

Sept-Oct 83
VOLUME 6 NUMBER 5

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MONTHLY NIRA LAUNCH Oct. 2
Ackerman Park, Glen Ellyn 2 PM

More fun flying sessions!!! Will this be your last flying until spring??? Don't let the fickle Chicago weather deny you your rocket flying time!!!

MONTHLY NIRA MEETING Oct. 7
Glen Ellyn Civic Center 7:30 PM

Review of Labor Day Launch. We also need to talk about the new Park District Director. Also planning for fall activities.

MONTHLY NIRA MEETING Nov. 4
Glen Ellyn Civic Center 7:30 PM

We have moved COMPETITION CHUTES



EDITOR'S CORNER

Greetings to you all, and my most profound apologies for, once again, producing a late issue. This is our post-NARAM issue but unfortunately you will have to wait until next issue for our annual NARAM report. In the mean time I would like to give a small capsule summary of how NIRA did at NARAM. In a nutshell, we did GREAT! NARAM-25 was easily NIRA's best ever, we rolled over our competition to win the meet championship. The not-to-surprising-news is that Pulsar's pre-NARAM point total again pushed them over the top to take a much deserved National Championship. This makes NIRA's third Reserve Championship. We seem to becoming the Avis of Model Rocketry and that Hertz. (sorry! no I'm not!)

The bulk of the credit for NIRA's win must go to our A-B Division flyers; "Now a Jedi" Mark Schmitt and "Almost Jedi" Larry London. Mark took the National Championship in A Division while Larry took Reserve Champion in B Division. Congratulations, guys! In fact, every NIRA member at NARAM managed to win something. We were in great spirits! More about this in the November/December issue.



MODEL OF THE MONTH WINNERS



The Model of the Month Winner for July is Henry Veldenz and his Plastic Model Conversion. Congratulations Henry!!



The Model of the Month Winner for August is Larry London and his NARAM-25 Scale model Asp. Congratulations Larry!!



THE LEADING EDGE

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COVER PHOTO: The horror of staying in rocketry too long. Tom Pastrick changes into a rocket! Will he be stable?

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THE 1983 U.S. Spacemodeling Team took two individual and team medals at the Fifth World Spacemodeling Championships held September 5-11 in Poland. Phil Barnes took a Gold Medal in E RC RG and Art Rose took a Bronze Medal in C Scale Altitude. U.S. Teams took an overall first in E RC RG and second in Scale Altitude. A total of nine countries, Russia, Yugoslavia, Roumainia, Bulgaria, Czechoslovakia, Poland, Spain, West Germany and United States, competed in six events.

In A PD, the U.S. team of Jim Wilkerson, Terry Lee and Mike Micci finished 9th, 14th and 16th respectively. Jim and Terry flew drop cloth chutes while Mike flew mylar. U.S. engines, producing only 1.94 Nt.-sec., didn't help our efforts.

In A SD, the U.S. team of Art Rose, Chris Morgan and Jim Wilkerson resorted to "hot" engines left over from the '80 championships. A couple of no max flights held down the team's placing. Defending World Champ Phil Barnes had the timers lose his Round #3 flight for a 0 time. This kept him out of the flyoff. The Russians had the biggest technical innovation here; 10 mm motors and 1 gram models. These birdies would just float on air.

In C BG, Terry Lee and Matt Steele flew 18" versions of George Gassaway's Windrift flexwing. Mike Micci flew a fixed pod, fixed wing model. They finished 11th, 14th and 26th. The winner here, J. Taborsky of Czechoslovakia, flew a new kind of flexie that featured a canard. His winning effort consisted of three maxes and four flyoff maxes; a perfect score. This canard deploys ahead of the main wing and improves the stability and transition. The Russians flew similar gliders in large fiberglass, clamshell boosters and might have won except for lost models late in the contest. Nearly all other flexies were of the "Opel" type featured in the Model Rocketeer.

