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Sky Buster News

Newsletter of the Tri-City Sky Busters

Spring 2005



A few words from the President

Fellow Rocketeers,

WELCOME to the Great Lakes Regional Meet Revisited V! It's hard to believe that it's been five years since the Sky Busters resurrected this great annual launch. This year the launch will be better than ever. We now have an onsite food vendor with many freshly prepared foods. Our raffle has some really great prizes. Raffle tickets are \$1.00 each or 6 tickets for \$5.00.

Please consider signing up for some range duty. A big launch like this takes plenty of help to run. When you lend a hand on the range you will receive 6 free raffle tickets.

If you have driven a long way to attend this launch, we hope that at the end of the day that it was worth it to you.

We hope that all of you have a GREAT time!!

Les Kramer, Pres.

Message from the Prefect

Welcome from NOTRA: As the Prefect of the Northern Ohio Tripoli Rocketry Association, I welcome you to the fifth annual Great Lakes Regional Meet Revisited. This launch officially kicks off the spring flying season for us. We all look forward to this launch each year because it allows members in the Prefecture an opportunity to meet other rocketeers, both new and experienced, who attend the launch from Cleveland and other cities and states, and of course, to fly rockets! I wish everyone a successful launch and a great flying season!

Chris Pearson
TRA 00036

Prefect
Northern Ohio Tripoli Rocketry Association
Tripoli Northern Ohio - 003



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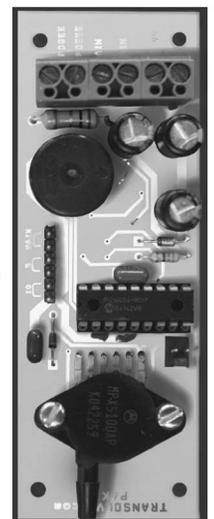
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Good Ship Manatee is a Winner!
The Sky Busters' own **Charles Delaney** came in third place in the BRS DesCon, Sponsored by BRS Hobbies, of Mason, Ohio, which was held online in conjunction with *Essence's Model Rocketry Reviews & Resources* (www.rocketreviews.com). This contest, held between September 2004 and concluding in January 2005, required the entrants design and build their entries strictly from off-the-shelf parts available from BRS Hobbies. In addition, the rocket had to be flight tested, and the resulting documentation was submitted and posted at the EMRR website, where the online readers would vote on a winner.



Charles' entry, one of the more unusual in the contest, featured a 24mm central motor, with 3 - 18mm outboard motors mounted on the fins canted towards the rocket's CG, in the vein of the Fliskits *Tres*. Charles even went as far as emulating a "failure mode" by launching with only the central and one outboard motor to assure that the flight would still be safe should such a flight occur. Good idea, as the top five designs from this contest are destined to be made into kits by BRS Hobbies. True to his calculations, all flights by the Manatee were straight and true.

Unfortunately, the one failure mode that couldn't be planned for resulted in the demise of The Good Ship Manatee, when the outboard motors ignited, but the central motor didn't. As a result, there was no ejection charge to release the parachute and, well.....

For his design, Charles won a \$30.00 gift certificate to BRS Hobbies, as well as his choice of a Custom Rockets Ion Pulsar or SAM-X. Please join us in congratulating Charles on his winning entry.

BS from The Editor

Please allow me to introduce myself. My name is Alan Tuskes, BAR and former SNOAR member from, oh, about 25 years ago (ouch!) I decided that I didn't have enough thankless tasks to fill my life, so I thought that editing the section newsletter would be a good thing to do during the empty hours between the last diaper change of the evening and the time the tranquilizers kicked in.

Please feel free to help with submissions of project updates, product reviews, event reports, photographs, details about road trips, exposés about notable rocket personalities, scandalous pictures of club officers in compromising positions, dollar bills, outright bribes, payola, whatever. It's *your* newsletter, please feel free to contact me at my email address (found in the *Club Contacts* page at the Sky Busters web site) with any questions, suggestions, or submissions.

