out a super-strong standard glider. Alas, it wasn't strong enough and shredded twice. Jedi George took three deep breaths and stepped up to F7's in his latest Flagship RCBG. He turned in two flawless flights to win in C. Ric Gaff's F7 parasite corkscrewed off the pad, but lived, glided down and took second. Bunny's Apteryx did stalls for the second year in a row, and was third. Jim and Al flew pivot-wing gliders in HL-101 boosters powered by composites. Both had catos. These flights were heartstoppers, tending to fall back a long way before ejection.



Mark Schmitt with his F RG before it went shread city.



C Superroc saw its first two flights get tracked to the cloudbase! It was foggy! After the skies cleared, the tracking was a bit more normal. No earthshattering designs or flight here. Tom Pastrick had the best overall score. There were only a couple of DQ's here.

A Altitude proved to be a tracker's nightmare. Nearly 20% of the models got a track lost. Mottled sky and little tracking powder were blamed. The Dual Egglofters had an excellent flight here. Maybe Bob does know something about altitude events!

C Payload proved to be the modelers' nightmare. The wind started to pick up, so you were in for a long chase with parachute recovery. Jim and Al went 1-2 in C, proving once again, that if there's something to be lofted, the guys from Wisconsin sure know how.

D Eggloft was probably the worst event of the meet. Only seven altitude scores emerged out of 24 flights. This has to be a terribly costly event to make a mistake in. D's aren't cheap, but losing those CMR capsules, either to a no return or prang, is even more expensive. "I love eggloft!" Al Neinast has the best flight.

Awards were dispensed fairly quickly after the flying, due in large part to Judy Kaplow's help and no judging events. A NIRA thanks to Alan Jones' power inverter which supplied power to Bunny's TL-59/PC-100. Kits went to the "best flight of the meet" and trophies to the overall winners. Al Neinast's F50 power prang of a massive swingwing won him the prang award.

See you next year at absolutely, positively, most assuredly the last ETR!



# ETR-12

## A DIVISION

	A RC	B RC	C RC	F RC	A Alt.	C Pay.	C SR	D E1	POINTS
1. Mark Schmitt	39/ 39-1	79/ * -1	122/* -1	NG/SHR-*	195/192-2	281/329-1	753/637-1	NC/UNS-*	747
2. Howard Olson	43/NVB-2	SHR/* -*	SHR/SHR-*	***	TL/255-1	NR/* -*	611/721-2	BRK/303-1	321
3. Steve Sangerman	NVB/* -*	***	***	***	TL/NC -*	NR/TL -*	717/717-3	TL/* -*	42
4. Tom Eckles	***	***	***	***	65/NC -3	UNS/ * -*	***	SEP/* -*	18

## B DIVISION

1. Pat Peterson	NG/NG -*	SHR/76 -1	71/287-1	153/SEP-1	101/247-1	362/ * -1	CRP/723-2	SEP/CAT-*	753
2. Larry London	51/NG -1	NG/SP -*	32/* -2	UNS/NG -*	TL/209-2	TL/ * -*	SP/965-1	383/ * -1	516
3. Tony Lentini	***	***	***	***	TL/SP -*	***	***	NC/* -*	0

## C DIVISION

1. Al Neinast	89/95 -1	94/88 -2	75/141-5	55/PRG-*	***	NC/421-2	1065 -3	413/399-1	576
2. George Riebesehl, Jr.	89/82 -2	SHR/SHR-*	90/177-3	187/199-1	239/ * -4	348/NR -3	538/579-6	CAT/ * -*	423
3. Jim Zingler	33/69 -6	74/107-3	427/?? -1	RB/21 -5	TL/295-3	TL/426-1	1068 -2	NR/NR -*	399
4. Mark Bundick	89/71 -4	79/108-1	104/NG -7	RB/83 -3	184/ * -6	281/ * -4	***	UNS/ * -*	330
5. Tom Pastrick	113/48 -3	9/NG -5	101/135-4	RB/ * -*	SP/231-5	NR/ * -*	1081 -1	237/TL -3	252
6. Ric Gaff	NG/ * -*	57/90 -4	46/129-6	153/* -2	300/ * -2	NC/ * -*	433/ * -7	BRK/ * -*	165
7. Dual Egglofters	***	SEP/ * -*	213/174-2	***	UNS/309-1	TL/ * -*	680/ * -5	NC/ * -*	126
8. Tim Vaccaro	52/36 -7	***	SHR/28 -8	***	NC/129-7	238/251-5	UNS/ * -*	271/251-2	63
9. Martin Huber	86/57 -5	NVB/NVB-*	RB/NG -*	***	TL/* -*	SAP/* -*	930/938-4	NC/ * -*	21
10. Braxton Miller	***	***	***	***	TL/ * -*	***	***	SP/ * -*	0

KEY:	BRK - Broken egg	NC - No close	PRG - Power prang	SHR - Shread
	CHU - No Chute	NDP - No deployment	RB - Red Baron	SP - Spit engine
	HNG - Hung on pad	NG - No glide	ROT - No rotation	TL - Track Lost
	LST - Lost by timers	NR - No return	SAP - Unsafe flight	UNS - Unstable flight
	MIS - Three misfires	NVB - Non-vertical boost	SEP - Separation	

Prang of the Meet Award: Al Neinast's P50 powered swing wing power prang in F RC



Jim Zingler seems oddly pleased with his cato blasted F BG.



