ISSUE 155 - JANUARY 17, 2005

APOGEE PEAK OF FLIGHT NEWSLETTER

Feature: An Interview with Tim Quigg: Winner of the NAR's 2001 President's Award

Image: WOW! Apogee's 1/70th scale Saturn 1B kit is featured on the cover of the Jan/Feb 2006 issue of *Sport Rocketry* magazine.

INSIDE:

- Chat With A 30 Year Veteran
- Help Using Rocksim Motor Files
- Web Site Of The Week
- Tip: Lining Up Launch Lugs

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Tim Quigg Interview

by John Manfredo, Newsletter Editor

JM: Describe the period and time when you were growing up and what things were like in general and in relation to rocketry.

TQ: I was born in Lewiston, ID on August 31, 1959. My father owned an American Oil Company franchise, so we moved around a great deal when I was growing up. We stayed pretty much in the Pacific Northwest. With the exception of a couple of years in Oregon when I was very young, I've lived my entire life in the State of Washington. I grew up during the golden era of space exploration. I barely remember a couple of Mercury flights, some of the Gemini program, but I remember all of the Apollo program. I was ten years old when Apollo 11 landed on the moon. I recall the first time I ever saw a model rocket was when I was in the third grade in Spokane, WA. The sixth grade class had built some model rockets, and all of the kids turned out on the playground to watch them.

JM: When did you first get "bit" by the rocketry bug?

TQ: The first model rocket I ever built was an Estes Scout when I was a Freshman in high school in 1975. I've been building rockets every since then. Over the past 31 years, my model rocket fleet has grown until it has taken over the second story of our home. I currently have nearly 300 rockets, ranging in size from Micro Maxx kits up to "Dragon Slayer"; a rocket that is six inches in diameter that stands ten feet tall. All of the kids in our rocketry club refer to the second floor of our house as the "museum of flight."

JM: What kind of educational background do you have?

TQ: I graduated from Prescott High School in 1978 with a fairly high grade point average and aspirations of going into journalism. When I was still in high school, Triton Press in Boulder, CO published two compilations of original poetry that I wrote, and the royalties from those two books paid my first year's college tuition. I enrolled in Washington State University in 1979, but very quickly became disillusioned with college life. I left the university at the conclusion of my Freshman year, and played around with odd jobs for the next two years.

JM: What was your involvement in rocketry like before and after college?

TQ: While still in high school, I was a member of an informal model rocketry group spearheaded by the high school science teacher. We'd spend all winter building model rockets, then in the spring we'd launch them from the football field. They'd let out the entire school to come watch us. It was a pretty big deal. I was a member of that group from 1975 until I graduated in 1978. I dabbled with model rocketry in support of science lab projects in college. I think I scared the heck out of several of the teacher's aides with my research work! I dabbled off and on with model rocketry until 1994, when I helped co-found the Blue Mountain Rocketeers.

JM: Describe your role in the Blue Mountain Rocketeers and how you became involved with them.

TQ: In December of 1994 I had the aspiration of obtaining my Washington State Pyrotechnician's License. My good friend Gary Lentz, Ranger of Lewis and Clark Trails State Park was a Pyro and I had helped him for the last

Infamous "Rubber Chicken" Odd-Roc

two years with the Fourth of July aerial fireworks display in nearby Walla Walla. This particular evening in December, I was helping him with an aerial display to officially kick off the Christmas holiday the weekend after Thanksgiving. We were launching the shells from a hill at the east end of Dayton that overlooks the entire town. As we stood on the hill-

continued on page 3

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side waiting for the appointed time to begin the display, we watched children happily running around, tossing snowballs at each other, and lamented the fact that because Dayton is such a small town, there wasn't much for kids to do with their spare time except get in trouble with the law. Earlier that day we had talked about getting his two sons and my son together to build and fly some model rockets. The seed of that conversation was still on our minds apparently, because we looked at each other and exclaimed, "Model Rocketry!" It was just what the kids needed; it was safe, well structured and educational. We held our first organizational meeting in February of 1995, and the Blue Mountain Rocketeers have been going strong for the last 12 years. Gary has since moved on, but I still remain very much involved with the group as the Section Advisor. I get re-elected every year. I don't know if that's because I'm doing a good job, or because no one else wants it! I believe our group is unique

Tim And Kids At Rocketry Presentation

in that kids run the group. They decide how to raise funds, what to spend them on, and what course the club will take. They set the rules and the policies. As the Section Advisor, I'm just here to make sure everyone goes home with their fingers and toes intact.

JM: I understand that this club is funded by local sources that enables you to not have to charge membership dues or pad fees. Tell our readers how this was accomplished.