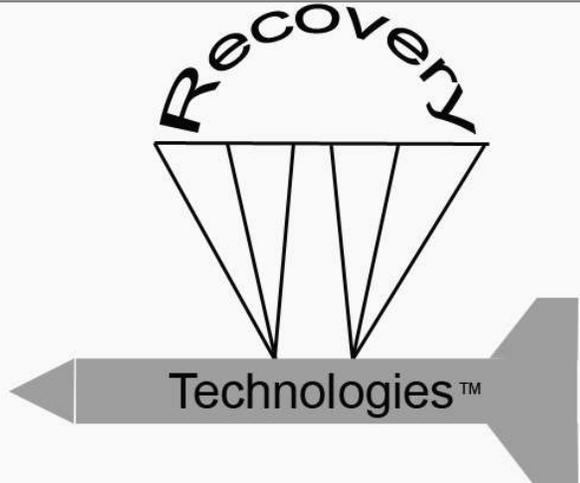


That being said, all contents are copyright 2005 © the Tri City Sky Busters. Any opinions stated in an article are strictly those of the author of that particular article, and do not reflect the opinions of the rest of the club, the officers, their relatives,

pets or wives. See? What did I tell you about those tranqs? Why do they make my freakin' teeth so mushy. Anything without an author's byline that smacks of sarcasm, yet still maintains that warm and cozy tone to it, was most probably written by yours truly. So there. By the way, please patronize our advertisers. Tell 'em that Big Al sent you. Or else.

Sky Busters News is published quarterly, the next issue is scheduled to be out in time for NYPower 2005, so get those articles in, people.

Alan Tuskes - Editor & Minister of Propaganda



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Blaster XL Launch Controller - From DMB Rocketry - Product Review

I received the **DMB Rocketry Blaster XL**, serial number 1, as a result of winning a "name the product" contest posted on *The Rocketry Forum* (www.rocketryforum.com), and was hoping that the weather would clear enough for the Sky Busters to launch today (03-19-05) to try out the Blaster under real life conditions. It didn't and I couldn't, so I retreated to my basement for some dry fire testing this evening.

The Blaster XL is a compact, lightweight single box relay launch controller that comes with the control box, a 6 foot removable power cord with heavy duty battery clips, and a 50 foot pad cable with smooth jaw copper alligator clips. Each cable has it's own distinct plug type, so there's no plugging this device in backwards. The detachable aspect of the controller serve as the safety key for this particular, which means that's one less thing (a launch key) to lose track of on the field. The box itself is small enough that it can be unplugged and tucked into your pocket for a trip out to the pad, just in case a curious child (or nosy adult) feels compelled to plug the box back in while your back is turned. This alone is a distinct advantage over something

like the Pratt Hobbies GoBox, which only unplugs from the pad cable. There is also an extensive instruction sheet that goes into great detail about how the controller is used, and even includes a polarity drawing of the power in socket. This would be indeed handy should you want to make something like a longer power cable, or possibly a car cigarette lighter plug attachment for power.



The box itself has two buttons, one for continuity, the other to launch. There is a bright red launch LED that glows when the relay is closed, which is a great feature that could help avoid burning your fingers in case the relay fuses, and then a quite audible buzzer to indicate continuity when the continuity button is pushed. To use the controller, with one or both cables unplugged, the igniter is hooked up, then the power and pad cables are plugged into the controller. A push on the continuity button sounds the buzzer, indicating good continuity. You release the continuity button, and a press of the launch button triggers the relay, which makes the launch LED light up, and the igniter itself burns. As this control uses LEDs, which are polarity sensitive, the clearly marked battery clips **MUST** be attached to the battery correctly, or nothing will actually happen. Now on with the testing....

Testing the Blaster XL....

For the tests, I tried to locate a few things that would make the testing more complete, like some AG-1 flashbulbs that I know I have somewhere, and my multimeter, which I haven't unpacked yet (grrrrr!) I wanted to check the voltage and amperage of the battery, in case there were problems with that being less than optimum, but it ended up not being the case. I wanted the flashbulbs to see if the controller was flashbulb safe but tht will have to wait for another day....

I used a 12 volt, 7 amp-hour Power-Sonic gel cell that I got used from the Cleveland Freecycling group. I was hoping to use the multimeter to test it, as I wasn't sure just how used it was. I hadn't even charged it as the gentleman who gave them t me said that 2 were freshly charged and one needed

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charging, but he couldn't remember which was which. For this evening's test, I fortunately grabbed a good one.

The first test was with the old stand-by, an Estes igniter. It was attached to the alligator clips and the box plugged in. A touch of the continuity gave me good tone. I released the continuity button and hit the bright red launch button, there was a satisfying "click" of the relay, the LED lit, and pretty much the igniter instantaneously burnt in half as expected. Test one successful.

Next up was a 1.5 inch length of 36 gauge nichrome wire, a favorite for me in BP engines, held in with a tiny ball of flameproof wadding. Since I pack my rockets with dog barf, it makes good use of the stuff that comes with Wal-Mart engines! Hit the button with the nichrome attached, and it glowed the entire length of wire between the clips immediately. Test two went very well.

Next up was a Luna Tech Pyropak electric match. These take very little voltage to fire, as I remember getting them to ignite in the past with as little as a single AA battery. Happily, the continuity tested good without setting the e-match off. Hitting the launch button make it go with a sweet, satisfying POP! Another big check mark here.

