

# Tri City Sky Busters

May 1995

Volume 1 Issue 2

## Sky Busters Have Award

### Show Awards

Tri-City Sky Busters' Club Display Booth took BEST-OF-SHOW for a Club-Display.

#### A REALLY BIG TROPHY!

Neal Bade (NAR-535 Pres.) took 2nd place in the Adult Open-Rocket class for his Aerotech Warthog. (First place was taken by an impressive Estes Jayhawk, and Third place by an Estes SR-71 Blackbird.)

Charlie Freed (NAR-535 Jr.Member) took a second place in the School Grade Open-Rocket class with his MCI Beta Launch Vehicle built from an Estes Beta/Tron designers kit. Third Place was taken by another NAR-535 Jr.Member, Justin Freed for his Estes Hornet. (First place was taken by an Estes Yellow Jacket kit.)

There were 4 HONORABLE MENTION AWARDS given to 4 of Tri-City's Jr.Members as noted below...

**Kristy Freed**, for her Quest Big-Rage, **Charlie Freed** for his Estes Mini-Patriot, **Justin Freed** for his Quest Apollo, and **Angie Freed** for her Estes E2X Patriot.

#### REALLY A GREAT JOB KIDS !!!!!

We received MANY, MANY inquires about our Club & Model Rocketry in general. A calling list of 75+ names was compiled from our show efforts.

They ALL received a call, thanks to Larry Freed !!

### 44th National Model Plane Show Parmatown Mall - by Gerry Freed

First of all, thanks to the extra efforts of 2 of our Sr. Sky-Busters, Dave Falkner & Larry Freed, NAR-535 was able to have a Club Booth at the 44th National Model Plane Show, as well as many of our Jr & Sr. members entering Rockets in the School-Grade and Open-Rocket Class.

#### Many Thanks !!!

We had a total of 7 members (Steve Yahner, Mark Sadowski, Dan Harold, Larry & Kristy Freed and Gerry Freed, & Neal Bade) that worked setting-up tables at Parmatown Mall from 9:00pm to midnight on Thursday evening 3-16-95.

Manning the Club Booth Friday, 3-17-95 were Dan Harold, Larry, Kristy, Angie, & Justin Freed.

Saturday 3-18-95 we had Gerry, & Charlie Freed, Neal Bade Dan Harold, and Mark Sadowski. Sunday,



*Tri City Sky Busters win Best of Show at 44th National Model Plane*

3-19-95 we had Larry, Kristy, Justin and Angie Freed, Neal Bade, Ken Hubal, Dave Falkner, Gerry & Charlie Freed, Mark Sadowski, & Dan Harold.

There were also cross-overs from day to day by many members not even scheduled for that day showed up to help out.

**MANY THANKS TO ALL**

### inside...

**March Launch Report**  
**History of Model Rocketry in Northeast Ohio**  
**Kit Review LOC Precision Aura**  
**Kit Review Quest DCY Space Clipper**

# President's Corner

Hello, and welcome again to the Tri-City Sky Buster's newsletter. This is our second newsletter, and much has happened in the past few months. First of all, I would like to congratulate all of the Sky Buster's for the hard work that won us "Best Club Display" in the 44th National Model Plane Show sponsored by the Cleveland Aeromodel Society. This show was held at the Parmatown Mall in Parma, Ohio on March 17-19. We learned about this event rather late in the game. With only a few weeks to prepare, we managed to pull together and make it happen. Everyone volunteered time and effort to get ready for the show. We had models to prepare, display stands to set up, raffle tickets to sell, and schedules to coordinate. It was a tremendous effort on everyone's part, and it yielded us the "Master Trophy". Quite an achievement for our first effort of this kind. I would like to thank all of you again for making this happen. It was great!

Our launch attendance has been increasing steadily. At a launch earlier this year, we had quite a crowd, including many families. It's a thrill to watch the youngsters launch and recover their first rocket. It reminds me of my first experience in rocketry many years ago. This is what model rocketry is really all about.

Because of the number of people attending our launches, and many of our members building "large model rockets", the search continues for an even larger launch field. If anyone knows of an available launch site that we can use, please contact one of the club officers. We will then contact the land owner and make the necessary arrangements.

