



MAX-Q



VOLUME 16, NO. 2

SUMMER 2002

SUMMER LAUNCH REVIEWS



Vince Huegele with his Explorer I on a J275 (IIRC). Congratulations!

INSIDE THIS ISSUE:

LDRS Report.....	1&6
HARA information.....	2
Third Time's the Charm.....	3
Launch Reviews.....	4-7
Cub Scout Launch.....	5
Who's is Whose?.....	6

President's Message

Hello again, HARA. We've had a wonderful launch year so far. The weather has been nice, though maybe a tad hot and dry, and the turnout for the launches has been nice. Our next big event will be the Rocket City Blastoff in October. We're already working some of the logistics. During the August club meeting, we identified nearly two dozen tasks that need to be performed for successful RCBO. We have volunteers for many of these tasks, but a few are still open. Todd Lumpkin and I have already been working the raffle-prize circuit and have finagled a few really nice prizes, including a HyperTEK motor from Cesaroni Technology, a 4" Thor kit from BSD, and a 4" kit from Blackhawk R&D. I know that I plan to toss in a couple kits from my stash and would love to see other club members do likewise. The RCBO raffle is a big revenue gatherer for HARA and a large prize cache really helps to entice flyers to let go of a few extra bucks.

(Continued on page 6)

LDRS 2002

The Ex-Side Report

By Walt Stafford

LDRS 21 was an inspiring event for me. It was great to see some huge projects and to meet some famous

rocketeers like Ky Michaelson, Frank Kosdon and Quentin Wilson.

For two days I soaked up the LDRS experience. The third day I was there was the first day of the Ex-Launch.

On that day it was time for me to try some of my own fuel. I built a minimum diameter 3" rocket about 2 years ago, thinking that one day I may find a field large enough to stuff

(Continued on page 6)

MAX-Q

Volume 16, No. 2

Summer 2002

HARA OFFICERS

President: Chuck Pierce

Vice Pres.: Todd Lumpkin

Secretary: Johnnie Paul

Treasurer: Mark Tygielski

Tripoli Perfect: Mark Tygielski

MAX-Q Editor: Beth Paul

This Issue's contributors:
Chuck Pierce, Johnnie Paul,
Vince Huegele, Todd Juhrs,
Walt Stafford

MAX-Q is the official newsletter of the Huntsville Area Rocketry Association (**HARA**), **NAR** section 403 and Tripoli Huntsville.

Membership dues are \$12 a year for individuals, \$20 a year for family and include a subscription to the newsletter. Checks are to be made out to **HARA**, 225 Park Stone Drive, Madison, AL 35758.

Articles, photos and news of interest should be sent to: bethletters@msn.com. Any errors or omissions are probably the fault of the editor and will be corrected and future issues.

Use of material contained in the **MAX-Q** requires the written permission of the author and/or the Huntsville Area Rocketry Association.

HARA MEETINGS

HARA has monthly meetings the second Thursday at 7:00 p.m. at the Huntsville Area Technical Services Office at 2003 Byrd Spring Road For further information, contact any of the members.

Ed. Note: The map in the Spring Max-Q showing the HATS office was completely inaccurate. MapQuest (and editors) obviously are not infallible. We regret any confusion this may have caused.

HARA LAUNCHES

Launches are regularly scheduled the fourth Saturday of every month at Ardmore, Alabama. The two-day Rocket City Blastoff will be October 26-27 this year. Tripoli experimental launches are also held at the Ardmore launch site. The next experimental launch is scheduled for October 20-21.

THIRD TIME'S A CHARM BY TODD JURHS

Some folks come to rocketry in a gentle and mild manner. I came to it like a HyperTEK 835 on a minima diameter rocket – full throttle baby! Last year's RCBO was my first experience into rocketry and I got hooked. Without much guidance or information I found a kit that I thought looked really cool on PML's website and I bought it. The kit showed up in the mail about a week later, and for the winter of 2001 I had my first rocketry project, a Pterodactyl Jr... I could have picked an easier name to spell. I followed the kit's instructions with no modifications (the first and only time that will ever happen) but still, I had some questions. So I showed up at the February HARA meeting at the HATS office, met some of the guys and started asking questions and got lots of different answers. Armed with lots of knowledge, I finished off my Ptero Jr. later that month and anxiously awaited her debut in the sky. March's launch got rained out so April became my first shot at what has now come to be known as "third time's the charm."