Next up was a FirstFire Jr, one of a number I got a while back from Andy Woerner. I've only used this *in* motors, never firing one outside a motor, so I didn't know what to expect. Continuity didn't set it off, but what a show when I hit the launch button!! Ignition itself took a fraction of a second longer than the other igniters so far, but it was still under a second between the time the button was pushed and the conflagration began, with sparks and flames and smoke and all manner of death and destruction occurring. Remind me to move the next one a little further away from my computer the next time.

I only had one spare Copperhead, which ignited perfectly after being attached to the alligator clips with a Copperhead clip adapter. Ya gotta wonder why Aerotech makes something that sits in rocket exhaust out of plastic! HmMMM...

As Dan included a DMB Rocketry three motor cluster cable with the controller, I couldn't very well let that go to waste, so the next round was cluster ignition. First off was a set of three Estes igniters. If you haven't used DMB's cluster cables yet, I highly recommend them, as it's so much easier to have individual sets of clips for each motor, rather than twisting igniter leads together.

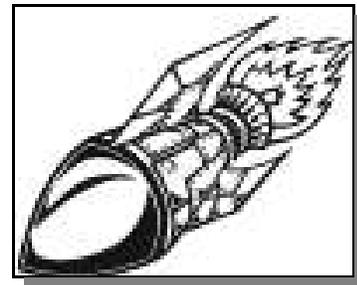
Anyway, pressing the launch button resulted in no discernable delay over a single igniter, so the Blaster XL was holding up well, and the battery I was using must be equal to the task. If I had a larger (or several) cluster cables, I would have done larger clusters of igniters to see how many I could do before there was a problem with reliability. Even then, one should note, it would be a problem with my power source and not with the Blaster XL itself.

Next I did a three igniter cluster with 36 gauge nichrome wire, which resulted in near instantaneous burn on all three. Line 'em up, and burn 'em all, thanks very much. Three Pyropak electric matches went equally as well.

Unfortunately, as I said, I couldn't locate the box with the flashbulbs, which also contained a quantity of old Centuri Sure-Shots, FSI style igniters, and a few other goodies, which I will eventually try with this fine device. I am very pleased with it, and it is assuredly going to be in my hand the next time I hit the flying field. Compared to other launch controllers, it's only a about five dollars more than the Electron Beam, which is incapable of launching a cluster, as is the Estes "E" controller, which actually costs more, and still can't do a cluster. The Estes Command Control and Aerotech launch control are both almost twice as much as the Blaster XL, with very little more than custom housings to show for it.

I highly recommend this to anyone as a logical step up from the Estes launch controller. With it's 12 volt capability and 50 foot pad cable, it's perfect for anything from model rockets through mid power flying.

Review by Alan Tuskes



Sky Busters Plan NYPower Road Trip

Mark your calenders now for July 1st through July 4th, 2005. It's time for a road trip again !!! So bust out those togas, put the beer on ice, and get ready to pass some serious gas !!!!
Drop it like it's hot, you Mutha!!!!

The Sky Busters will once again make their presence known at the NYPower 11 Launch held in beautiful Geneseo, New York.

Last year LDRS-23 was held here and a GREAT time was had by all! If you haven't been to one of these launches before, you are really missing out! The field is HUGE and is mainly mowed grass!! It is a 4 1/2 hour drive from Cleveland. Many rocket vendors are present each year to sell their wares. Camping is allowed on site but check their

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website for the details and restrictions. Food will be served on site as usual.

The Sky Busters have once again chosen the **CREST HILL MOTEL**, a very neat and clean facility, as our NY Base of Operations. This is where I stay every year. It is just two exits North of the Geneseo exit. This will be a Very Busy Week for them due to the holiday so please reserve your room early. Please contact the motel directly at (585)226-3450 to reserve your room. Just mention that you are attending the launch and that you are a Sky Buster from Cleveland, OH.

For more information including other motel accommodations, pre-registration (saves money to buy more motors!!) and driving directions, visit the NYPower 11 web site at NYPower 11.

Les Kramer - President

Flight Cards Now Online!

You can now download Sky Buster flight cards from our website and have them filled out already when you come to a launch!! Just click on the "Flight Cards" link from the Sky Buster home page at www.skybusters.org. They can also be accessed from the "Launch Rules" page, under "Launch Information" or the "Launch Windows" page along the left side of the web page.



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Feature Story:

The Great Lakes Regional Meet and its' evolution into LDRS and beyond.

The story of the first organized national high power sport launch, the first to get an FAA waiver, and the first to cause the NAR to expel members.