The U.S. Team swept all three places in E RC RG with the order of finish being Phil Barnes, Karen Dillon and Bob Parks. All other countries had considerable boost problems. The Polish team took third place with a total score of 118 seconds!!! None of the three Americans maxed out due to high winds and poor air.

In C Scale Altitude, the results were as follows: Art Rose (D Region Tomahawk), 3rd; Matt Steele (Sandhawk), 6th; Chris Morgan (Astrobee D), 9th. Art had the best altitude, 580+ meters, but the winner had over 600. The Russians again used 10mm mini-B's in two staged models of Russian sounding rockets. They reached only 400 meters or so.

In Scale, the U.S. team of John Pursley (Saturn V), Rob Justis (Space Shuttle) and Matt Steele (Sandhawk) never seemed to get rolling. Some questionable judging left them at the end of the pack. Flying-wise, Justis crashed and Pursley had only 2 of 5 engines ignite for a similar result. Matt managed a qualified flight. The winner was a Polish Saturn 1-B, which was fourth in 1980.

The U.S. Team swapped for a lot of foreign engines, including the Russian 10 mm "Super-minis", and some interesting models. BG freaks will be interested in the new canard flexies, and scale buffs will want to look at the Bulgarian Soyuz, complete with four drop-off boosters, each with its own chute. Once again, we learned some lessons, took home some medals, made some new friends and had the experience of a lifetime.

Terry Lee as told to Bunny

(Readers should note this story was written from notes Bunny took over the phone. Any errors or misstatements are the result of rabbit scribbles, and not Terry's reporting. - RG)

I.P.M.S.

Often, I find it interesting to go and see what other model builders are doing out there. I've been to model airplane contests, mall displays, even model railroad meets. I'd read a lot about plastic modelers and their shows and conventions, but September 24 was the first time I'd ever attended a show. The Butch O'Hare section of the International Plastic Model Society (IPMS) had a exhibition and swap shop at the Elk Grove Village VFW Post.

The atmosphere was similar to a typical model rocket convention; people milling about, greeting old friends, swapping war stories about their latest creations and asking for tips or information on kits. Half a large room was devoted to the swap shop portion of the exhibition and half to the model display/contest. Apparently, lots of plastic model contests get nasty. No one I heard talking about a contest had anything good to say about the judging. Conflicting sets of rules, each emphasizing a different model feature or point, are used at different contests. I heard almost universal complaints about locally biased judges. Additionally, there are lots of categories of models, e.g. "WWII US Carrier Aircraft" as distinguished from "WWII British Carrier Aircraft". At this get-together, there was a special table set aside for aircraft and ships from the recent Falkland Islands war, a table for novice modelers, and then all the rest! The literature and judges all emphasized this was not your typical cut-throat model contest.

The swap show consisted of one hobby shop and a half a dozen obvious plastic model freaks/collectors cleaning out their basements. Venture Hobbies (it's on Dundee Road in Wheeling. - RG) had a good collection of models from Monogram, including Larry London's infamous F105, selling at a discount. After the show, I went over to their shop and found an even wider collection of models and good Micro-Scale decals. I suggest you pay them a visit prior to the next NAR contest featuring Plastic Model. Their 30% discount table had numerous jet models that could be easily converted.

The freaks/collectors had equally good stuff. Of interest to the rocket crowd (Are you ready, Tommy P.???) were the following finds: an Airfix LEM for \$5, your choice of a Revell SNARK, Colonial Viper or Battlestar, all for \$15, a Revell Regulus for \$20 and an ancient Revell "Space Station" for \$75!!! I bought the LEM and left the rest.

TURBULATION REVISITED

Model-wise, I saw some exceptionally well done aircraft in small (1/72) scale. How you get precise cockpits in these tiny planes is beyond me. In larger scales, cockpits were on a par with Tom Pastrick's, with slightly more attention being paid to documentation, crisper execution and additional wiring/piping being done around the seats. The exteriors of the aircraft were probably better done than most of ours, but then again, these guys don't have to fly theirs. One thing I was determined to do after seeing this show is go out and BUILD that display stand I've been talking about. Nothing enhances a model plane than to have it sitting on a runway or carrier deck. Wait till you see what I have planned for rockets!