TQ: From the very beginning, Gary and I realized that charging even token membership dues could present a barrier to some children. Many of the boys and girls we started out with were "at-risk" youth coming from broken or single parent homes. So money was tight for some of these kids. Gary and I, as well as other adults in the club, have spent hundreds of dollars over the years buying model rocket kits and motors from our own pockets for some of these kids. But it's been worth the effort. Many of the kids have gone on to finish college, or into the military, and have really made

Helping Out A 4 Year-Old

something of themselves. I would like to think that their involvement with the Blue Mountain Rocketeers played a role in turning their lives around. Funding was never really an issue. Gary and I started the club bank account with a dollar from each of our pockets. From there we started hitting the civic club circuit, giving presentations at the local Lion's club meetings, Kiwanis and others. We hit up the local chapter of United Way. We even put the pinch on the Sheriff's Office, who agreed to let us use their gun range as a place to launch our rockets from, in exchange for mowing it four times a year. We also received $200.00 a year from this "contract" with them. We currently have two launch sites, with 5,000 foot waivers. Most recently, we conducted a yard sale in which club members donated items. In two days we raised over $500.00 for the club. In this way, we maintain a club account balance of close to $1,000, all without charging any membership dues or pad fees. We run an open range, so everyone is welcome.

JM: What is your current occupation?

TQ: In 1981, I tested for and was offered a position with the Columbia County Sheriff's Office. I worked the road as a deputy for 16 years, as well as dispatch. I retired from the road in 1997. I am current the Senior Communications Officer in the Columbia County E911 Center. I am a nationally certified Emergency Medical Dispatcher. I am also a state-certified law enforcement firearms instructor, a certified armorer for Glock and Sig-Sauer, and have participated in the capacity of instructor at three regional law enforcement academies. I also instruct an officer survival course dealing with street weapons. In my "spare time" I am the Assistant Editor of *Extreme Rocketry Magazine*, occasionally freelance articles for *Sport Rocketry Magazine,* and authored the book, *"A Guide to Level One Certification"* which is currently in its second edition and fourth printing.

JM: *"A Guide to Level One Certification"* was very

continued on page 4

helpful to me and I'm sure to others, too. Do you have plans to write one on certifying level two?

TQ: I'm flattered to think you found the book helpful. Indeed, the book has surpassed I and Brent's best expectations. We've talked several times about writing a sequel to it on the topic of level two certification, but I just haven't had the time personally to even sit down and draft an outline. Besides, there are other great publications out there that have filled the need for such a book. I highly recommend Mark Canepa's book *"Modern High Power Rocketry 2"*. It's a great piece of work!

JM: When did you realize there were larger rockets than model-sized out there, and how did you start becoming involved in high power rocketry?

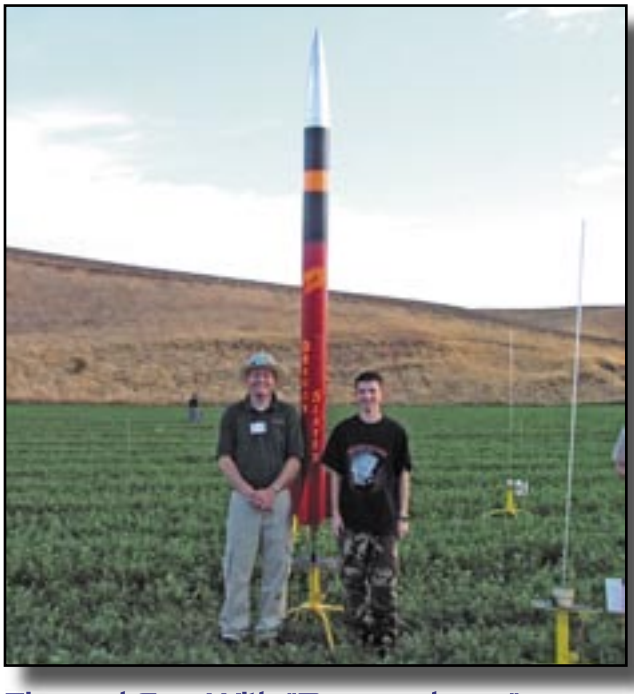
TQ: That would have been shortly after we formed the Blue Mountain Rocketeers, and kids starting bringing in some of these (at the time) really big rockets. One child brought in an Estes Maxi-Force kit, and it was the largest thing I had ever seen! I started reading the instructions and noted that we might need a thing called an FAA waiver. From there it mushroomed. I started haunting the book stores and found my first copy of Stine's *Handbook of Model Rocketry*. It was there, in the magazine section, that I came across my first copy of *HPR Magazine.* I was hooked as soon as I opened the cover. So I guess I have Bruce Kelly to thank for hooking me on high power rocketry "by proxy."