By Christopher T. Pearson

(Originally appearing in SNOAR News, and reprinted in the Tripolitan. It is reprinted here as an updated version.)

About the author: He got started in model rocketry in 1967, at the tender age of 13 years old while the US and the USSR were at the height of the Moon race,. By 1976, at the ripe old age of 22, he was ready for something more than NAR competition and Estes' rocket kits. Having been introduced to motors "bigger than a D" by Flight Systems Inc., he entered the forbidden (at least as defined by the NAR) realm of what was called "illegal amateur rocketry", that was, at the time, anything weighting more than one pound and having more than four ounces of propellant. Clusters of D, E and F black powder motors soon gave way to early composites. Reinforced Estes and Centuri model rocket kits adapted to take high-power motors quickly evolved into what was considered "big" for the time, four inch diameter rockets of original design and later those produced by the first high-power rocket kit companies. The rest is history.

The LDRS story actually got started a number of years before the first LDRS was held in a northern Ohio farm field. Here's how it began:

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As with many people, I started into model rocketry as a teenager, but more adult things, like cars, motorcycles, girls, a job and college forced me to put rocketry on the back burner for a while. When I got back into rocketry, even though I was heavily involved in NAR competition until 1978, I wanted to try something different. I got started in highpower rocketry, as it existed then, back in 1976. I quickly made contacts with people all over the country that were involved in the emerging high-power hobby. Some of these people were Gary Rosenfield (then of Pro-Jet, predecessor of Composite Dynamics and Aerotech), Roger Johnson (aka: The Rocket Clown), Korey (the Ace from Space) Kline of Ace Rockets, the first high power rocket kit company, Mark Mahyle of Small Sounding Rocket Systems, another composite motor and kit company, along with others who were, at the time, taking "model rocket technology" to the limits. MRT, as it was also called, referred to high-power rockets made from model rocket components.

Between 1972 and 1978, unless you had an "in" with a motor manufacturer, about the only thing there was for the high power crowd was either clustering D12's or using FSI motors. Centuri/Enerjet had ceased motor production, although limited motors were still available and being used. This was before any of the early composite rocket motor companies arrived on the scene. Some of the people that were visible in the early high power community were Scott Dixon of Vulcan Systems, and Irv Waite, formerly of Rocket Development Company, father of the Enerjet line of composite rocket motors. They were both producing professional rocket motors for military and industrial use, but for the right amount of \$\$\$, they could be persuaded to make motors for you.

Before this time, there were many notable, and now very rare and collectable, high power rocket motors. Pro-Dyne, maker of F thru G class motors. Coaster, who made large E, F, and G black powder motors, and Centuri Mini-Max, also D, E, and F black powder motors. All had vanished from the rocketry scene by 1970. Gary Rosenfield was one of the new breed of composite motor manufacturers, as his first company, Pro-Jet, produced F and G composite motors. Mark Mahyle of SSRS (later known as Crown Rocket Technology) entered the foray with E thru H composite motors, and a little known company called Plasmajet, run by John Krell and Randy Sobczak, made F thru I motors. So with those new motor manufacturers producing a new generation of motors, a number of high-power kit manufacturers soon followed suit. Unfortunately, as with most hobby-type businesses, many people entered the hobby and left just as quickly.

Gary Rosenfield joined forces with John Davis and formed Composite Dynamics, which gave rocketry mass-marketed composite 24mm E and F motors, as well as the first endburning composite, the 29mm E9, a motor which, ten years earlier, Enerjet had called "impossible". Other early companies produced specialized items for the high-power community such as launchers, pads, etc.

Unbeknownst to the NAR, a number of people at the time were flying high-power rockets at local sport launches or side by side with competition rockets at NAR events. Unlike NARAM's today, where the sport range is busier than the competition range, sport flying was almost unheard of at a NAR launch. At one of our regional meets early in 1980, several uncertified F, G and H motors were flown in overweight rockets. Somehow, word of this leaked out and later that year while at NARAM-22, another SNOAR member and I were called on the carpet by Mark Bundick, the National Contest Board Chairman, and questioned about it. This is where the famous, "Who flew the G?" quote came from.

