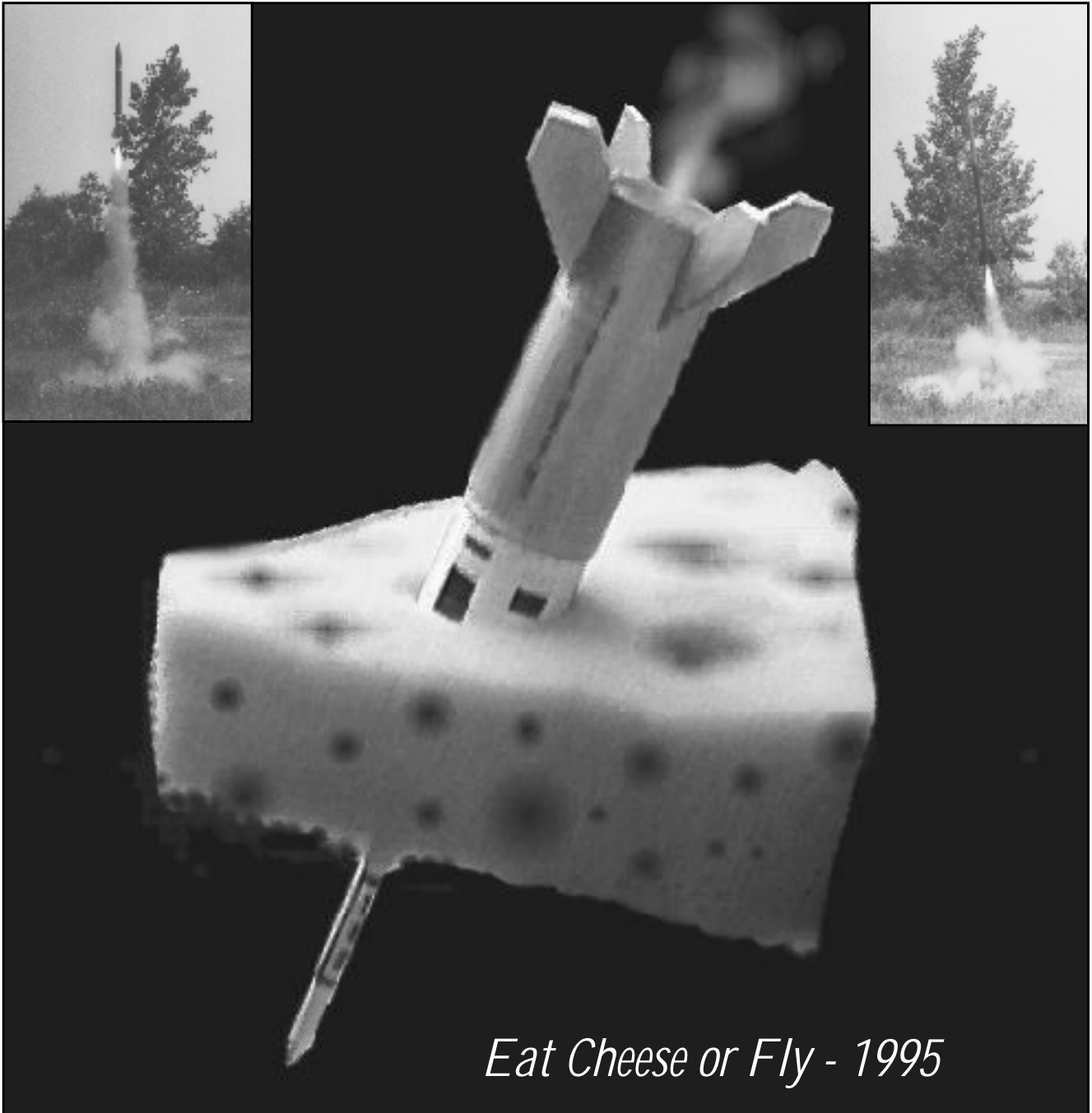




Newsletter of the Northern Illinois Rocketry Association,  
NAR Section #117, TRA #36

Volume 18, Number 5  
September/October 1995



*Eat Cheese or Fly - 1995*

# T MINUS 1 - NIRA'S CALENDAR OF UPCOMING EVENTS

## MONTHLY MEETINGS

All meetings start at 7:30 PM, and include refreshments, entertainment and a brief business meeting. Don't forget a model for "Model of the Month" voting. We need volunteer speakers to entertain the troops after the business meeting, so call Bob Wiersbe at (708) 690-5442 if you can help with ideas or can speak yourself.

- October 6: Regular Monthly Meeting. RCHTA Planning.
- October 28,29: RCHTA Show.
- November 3: Regular Monthly Meeting.
- December 1: Regular Monthly Meeting.

## OTHER ITEMS OF INTEREST

September 23 - HPR launch, Rantoul Aviation Center, Rantoul, IL, 10am. Contact Greg Smith (217) 352-9655 for more information.

October 7 - HPR launch, Bong Recreational Area, WI. Waiver to 6000', \$5 range fee. Noon to 4pm. Contact Dave Sutton at (414) 886-6017 or Paul Olsen at (608) 424-3505 for more information.

October 1, 1pm - James Lovell, spacecraft commander of Apollo 13, talks about that mission and his other accomplishments in Joliet at the Rialto Square Theatre, 102 N. Chicago St. Joliet. Tickets are \$12.50 and \$15.50, children under 12 \$7.50.

October 28-29 - Fall 1995 Danville Launch The field is approx 5 miles from the Red Roof Inn at Lynch Road & 174. Maps available at the hotel front desk. 10,000' waiver secured. For more information call Dennis Wacker (708) 888-8587 7-10PM CDT.



On the Cover - Dave Miller's cool artwork for the ECOF badges, with liftoff shots from Norm Heyen. On the left is Norm's Graduator, on the right is John Richter's Mirage.

## 1995 CLUB LAUNCH DATES

All launches or other activities start at 2:00 PM. BYOL (bring your own launcher). Location for our 1995 launches is Community Park in Lisle. Get off Route 53 at Short St. and head west. If you have questions prior to any launch, call either Bob Wiersbe at 708-690-5442, or Mike Jungclas at 708-910-1267.

October 15: Section Meet! See Page 10 for details.

November 5: Club Launch, we will be launching the kits from RCHTA at this launch. PLEASE NOTE THE DATE CHANGE FOR THIS LAUNCH! There will not be a launch on the 3rd Sunday of November. NOTE: If it rains on the 5th, we will try again on the 12th.

**STAFF**  
 Bob Wiersbe - Manual Entry  
 Ric Gaff - Manual Assembly

**CONTRIBUTORS**  
 Peter Alway, Mark Bundick, Ric Gaff,  
 Norman Heyen, Bob Kaplow, Bob Wiersbe

Your address label contains an item of vital information, your NIRA membership expiration date! Please check your expiration date and renew your NIRA membership before it expires. You will not receive any more newsletters after your expiration date has passed!