Strike 1) I borrowed the club's 29/180 casing and loaded up an H128W. Only I wasn't as careful with the black powder then as I am today. The ejection charge blew. All the black powder had spilled out so the chute never popped and he had a missile inbound. My Ptero Jr. struck smack dab in the middle of the road on the south end of the field. You could measure it with a ruler – in the middle of the road, there is a three inch divot with my Ptero's name on it.



Amazingly, the damage to the rocket was minor except for the nose cone which made a beautiful accordion. What a testimony to the strength of the Quantum Tubing! With a bit of epoxy, the one loose fin was repaired and with some JB Weld, I affixed a new set of launch rail lugs to the Ptero's Quantum Tubing and she was ready to fly again....

Strike 2) Again I borrowed the club's 29/180 casing and this time, loaded up an H238T, paying close attention to taping in the black powder charge. Like a bull out of the chute, my Ptero Jr. leaped off the launch pad, soared to about 1,100 feet and fired her ejection charge. Out shot the parachute but what was that object that kept going? Oh no, heads up! The 2 lb. nose cone pulled through its tethering and was inbound from 1,100

feet up. By the time it reached Mother Earth, it had reached terminal velocity and landed within inches of someone's parked white van. (Sorry!) Lesson number 2: Never tether a nose cone using key chain rings. They pull right through the plastic eyelets. That detail was left out of the instruction sheet. Remarkably, the nose cone was still intact after we dug it out of the dirt. Three other birds made their L1 flights that day but not mine. So, with a bit of hardware, namely a concrete lag bolt and some of PML's two part foam, my Ptero Jr's nose cone was readied to fly again.

Strike 3? I really liked that H238T so in July, I loaded up another one. By this time, Chuck had gotten tired of hearing me ask for another L1 certification form, Johnnie was tired of announcing it and I've got several rockets in my queen all in need of H class motors! Once again, the Ptero Jr. leaped off the launch pad and shot up to about 1,100 feet. The ejection charge blew, the chute popped open and the nose cone stayed affixed. A perfect L1 flight! It took me half a year but now I'm ready to soar with the big boys. P.S. I'm praying that my L2 flight gets labeled as "It only took once."

Photo courtesy of Earl Henson.

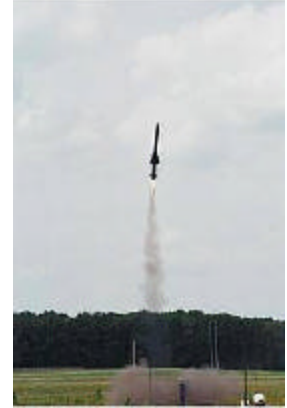
MAY LAUNCH REPORT

The HARA launch this past Saturday was a huge success! The weather was wonderful, temps in the low/mid 80's and very light winds. The turnout was great. At the peak, we probably had 20 cars on the line but there was not an exact head count of flyers. There were a bunch of L1 certification shots this weekend, all but one of which was successful. Congratulations to Rickey Stevens (Aerotech Initiator, H128), Lee Brock (on an H238), Earl Henson (Patriot, H128). Todd Jurhs had a nose cone separation on his PML Ptero Jr., using an H238.

Our former president and esteemed NAR advisor finally made his L2 shot with his beauti-

ful Explorer I on a J275. (See photo, front page.) The flight and recovery were perfect. Congrats, Vince! Walt Stafford and Max Gray continued to dazzle us with their J-motor launches. There were also several HyperTEK birds. Oscar and Scott Valent put up their 23#, modified 7.5" PML Pterodactyl on a J330 (835cc Hammerhead J) to 917 ft. The top honors for the biggest launch and subsequent hard landing of the day goes to Chuck Pierce who put up a 24# 5.5" x 100" Blackhawk R&D Rapier on an L550.

Special thanks to Johnnie Paul for spending most of the day at the launch console.