My high-power contacts in California told me of all the extreme rocket flying that was happening out there: huge clusters of F and G motors, real metal vehicles, special effects rockets and so on. I wanted to observe what was going on in high-power rocketry on the west coast, so, in 1981; I journeyed to Smoke Creek, Nevada, to attend the annual Memorial Day Amateur Rocket Launch. This was sponsored by the Rocket Research Institute, and is primarily for the zinc/sulphur crowd, but they allowed the launching of large model rockets and MRT vehicles, along with a lot of professional pyrotechnics people who lit up the nighttime sky with fireworks demonstrations. While there, I heard Roger Johnson say something that was to stay with me long after the launch, and that

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was "***We're going to fly some large and dangerous rocket ships!***"

To tell you the truth, I was actually somewhat disappointed by what I saw flying out at Smoke Creek. Except for the zinc/sulphur and asphalt/per chlorate rockets being flown by Dr. Key's high school group, it was rather mundane. It was nothing like what is flown at LDRS today. Primarily a lot of four-inch stuff with clusters of F and G motors, and an occasional H or I motor. And as for the launch facilities, you walked out away from the cars, stuck a rod in the desert floor and ignited the motors with fuse and a match! Nothing like I was led to believe was flown.

Later that summer, the NAR section that I belonged to ran a regional meet in which we flew a number of E and F competition events, which was very rare for sections even today. We advertised it as a meet for "you Large and Dangerous Rocket Ship fans." Also flown during that event were actual high power rockets powered by non-certified motors.

It was only a few months later that I let my NAR membership lapse after being a member for 14 years. When other NAR members asked me the reason, I explained that it was because I wanted to fly rockets that would exceed the NAR's limits, and I didn't want to cause problems by doing so. I was later told by a NAR official that this was probably the best way to have done it, rather than openly flying high power and daring the NAR to do something about it, as some people did. Shortly after that I began planning what would later become the first national high power rocket launch, LDRS. The name LDRS was an acronym for "Large and Dangerous Rocket Ships", just as I had heard Roger Johnson say at Smoke Creek the year before. LDRS was the first MRT or high-power rocketry event that was promoted as such. I found out what I needed to do to get a FAA waiver to legally fly "amateur" rockets. When I contacted the Oberlin Air Traffic Control Center about the waiver, they were baffled! They had never issued a waiver before! So it was a learning experience for both of us. Feeling rather the rogue at the time, I even managed to get the event listed in the contest events schedule in the *Model Rocketeer*, the NAR's magazine for one issue before they discovered its true nature. The following is how it appeared:

LDRS-1 Sport Launch, 24-25 July, 1982, Medina, OH (SNOAR). Three unofficial "events," prizes to be awarded (no national contest points). Contact: Chris Johnston, 26481 Shirley, Euclid, OH 44132; (216) 731-3839.
-From *Model Rocketeer*, May, 1982 Con Calendar

Then, late one night a couple of months before the launch, I received a rather nasty phone call from a very PO'ed then-editor of the magazine, Chris Tavares, questioning me about the true nature of the launch. So I told him. Needless to say, he was not pleased. After that, they ran a disclaimer in the next few issues warning about "intentional amateur activities" and urging NAR members not to attend:

LDRS-1, previously appearing in this space has been determined to include intentional amateur activity not announced in the original notice sent to the *Model Rocketeer*. **NAR members are urged not to participate in LDRS-1**
-From *Model Rocketeer*, June, 1982, Con Calendar

We were under a great amount of pressure from the NAR officials. After all, in their arrogance they thought that they were in control of all model rocketry (at the time even Estes bowed down to them) and here was someone who was organizing a launch to publicly do what they specifically forbade. This was something that they never had happen before. Frantically, Pat Miller, the president of the NAR at the time offered to send me a list of all active NAR members so I could check to see if the attendees were members and forbid them to fly. Yeah ... right! NAR officials attempted to coerce certain members that they knew would be attending, asking them to write down names, take photographs, and generally "rat" on everyone that was there. To the best of my knowledge, no one volunteered to fink either before or after the launch.

LDRS-1 as well as LDRS-2 through 5 were all held on a farm field near Medina, Ohio. And not a real great flying field, either. There were houses nearby and lots of trees a short distance from the launch site. "So why did we launch there?" one might ask. Simple! The field was owned by Mike Wagner, who was a member in the local NAR section (SNOAR, or the Suburban Northern Ohio Association of Rocketry). It was actually listed as a private airstrip, so it was uncultivated, smooth, and big enough for most model rocketry activity. LDRS-1 went off without a hitch. People came from all the surrounding states and one as far away as California to attend. There were a grand total of 47 people at the launch. Not 47 flyers, 47 people! For launching hardware we had the SNOAR model rocket racks and one launcher with interchangeable rods up to ½"! A far cry from the launch range at LDRS today! A lot of FSI E and F motor clusters were flown, along with clusters of D12's. Left-over Composite Dynamics motors were flown, along with Plasmajets and SSRS motors. The highlights of the launch were rockets flown with single composite Rocket Development Corp. H and I motors! Wow!