A couple of Starship Enterprises were displayed, but they were nothing to write home about. A scratchbuilt model of some starship was pretty bad. The model featured some model rocket parts, styrofoam cabins, and plywood rings, none of which were really finished. Imagine wood grain showing at a plastic model contest, and you get the general idea. The X-Wings and A-wings I saw weren't well detailed. None had any cockpit detail. One scratchbuilt starship was quite good however. It had working lights, a radar dish that turned and an American Airlines logo. Neat.

Which model did I think was the best? A Bell 47 helicopter, completely scratch-built with full instrument panels, fully detailed engine, full cable rigging and huge bubble canopy. I didn't hang around to see if this fellow won or not, but his care and craftsmanship were evident and deserved an award.

The show was a pretty relaxed way to spend a Saturday morning. There were a few bargains to be had in the way of kits, but I didn't see any really "Knock-out" models. I left convinced that care and craftsmanship are the "universals" that weed out the good, bad and indifferent members of the modeling community, airplanes or rockets, flying or not. Maybe NIRA should give some thought to putting on its own exhibition/swapshop in the winter???

Bunny

My NARAM-23 R&D report investigated the effect of turbulation on boost glider boost performance. While turbulators and their supposed performance improvements were topics of hot discussion for any BG fanatic in the 70's, turbulation had died as a serious alternative for BG flyers of the 80's. In presenting my R&D paper at WISCON-IV, I found many of the BG experts there didn't know how turbulators were supposed to work. This short article will help explain about turbulators and their effects.

All gliders need to produce lift in order for them to fly. Most of the lift any aircraft generates comes from the airfoil flying at an angle of attack to the relative wind. The airfoil shape also produces lift. It causes the airstream to split its forces to get around the intruder. If we imagine two air molecules, Tom and Jerry, tagging along together, we can watch them get separated at the leading edge of the airfoil. Most surprisingly, Tom and Jerry will be reunited at the trailing edge. Due to the shape of the airfoil, Tom, going around the airfoil's curved top, traveled farther than Jerry, who went around on the flat bottom. Tom had less time to press down on the airfoil surface. A low pressure area on the top of the wing relative to the bottom was created, and lift is produced.

How does turbulation fit in? It fits in when things go wrong. Tom, the top molecule, must move faster in order to meet Jerry at the trailing edge. He has lots of energy. When Tom goes over the smallest bump, Tom jumps off the surface of the airfoil. It's just like you'd jump up if your car went over a bump in the road while traveling at high speed. With Tom off the top of the airfoil, lift production is reduced.

Turbulation works by tricking Tom with an imaginary bump, the turbulator. Turbulators can be made by putting a small strip of tape, or thread along the front of the airfoil, a distance about 5-10% of the wing chord behind the leading edge. Another method involves putting a vibrating string a similar distance ahead of the leading edge. When the air molecule sees these things, it reacts to them like it would to a surface irregularity. It jumps up. But, due to the extra energy imparted to the airflow,

it quickly reattaches itself to the airfoil, much quicker than it normally would. Less lift is lost, and drag is reduced. If your L/D (lift over drag) ratio improves, your glide performance goes up.

Research over the years shows turbulators work best when airspeeds are low. In this speed range, it is extremely difficult to keep airflows attached to the surface of the airfoil. Model airplanes and BG's fly in this speed range. They have bad stall characteristics, and they have lousy performance. Turbulators change all of that. Turbulators are particularly helpful on undercambered airfoils. Those airfoils are particularly prone to airflow separation.

For model rockets, my study indicated turbulators of the vibrating string type would give you a 20% reduction in boost altitude over unturbulated gliders. If you want to try them anyway, take a tip from the swing-wing experts at WISCON. Use them on swing-wings! Swingwings use undercambered airfoils, and they are probably prone to airflow separation. They do look a lot like model airplane gliders. WWAR supposedly will try them in the spring. Another thing you can do is confirm, via testing, that the supposed three-fold improvement in glide performance from using turbulators does exist in the real world. That will offset, more than adequately, the loss in boost altitude.