(Left) Chuck Pierce readies his HyperTEK. (Right) Chuck's rocket lifts off the pad.



Oscar and Scott Valent's Ptero lifts off the pad.



Lee Brock ready for L1 attempt.



Earl Henson prepared for L1 attempt.



Earl's L1 Patriot lift off.

JUNE LAUNCH REPORT

June's launch turned out hot and muggy. It was dubbed the "Day of the HyperTEKs." Oscar Valent helped launch 5 or 6 which is the most launched at any single HARA launch. John Storey put up 3 HyperTEKs. He used an HT L550 in his 5.5" Standard Arm and he and his son launched several more low power and MPR rockets. Congratulations to Becky Ciliax on her L1 certification. She launched and recovered an AT Sumo on an H128. Russ Bruner launched a video rocket on one of the new Pro38's J360.



Cub Scout

Launch by Chuck Pierce.

A cub scout pack from Atlanta had a Father/son campout in Huntsville for Father's Day weekend this year. They first visited the Space and Rocket Center. At 1 p.m., we caravanned to the Ardmore Field for an afternoon launch. There were about a dozen cub scouts in all and after a general talk about rockets, they were able to launch their own rockets they had built with their dads. Those that didn't have their own were able to use Mark Tygielski's Green Alien Invader rocket.

Once they were able to launch their rockets a couple of times each, several members of HARA launched larger ones. I put up my Exocet on a pair of E15's, and my scratch built Broadsword on an H97J and a BSD Horizon on an H238. CJ and Randy flew several G-motor flights. CJ lost an Amraam to the power line south of the field. Mark stole the show with his Crimson Tide colored behemoths on a J350 which the kids thought were really cool.

There were plenty of launches within the 3-hour limit and a good time was had by all.

JULY LAUNCH REPORT

There was a great turnout for the July launch although the number dwindled by lunchtime, thanks to the brutal Alabama heat and humidity. There were two L1 certifications. Congratulations to Todd and James on certifying L1. Todd was successful on his third attempt at launching his Ptero Jr. on an H238. James successfully launched a red and white Blackhawk R&D SAAB RB-05A on an I161. Oscar Valent stayed busy with the HyperTEKs. Todd Lumpkin flew two flights with his scratch built split fin rocket, both on J330's. Shannon Rollins flew a 440cc system (J250) in his L2. Chuck Pierce flew a 24-lb Blackhawk R&D Rapier on a L610. Max Gray flew a composite J180 motor early on. Wes Weimer did a beautiful vidroc shot which he has to share. There were a lot of

nice low and mid power rockets flown as well as L1 flights. Thanks to Johnnie Paul once again for handling the LCO console duties. He did manage to get in one flight, an Estes Honest John on an AT E18. There were several visitors from out of town. Besides our "regulars", Russ and Sharon Bruner, Max Gray and Shannon Rollins, David Logan, a repeat visitor brought his wife and daughter from Kentucky. Alan Adamson came over from Atlanta. The Zimmerman family from Tallahassee stopped by. Mr. and Mrs. Zimmerman are chemistry teachers who are interested in starting a rocket club at their college. We're glad to welcome them all and thanks to everyone for a great day!

LDRS 2002 CONTINUED

(Continued from page 1)

an "L" motor in it. Well, that day had come. The field at Amarillo, Texas was just massive. I selected white smoky fuel because it has the highest specific impulse, and the smoky exhaust would give it a few seconds of tracking. (Note to self: develop tracking smoke!) The rocket was prepared the day before the flight, so all I had to do was pack the four grain, 3" motor. The motor was an L1200 with a three-second burn. You should have seen the RSO's face when I set my 3" by 6 feet long rocket, weighing 18 pounds, on the table. He tried to pick up the rocket and said, "Good Lord! Is it all motor?" I said no, only half. I think I really scared him. The RSO signed the card, and my



Pictured: Walt's scratch built 3" minimal diameter rocket with experimental 3" L motor casing and internal components.



ground crew, Max Gray, and me drove to the away pads. We slid the rocket onto a 6-foot rail, sitting on top of a quad pod. I poked an igniter in the

rocket, armed the altimeter, and we were go for launch. My turn came and then, WHOOSH, off the rocket went. We lost sight of the rocket

after about 4000 feet. A spotter at the flight line saw the rocket the entire way. It was quite difficult to find the rocket, since we didn't see it land. If it hadn't been for that spotter telling me exactly where the rocket gently landed, I'm sure I would have lost the rocket. The altimeter beeped out an altitude of 14,391 feet. (Looks like radio tracking is in the near future.)