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After the launch, the club newsletter, SNOAR News ran an article on LDRS-1 complete with pictures. As a result, every NAR members pictured was contacted by NAR officials about alleged "safety code violations," and several were expelled after so-called "disciplinary hearings".

With the success of LDRS-1, plans were quickly made to continue the launch. More launchers were added and better crowd control was implemented. The following year, more people came from the west coast, notably Gary Rosenfield and Korey Kline. LDRS-2 featured the first composite J motor flown at a LDRS, courtesy of Scott Dixon of Vulcan Systems, who attended, which was flown by the author. It also featured the first power shred at an LDRS, also by yours truly. Korey Kline flew a bunch of his highpower Ace Rocket kits. Aerotech flew a number of prototype high-rate motors. In the next two years, the NAR zealots tried every which way to prevent LDRS from happening. They threatened to contact the FAA to check the waiver (I told them to go ahead), got in touch with the Medina city prosecutor, fire and police departments, even the Bureau of Alcohol, Tobacco, and Firearms (otherwise known as the ATF), in attempts to shut it down. They failed.

Each year LDRS got bigger, the motors and rockets got bigger, and the NAR saw its senior membership shrinking as more and more of them left model rocketry, ceased model rocket competition and entered the high power rocketry sport. By the time LDRS-3 rolled around, the NAR was forced to admit that we might be right and started the first "Blue Ribbon Commission" for the study of high power rocketry. Pat Miller attended LDRS-3 to observe and walked away very impressed with what he saw. At one point during the first day's activities, I offered to let him launch my rocket with clustered F100 motors, but he politely refused. It was only 150n-sec! Later, he told me privately that the degree of craftsmanship that he saw at LDRS, along with the way the range was operated was better than any NARAM he had been to. Negotiations began after that with the HPR/LDRS committee, which had such notable high power people like Chuck Mund, Jim Dunlap, and SNOAR members Chris Johnston and Bob Geier. Guidelines were drawn up by the committee, along with a proposed safety code, and submitted to the Commission. Experiments were conducted by Trip Barber to ascertain the power limits of the new composite motors. Some high power manufacturers, including North Coast Rocketry, were contacted to give their input in certain subjects, such as motor design and airframe construction. Others donated materials for the testing. The Blue Ribbon Commission gave its findings, and out of this came the new revised NAR/HIAA Safety Code, which was undoubtedly the most profound change in the hobby since its inception.

At LDRS-4 the crowd on the field was exceeding 100 people. It featured the first Aerotech K motor flight and the first L motor flight, another Vulcan Systems motor in a minimum diameter airframe, which we never saw again. Soon after this, the so-called "Son of Blue Ribbon Commission" was formed to study the true LDRS type of rockets, over and above the 3.3 pounds which were now called Model Rockets. Members of the Commission visited LDRS-5 and were impressed by the quality of workmanship of the rockets, the reliability of the motors, the vehicles in flight, and especially the strict safety rules which were enforced at the meet. The result of this was the new NAR code for high power rocketry which allowed NAR members to fly high-power rockets beyond the 3.3 pound weight limit. After LDRS-4 we realized that because of motor and vehicle development, we had far exceeded the limitations of the flying field, and for the next year there was an attempt to hold LDRS-5 at El Dorado Dry Lake near Las Vegas Unfortunately, the FAA waiver was refused and hastily plans went ahead to hold it once again in Medina. Unfortunately, LDRS-5 was the last national high power launch to be held in Medina, as the field we flew on was leased to a local farmer soon after that and plans were made to plow it for crops. As a club, we had just one more high-power sport launch there, just a couple of months after LDRS-5. I'm sure that we probably put a few rockets into the Medina town square, and I think that we were really beginning to scare the locals! Also, after the problems that happened that year, both on and off the launch range, I was reluctant to organize any more events. Several people had attempted to use the launch to further their personal and political agendas and I became very discouraged, not to mention, totally burned out. Furthermore, North Coast Rocketry, the company that I founded and was operating out of my house, was consuming increasing amounts of my spare time. With the request of Tripoli officials, I allowed the copyrighted term "LDRS" to be used by the Tripoli Rocketry Association for the name of their national launch.

Others have followed the example that was started by LDRS and have organized other regional type events, some with more success than others. LDRS-6, held in Hartsel, Colorado, was the first national event sponsored by Tripoli in conjunction with Vulcan Systems, Inc.