Turbulators may not be the answer to your BG problems, but they are very interesting things to experiment with. Try one on a glider just for kicks. If you make it to NARAM, chances are you'll attract a crowd, and maybe stir the competition to think "What have I missed out on here?"



Glen Ellyn teen wins model rocket championship

Glenbard South sophomore, Mark Schmitt of Buckingham Road is the new national champion of model rocketry for participants up to 15 years of age.

Schmitt, 15, amassed 3500 out of a possible 4500 points at the 25th National Association of Rocketry Annual Meet (NARAM) held Aug. 8 - 13 on the grounds of NASA's Houston (Texas) Space Flight Center. In competitive flying and skills events, he placed in ten out of eleven events, winning five first, two second, one third, and two fourth places. He was declared Meet Champion for his age

group, and the points awarded, when added to his points from other competitions throughout the year, were enough to win him the Trophy as Division A (up to 15 years of age) National Champion for 1983.

Schmitt is a member of The Northern Illinois Rocketry Association (NIRA), a club which meets the first Friday of each month at the Duane Street Civic Center in Glen Ellyn. NIRA outpaced all other clubs at the National Meet. Its members collectively amassed 30 trophies, making it club champion for the meet, and giving it second place among all clubs in the nation for 1983.

NIRA holds frequent rocket launches on summer weekends at Ackerman Park on St. Charles Road, Glen Ellyn. For further information about NIRA call Mark Bundig, 642-9028, or meet all the members at the Annual Labor Day Launch at noon at Newton Park.



Mark Schmitt

NIRA IN THE NEWS



Out to launch

SOMETIMES YOU HAVE TO really get down to earth in order to spread your wings properly. These members of the Northern Illinois Rocketry Association are shown preparing a rocket for launch at the group's annual demonstration held this past Labor Day at Glen Ellyn's Newton Park.

NAR WARS

RETURN OF THE MAR

June 11 dawned clear and warm for the start of Return of MAR, the regional hosted by Tom Hoelle and his section in Fort Wayne, Indiana. In attendance from NIRA were Ric Gaff, Larry London, Mark Schmitt, and Henry Veldenz. Tim Vacarro, Al Neinast, and Jim Zingler came from Wisconsin. A suprise was the arrival of the Kuczek Family. This was to be their last Midwest meet before moving to Colorado, we're going to miss the Kuczek's. Attending from SCAM were Bob Black, SCAM's president, and Dave Weiss, a friend of Tom and Ric's from "The Old Days".

MAR began with an auspicious start as Tom did not have flight cards. The miracle of photocopying solved the dilemma, and flying began. The weather for flying was superb, although the heat was a little hard on the contestants itself. June 11th saw all duration events. Gliders thermaled away with regularity. Mark Schmitt lost his B/B/G points by having both his birds thermal away. He almost lost his rocket glider points, but was able to get one returned. Jim Zingler lost a 5+ minute flexie that was still rising as the timers lost sight of it. The only gliders that stayed near the field were Al Nienast and Jim's swingwings. Even then they spent hours looking for them. Other notable glider flights were some Red Barons and a real vicious power prang of Henry Veldenz's old nighthawk onto the IU-Purdue parking lot.



Mark Schmitt's Sport Scale Saturn-V on another successful mission.

