



# MAX-Q



VOLUME 18, NO. 1

FALL / WINTER 2004



**MAX-Q**

Volume 17, No. 1  
Summer 2004

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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**.

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.

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\*Cover photo courtesy of Will Hillis

# HARA 2005 MEETING & LAUNCH SCHEDULE

TBD

## NEXT HARA MEETING

**Thursday, December 9, 2004**

**7:00 p.m.**

Hobby Town USA

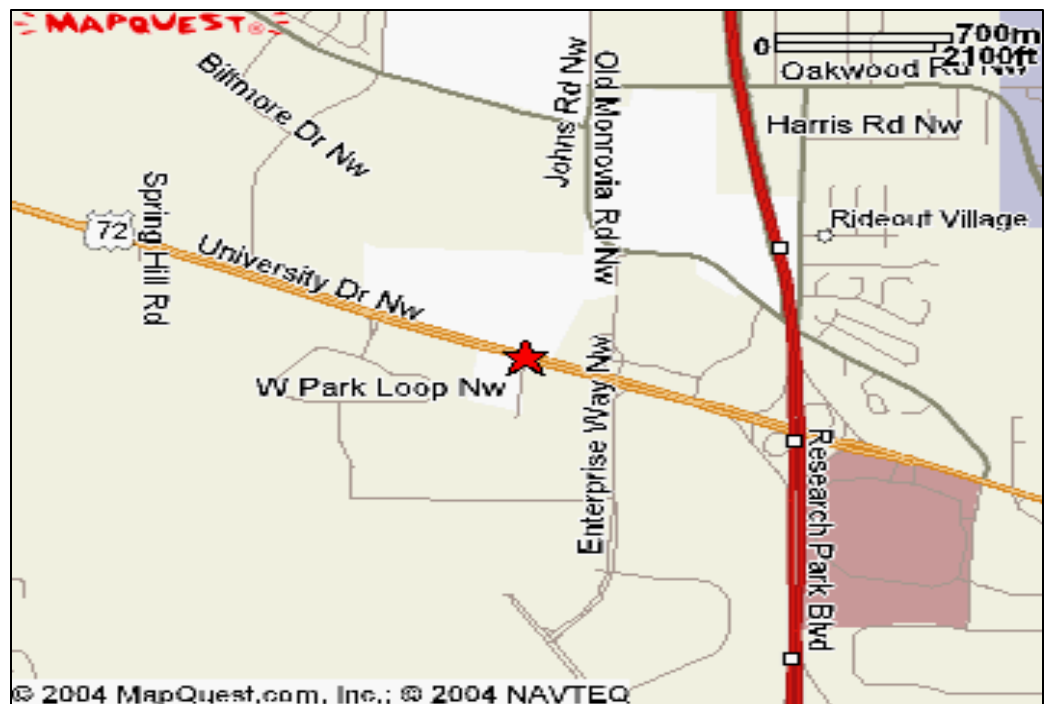
(Come early and receive 20% off all rocket purchases before meeting.)

6275 University Drive, Suite 21

Huntsville, AL. 35806

(256) 971-5080

(Adjacent to Super Target shopping center)



## PRESIDENT'S MESSAGE

Well, the launch year is rapidly drawing to a close. As everyone knows, we've been without a local field for this entire year. Though we've chased several leads, none of them has panned out. Our rocketry brethren in the Music City Rocket Club have graciously allowed us to hold joint launches with them, at their field in Manchester, Tennessee. We have been alternating range duty between our two clubs every other month, which has allowed the clubs' officers some much needed free time to fly some of our own rockets for a change!

Despite not having a local field, this year has been a great success. The weather has been absolutely fabulous all year. Cool temps, light breezes, nice soft sod, good friends... it doesn't get much better than that! We held the two-day Southern Thunder 2004 Launch in May. The weather was iffy, but many folks still attended and many rockets were flown.