**THE LEADING EDGE**, published bimonthly by and for members of the Northern Illinois Rocketry Association, NIRA, NAR Section #117, is dedicated to the idea that Sport Rocketry is FUN! Articles, plans, photos, other newsletters, and news items of interest should be sent to Bob Wiersbe, 1835 Shetland Drive, Wheaton, IL 60187 (or electronically via Internet to [hrbob@ixstar.ih.att.com](mailto:hrbob@ixstar.ih.att.com).) Photos will be returned, other material returned if requested. Send membership applications (dues: \$3/year, including a six issue subscription to the Leading Edge) and nonmember subscriptions (\$5 per six issues) to Ken Hutchinson, 84 Jefferson Lane, Cary, IL 60013. Any item appearing in the Leading Edge may be reprinted by Sport Rocketry with proper credit given; all other uses require written permission of the Northern Illinois Rocketry Association. The Leading Edge - Nominated for 3 Emmy's, 4 Academy's, 2 Oscar's, 3 Tony's, a Pulitzer, and seen at the O.J. Simpson trial; but we can't win the darn LAC Newsletter Award.

- Abbreviations used in this issue:
- BG - Boost Glider
  - DELD - Dual Eggloft Duration
  - DQ - Disqualify
  - ELA - Eggloft Altitude
  - FUBAR - really, really screwed up
  - HD - Helicopter Duration
  - IMHO - In My Humble Opinion
  - LCO - Launch Control Officer
  - MR - Multi Round
  - NFPA - National Fire Protection Agency
  - OSL - Open Spot Landing
  - PD - Parachute Duration
  - PMC - Plastic Model Conversion
  - R&D - Research & Development
  - RCHTA - Radio Control Hobby Trade Association
  - SD - Streamer Duration
  - SRA - Super Roc Altitude
  - SpSc - Sport Scale
  - TRA - Tripoli Rocketry Association

## Eat Cheese or Fly!

by Bob Wiersbe

While folks were sweating out in the desert at LDRS, 32 die-hard rocketeers gathered in southeastern Wisconsin to attend NIRA's ECOF high power rocket launch. We may not have been in the desert, but we sweated just as much. To put it simply, we had a blast! What else can you say about a day when there's no check-in line, hardly any waiting for a pad, rockets are recovering back into the launch area, and very few rockets were lost?

While this was technically a high power launch, most of the flights were either model rockets or large model rockets. But that's what we like to see at all of our launches - variety! There were 37 rockets flown on A-C motors, 40 on D-E, 24 on F-G, 8 H's, and 3 I's. If it hadn't been so hot, the count would have been much higher.

There were 14 cluster flights out of 112 total, continuing the trend we set at MRFF back in June. Jonathan Charbonneau put up three flights of his Deep Space Transport, first using 3 B6-4's, then 2 B6-4's and a C6-7, and ending with 3 C6-7's. He also tried out his converted SR-71 Blackbird on 2 A8-3's and a B6-4, which worked perfectly. It didn't stand up to 3 B6-4's, and suffered some wing damage.

Not to be outdone, Ken Hutchinson flew his Magnum on an I284 and air-started two G80's. It was a beautiful flight! Ken also combined clustering and CHAD staging, using 3 D12-0 with 3 D12-7 motors in his Viper III. Greg Roman had good and bad luck with his clustered Sidewinder, putting in a nice flight on 3 D12-3's but trashing the rocket when one of three Estes E15's blew at ignition.

Gary and Fran Miller put up eight flights between them, and seemed to be having a good time chatting with folks. Dave Miller (not related to Gary and Fran) brought out his U.S.S. Atlantis and Tomahawk, and had picture perfect flights with both.



Gary Miller readies his MRC Sidewinder.



The remains of Greg Roman's Sidewinder after an Estes E15 got through with it.

Rick Gaff was out flying his usual silly stuff, and having a blast with it. His "The Die is Cast" made a 4 point landing, and remained standing! Also in Rick's arsenal was the ever popular Pyramid, and something new: The "Eye" Payloader. Basically a Warp II, but with an eyeball in the clear payload section.

Rick and I got to talking about what we could stage on top of the booster that would be cool. Ric had his F7 Steam Machine that he flew at MRFF, and another F7-4 motor. The F7 motor fit just inside the adapter on my booster, and with a little tape it was snug. In about 10 minutes we went from brainstorming to having a prepped model ready to fly.

Rick dubbed it the "Psychopath", and it did look a little strange. But we weren't concerned about looks, we just wanted to see what would happen when you staged an Aerotech E30 to an FSI F7. Ric didn't like the way the stages fit together when it was on the pad because the wind kept tipping the upper stage to one side. Eventually he put a small piece of tape on the outside of the motor, and gave me the okay to charge the staging circuit.

When it was charged and armed I gave the okay for launching, and got as far away as I could



Bob Wiersbe and Rick Gaff with "Psychopath", one of the most unique staged rockets you'd ever hope not to see. (photos by Rick Gaff, well someone else used Rick's camera for this one)

from the rocket. At zero the E30 came to life and shot the rocket into the sky. It made one small twist as it accelerated, then the E30 burned out. I was holding my breath when the F7 motor lit and began its 9 second burn. That upper stage just disappeared into the sky, and no one ever saw the ejection charge! People were clapping and cheering, and Ric and I high-fived after I retrieved the booster. We never saw the upper stage again, but it was worth it!

Bob Kaplow was out at Pad 12 setting up his Electric City with a G160SS motor, when he noticed the relay was chattering. He mentioned it to Rick and the LCO, but nothing seemed to be wrong at the control box. He finished hooking up his model and moved about 100 feet away from the pad. The LCO switched the panel to launch the rocket on Pad 6 then armed the panel. When he armed the panel Bob's Quicksilver launched, catching everyone by surprise. A postmortem revealed that the transistor for Pad 12 in the spider box had failed in the ON condition, causing the rocket to ignite when the panel was armed. We moved the connection from 12 to 8, and tested before we put the system back into service.

Bob had wisely disconnected the relay box from the spider while hooking up, and waited until the system was disarmed before reconnecting it. This prevented the relay from closing while he was at the pad, and averted what could have been a serious injury. We followed this same procedure the rest of the day, just to prevent any further failures.

A local scout group was supposed to be launching in the same area, but the person with the launcher never showed up. So Rick invited them to join us, and they really had a good time. It's always a blast to see someone fly their first rocket.

John Richter from Fox Valley Model Raceway & Hobbies in Cary came out with rockets to fly and motors to sell. He flew his Mirage twice, and John Jr. flew a Patriot with four D12's. John has a pretty good stock of Aerotech single use



Big or small, we fly it all!!

motors and reloads, and is offering NIRA members a 10% discount.

Major THANKS! go to Steve Koszuta for securing the field and the waiver, and to Dave Miller for the really cool artwork on the badges. I also want to thank Dave Price and Kathy Larson for helping me retrieve two of my rockets.