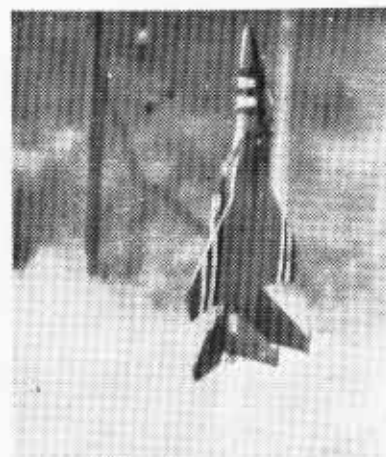
Streamer duration benefited the contestants that flew later in the day. In the morning, one minute to one and a half minutes were the norm. But in the afternoon, Al Nienast broke out his pet thermals for two 2:00+ flights. Kevin Kuczek and Jim Zingler also benefited from the thermals. NIRA notables for the day were few. Mark's good BG times were lost due to no return. Larry had flights that qualified him in all events, but nothing real spectacular. Henry flew a fair SD in the morning after his first bird CATOed on a bad A3-61. Henry's gliders met with a Red Baron that broke a boom on impact, the previously mentioned power prang onto the parking lot, and a shred of a "Seattle Special" due to construction error. The NIRA surprise of the day was an excellent B RG flight by Ric Gaff, who Hot Stuffed his bird together right on the field. It was fitting that Ric got 117 points for his RG performance.

After the day's launching, NIRA members went to the new, air conditioned Hoelle Hilton. There Tom and his Wife, Nicole, gave us excellent hospitality. We had a great backyard barbecue and a tour of his expanded workshop. Here he showed the work he is putting in to his Scale Ariane for the Internats. His attention to detail was impressive. The night's activities were highlighted by a trip to see Return of the Jedi (George?). At the theater, the Kuczek Family and Bob Black also were enjoying the film.

June 12th started with the usual preflight preparations. While Ric and Tom set up the tracking equipment, the flights for Sport Scale and Plastic Model were held. Jets dominated PM, and so did the prangs. Mark had a good F15 that flew well, but he lost out to one of Kevin's F16s. Al and Jim had the only qualified flights in C Division. Henry power pranged his MIG 21 back to kit form. Dave Wolf had a neat model of the Imperial Shuttle Tyderium from Return, but it was unstable. Larry's X15 was also unstable, but just by a little bit (??).

Sport Scale saw controversy. First, there was dissatisfaction with the static judging. Second, a rules protest was filed by Mark when he lost 10 points for a misfire, resulting in a second place to Kevin by 5 points! Mark lost his protest. Sport Scale left a bitter taste in NIRA's mouth. On the good side, the Boosted Arcas from the Leading Edge performed well in flight, if not in static. Ric flew a BT-50 model that was not fully finished. Henry flew a BT-5 model that flew well with a separation at the end. Both Boosted Arcas models boosted very straight and were quite stable.

The old saying goes that you have to break a few eggs to make a good mayonnaise. Well, after B and C Eggloft Altitude, gallons of mayonnaise could be made. There were only three qualified C ELA flights in C. Problems encountered were the parking lot, parachute shreds, piston tipoffs, and flights over the tracking baseline, making it impossible to track those flights. B ELA apparently was not as difficult as there were more qualified flights. Here simplicity worked best. All flights were single stage B's with most out of towers (very smart!).



"Jedi"-Schmitt's Plastic Model.

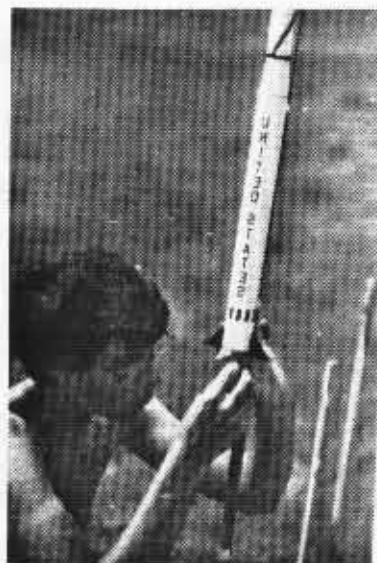
The oner of pistons tended to fly over the parking lot or the tracking baseline. D superroc saw several competitors unprepared. The August '82 rule change with a maximum static points limit hurt a few people. Most flights were D12's out of towers or with lugs. A local young modeler, entered a Mean Machine against the NAR competitors. It flew well, but not very high. The best flights were with E5-4's. Al Nienast pranged his second D SRA flight with an E5. The crumpled wreck with its buried nose deservedly earned Al the prang Award for the meet.