Chuck Pierce's 5.5" Arcas on White Wolf K570 Power

Photo courtesy of Will Hillis



Chuck Pierce readies his "Outhouse" for another smokey flight

The NASA Student Launch Program held the student rocket fly off during Southern Thunder, and the NASA staff was extremely pleased with the professionalism and conduct of our launch. Since I've started recapping the year, what else has happened? Todd Jurhs made a successful L3 flight. The Discovery Middle School (in Madison) made it to the finals in the Team America Rocketry Challenge! HARA staffed a booth at a local Lego Robotics Tournament (the theme was A Trip to Mars). Mad Max's Moss-cover Three-Handled Family Credenza made several flights. Port-a-potties, crooked rockets, and flying saucers have filled the sky. Your beloved president blew up three rockets in a row, but has resoundingly bounced back with a couple K motor flights in his 1.2x upscale ARCAS.

Chuck Pierce  
president@HARA.org

**REMINDER**

**Dues are due in January!**

# Random Rockets



The Executioner Cluster.

Photo courtesy of Chuck Pierce.



Back in Black on a PRO38 I motor.

Photo courtesy of Will Hillis.



Horizon on a Dirty Harry load.

Photo courtesy of Chuck Pierce.



NCR Patriot on a G64

Photo courtesy of Ronny Tipps.



Cold and lovin it, HARA representatives at Orangeburg, SC launch in November 2003.



Walt Stafford & Express Mail.

Photo courtesy of Chuck Pierce.



Johnnie Paul's Astrobe D on a G38.



Alpha lift off!

Photo courtesy of Will Hillis.

# HARA members visit SEARS.

By Lee Brock TRA #9587



**Lee Brock with his Batroc.**

I like to fly at a different launch site at least once a year. My hopes were to smoke up the sky of Argonia Kansas at the annual air-fest launch. Logistics and an unfinished level 3 project prevented all that. So here I am with motors and nowhere to go.

It wasn't going to be a total loss. HARA was hosting the monthly launch in Manchester, Tn. on 9/11 so that was the plan.

The week before the launch, I receive e-mail from TRA prefect Frank Jones who fly's with SEARS (Southeast Alabama Rocketry Society). I had met Frank at the AERO EX Launch in July. (Another great story) Frank told me about their new launch site in Samson Al.

In the e-mail he told me about a complex flight he had planned with clustered air starts and a LOKI manufactures motor demo flight he had planned.

I made a call to my rocket buddy Max Gray to tell him about making the trek to Samson and we were GO for launch.

We met up with Frank on Friday in Andalusia to prep and talk rockets. There were a few other TRA members staying at the hotel as well.

Saturday morning, I step outside the room to see FOG. Not

good. The weatherman said "sunny sky and no wind". He was wrong. OK. This will burn off soon and we'll have great flying weather.

Things aren't much better at the launch site with wind reaching 10mph, but were here so we set up an assembled some motors.

The launch site is great. It's another huge sod farm. Field conditions are much like Manchester so you can fly there without too much worry of loosing a rocket.

Lots of low power and mid power rockets are going up so I get my rebuilt Batroc ready to go. After having the rocket RSO'd by Jack Kale, I get the igniter in the J275 and tell the LCO I'm ready. 3,2,1 and off it went with a great flight to the edge of the clouds. It lands without a scratch with the P6K beeping out 3,100'.

When I get back to the prep table, Max has "Moss covered three handle family credenza" ready to go. At the pad we wire up the electronics and the J415. After a five count, the rocket screams into the clouds and seems to stay up there for a good while. Bang! The ejection charge goes off as the rocket descends from the clouds and lands 150 yards from the pads. 6,275'. A great flight!

Next up is Max's reincarnation of an older rocket renamed Dogs keep going. This one has an AMW K950 Super Tiger for power and takes it to 5,175'. We were able to drive to where it landed. That's good because the clouds are gone and the launch site is starting to heat up a bit.

Frank Jones has one of his R.E.D. Rockets ready to go. He has his own line of custom high power kits. You can see some of them on the sears572.com website. Absolutely some of the best finish work I've ever seen too. This one is the Hooligan. It's going up on the



**Max Gray with his Dogs.**

Loki J222 demo. This motor is a single grain 54mm moon burner that makes for a nice long burn time and another great flight. Got'ta get one of those!