I want to apologize to anyone who didn't know about the launch in advance. We announced it at the club meetings in July and August, but the Jul/Aug issue of the newsletter didn't make it out in time. This was due to some really bad timing on my part (forgot that people would be gone for NARAM), and the Post Office losing some critical articles. Anyway, we're thinking of doing a separate HPR launch at Bong next spring, in case there isn't a Danville launch. It will take some planning, and a lot more organization, but it could be a really good event. We'll be holding ECOF again next August, so make plans to attend!

### Aug 12th Bong/NIRA launch report by Norman Heyen

Last Saturday the Northern Illinois Rocket Association (NIRA) invaded Wisconsin for a high power fun launch. Eat cheese or Fly...

My son and I flew everything from an Alpha on an A6-4 to a stretched EZI-65 on an H242. A total of six flights, all successful, were flown by the two of us.

We started with a Graduator on an F25-6 to test things out. Dropped it in the parking lot. A couple of paint scratches, a bit of mud, a ding in the fin, no problem.

Dig out a reload and prep an F22-4J. Graduator up again. Hey, the reload worked! Delay a bit short, but dropped it within 50 feet of the pad, but on the gravel again. Cracked a fin joint. Better put it away and fix it at home.

Now, just to say our Alpha has flown interstate, we prep it with a Quest A6-4. Nathan does the work, Dad watches. Out to the pad (did I mention they have 12 set up?) His name is announced over the PA and off it goes! Hey, that's launch number 15 on it. Good recovery in the grassy area. Hmm, should let the kid aim these things.

Try the Serval on a C6-7. Tube fins and a streamer. Good flight, straight up, just about out of sight, streamer out, right into the grass a dozen or so yards away. Big smile on Nathan's face, good flight #2 for him today.

Dad pulls out the 25+ year old Goblin, stuffs in a D12-7, reefs the chute, carefully adjusts for wind and off it goes! Hmm, seems to have entered cruise missile mode, 200' up, 1/4 mile upwind. Good chute, line up a tree in the background, walk through 2' tall weeds and grasses. Hey there it is! Right on a gravel trail... Do you see a pattern here? Another scratch, but well earned. No takers on giving me an award for the oldest rocket flown...

OK, worked up enough nerve by now. Prep the

38mm H242 reload, prep the EZI-65, walk way out to pad one. Nathan helps lift it up and gives me hints where to point it. We take a couple of pictures, just in case... 3,2,1... smoke, but no go. Tramp out and see what happens. Looks like the copperhead shorted out. Pull the old one out, yup, the thing shorted out somewhere between the two leads. New ignitor, back to the range-head, and try it again. 3,2,1... Whoosh! How can something that big get that high? Good chute, drifts into the really tall weeds. Pick a spot, find out that the really tall weeds must be 12' tall! Felt like I was in an old Tarzan movie, need a machete. OK, next time, I will really build a beeper. But the weeds were only a few yards deep, then 2' grass and weeds. There it is! All safe and sound.

Get a couple of kind folks to sign my cert, file it away carefully and time to relax and schmooze some more...

All in all, a great day. Left with as many rockets as I came with, and fewer motors.

My thanks to the folks at NIRA for organizing it all. Good times were had by all. I hope that someone can publish the results of the flight cards. Lots of rockets going off, well run launch! Good people and good times.



Norm Heyen got these really good liftoff shots of Dave Miller's U.S.S. Atlantis and Nathan Heyen's Serval at Eat Cheese or Fly - 1995.

**Another fine mess....  
July and August Launch Reports**  
by Bob Wiersbe

Well, I wasn't at the July or August launches, so I can't tell you how things went (other than hearing that there was a problem with a softball tournament in July and a mix up over where we were supposed to launch from and had two separate launches going on at one point in August). I do have the flight cards, so I can at least tell you who was there and other such stuff.

From the nice stacks of flight cards that Cheri Chaney and Rick Gaff gave me at the September club meeting I found the following:

In July, 28 people came out to the launch, put up 106 flights, and used up 122 motors. Here's who was there and how many rockets they flew: Bill Thiel - 9, Pete Juengst - 8, Rick Kramer - 8, Justin Blanchard - 7, Adam Elliott - 7, Ed Thiel - 6, Chris Holmes - 5, Amanda Mansfield - 5, Jonathan Charbonneau - 4, Ken DiGiulio - 4, Steven Mrozak - 4, Leo Ringwald - 4, Greg Seul - 4, Kevin Smith - 4, Ron Husak - 3, Tom Pastrick - 3, Drew Pierson - 3, Eric Weber - 3, Bryan Chesi - 2, Ray Chesi - 2, Bill Mansfield - 2, Kyle Saginus - 2, Mike Ugorek - 2, Cheri Chaney - 1, Jenny Chaney - 1, Ken Hutchinson - 1, Bob Kaplow - 1, and Michael Ugorek - 1.



Rick Gaff caught Tom Pastrick for this catalog pose.

In August, 40 people were out launching rockets, and used 170 motors to put up 155 flights (there were a bunch of clusters and staged models). If you add up all the Newton-seconds it comes to about 1700, or a low J motor. That's like taking 170 C6 motors and clustering them together! But I'd rather see folks having fun and put up 155 flights in three hours, than see one guy put up one flight on a J in a few minutes.

Peter Juengst put up the most flights with 14, followed closely by Rick Kramer and Mike Oswald with 10 each. The Maniac was the most flown rocket, and Bryan Chesi flew his 6 times! He didn't use any E15's in it, so that explains why he could fly it that many times. Bertha's

were the next favorite model, followed by the Sentinel and Manta.

What's really nice to see is the number of families that are coming out and flying with us! Ron, Don, and Mike Swikowski put up 13 flights between them; Chris & Dan Petrek had 9; Kleve, Rosela & Lionel Slouber had 9; John & Sean Trilik had 7; Don & Zach Vicha put up 6, as did Pete & Jake Olivola; Jerome & Steven Mrozak had 5; Daniel, Jonathan & Roy Plotnick's also had 5; Mark & Chris Soppet had 4; and Mike & Tony Maro had 2. That's 61 flights between 20 people.

So far, 1370 rockets have been flown at NIRA launches this year!! Just a few years ago we were trying to break the 1000 flight mark, this year we'll probably break the 1750 mark. We'd need another 630 to reach the 2000 mark, and with only 3 launches left this year that would be hard to do. But, who knows, maybe we will!