The meet ran well once the flight cards were reproduced. The range had very few problems. Timers and trackers did a good job in the bright skies and hot sun. Except for thermaled gliders, the field handled all of the flights fairly well. The meet even had Mom Kuczek's Competition Chutes for sale and on display. The really bad news is that WVAR beat NIRA by about 5 points! Al and Jim flew a really good meet, but then they usually do! NIRA saw Larry and Mark place second and third behind Kevin Kuczek in the combined A and B divisions. This really hurt as Mark had to compete in a larger field. Where are the A division modelers? C division for NIRA left a lot to be desired. The old pros of Bunny, Bullet, Tommy P., and the Star Wars "team of Darth and Jedi were absent, and their loss hurt. Ric and Henry were only able to earn 250 or so points for NIRA.

Disappointments aside, Return of the MAR was an enjoyable meet. It was the best flying weather of the year so far. It also was fun to head down to Fort Wayne. There is always next year. Who knows? It might be the Return of John Carter's Last Raiders or the Son of the Lost Boatloads of MAR, and NIRA will be there!

NAR WARS

RETURN OF THE M A R



Larry London and his Sport Scale Scout.



Bob Hart and his very good FBI Black Brant III.



Henry Veldenz "towers" his second place SD model.

HENRY VELDENZ



Jim Zingler prepares to fly Plastic suicide.



Joan Kuczek sets up shop using a tree to display her wares.

Are you sure this is Colorado?
I don't see any color.

I'm not sure. We may have taken a wrong turn somewhere.

Should I tell him about that thing on his leg? NNNAAA!



ETR-13

This "unlucky" and "last" ETR was held over the Fourth of July weekend at Bong Field, Wisconsin. Upon arrival on the field, the weather was cloudy and the flag at the entrance was out full. While waiting of the wind to calm down, everyone was either talking, building, looking through an amateur rocket catalog (complete with G's and H's), or any combination of the above. Flying finally started around 11 AM with most folks flying A SD and 1/2A PD. It was still too windy for gliders.

Steve Sangerman took first in A SD in A/B Division. Once again, there weren't enough contestants for three age divisions. (Hey! NIRA members! When are you going to come out and take some of these trophies and ribbons home?? - RG) Steve flew a "blow away" flight and a BT-50 model equipped (Gag me to the max!!) with a plastic garbage bag streamer!!! He took second in 1/2A PD with the same model. Tommy P. won C Division with models found hours later in the day by persons who happened to "stumble" across them while searching for their own. Darth Riebesehl took second in both events with steady, consistent flying.



Howard Olson prepares to fly eggloft.



Larry with his 3 D12 powered Terror-dactyl!

A RG was really sad. Proven designs from previous meets would not work in the high winds. In A/B, there were no qualified flights. In C, Darth took first, flying his usual, small, but well trimmed slidewings. Chuck Beneateau and Tom Pastrick tied in second with the only other qualified flights.

1/2A BG was a bit better. Larry London won A/B with, again, the only qualified flight in the division. The model was his bird left over from NARAH-23 in Allentown. Tom won in C followed by Darth.

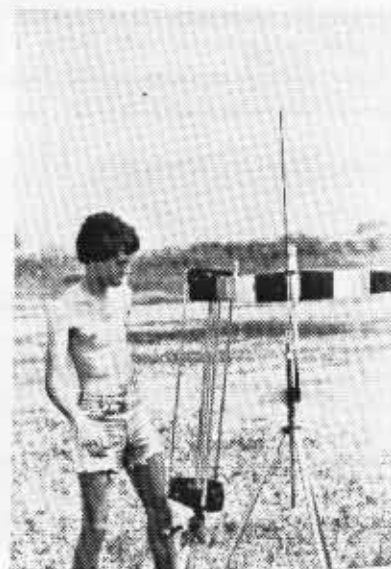
F BG was, ummmmmmmmm, well, F BG!!! In A/B, Larry London flew his "Terror-dactyl" (or Terrible-dactyl, for the readers who prefer the truth) with a cluster of three E5's. One motor in the cluster didn't light, causing the model to loop and attack persons on the range for four seconds. In C, Chuck Beneateau won with a qualified flight of 12 seconds. His model, a giant swingwing in the Tomah Tradition, flew with an Aerotech E6 and a 1/2A. The bird just did pull out of a dive before touching down. Tom Pastrick's