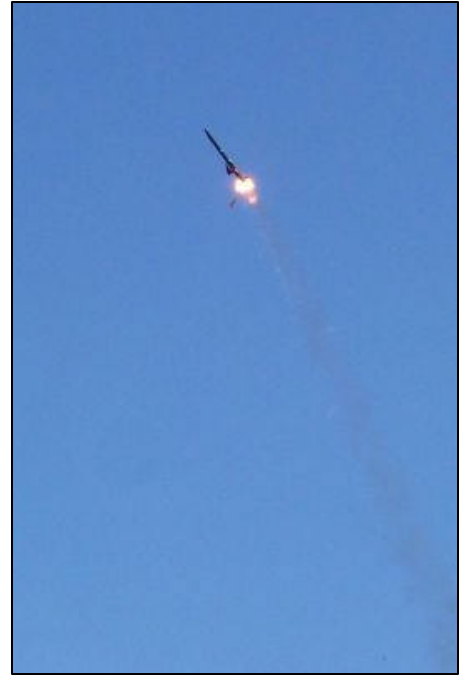
After two attempts trying to get an RRC2 to boot up, I have to scrub my last flight. I'll save that motor for Manchester. Meanwhile, Franks bringing out a big'un. Miss Liberty is a 6'dia rocket and at least 12' tall, Red, white and blue metallic finish with a central K1275 red, air starting 2 H180's white and for the blue it's 2 H238's for an all American liftoff that was awesome! We got the Red at launch, then to plumes of white smoke for the first air start but no blue. The rocket arks over and separates with the booster section core sampling down range. After the garbage bag recovery, we head back to the easy up to talk about the days flying.

There were four L1 and Three L2 NAR and TRA cert flights during the day so we weren't the only high power flyers there. I hope to visit SEARS and Samson, Al. again soon. Great folks, great field and great flying.



Photos courtesy of Lee Brock and Max Gray.

# LAST FLIGHT OF THE RAPIER



March 2004—The last launch of the ill-fated Black Hawk R&D Rapier.



Postmortem pic - The Rapier after the bucket and stomp recovery to put out the fire.

Chuck Pierce's 2004 flying season started out to be a rough one. With multiple attempts at Hybrid flights, the legacy of the Rapier came to an end at the hands of an L575 hybrid that burned thru a couple a hundred feet into its launch.

Photos courtesy of Vince Huegle.

# A Level One Certification Day

by Jim Baskin (NAR# 83206)

Well, after 40 plus years, I finally found rocketry again. But how it has changed! Back in 1960, all we had were the little Estes and Centuri motors, and today, the motors on the market make one's head spin. Yes, I'm a BAR, as you may have guessed. I was at a hobby store here in Nashville, Tennessee, Hobbytown, U.S.A. to be exact, looking for some paint for a plastic model of my grandson's when lo and behold, there on the shelf were these shiny cylinders. What were these black and gold objects, I wondered? Well, needless to say, I bought a few, plus an Aerotech Initiator kit. Then, while surfing the web, I saw these websites about High Powered Rockets and my life hasn't been the same since.

I recently attended a launch in Manchester, Tennessee, after talking to Johnnie from the HARA club. I bought a baker's dozen of Sorbitol from him off of ROL, and he told me of the planned launch in Manchester. I couldn't believe the rockets I saw ... big tubes with strange motors. And all screaming up into the sky faster than the old Estes stuff I was familiar with. I knew I was on to something here. A month went by and a chance acquaintance I met at that first launch, Russ Bruner, had me over at his house building this LOC/Precision Hi-Tech 45 kit I had ordered.

August 14, I was again in Manchester, seeking to get my Level 1 certification. Russ had loaned me a 29mm motor and motor adapter for my first high powered flight and I was both anxious and scared. Anxious to get to the field, launch my new 'toy' and get that certification that would allow me to buy bigger motors. Scared

because I didn't want to embarrass myself in front of all those 'rocket boys'. Here I was, a relative newcomer, not knowing that many people and putting myself right out there with the more experienced flyers.