Kleve Slouber with a couple of really neat old kits - the MPC Nike-Patriot and Centuri Point (built from memory!). (Rick Gaff photo)



Bryan Chesi rescues the U.S.S. Enterprise from the jaws of death. (Rick Gaff photo)



Pete Juengst with one of his cool custom models. (Rick Gaff photo)



Leo Ringwald loads his Phoenix (photo by Rick Gaff)



Ken Hutchinson prepares a kamikaze HL20. (Rick Gaff photo)

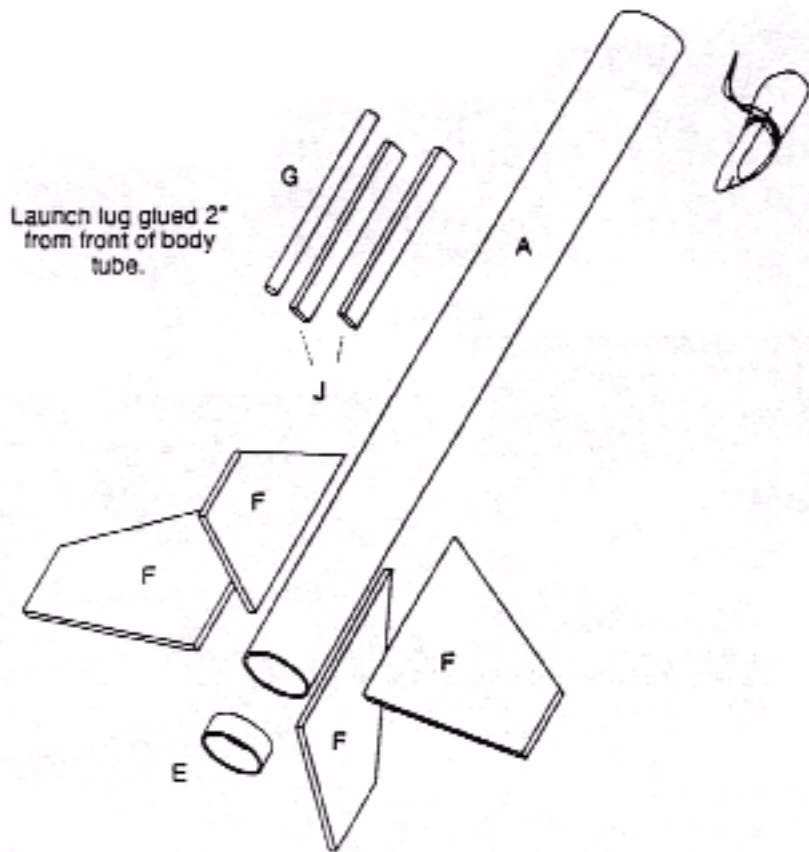
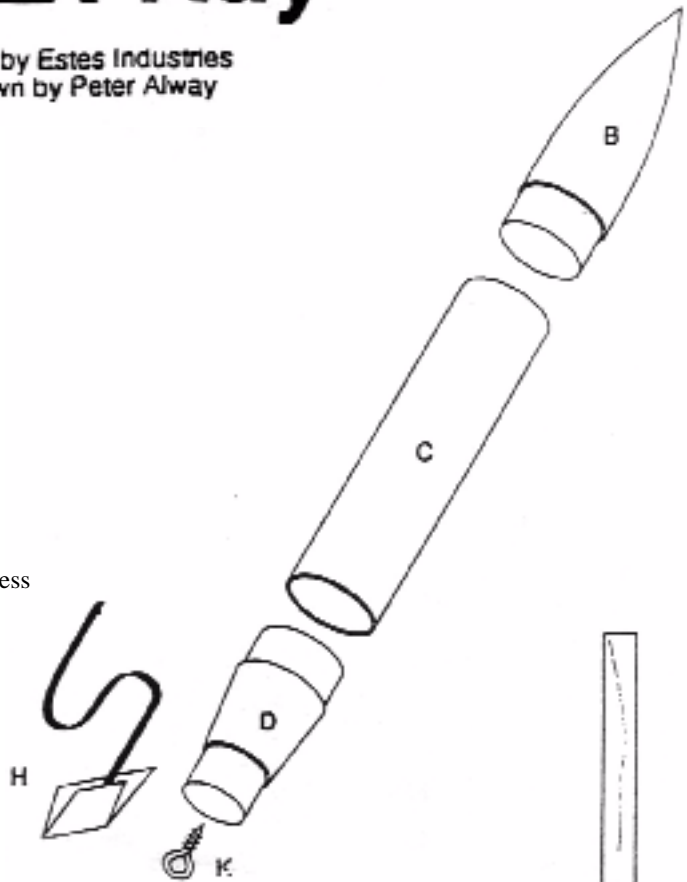
# Astron X-Ray

Parts List:  
(all parts from Estes)

Design by Estes Industries  
Re-drawn by Peter Alway

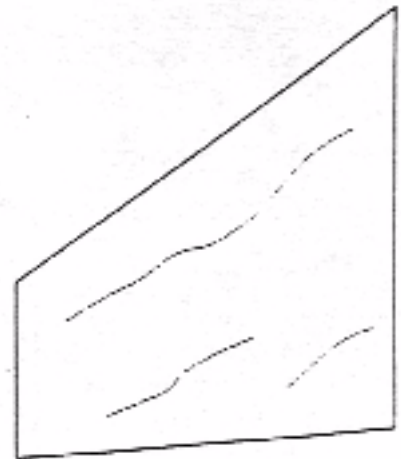
- A Body tube 8.7" BT-20
- B Nose cone BNC-50K
- C Transparent payload tube PST-50S (4" long transparent BT-50, available as part of Estes Hercules, Nova Payloader, Super Nova, and Phantom kits)
- D Balsa Adapter TA-2050A
- E Engine block EB-20A
- F Fins (4) from 1/16" balsa
- G Launch lug 1/8" x 2 3/8"
- H Shock cord with mount
- I 12" Parachute PK-12
- J Launch lug standoff from 2 pieces of 1/16" balsa
- K Screw Eye

Estes Industries introduced the X-Ray, a simple payload model, "perfect for research work and sport flying too," in 1964. Countless insects saw their last days aboard the X-Ray, and the kit saw its last days in 1985. Fortunately, all the components are still available, and today's high-tech modelers might even come up with interesting payloads small enough to fit in the payload section. One suggestion would be a little Cyalume light stick for night flying.



Launch lug glued 2" from front of body tube.

Launch lug standoff (J) make 2 from 1/16" balsa, glue together for double thickness.



Fin pattern (F) make 4 from 1/16" balsa

## NARAM-37

-or-

### What I did instead of a summer vacation by Bob Kaplow

July 21st found my wife Judy, daughter Rachel, teammate Ric Gaff, myself, and more junk than you would have thought possible crammed into "VGER-2" for the 12 hour trip to "SUNY" Geneseo (funny, it wasn't most of the week...).

#### The Flying:

Our team only entered a few events, and I only flew two using off-the-shelf models. The first was A BG on Tuesday. My model were designed for B BG (NARAM-31?) but the size of what I expect to see next year in C BG. 18" wingspan x 4" cord of Rohacell: but the whole glider weighed only 20 grams! Build strong but light. It just didn't boost that high on A motors; I tried both A3-4T and A8-3 with similar results. The air was damp, thick, and down, and both flights were under a minute. The glides were perfect though, with the models being in perfect trim from the first hand launch. I think I finished 6th in Team division, just out of the money.

I wisely chose not to waste my \$\$\$ on C4s and D3s, so I passed on C ELA and D SRA. Our team also refused to fly A Multi Round Parachute Duration \\\\\\\ flexie. Teammate Ric Gaff managed to do well in PD, with a boomer first flight, and then a few seconds on his peanut scale "Down Right Ignorant" for a return and a 4th place.