Neal Bade, President NAR #535

## A Reminder...

**SAFETY FIRST!** I would like to remind all of our launch attendees that all launches are conducted under the rules established by the National Association of Rocketry. Also, all models that are to be flown must pass inspection by the attending Range Safety Officer (RSO). The RSO has the final word on whether your model is fit for flight. And please see the Launch Control Officer (LCO) before beginning your countdown. The LCO has the task of coordinating all launches and will let you know when it is your turn. If you are just an observer, make sure you stay behind the safety line and away from the launch area. Young children must be supervised at all times and are permitted in the launch area only when accompanied by an adult.

### **Kit Review: LOC / Precision "Aura"**

I received this kit for Christmas last year (12/25/94) from my wife Debbie. No time was wasted opening the bag-packed kit. Looking over the contents I was VERY Impressed to find 3 Aircraft grade plywood fins (Surface Mounted) though through the wall would be better, a good coat of epoxy fillets worked just fine. This is my first LOC/PRECISION Kit & I was amazed by the body tube thickness & Strength. The nose cone is weighted for better recovery. The over all quality was a welcomed surprise to a person that has built mostly Estes type kits.

I did choose to change a couple of things when I assembled this kit...(I know this comes as a surprise to those of you who know me, as I am well known for my ALWAYS following the instructions...)

I used an 8 inch long steel fishing leader attached to the 29mm motor mount as a shock cord mount. I got the idea from the type

of shock cord mount used in the Vaughn Brothers Rocketry BLOBBO kit. The braided nylon loop epoxied to the inside of the body tube (much like an Estes shock cord mount) didn't thrill me. I also added an Aerotech 29mm F/G Motor Hook, Thrust-ring and Thrust-ring-flange assembly.

The only problem I encountered with this kit was in painting the nose cone. Just didn't want to take paint !!, I finally stripped off all of the paint with paint thinner & re-painted it after a light sanding. All went well this time.

I have yet to fly this bird, but hope to do so at the May Launch.

### **LOC/PRECISION AURA KIT DATA**

Approx. Cost \$ 16.00 Weight 8 oz.  
Length 23.3 in. Diameter 1.62 in.  
The AURA comes with a 72 in. long x 4 in. wide streamer for recovery.

This kit is rated to be launched on the following motors. And more....

LOC / PRECISION lists "A few of the many motor combinations possible" as:

Estes D12-5\*, E15-6\*  
(\* with a 29mm to 24mm adapter)

Aerotech E30-8\*, F25-9, G80-13.

Vulcan Sys. E26-7\*, F40-10, G50-12.

Flights to over 4,500 ft. can be expected on a single G motor.!!!

I was VERY Impressed and look forward to building other LOC / PRECISION Kits in the VERY near future.

Gerry Freed

# ***Cleveland and Model Rocketry***

## ***A Historical Retrospective***                      ***-By Ken Hubal***

It's not very often that I take time to do these types of articles, in fact that last time I wrote an article for a rocketry publication, I was using an old Olympia typewriter (manual of course) that dated back to the 1940's !! How times have changed !!

As most of you well know, Cleveland has played and still plays a pivotal role in this nation's quest to travel to the stars. So it is also, that this city on the "NORTH COAST" has also had a colorful and very rich history in non-professional rocketry as well. In fact, Cleveland's history in rocketry dates back to 1932, when the Cleveland Rocketry Society was hard at work in experimental rocketry, which at that time centered around liquid fueled rocket engines. The club had a test stand on the old Rau Estate in what was then the sleepy little township of Highland Hts, Ohio. That test stand went silent in 1935 when the society unfortunately folded, for unknown reasons. Today those pioneers of years past have not been forgotten, they live on in our insatiable curiosity to explore.

The years following the CRS, no major clubs or research organizations flourished, namely because of the hazardous reputation the rocketry had born, and still does to some extent to the uninformed. Of course, that began to change with the development of the modern Model Rocket, by Orville H. Carlisle, the REAL Father of Model Rocketry. Later, as this new "Space Age" hobby caught on, the N.A.R. was founded and nurtured into the organization we know today. (It's first member was Orville H. Carlisle.) Today, the N.A.R. continues its tradition of educating and getting people excited about rocketry and space sciences.