I would like to believe that LDRS was a deciding factor in the Model Rocket Safety Code change, and that it was also a factor for the emerging interest in high power rocketry, as with LDRS came the development of many of the leading high power rocketry companies that changed the face of rocketry as we know it. Never again would we think of Estes-type model rockets when discussing rockery, Motors evolved from 13, 18 and 24mm "toy" black powder motors to 2,3, 4 inch diameter and larger professional expendable and reloadable composite motors. From clusters of D12's to clusters of M motors. We now have a variety of "alternative fuel" hybrid motors. Rockets leaped from ounces, to pounds, to tens and then hundreds of pounds. From paper and balsa wood to fiberglass, carbon fiber and Kevlar. And there is no end in sight. LDRS was the first, and set the example for others to follow.

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I can only hope that the number of high power launches continues to increase all over the country, as the sport of high power rocketry continues to grow. I urge the sponsors of future LDRS's to continue the tradition of well run meets stressing safety, as LDRS is the standard all others are judged by.

A Word from the Real Boss

I'M THE OTHER WOMAN

By Heidi Kramer

Sometimes I'm the *only* woman... the only woman to show up at a Sky Busters rocket launch. I'm Heidi, the wife of the Sky Busters Rocketry Club president, Les Kramer. Has your guy said, "Why don't you go the rocket launch with me," and all you can think of is "yuck"? You may not know what you're missing.

I know that we're all busy women. By and large we have increasing demands on our time. We have responsibilities in the home and at work, and with our children and extended families. I understand this very well. I run my own business, I have employees, I have housework, and I have a family that needs me. That is why it's particularly important for me to make the time to spend with Les and his interests. My marriage is important to me and I know that I am strengthening our relationship by spending time with the person I love and experiencing the hobby he enjoys. In addition, attending a rocket launch gets me outdoors, gives me time away from the house, and provides me with a break from my responsibilities. And yeah... I've spent some time with your husbands and boyfriends, and here's what I know:

I'm affirming my love. By going to the launches I'm demonstrating to Les how much I love him. He likes that I take the time to be there and be with him. I support Les and his interest in rocketry. One of the ways to show your mate that you love him is to show interest in those things that are important to him. Remember, you reap what you sow. By giving love and support you will get love and support in return.

These guys are funny! The Sky Busters have a great sense of humor. Remember when you were first dating him and he made you laugh all of the time? And you loved it? He's still pretty funny.

It's enjoyable to watch the male rocketeer in his natural habitat. When was the last time you got to sit down for a couple of hours, take it easy, and watch the world go by? The middle of a cornfield is a great place to get a tan, read a book, or just watch these guys. There's nothing to sweep, nothing to pick up, and nothing to clean (unless you ask what a motor casing is – so don't).

The rockets are fun. If you haven't been to a launch lately and you haven't experienced the "big stuff" you

really are missing something. These rockets are incredible. They are truly exciting to watch. (And there's that whole phallic symbol thing you can tease him about later.) You just might want to build your own rocket. I have. It's no different than doing a craft; it's something you can do together with your mate; you can have a girly paint job on it; and best of all...you'll probably learn a new skill.

I look forward to seeing you!



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Rebar Rocketry opens retail location

I think that rocket heaven has found a place on earth, and it's in Mississippi. The hobby shop we've been waiting for...all rockets, all the time. On March 5th, ReBar Rocketry opened a retail store in Kosciusko, MS, focusing on model and high power rocketry. "With the largest selection of rocketry related products in the South (that we know of), I hope to provide a local outlet for the rocketeers of this area as well as a road stop for anyone passing through," said Doug Parks, owner.

Doug also added: "I would like to take the opportunity to thank our customers who have ordered recently and had the package take a few extra days to arrive. I was very busy getting the store ready to open and I was backed up more than a little bit on shipping. With the opening finally behind me, I can return to my same day or next day shipping policy on all in-stock products."

Doug added: "I have a shipment of the brand new Saturn kits from Dr Zooch Rockets in stock. They are the Saturn 1B AS-203 and the Saturn 1B Apollo 5. In celebration of our opening, I'll be marking all Dr Zooch Saturns down to \$20.95 for a limited time. Also new from Dr Zooch is the R7 Luna kit, at \$22.95. I also have a new shipment of Orbital Engineering Spaceplanes on the way, so keep a sharp eye out for their arrival."

When passing through, be sure to stop by. Heck, forget passing through, make it a vacation destination this year!

ReBar Rocketry
301B N Wells St, Kosciusko, MS 39090
www.rebar-rocketry.com



Sky Buster Launch Windows for 2005

ALL launches are subject to the NAR Model Rocket, High Power Rocket, Radio-Controlled Rocket Boosted Glider Rocketry safety codes (i.e. U.S. Model & High Power Rocketry Sporting Codes) **AND** our own Sky Buster Launch Rules. You do **NOT** need to be a Sky Buster OR NOTRA member to launch rockets with us. Members do enjoy reduced launch fees however as well as other benefits. Standard launch dates will be the FIRST WEEKEND, and THIRD WEEKEND of each month. Rescheduled dates are the SECOND WEEKEND & FOURTH WEEKEND of each month as needed. **These dates may be changed however to accommodate holidays.** We also have impromptu launches throughout the year. These may be to test new launch locations or for special events.