Pat Peterson lights his F BG DT, then kisses it for luck.



Al Neinast and the "remains" of his magnificent, huge F swing-wing BG. Prang award was a small consolation.



Larry London's bizzare "glider" made from an Estes Phoenix kit.

# ETR 12



Al Neinast, the only person to win two trophies at ETR.



Bunny and Jedi dig in the swamp for RC BG parts (No, you don't normally find them there!) after Jedi's ill-fated third flight.



Something that crawled out of the swamp? Nope, just Pat Peterson's F BG booster.

# HOT TUBES

Celestial Enterprises joins the list of model rocketry suppliers. Sam Baxter, a longtime rocketeer, has listed in his catalogue the following supplies:

Airframe Tubes, Tube Couplers, Centering Rings, Thrust Rings, Cloth Parachutes, Shock Cords, Engine Clips, Recovery Wadding, Sonic Sounder.

My first order was for tubes, couplers and centering rings. Upon receiving them only two weeks later, I compared them to other manufacturers' parts. To my surprise, they matched perfectly to those of Estes, except in price. Celestial Enterprises is a lot cheaper. For example, Celestial's 18mm tube matches Estes BT-20. Their price is \$.45 while Estes charges \$1.20. Estes nosecones fit these tubes as if they were made for them. At savings like this, we can all build more models at less cost. This is very important for younger NIRA members who don't have a lot to spend.

Celestial doesn't have nosecones yet, but they seem open to suggestions. Maybe if enough of us ask, they'll find a way to make CMR-type nosecones at a lower price.

Celestial Enterprises  
4412 Crabapple Street  
Ft. Worth, TX 76137

Tom Pastrick

NEW CHUTES  
FROM C.C.



We both recently received a new "Competition Chutes" catalogue, and a sample "new and improved" parachute. In case you didn't know, "Competition Chutes" is run by Kevin "Killer" Kuczek's mother, hence the nickname "Mom's Chutes".

The new chute is of a lighter nylon material. Older Competition chutes were made of heavier nylon and polyester. If you didn't have a body tube big enough, packing it in could be a long, tough job. The new material is thinner, at least 50% lighter, and can be packed easily in a BT-50 tube.

Bunny test flew the chute in three different models, using longer than normal delay times to test the durability of the construction. Bunny's Big Bertha broke the shock cord, but two other flights yielded good results. Both a SPEV and a Cruise Missile nosed over and ejected at a fairly high speed. The chute held up through it all. Bunny did note some minor scorching, and thus recommends a sheet or two more wadding be used when flying a C.C. chute.

You'll never use one of these custom parachutes in your PD model, but if you need a durable, lightweight, colorful chute for Scale, Plastic Model or that super demo bird, CC is hard to beat.

Competition Chutes  
c/o J. Kuczek  
49354 Bay Lane  
New Baltimore, MI 48047

Send \$.75 for catalogue.

Ric and Bunny

## NIRA'S NARAM RESULTS

### B Rocket Glider

Mark Schmitt	209 sec.	(1-A)
Tom Pastrick	204 sec.	(2-C)
Ric Gaff	155 sec.	(3-C)
BG Team	151 sec.	(4-C)

### C Eggloft Altitude

Mark Schmitt	222 mts.	(3-A)
Larry London	270 mts.	(1-B)

### Predicted Duration

Mark Schmitt	10.9%	(4-A)
Ric Gaff	2.0%	(2-C)

### 1/2 A International BG

Larry London	147 sec.	(3-B)
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### C Helicopter Duration

Mark Schmitt	111 sec.	(4-A)
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### D Superroc Altitude

Tom Pastrick	1,455 pts.	(1-C)
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### Plastic Model

Mark Schmitt	652 pts.	(2-A)
Larry London	523 pts.	(2-B)

### Research and Development

Larry London	(3-B)
Tony Lentini	(4-B)

### Scale

Pat Peterson	682 pts.	(2-B)
BG Team	705 pts.	(2-C)

FINAL NIRA POINT TOTAL: 16,299 points

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