The 1960's would become the most prosperous years for model rocketry. During this period, millions would be captivated by the real life dramas of the U.S. space program, and millions of young and old alike would be building and flying their own models on any typical Sunday afternoon. At approximately this very same time (mid to late 60's) the North Royalton Rocket Society had formed. I am not sure if this organization was a chartered N.A.R. section or not. I have dug through my archives, but haven't found anything namely because they don't go back that far. I currently have a friend searching for this info. An update will be forthcoming. The North Royalton group flourished until 1974, when it folded and the remaining members went on to form S.N.O.A.R., the Suburban Northeast Ohio Association of Rocketry, the forerunner of Tri-City Sky Busters. SNOAR's history was definitely very rich. It was this group of people who were instrumental in the advancement of the hobby during the so-called "dead period" during the post Apollo years and preceding the Shuttle era. During this time, many individuals long associated with this hobby were pushing the N.A.R. to weight limits and increase the amount

of legal engine power. This was a very turbulent time for SNOAR and the N.A.R. As the 1980's approached, things heated up even more. SNOAR had begun its G.L.R.M (Great Lakes Regional Meet) series of launches. These launches, which were originally held on the Garfield Heights landfill (when it wasn't quite as explosive!!!) started back in the mid to late 70's as N.A.R. sport launches. As the high power craze took hold, the launches were moved to a new site in Medina, Ohio. It was at these launches that larger and more powerful rockets started appearing. SNOAR had clearly sent a signal to the model rocketry community that larger rockets could be flown just as reliably and safely as smaller ones, opening up whole new vistas and new experiments in the process. The G.L.R.M. launches were the forerunners of the L.D.R.S. launches that now attract thousands every August and have become the premiere rocketry event in the U.S. In 1982, the G.L.R.M. launch became L.D.R.S. The event was to be held traditionally in late July early August at the same site in Medina, Ohio. The highlight of this series occurred in 1984 at LDRS-3, when Pat Miller then president of the N.A.R. attended. Back then, the launch only lasted the weekend so there was plenty going on both days. During this event, the most powerful rocket that most including Pat Miller had seen was launched. It was a Vulcan Systems "L" class motor with fins and nose cone attached. One can only surmise where it ended up. (why does the word "WORMHOLE" come to mind ?) The N.A.R. had finally seen firsthand that "High-Power" wasn't anymore dangerous than N.A.R. legal rocketry. It was at this point that a blue ribbon commission was set up to discuss raising power and weight limits. In August of 1986 during LDRS-5, the last to be held in Ohio, an agreement concerning power and weight limits was reached. This historic event led to what we now have in place today. In fact, it was at this launch that Vern Estes was present, a truly fitting end to Ohio's L.D.R.S. heritage ! It was also at this time that L.D.R.S. was turned over the auspices of the Tripoli Rocketry Association. Instead of attracting 30-50 participants, they now attract well over 100.

**Cleveland and Model Rocketry** *continued from previous page.*

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page...

After LDRS-5, the field was sold for cultivation and things began to die down for SNOAR. We did do some flying in back of the Euclid Library after club meeting, but this didn't last long. SNOAR continued to hold monthly meetings until 1990 when it was decided that the club would not renew its charter and because of low (3 or 4 people) attendance, would have to fold. This was mainly due to the fact that most of its members had either gone away to college or accepted professional positions upon graduation and had to relocate outside the state. Presently, there are 3 of the original members left here in Cleveland (possibly a fourth), myself being one of them. I am still in contact with the other two, one is now a NASA employee and the other a consultant. Both have expressed interest in attending one or more of our launches and both still have a great amount of interest in the hobby, though their schedules may or may not be as flexible as before. Be sure to look for them, they have a great wealth of information to offer and stories to share!!!