"Tapeworm" glided to insect heaven, causing a "No Return". The Boilermakers', Dan and Dave Wolf, first flight separated; flight number two earned a place in the "ETR F BG Shread Hall of Fame".

Spotlanding. Who really cares about Spot Landing, anyway?

Plastic model was a much more interesting event. Steve Sangerman had the only qualified flight in A/B (Astute readers will, by this time, have noted a trend in this year's ETR flying. - RG). He had a 1/48 scale F104 painted red, white, blue and silver. Howard Olson's 1/32 F104 had an engine eject while Larry London's well done F105 pranged under D12 power. People helping Larry pickup up the remains coined the term "shake and break; it's better than flying". In C, Tommy P. flew his usual 1/32 F104 to first. The Boilermakers had the only other qualified flight with an X-15. Darth Riebesehl planted his F104 when he shreaded a wing on the way up.

F International RG was flown as an unofficial event. There was a \$25 first place prize offered by Bunny. Jedi George and Larry London had the only entries.



Jedi George with his F7 powered RC B/G.



The Vaccaro's enjoying a spare second.

ETR-13

Jedi demolished his new RC ship when the launch lug came off on takeoff. He tried to make a free flight glider out of the remains, but it followed its prior version by prancing harmlessly in the tall grass. Larry London flew a slide-flop wing with triple E5's. His first flight ripped off the flop panels. Repaired, the second flight featured an awesome boost, and everyone started telling Bunny to get out the checkbook. Bunny calmly replied, "He's not won yet." Alas, Larry's model didn't deploy the flop panels, and failed to glide. Bunny, with a big smile, breathed a sigh of relief and kept his 25 bucks.

The range was well run by Bunny, Bob, Ric and Alan Jones, none of whom flew. (Sorry, I didn't have any models. - RG) With this last contest, ETR has become the longest, continuously run regional meet in the country. I hope to see you at next year's contest, which will positively, absolutely, and undoubtedly, be the last ETR.

Larry London



The Bob and Doug McKenzie tracking Team. "You hoser!!!"



Steve Sangerman with his 'King-of-the-Swamp' plastic model.



Always helpful, Bob accidentally 'Hot Stuffs' his hand to his forehead.



Mark Schmitt in pre-"Jedi" days.



Tony offers some sage advice: "The trash can is back here, Larry."



The Wolfpack team of Dave and Dan Wolf with their pre-flight Condor.



Dave Wolf with remains of his D12 incinerated Condor B/G pod.

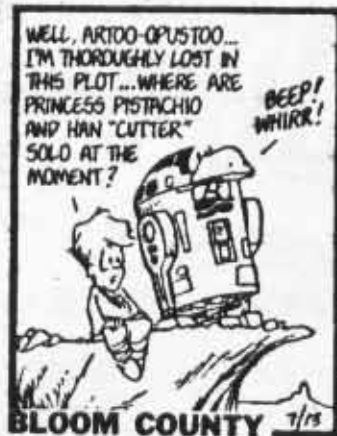


"Gollllllyyyy! That's way the heck up there!"



The whole crew shoot the bull waiting for the weather to cooperate.

EDITORS COPOUT REPRINT PAGE



AIRBAGS FOR MODEL ROCKETS

YES, YOU CAN GET PARAS EIMINATING
AIRBAGS FOR YOUR FAVORITE MODELS,
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