Well, after maybe a couple of hours of putting it off, I walked up to the RSO and submitted my Range Card. Chuck Pierce had checked my rocket over pretty darn good, asking me questions like 'is this through the wall fin mounting, where is your CG and CP, who watched as you prepped the motor?' Satisfied I was at least knowledgeable enough to fly it, he checked things off from the pre-flight checklist and I was off. Accompanied out to the launch tower by Russ Bruner, my advisor of sorts, (thanks, Russ), I slowly slid my baby down onto the stand-off. Inserting an igniter I got from Chuck (thanks to you also Chuck), I attached the leads, double checked everything and took a big breath. I was ready to either be crucified by laughter or hear yells of excitement from these strangers watching me.

Walking back to the safety zone, I waited. All I heard was my name and that this was a level one certification flight. The RSO did his count-down and suddenly, my baby's engine lit and in the blink of an eye almost, she rose slowly at first then in an instant, was gone! I watched the smoke trail as she climbed for what seemed like forever, then a 'pop' of smoke, and the parachute was out! Watching the rocket drift down I wondered if my rocket was going to be a 'lost in the woods' rocket like others' had been last month. But nope! She came down less than 200 meters from the launch tower and it seemed like everything was A-OK. Cheers and

applause echoed from the crowd. I had made it I thought.

Russ's daughter and her cousin raced ahead of me to the landing spot. I just KNEW things had gone alright until Allison turned toward me with this look in her eyes. My rocket had suffered a zipper effect! Oh well I thought, there goes my certification for this day. But that wasn't the only thing bad to happen. Somewhere in the wild blue yonder and sod grass field, I had lost Russ's motor. A delay charge had gone off while the rocket was still accelerating discharging my parachute, or else my shock cord was too short causing the 'zipper' effect. Whatever the cause, my day of excitement had ended. I felt gloomy, not from the rocket malfunction, but from the loss of a motor I had borrowed.

Both Russ and I searched that field for well over 2 hours and it seems like sod just swallows things! I never found his motor and yes, when you borrow things, like an expensive motor, you are responsible for replacement if things go wrong. Russ, the money's on the way, buddy.

Will I try again? You bet! Am I anxious? Yes, who wouldn't be? And I'll keep going until I get it right. Not for bragging rights, but to have the satisfaction of knowing something I built was launched safely and recovered safely just like the big boys' at NASA do. I want to say thanks to everyone who offered advice, gave freely the knowledge they have, and have been such great and friendly folks. You're all a great bunch to be associated with.

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Note: Jim Baskins' next shot at Level One is described on page 8.

**Updated****Part II****A Level One Certification Day**  
by Jim Baskin (NAR# 83206)

My Level 1 attempt was a disaster. I had a delay grain malfunction. The rocket cleared the tower but about 5 feet above the tower the delay grain blew out causing the nose cone to eject. As of now, the complete motor and the reload remains are at Aerotech being looked at. Craig Christiansen, Production Facility manager, called to inform me that to him it seemed the reload fired extremely too fast causing the ejection charge to fire early. The motor casing is okay and I'll get my motor back, cleaned up by the way, as well as a new I161W reload.

On to next month as I try try again to get this level 1. I will not give up!