Prepping a Rocket

JM: Describe your experiences with certifying at levels one and two and what rocket/motor combinations were used.

TQ: I originally started out as a Tripoli member, but dropped my membership shortly after my level one certification and went with the National Association of Rocketry. It was purely a monetary choice at that time. The NAR membership was a lot cheaper, and still allowed me to accomplish what I wanted to do.

My level one certification flight was on March 16, 1996 with a Binder Design Thug on an H128. It took me three tries to get my level two certification, and that was mainly because of little things that I missed. My first attempt was two months after my level one certification with a LOC Magnum on a J800. The ejection charge never went off, and I lawn darted the thing from about 5K. I specifically remember the 20-foot circular debris field it left behind! My second attempt was on June 22, 1996 with a Binder Design Iris on a J275. That flight suffered a separation. I tried it again with the same rocket the same day on a J180 and nailed it. I realized my problem was I was just in too big of a hurry. I have learned a great deal about the hobby since then, but in hind sight many of those aspects I should have taken the time to learn before my level two attempt. I currently have no aspirations to go for level three. I'm having too much fun with the A through K stuff right now!



Tim and Son With "Dragonslayer"

"Dragonslayer" on K550 Power

JM: What is your all-time favorite personal rocket/motor combination that you have flown?

TQ: That's a tough one to answer. I've got close to 300 rockets upstairs, and you don't have enough room in your newsletter for me to list them all! I like just about any 2.6 or 3-inch airframe on a G64. I just love that motor! In September of 2005 I flew the big-

gest rocket/motor combination I have ever flown. That was "Dragon Slayer." The rocket is 6-inches in diameter and stands 10 feet tall. It weighed in at 14 pounds on the pad. I kicked it up on a K550 to around 4,200 feet or so. Perfect flight. I don't use electronics. Everything I fly is motor-based ejection. I've flown this rocket in the past on a J800, and will probably fly it again in 2006 on another J800.

JM: What other ways are you involved in the hobby?

TQ: I always try to help out where ever and when ever I can. Various members of the NAR Board of Trustees have contacted me from time to time for an opinion or some input. I had a very small hand in helping the kids of the Blue Mountain Rocketeers with the development and beta testing of the Cadet NARTrek program for NAR. I also am participating in the NARTrek program myself. I love being a mentor to people, but my main focus is on youth. They are the future of the hobby, and as NAR President Mark Bundick puts it, I try to "Pay Forward" every chance I get. Apparently folks in the NAR thought I was doing a pretty good job of it, as I was presented with the 2001 NAR President's Award in recognition of my work with youth in rocketry. I recently became the webmaster for the Blue Mountain Rocketeers website, which you featured in the August 2005 issue of this newsletter as a matter of fact! I help organize and conduct local model rocketry presentation at schools in the area and have from time to time taught model rocketry in school science classes. I'm also a registered counselor for scouts, teaching the Space Exploration merit badge.

JM: Describe your favorite aspects of rocketry.

TQ: Again, that would have to be working with kids in the hobby. That and the fact that no matter how long I've been in the hobby, I will never know all there is to know about model rocketry. I'm learning something new at every launch I attend. No one will ever know all there is to know, and one should fear the person who claims they do!

JM: What do you see as the problems in rocketry, both model and high power, and what changes could be made?

TQ: With regard to model rocketry, the NAR Special Committee on Range Operation and Procedure just released its 118-page report. I think they are on the right track as to identifying what's wrong, and what needs to be done in order to fix it. I've read reports and seen pictures of the aftermath of near-misses over the past couple of years and as recently as just a few months ago, and I have to admit they scare me to death! However, what hobbyists will accept as needed changes and what they will view as "overkill" still remains to be seen.

With regard to high power rocketry, definitely the current regulatory situation with the BATFE is number one on my list. I hate to sound like a pessimist, but I really do have a feeling that the rocketry organizations are going to lose this battle. I can't speak for those on a national level, but locally, I've seen a great deal of disenchantment with the entire situation, that ranges from mild amusement to total disgust. Some have dropped out of the hobby altogether, others have submitted to what they see as the inevitable, and have filed for LEUP's or LUP's. After 31 years in the hobby, I finally knuckled under and obtained my permit.

JM: Where do you see this hobby going/changing?

TQ: I see permits, regulation and storage magazines becoming the norm, and as a result, a resurgence in model and mid-power rocketry. As a result of the regulations, I also forsee the EX trend to continue to grow and prosper. I think TRA is doing a great job of nurturing this field of pursuit, and I wish them the best of luck in the future!