The other event I flew was Spot Landing on Friday. Since we weren't in it for the points, I decided to dump my strategic bomber and have some fun. I took my kitbashed Maniac with 29mm motor mount (Maniacal for those of you who must know), and installed an F14-9 that I had been meaning to fly on the sport range. It roared out of sight, leaving a nice black line in the sky behind. I totally lost it after burnout, but others spotted it, and I finally saw it about 500' in the air. I was amazed that I even got it back, much less having it land on the field and in sight. I paced it off at just over 100 meters from the spot, better than some who were actually trying!

Also on Friday I helped my teammate and NAR Prez. Bunny prep, fly, and prang his scale model twice! It wasn't my fault! I was Propulsion, I don't know who was Recovery. On both flights the boost was perfect, but the booster chute failed to deploy. Somehow they qualified the second flight when the body came in sideways instead of core sampling like the first flight did.

I had a great time on the sport range most of the week, flying some old standbys as well as a few new models. On Saturday, I started things off with (what else) my Happy Meal on a D11-P for another perfect flight. The Happy Meal fleet



Mark loads his Atlas on the pad (above), and the remains attached to the wall after 2 flights (below). It's in good company, I'd say. (Mark Bundick photos)



is now at about 100 flights (they flew several times before I started logging everything, and I've now logged 94 flights between the two).

Next up was a brand new model; Pentium of Borg (Division is Futile, You will be Approximated) on a D12-3. The model is based on Ric Gaff's flying die and the old Sputnik design. I copied the artwork from a MicroMachine plastic Borg cube, enlarged up to about 40cm on a side. A neat model and a neat flight. Then I flew two relatively new models, both scaled up from old estes kits: a BT-60 Gyroc on a D12-3 and a Super Ranger (I'm tired of Super Big Berthas) on a cluster of D12-5s. Both flights were fine.

I finally got around to flying H H2Oloft Thursday, as there was no altimeter available on Tuesday when it was scheduled. My Quicksilver flew great on an H123-MW, but I was DQed for practicing unsafe rocketry (the condom holding the water broke). I also flew all 6 members of my Skywriter crayon fleet, from the BT-5 model on a 1/4A up thru the new 5" diameter 5' tall huge purple crayon on an H242. All flew great, but the 2.5" diameter model broke yet another clear fin. Time to replace these with Lexan like the bigger models use.

The bumper was Friday. The weather was

sunny enough for me to finally launch my Magnette (4" dia 3/4 scale Magnum) with the Ricoh camera on board. I had flown this camera for the first time at MRFF-95, and was hoping to get some rangehead shots this time. Alas, boost was perfect, but the #\*#@ Aerotech I161-SW ejected about a second after burnout, trashing the rocket and recovery system. The booster with reload plummeted down into the bean field, and the payload shroud did likewise. The camera mount ripped loose and splattered somewhere in the field never to be seen again, and the chute just landed within the bean field with nothing more than the metal hardware and payload bulkhead attached. So between a vanished camera, trashed rocket, and a defective reload, I figure I'm out about \$300 on this flight. Not a nice way to end an otherwise mostly fun week.

#### The Good:

There was much good at NARAM-37. Dan Wolf and the Men of Mars did an outstanding job of running the meet. The fact that all went smoothly in spite of bad weather just reinforces the outstanding job of Dan and his team. The last NARAM I'd see run as well as NARAM-31 in Virginia. Even our own NARAM-33 was not as well run as this show.

The field was huge and set up well. Plenty of space between sport and contest ranges. Range operations were smooth, and the few glitches were quickly resolved. No check-in lines were evident during the week. The new NAR launch system performed well in its first real test (OK, so I helped build it, and got to run my own panel for 1/4 of the week). Tracking operations went smooth in spite of more rain. The sport range was again well staffed by the CMASS gang.

The dorm layout was key to increased socialization throughout the week. The mid-week picnic provided a nice break to things, as well as a spectacular view of the falls. I was also pleased to see lots of nice Scale entries, particularly in A/B division.

Again lots of small manufacturers dominated the manufacturers forum. Aerotech was present, but seemed to be there only to demo their hybrid motor, which looked no different than any other HPR motor. Motors, up to and including non ATF regulated HPR reloads were available both in the dorm and on the field.

The NARAM program, first done by Matt Steele, provided a nice memento of the week as did the spiffy patch. Even the awards banquet was completed in record time, thanks to an innovative door prize give-away (prize tickets under the chairs).

We blew off the crummy R&D showing, and I finally got to see Apollo-13. [No, I won't be changing my .sig, I STILL haven't seen 1-12!]

Best of all at any NARAM are the friendships: the chance to make new friends and see old friends. Best of all, Dan is moving back to the midwest! Expect him to run NARAM-42 at Bong!

Just for an added bonus, we didn't run into any road construction on trip from Chicago to NY and back.

### The Bad:

The weather was hot, humid, and rainy :( No AC in the dorms made it uncomfortable even in the evening. I'm really glad I lugged my shop exhaust fan along. The AC in the dining/meeting areas was marginal at best, providing little break from the unseasonably warm weather. While it could have been worse, I really didn't care for the dorm/banquet food. The room phone access stunk; there was 1 phone in the entire dorm I could call out with my credit card. While I was spared road destruction on my trip to and from NARAM, they rolled up the streets in Geneseo for NARAM. The first night, after finding the dorm, we went out to eat. Coming back, the road to the dorm was closed, and we had to find our way back, not knowing where we were, in the dark.

Several old friends were missing. Among them were Tom Beach, Joyce Guzik, and Terry Lee. It just wasn't a NARAM without them. The few R&D entries were mostly just there for points; I thought the judges were most lenient in not DQing about 80% of the reports as crap. I was really looking forward to seeing Dan Wolf's automated tracking system in action. It had problems, so it wasn't used. I give Dan credit for trying, and for not wasting range time futzing with the system, and wisely going to the fallback old style radio communications.

Estes, Quest, MRC, FSI and the other oldies were absent from the manufacturers forum. Quest did send gift certificates for some of the winners, but again zippo from Estes and the others. Yes, we do remember this when it's time to spend our hard earned \$\$\$ on rocket supplies. Estes did send some new ignitors, which set new records in low quality, IMHO.

### The Ugly:

I was most disappointed in the election returns; not so much the winners or losers, but in the number of ballots cast. There were just over 100 members who bothered to vote. Worse, the bylaws amendment prohibiting manufacturers on the board again got a majority of the votes, but not the super-majority needed to pass. Come on folks, realize what manufacturers are doing to the NAR board, and look at TRA as a perfect example of manufacturers run amok on a board. We need to get this amendment passed, ASAP.

I was just as disappointed in the NPRM results, and lack of interest by the members in this process. To add insult to injury, the contest board

failed to follow their own rules for running the process. As I'd pointed out earlier in RMR, to President Bundick, and to NPRM subchair Marsh, the NPRM process requires publishing the proposed rules, followed by a 90 day comment period. We are then supposed to have the opportunity to see at least a summary of the comments before voting on the rules. In reality there was NO comment period at all, and less than 45 days from the initial publication until the deadline for the final vote. Other than the handful of voters who read the posts here, the folks who voted on these rules really didn't know what they were voting on.