Since the LDRS Ex days, I have been preparing for our 2 day Ex-Launch on October 19-20. I have been developing 4 new formulas: **Road Flare Red**, **Gaseous Green**, **Sparky**, and **Mr. Clean**. At the upcoming Ex-Launch in October, I will have a test stand set up. There will be some large motors tested and flown. Don't miss it!

(Continued from page 1)

The RCBO is a big effort undertaken by our club and always needs a few more volunteers than we have. If you're available to help out with logistical and on-site support, please let me know; I know that I'll definitely be able to put your talents to good use.

As I'd said earlier in the year, I plan to always include a few

words on safety from this bully pulpit. I'd like to target this safety devotional to igniter installation. Everyone knows that igniters are electrically initiated. Usually significant current (4 to 10 amps) is required to light the pyrogen tip on the igniter. However, on dry (low humidity) days, there is always a chance that a static discharge could set them off. With that thought in mind, I'd like to offer several safety measures to reduce the

chances of hurting yourself or someone else: (1) never install an igniter into a motor in your house or a motel room, especially if the floor is carpeted and (2) try to keep your hands and other body parts above the exit plane of the nozzle as much as possible. Taping the lead ends to a fin or the airframe will allow you to attach the ground igniter clips to the igniter with your precious fingers above the exit plane of the motor.

Fly safely and have fun! Chuck



Fly less with

HyperTEK.

No leup required. See Oscar Valent for details.

AUGUST LAUNCH REPORT



Photo courtesy Eric Hunt.

Eric Hunt posing before his L1 flight.

AUGUST
LAUNCH REVIEW
NOT AVAILABLE
AT PRESS TIME.



Photo by Maria Stafford

Wes Weimer's camera rocket.



Photo by Maria Stafford.

Ready to launch!

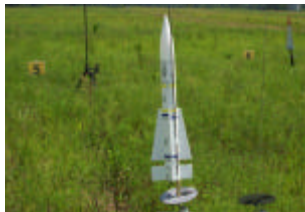


Photo courtesy Eric Hunt

Eric Hunt and his flight crew.

Who's is Whose?

Can you name the owners of these rockets flown at the August Launch?



A



B



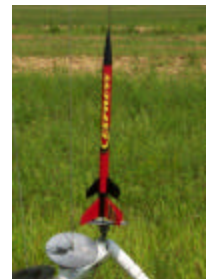
C



D



E



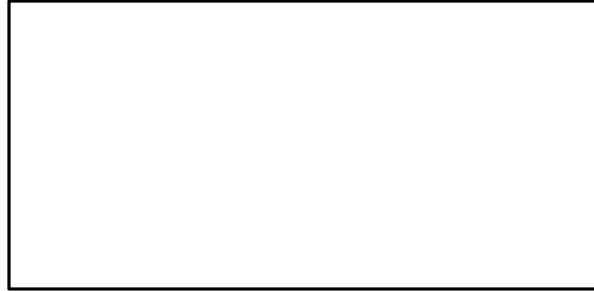
F

Photos courtesy of Maria Stafford.

The **Huntsville Area Rocketry Association**, based in Huntsville, Alabama, home of America's first adventures into space. Founded in 1979 as a section of the National Association of Rocketry (NAR). **HARA** maintains an active launch schedule coupled with an ongoing commitment to rocketry's educational applications.

HARA's website:

[Http://www.hararocketry.org](http://www.hararocketry.org)



Don't forget...it's almost time for the

5th Annual

Rocket City Blast-Off

HPR and Sport Rocket Launch

October 26-27, 2002

For details, see the website or contact one of the members.



Walt Stafford's M1315 L3 flight at 2001's RCBO.

Photo courtesy of Earl Henson