Jim

**"Got Certs?"** Then tell us,  
and we will print it.



Ray Coles Successful NARA Level 1 flight, with an H128 in a SUMO March 13, 2004

**Advisors Column****HARA on Ascent**

By Vince Huegele

My son recently started taking karate lessons inspired probably from watching too many Japanese fighting cartoons. I've found out that although you can sign up to attend martial art classes to learn moves and stances for fun and exercise, there is also a 'belt' program offered by the school. In this program the moves are taught as a systematic progression so that the student can master specific skills in a test to receive a colored belt. As he accomplishes more advanced skills, he is rewarded with a higher ranking colored belt, ultimately achieving the top level black belt after years of work. I see many parallels in the karate class to what a good rocket club does. Members help each other practice and improve their skills. Beginners want to move to the next level, but they must focus on the basics to be successful. Experienced masters emphasize and respect the fundamentals because those are what make the extreme techniques possible. The class celebrates everyone's victories regardless of their learning stage and encourage one another to try again when they make mistakes. HARA, and the other nearby NAR sections we fellowship, have an impressive team spirit. We willingly support each other however we can to do what it takes to make our rockets fly right. The fun is shared by all. Like karate, rocketry is a practiced art, no matter what you fly today, you have your eye on the stars tomorrow for the next level and that bigger and better rocket. The NAR certification process works very well to recognize achievement. Maybe we should have belts to go them. But not robes, that's too Jedi.

**A Very Cool Launch Picture**

Is this picture of a Saturn 1B launch real? According to the source, this is the real deal, from a NASA file photo...You decide, "is the real or Memorex?"





One of the coolest Strong Arms to ever fly at a HARA launch  
I am bad w/ names I sincerely apologize.



Walt Stafford assists in loading the Rocket R&D kit

# LOST PHOTOS OF HARA'S PAST



The owner of The Launch Pad, and David Butcher at NSL `99



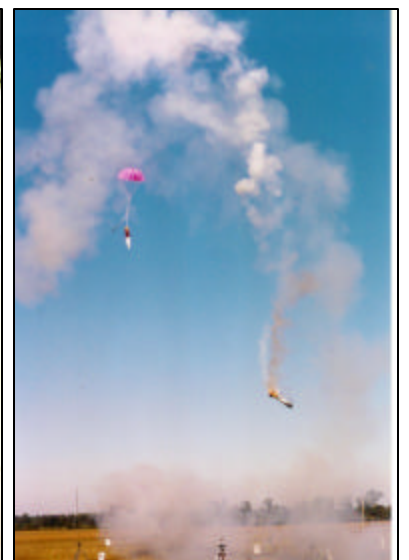
Mark Tygielski school of Rocketry at a MSFC open house



One of MC2 founding members, Perry Lancaster w/ "the Great Pumpkin II" at NSL `99



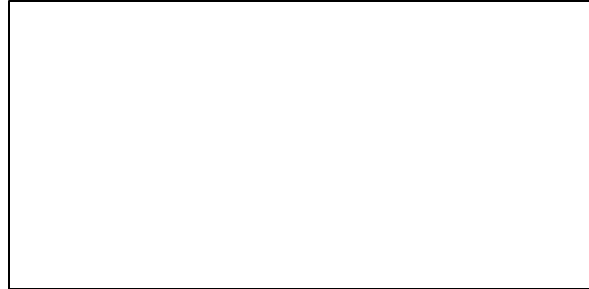
Johnnie Paul's Hercules



Donald Dunn's NCR Patriot on a G64 CATO

# HARA

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)**

## *Come fly with us!*

### When:

MC2 normally flies on the second Saturday of the month from March to November. The range will open at approximately 10:30 AM CT and close at approximately 4:00 PM CT. Please bear in mind that most of us drive down from as far as an hour away so these times may not be precise.

### What:

We have a 10,000 and a 14,000 AGL waiver filed for the MC2 field, which is approximately one mile square, 95% unobstructed. Motors 1/4 A thru M are supported.

### Where:

Take I-24 to exit 111, US 55 to Manchester/Tullahoma/McMinnville. From the ramp, turn right and cross over the interstate. Turn right on Ragsdale Road, right before the Golden Gallon Market. Follow Ragsdale for 7.2 miles, then turn right on Hickerson Road at the Mountain View Golf Course sign. Follow Hickerson Road for approximately 2.1 miles. As the road takes a right angle, look for the range head setup.

## **IMPORTANT NOTICE:**

Elections for the 2005 flying season will be held the second Thursday in January, 2005. The following are open positions to be filled:

HARA President

HARA Vice President

HARA Secretary

If you would like serve as a HARA officer, please let Vince Huegle or one of the other officers know. If you have the time and opportunity, please volunteer. You'll enjoy it and the club will appreciate it!

A big thanks to the officers who have worked so hard for us and done so much for us this past year.