New Pink Book is already FUBARed. In a 5 minute glance, I've found hunks of the ramrodded NPRMS that were left out, or only half the old rule replaced. The Safety code(s) and the index are missing. God only knows what else is messed up with this book. Well, folks, you voted (or failed to vote) for this board, you voted (or didn't vote) for these rules, and now YOU are stuck with them.



One of the few perks the NAR President gets.

### Hot Fun in the Summertime

by Bob Wiersbe

It's Saturday July 1st, 95 degrees outside, humid, and the heat index is something like 105. Good day to stay inside with the air conditioner on, right? But there's a rocket launch only 3 short hours away with the Central Illinois Aerospace (CIA) in Rantoul. What's a rocketeer to do?

Ok, so my wife thinks I'm nuts. I pack up my rockets, lots of cold pop and ice water, my two sons, and take off. The launch started at 9am, but we get there about 1pm, just at the hottest part of the day. There are people scattered about the field, all trying to find some shade. Some folks have even settled in under the Bomarc, which not only provides shade but wonderful protection from pranging rockets.

After checking with Greg Smith on the routine

they're using, I get ready for some serious rocket flying. The kids are already asking me when we can leave. I decide to launch Mother, since no one here has seen it fly before. I let the LCO in on the joke, and set up on Pad 2. He announces the flight as "heads up" and makes everyone stand up. This not only gets their attention, but they're looking at the rocket when it goes off. Right on cue the nose flops off, and the "baby" inside streaks out. It gets a good reaction from the crowd and I trudged out to recover the rocket.

I decided to do some schmoozing (meaning walk around and talk to folks), and before too long I've run into two more NIRA members - Joe Chiabai and Norm Heyen. Always fun to have someone around that you know! Joe and I talked a little about the way that NIRA runs launches (like MRFF) and how the CIA runs theirs. It gets more than a little irritating to wait 20 minutes between racks.

But, it does give you time to talk, and see what other folks are flying. Quite a few folks were using the Rocketflite Silver Streaks, mostly H's. While they make for impressive flights, they do have one drawback: they tend to start dry grass on fire. After nearly every flight someone would spot a fire and go stomp it out. No serious damage, but someone had to watch the ground and miss the flight.

One H ripped right through the rocket about 100 feet off the ground, and propelled itself several hundred feet away into a ball field. The rocket fell back to earth sans nose and parachute, and destroyed itself on the rock hard ground. A cluster model that air started two Silver Streaks was destroyed when one of the motors literally exploded. Pieces of the rocket were falling from the sky for quite some time, and I do mean pieces, like confetti, not big chunks. It was a really bizarre failure (the Rocketflite motors have an inner aluminum tube).

Norm had trouble with one of his high power rockets, well, the reload actually. It ignited and lifted off okay, then blew in mid-air. I think it took him a while to find all the parts, and he was disappointed to say the least. I suspect he'll be back!

Jonathan Sivier showed me his two stage Pink Birdie, and after our talk he decided to fly it. Pretty cool to watch. I decided that I'd do him one better and put a D21 in my Big Birdie. This time, I was standing far enough back so I could see the whole flight, and boy did it move out! Jonathan was duly impressed, and I heard that he flew his with the same motor type some weeks later.

Gary Buck (of Rocket R&D) showed up later in the afternoon with a Hypertek hybrid system, and the new NIRA OX pads. I finally got to see a hybrid flight, and was suitably impressed. The only flaw was a stuck chute and a pranged bird,



but the motor was fine.

Gary helped someone prep a monster with seven G motors using flashbulbs and thermalite. At ignition only a few motors lit, lifting it off the pad but without a prayer of going high enough to recover in time. Just as it was starting to arc over some more motors kicked in, making it loop and head back over the range towards Route 45. Then the ejection charges in the first motors blew, ripping the nose and parachute off, and the body dropped onto the frontage road. The other ejection charges could be heard going off as it hit the ground and skipped onto the shoulder. Just as we thought it was over, someone spotted a grass fire far beyond where the rocket took off. It looked like one of the fuses fell to the ground when the rocket looped.

The best flight of the day was a 1/2 scale IRIS on a K550 motor. The rocket had an interesting payload, stamps! It seems there's a stamp club in Chicago that specializes in collecting stamps that have been in the air - whether it's by plane, balloon, spacecraft, or rocket. The liftoff was spectacular!! I really love those K550's (wish I could afford some), lots of flame, smoke, and noise! It lofted the IRIS over 4000 feet, and the owner ejected the chutes via remote control for a near perfect recovery.

I was about to leave right before the IRIS flight, and was glad I stuck around to watch it. After saying good-bye to a few people, my sons and I headed for home. On the way out of the field I spotted the IRIS, hanging from a telephone wire by a tree. The owner was trying to use a pole to get it unstuck from the tree, and a member of the stamp club was holding on to the rocket. He looked more than a little afraid, so I offered my help. We got the whole thing out of the tree and wires without any damage to the rocket, wires, tree, and most importantly, the stamps.

All in all, a good day. We didn't get heat stroke, didn't lose any rockets, got the OX pads, and had fun! That's what the hobby is all about!

### Miscellaneous Stuff

**More Mistakes** - The email keeps pouring in, pointing out glaring errors in the last newsletter.

John Kallend wrote: "There is an error on P8 of the LE newsletter. I never owned a SR-X Aurora, nor did I prang one at MRFF. I demand an apology or I'll sue for slander, libel, breach of promise, delay of game and unnecessary roughness."

My response: Yea, I blew it. The rocket in question belonged to John Barrett, not you. Both Lawrence and I missed this one, but you'll be happy to know that we got it right in the write-

up that went to Sport Rocketry. And just why DON'T you own an SR-X Aurora????

Jerome Mrozak writes: "I liked the newsletter. I was looking forward to seeing how my son's Falcon dive into the pond was covered. It was described well, but unfortunately Bunny attributed the splash to Pete."

My response: ARRGGGHH!! I wondered about this when I read the article, but not having the flight cards I couldn't check it myself. Typically, I assume the author knows what he's talking about (except myself, of course) and don't double check anything. I know your son was upset at losing the rocket, I hope he wasn't more upset by our mistake (by the way, it was Lawrence who did the article, not Bunny :)

### Falling Leaf Finale

HUVARS Annual Fall Open Meet

September 30-October 1, 1995

Jackson, MI (about 5 hours drive from Chicago)

EVENTS: 1/2 A Parachute Duration

1/2 A Superroc Altitude

A Boost Glider

B Eggloft Duration

Open Spot Landing

SITE: Jackson County Community College, Jackson, MI (Also the site of the Michigan Space Museum)

Contact: Roger Wilfong or Buzz Nau

### NAR S&T News

NAR S&T MOTOR CONTEST DECERTIFICATIONS - Release 28

The following motors have lost their contest certification effective July 1, 1995. They remain certified for general sport flying use for three years.