In closing, I would like to state here that I have been involved with this hobby for over 20 years and was involved with SNOAR since 1980. There have been profound changes in that period, both in the hardware that we use to send our birds skyward and in the philosophy behind the reasons for our continued participation in this endeavor. But one reason remains the same as the first time my father and I flew my first model rocket on a very cold and blustery January day 22 years ago. That reason can be summed up in one word, F U N ! Thus, I would like to dedicate this historical perspective to several persons, too numerous to mention individually, but as a group. First of course my father, who took the time to help a young boy put a bunch of balsa and paper into what would hopefully be a model rocket that would fly straight and get high enough to crash! Second, all of the former members of the Suburban Northeast Ohio Association of Rocketry, wherever they may be. Third, Orville H. Carlisle, who passed on in 1988. Unfortunately, I never got to meet the man but I see his work in every model rocketry kit that I open up. And finally, to the "Skybusters", this new and energetic group of kids (young and old!!), who will hopefully carry model rocketry in Cleveland into a new "history" and era. You're a fantastic bunch of folks and I'm proud of your accomplishments and proud to be a part of this group in a time of unprecedented technological advancement. It's often said by child psychologists that involvement by parents in their children's activities is the single most important thing a parent can give. In a day and age when this is being put to a severe test, it's nice to see a parent involvement here!! Lastly, it's appropriate to note here that what we do is not very different from what the professionals do at the Cape. Sending a vehicle into space takes teamwork, so does running a chartered model rocketry society. As humans, we are just now beginning to leave the cradle of Earth, one of nine planets orbiting one of more than a billion stars in a minor arm of one of hundreds of thousands and possibly millions of galaxies in an ever changing and dynamic universe.

**KEEP 'EM FLYING STRAIGHT !!!**

Author's note:

The historical accounts in the preceding article represents only the major events of significance in Cleveland's role in model rocketry. It would be impossible to list all events, dates, etc. as this would require undertaking the writing of a book,

**Birthday Cake!**

For those of you who were unable to attend our first birthday celebration, here is a picture of the birthday cake before it was devoured by a group of hungry Sky Busters.

Thanks to Neal Bade for scanning the photo!



**Editor's Note**

If you would like to appear in the monthly launch report, please send a list of rockets launched, and a brief description of their flight to me at the address below. If you would like to write an article (a kit review, or other story related to rocketry) please send it in as well!

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## March Launch Report

A regular monthly launch was held on March 12, 1995. We had beautiful weather that day with clear skies, temps in the 60's and light to moderate gusty winds. A large number of rockets were launched. Some of the highlights:

Larry Freed launched his "Shadow", "Broadsword", "Ranger", and two "Patriots" one an E2X and the other the "mini" version. All flew well, with no mishaps. He did manage to hang his Quest "Falcon" in a tree. Larry also launched his Estes "Impulse" using a two "D" cluster. The bird flew beautifully, and landed right in the top of a tree. As of this writing, I've learned that Larry has recovered the rocket from the tree.

Ken Hubal also fed the trees with his Centuri "Thunder-roc". This rocket was also recently recovered by Larry, but it is in very "limp" condition due to the rains.

Gerry Freed launched his Aerotech "Cheetah" for the first time, with a second flight later in the day. First flight was on an Estes D12-5, and the second on a D12-7. Both flights were picture perfect. Gerry also offered his Quest "Big Rage" to the trees this trip out. For a different flight, he flew a FSI "Competitor" with a rear ejection system. The only mishap here was a chute line appears to have put a notch in one of the fins.

Dave Falkner launched his Custom Rockets "Serval" tube fin rocket a number of times. This bird always turns in good flights, and the spectators love the red metallic mylar streamer. Dave's Estes "X-15" with the uprated 18mm engine mount flew great on an A8-3, but stripped a wing tip fin after lift off on a B6-4, causing a horizontal flight about 30 feet off the ground. The model landed softly, incurring no other damage. An "E" powered "Broadsword" provided this launches CATO. The rocket lifted off, climbed to about 10 feet, and erupted with a large fireball. The kit and motors have been replaced by Estes. Two of Dave's rockets lost to the trees at the last launch were recovered minus their nose cones, but otherwise intact.

Neal Bade flew his LOC /Precision Graduator on an Estes E-15 with no CATO! Neal also flew his Estes Arrow (with a streamer due to the wind), Mini Patriot (on A10-3T power), and his Red Max (B4-4 power) for many nice flights without mishap!

Mark Sadowski turned in some nice flights with his "Super Vega" and a number of other rockets.