The launch location may vary from one launch to the next depending on field conditions and/or availability.

First Weekend Launches

May 7-or-8, 2005
June 4-or-5, 2005
July 2-or-3, 2005
August 6-or-7, 2005
September 3-or-4, 2005
October 1-or-2, 2005
November 5-or-6, 2005
December 3-or-4, 2005

Third Weekend Launches

May 21-or-22, 2005
June 18-or-19, 2005
July 16-or-17, 2005
August 20-or-21, 2005
September 17-or-18, 2005
October 22-or-23, 2005
November 19-or-20, 2005
December 17-or-18, 2005

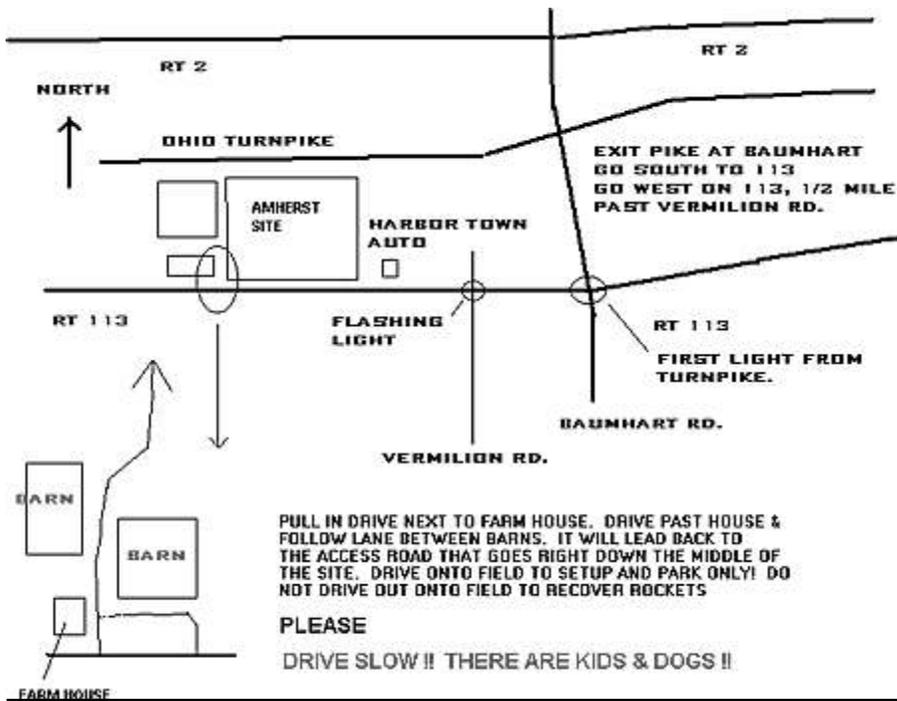
If a launch is canceled or postponed for any reason, we make every attempt to notify everyone by e-mail. If you plan on attending a launch, please call one of the club officers the day of the launch to confirm. Remember, this is only a **tentative** schedule. Launch dates are variable due to weather, field availability, and other conditions. Most launches have FAA Waivers to 5,200 feet AGL.

Launch rules, fee schedules, last minute launch updates, and even the *real* secret of life can be found at the Sky Busters website at:

www.skybusters.org

Finding the Amherst Cosmodrome

1. Take 480 West OR 90 West to the Ohio Turnpike (80) West.
2. Take the Baumhart Road exit.
3. Turn right (south) onto Baumhart Road from the Ohio Turnpike, or left from 90 West.
4. Go south to the first intersection (traffic light). This is Rt. 113.
5. Turn right (West) onto Rt. 113.
6. Go two(2) miles to 51236 Rt. 113. It is on the right hand side of the road. You will see the club launch sign and cars out in the field.



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Sky Buster election results 2005

The annual election for Sky Buster officers was held at the December 12 2004 meeting. The current officers were re-elected to the existing posts, and the officers for the 2005 season are:

President - Les Kramer

Vice President - Pat Easter

Treasurer - Peter J. Pfingston

Advisor/Promotions - Gerry F. Freed

Secretary/Membership - James J. Mullane

Elections are held at the December meeting each year, and all are welcome to become involved with club activities. Contact information for officers and other members is available at the Sky Busters website at:

www.skybusters.org



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