Aerotech/Apogee: E6-2, F10-2.

Estes: E15-4, E15-6, E15-8, E15-P.

The following additional motors have had their contest certification suspended, effective July 1, 1995, due to a manufacturing hiatus. Certification for contest use will be restored on November 1, 1995, assuming production resumes in October. They remain certified for general sport flying use.

North Coast Rocketry (NCR): F30-4, F30-6, F30-P

NAR S&T ANNOUNCES HIGH POWER AND HYBRID ROCKET MOTOR TESTING PROGRAM - Release 29

The NAR Standards and Testing Committee is proud to announce their intention to begin testing high power rocket (HPR) motors October 3, 1995. John Cato has agreed to join NAR S&T to test HPR motors at his facility in Nicholls, Georgia. John brings a wealth of experience as former Chairman of Tripoli Motor Testing.

Vern Estes has been hard at work since this winter, fabricating a new test stand based on the design currently used by S&T to testing model rocket motors. The new stand is designed to handle motors up to 54mm in diameter with peak thrusts up to 2,500 newtons and contains several provisions to minimize the effect of any motor failure during testing. Vern demonstrated the stand at NARAM 37 in Geneseo, New York. The maximum motor accepted for certification will initially be "K" (2560 newton-seconds total impulse).

NAR S&T is also actively pursuing hybrid motor testing. Bob Littlefield is spearheading efforts in this area. Though there is not presently a committed date to begin formal testing of hybrid motors, S&T expects to conduct experimental firings before the end of the summer at Bob's facility in Newton, New Hampshire.

Appropriate modifications to S&T testing standards and policies taking into account high power and hybrid motors testing, as well as feedback received at the April meeting in Huntsville with manufacturers and NFPA experts are now being discussed. They will be mailed out to manufacturers when completed.

Jim Cook, Secretary for NAR Standards & Testing <JimCook@AOL.COM>

Jack Kane, Chairman

### 1995 RCHTA Show

NIRA has once again been asked to staff the Rocket "Make It and Take it" booth at the RCHTA show. The dates for this year are Saturday October 28th and Sunday October 29th. We're building a Pegasus clone and we have 900 kits coming (up from 500). We're in need of folks to work all shifts, but our greatest needs are Saturday afternoon and Sunday afternoon. The shifts are:

Sat. Oct. 28th, 10 AM - 2:15 PM

Sat. Oct. 28th, 2 PM - 6 PM

Sun. Oct. 29th, 10 AM - 1:45 PM

Sun. Oct. 29th, 1:30 PM - 5 PM

We can probably accommodate folks that don't fit in to this schedule, just let me know the hours that you are able to work. You will get into RCHTA free if you work a shift, which is a pretty good deal (please don't sign up for a shift just to get in to the show and not work your shift, this causes problems for everyone).

Please call Cheri Chaney (708) 462-0260 or Mike Jungclas (708) 910-1267 by October 6th if you can help out. You MUST sign up by the 6th in order for your name to appear on the list that will be given to the RCHTA coordinator. Only those names that appear on the list will be allowed into the show to work at the booth.

**I'm a Section Meet; Come Fly Me  
-or-  
Contests Can Be Fun!  
by Bunny**

If you've never flown a model rocket contest, the October club launch will be a good chance for you to try one. NIRA is sponsoring a "section meet" the smallest, simplest and easiest class of NAR sanctioned contest. There are only three events, and most of you probably have models lying around that will easily qualify to fly. Let's look over how this contest will work.

Contest Basics: When you arrive at the field, look for a card table set up with a sign that says CONTEST. There, you can pick up your entry blank. To officially enter, fill out the name and address information, and if you're under 16 years old, have Mom or Dad sign it. There will

be forms available at the October club meeting if you're in a hurry and want to sign up in advance.

After you get your entry blank in, you'll be given official flight cards for the three events. These are different than our regular sport launch cards, so make sure you get the special colored flight cards before you leave the CONTEST table. We're also asking members to bring stop-watches if they have them.

The events to be flown are 1/2A Parachute Duration, 1/2A Streamer Duration and Open Spot Landing. Here's how to play:

1/2A Parachute Duration - fly any singled staged model recovered by a parachute and powered by a 1/2A motor. You can fly up to two flights. The total number of seconds your model stays up in the air under the parachute are added

together. Whoever has the largest total wins.

1/2A Streamer Duration - works the same as 1/2A Parachute Duration except the model must be recovered by a streamer. The streamer must have a minimum length to width ratio of five to one (5 to 1).

Open Spot Landing - open to any rocket and any engine, whoever lands closest to a predetermined spot on the field, as measured from the tip of the nose cone to the spot wins. What could be simpler?

In just three flights, you could fly an entire contest! Why not give it a try? See you at the October launch!

**Model of the Month Winners**

Whoa! Four months worth of MOM pictures! May (no pictures) Mark Soppet won in Youth with his Sparrow, and Ron Husak won in Adult with his Cheetah.

June (far right) - Bob Wiersbe with "Mother" won in Adult, and Anthony Cekay (no picture, sorry..) won in Youth with his Big Bertha.

July (below, left) - Bill Thiel's "Air Mail" cluster model won in Adult, and Mark Soppet's "Three Day Late Yankee" won Youth (the meeting was on July 7th, hence the name).

August (below, center) - Bob Wiersbe's recently rebuilt and electronic staged Terrier-Sandhawk took Adult, and Mark Soppet's HL-20 took Youth. (Cheri Chaney said the HL-20 looked like a "drinking cup with wings", Rick Gaff replied "It might be better used that way.")

September (below, right) - Jerome Mrozak's "Not Quite a Bertha" was the hands down winner in Adult, and Bryan Chesi's SR-71 took Youth. Jerome's model ejects the parachute out the side instead of the nose.

Congratulations to all the winners!



**Hobby Shops that support NIRA**

Trains Plus Hobbies  
59 Danada Square East  
Wheaton, IL 60187  
708 690-5542  
Estes, Aerotech, THOY, Custom, Quest  
(discount with NIRA membership card)

Berwyn's Toy Trains & Models  
2827 S. Harlem Ave.  
Berwyn, IL 60402  
708 484-4384  
Estes, older kits (discount with NIRA  
membership card)

Fox Valley Model Raceway & Hobbies  
21 Jandus Road  
Cary, IL 60013  
708 639-2897  
Estes, Aerotech (discount with NIRA  
membership card).

## Heard On The Street

Rumors and such, with apologies to the Wall Street Journal

**Welcome to the club** - Erik Adams, Matthew Duckworth, Michael Porter, Brian Cieslak, Ken DiGiulio, Brent Ford, Tom Frymark, Mark Kotolski, Dave Miller, Drew Pierson, Jeffery A. Pleimling, and John Richter have joined NIRA recently, welcome!