A new flier, Tom Campbell flew a number of large HPR home built models. He flew a beautiful Gemini Titan that was 4" in diameter, a large upscale IRIS, and a few Boost Gliders.

We had some new fliers and spectators out, and all in all, it was a very enjoyable day of flying!

We are still looking for that perfect large treeless field; if ANYONE has seen a field that might be suitable, please contact either Neal or Gerry so the owner can be contacted!

- Dave Falkner

## Kit Review Quest DCY Space Clipper

I purchased this kit for one reason; No fins! I was intrigued by the cone shape and "Aeroshroud" system used by this kit. This was a very enjoyable kit to build as many of the standard kit building procedures do not apply to this model. This model incorporates a conventional body tube in the core of the rocket with a standard engine mount and nose cone. A framework of heavy poster board is then built around this core to serve as a former for the aeroshroud. Once all the frame pieces are assembled, you have constructed a very strong box-like structure to support the shroud.

The aeroshroud is not difficult to apply, though it looks harder in the directions. Just take your time while cutting it out with a very sharp (I finally broke down and put a new blade in mine just for this task!) hobby knife, and test roll it a few times before applying the supplied adhesive tape. It really is a snap to put on!

I did make one modification to the kit. The original plans call for two 12" parachutes, one for the main airframe, and the other for the weighted nose cone. I was worried about losing the cone in tall grass, so I opted for a long kevlar cord attached to the shock cord and using a single 18"

chute. This way that heavy nose cone has plenty of room to separate without damaging the airframe, and the rocket is recovered as one piece.

My only complaints with this kit are the trim stickers are not cut around the edges of the sticker; that is you can't put the "USA" on without the white background. I tried cutting around the letters, but without success. Luckily, the kit looks fine without them due to the detail printed on the aeroshroud, and I dislike the "Grippers" to attach the shroud lines to the parachutes. They make packing the chute for flight difficult!

This model is rated only for the C6-3 motor with an estimated altitude of 300 feet, and has turned in 3 flawless flights so far. It is VERY stable during flight, and recovers nicely on the 18" chute. As it is an unusual looking model, onlookers are always impressed by the nice flights this rocket produces.

Included with this kit is an informative technical report on the stability of Cone-Stabilized rockets.

### Quest DCY Space Clipper Specs:

Skill level.....	3
Est Max Altitude.....	300 feet
Recommended Motor.....	C6-3 only
Length.....	13.5 in
Body Diameter.....	4.0 in
Weight.....	4 oz
Product Number.....	3004
Cost.....	\$12.99

- Dave Falkner

**CONGRATULATIONS!**

Our club won first place for best display in the 44th Annual Model Plane show. Thanks to all of the gentlemen and their families who gave up their time and husbands so they could get this "off the ground". They did a superb job and I am very proud of all of the winners in the club. Great Going!

Now, I guess you will have a whole year to think of something else to out-do what you did this year. I have a feeling I am going to be a "Rocket Widow" for a long time! To all of the other "Rocket Widows" out there and their families, I know what it's like. All I can say is thanks to all of you for understanding and giving up your husbands for one or two days a month. They really enjoy launching and getting together to discuss motors, meets, and all that stuff. And to all of the families, friends, and ladies who go with their "Rocket Men" more power to you! One of these days we will all get to meet, but until then, I wish you all warm, dry days with no breeze and lots of blue sky!  
- Linda Bade

**T- Shirts now Available!**

Thanks to Larry Freed, we now have Tri City Sky Busters T shirts available. They will be in the Range Store which Larry runs. The shirts are light blue in color, with the Tri City Sky Busters logo on the front in a dark shade of blue.

A full range of sizes are available, contact Larry if you would like to purchase one!

The Tri City Skybusters newsletter is produced using Microsoft Publisher 2.0 on a home PC by Dave Falkner. If you would like to submit an article for publication, have any suggestions for future articles, or any suggestions about this publication, please contact the editor at:

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If you have a photo you would like printed, we need to have it scanned. I can use nearly any popular format, such as TIF, BMP, etc.

If you can submit an article electronically, the best format (for me to use) is Microsoft Word 6.0, or any ASCII text file can be used. It can be

# Tri City Sky Busters

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