**If At First** - An in-flight anomaly resulted in the loss of the first Lockheed Launch Vehicle approximately three minutes after liftoff on August 15. According to an initial review of the telemetry, the solid-fueled vehicle began oscillating near the end of first stage flight. Range safety officials continued to observe an anomalous condition early in second stage flight which required the subsequent destruction of the vehicle. The debris fell into the Pacific Ocean and there are no plans to recover it. The payload, a GEMstar-1 communications satellite, built by CTA, Inc., Rockville, Md., was lost with the vehicle.

## NIRA REPRINT SERIES

The NIRA Reprint series, which has been available for months at NIRA meetings, is now available by mail. The reprint series is an effort to get interesting useful information out of the collections of "Old-Timers" and into the hands of people who don't have access to the original material.

Sources for the reprint series include back issues of Model Rocketeer/American Spacemodeling/Sport Rocketry, Model Rocketry Mag., main stream magazines, and the Internet's Usenet rocket group Rec.Models.Rockets (R.M.R.) just to name a few.

There are currently 14 booklets available.

- 1) Sport Plans of the Model Rocketeer. A collection of 10 easy to build single page plans. 16 pages
- 2) Sport Plans of the Model Rocketeer #2. A collection of 12 single page plans with the emphasis on ODD. 16 pages
- 3) Glider How-to articles from the Model Rocketeer. How to build, trim, and fly a rocket powered glider. In addition to the how to articles are several more technical articles. 20 pages
- 4) Boost/Glider plans from the Model Rocketeer. Collection of 7 interesting 1 and 2 page plans. 20 pages
- 5) Ideas. A collection of 10 articles about... well...IDEAS! Some things you may not have thought of such as launching from under water! or kitbashing. 16 pages
- 6) Reusable Rocket Ships. Set of 3 articles about the Delta Clipper (DC-X) from Popular Science, Air & Space and Sky & Telescope. 20 pages

7) Rec.Model.Rockets Glossary of Rocket Terms.

8) The NIRA Big Book-o-tips! 22 pages of tips, hints, suggestions and ideas that will help you with everything from building to flying!

9) Glider Plans from the Leading Edge. Mark "Bunny" Bundick's 4 part series on Boost/Gliders for beginners. Five glider plans by NIRA's best glider builders including an "F" powered glider. 20 pages

10) LIFTOFF - For Beginners Only (not). A collection of articles on beginning rocketry by Lawrence "Mr. Strato" Bercini and Mark "Bunny" Bundick that were published in Sport Rocketry. 20 pages

11) The Lawrence Bercini collection of rocket plans Vol. 1. A collection of plans originally published in other club newsletters. Plans range from simple to complex and generally tend to be unusual. 12 plans

12) The Lawrence Bercini collection of rocket plans Vol. 2. More of Lawrence "Mr. Strato" Bercini's favorite plans from other club newsletters. 11 plans

13) Single Stage to Orbit, The Delta Clipper DC-X Spacecraft. One article from American Spacemodeling and five articles from the Internet.

**14) NEW! NIRA's Idea Book #2! 24 pages of ideas, construction tips, and other useful information. No collection is complete without it!**

Reprint booklets are FREE to members at club functions. If you want them by mail simply send 32 cents in stamps or cash for EACH booklet you order. Or (best of all) a large 9x12 Self addressed stamped envelope (the SASE can be used for several at once, be sure to include postage for EACH booklet) to:

Richard Gaff  
3175 Norwood Ct.  
Streamwood, IL 60107

## New Product Announcement from Saturn Press

Our supplies of "Rockets of the World" are nearly exhausted, so it's time to go back to the printers. Since we have to print up a bunch more, I thought I'd go in and fix my mistakes, I also discovered I could squeeze in a little new material without increasing page count (and cost). The result is a second edition of Saturn Press's favorite book. This will be an all-hardcover run. We will go to press by the end of August, and in late October, we will be shipping:

Rockets of the World - Second Edition

- All known drawing errors eliminated
- Four new rockets

**DC-X**, the new rocket that promises to change the future of space travel.

**Maxus**, the latest Swedish-German zero-gravity research rocket.

**GIRD-09**, the world's first hybrid rocket (Soviet Union, 1933).

**GIRD-X**, the Soviet Union's first all-liquid-propellant rocket.

- Quality hardcover binding
  - Laminated, full-color cover.
  - Smyth-sewn binding lies open for workshop use.
  - Easy to photocopy (for working drawings and substantiation data only!).
- No price jump

\$35 the same price as the hardcover first edition (US orders add 10% shipping and handling, foreign orders 16%, inquire for airmail rates). Check or Money order drawn on US bank, Visa/MasterCard.

Peter Alway  
Saturn Press  
PO Box 3709  
Ann Arbor, MI 48106-3709  
(313) 677-2321

(softcover first editions are still available for a limited time at \$28.00)

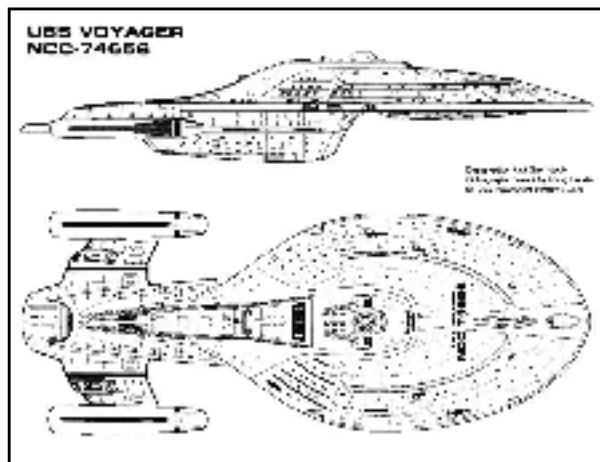
## 1996 NAR EVENTS

Date: March 22-24, 1996  
Meet Name: 1996 National Sport Launch  
Location: Argonia, Kansas  
Sponsor: KOSMO, NAR 427 and Kloudbusters, Tripoli Kansas  
Contact: Allen Swayze, 9600 E 47th S., Derby, KS 67037 or email 71435.527@compuserve.com  
Notes: FAA Waiver to 25000 feet or more. More information will be posted as it becomes available.

Date: August 2-10, 1996  
Meet Name: NARAM-38  
Location: Evansville, Indiana  
Sponsor: Launch Crue, NAR 519  
Official Events: A Alt, B PD(MR), B SRA, C BG, C HD(MR), D SD, F DELD, OSL, PMC, R&D, SpSc  
Fun Events: RC Glider, Aerial Photography, Duration, Altitude, Most Spectacular Flight, Star Trek, Spot by Launch Pad  
Notes: This is the big one, the NAR National Championships and annual meeting.  
Contact: Chad Ring, RR 1 Box 7, Holland, IN 47541 or call (812) 536-5291

*THE LEADING EDGE*  
C/O Bob Wiersbe  
1835 Shetland Drive  
Wheaton, IL 60187

## HAVE YOU SEEN ME?



The U.S.S. Voyager has been missing since Stardate 48315.6. Voyager's last known location was in the "Badlands". The Voyager can carry a crew of 200, is 1130 feet long, and has 15 decks. It's maximum Warp is 9.975. If you have any information regarding this vessel, please contact Starfleet immediately.