16. Do you have any "words of wisdom" for new hobbyists?

TQ: I've hit this topic really hard over the last five years as the Assistant Editor of *Extreme Rocketry Magazine*. The best advice I can give anyone just starting out in the hobby is not to be scared off by the current regulatory situation. Again, I hope that I'm wrong in my assessment, and that we will win the fight and we will see another "golden age" of rocketry begin! Also, don't be in a hurry like I was to get your level one and two certifications out of the way. There is a great deal of road to travel even before you get to level one, let alone the trail between level one and level two! Take your time to learn, relax and enjoy, because it's not just a way of life (for some of us anyway!) It's a HOBBY to be enjoyed and shared with family and friends.

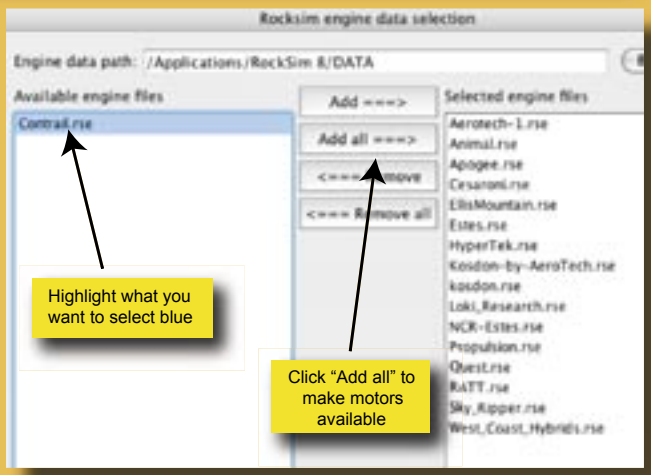
Discussing Rocketry Over a Meal

QUESTION AND ANSWER CORNER

The question for this issue is, "In Rocksim 8, how do you make new engines available to use after downloading them from the internet?" The answer is quite simple. After downloading the file from the 'net, put the .rse or .eng files into the "Data" folder (which you will find in the main Rocksim 8 folder). Now open up Rocksim and direct yourself to the "File" menu at the top, scroll down to "Reload Engines." The Rocksim engine data selection screen will open up. A screenshot of this is shown to the right.

Make sure that the correct engine file is showing up on the left side. If not, then you may have put the file in the wrong folder. Assuming that the file is present and showing, click on the name to highlight it blue. This selects the file and tells Rocksim that you want to load this file into the database. Next, make sure that you click on the "Add all ===>" button. You should see the selected file move over to the right side of the screen.

Last, but not least, click the "ok" button to complete this procedure. You may now use the new motors!



If you have a question you would like answered, please e-mail me at: johnm@apogeerockets.com

WEB SITES WORTH VISITING

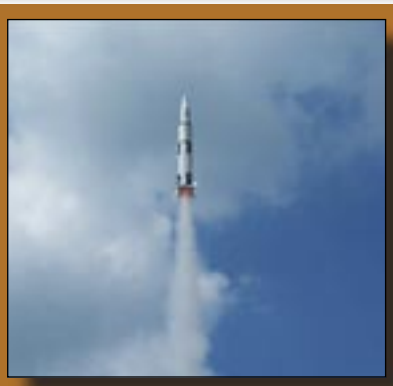
The featured website for this issue is *Verna and Randy's Rockets*, which can be found at: http://www.vernarockets.com.

These two have been flying since 1968 and are currently members of two NAR sections. Although they only fly model rockets for now, they enjoy modifying the rockets they build. Kit bashing, staging and clustering are what they enjoy the most.

You will find information and photos about their latest projects, featuring several versions of the Estes Saturn V, one which is clustered with a D12-3 and four A8-3 motors.

And make sure you check out the details of the cool "Bad Girl Saturn V Full Stack, 3 Stage, 11 motor Cluster" that uses no electronics! It uses five C6-0 motors, five B4-2 motors, and one B4-2 motor.

The page entitled "Our Fleet" shows a variety of older kits that still look and fly well!



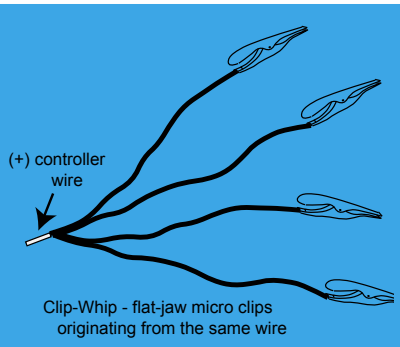
All in all, this is not a huge, in-depth site by any means, but it does show some pretty neat stuff that can be done.

They say, "Of all the fantastic rockets we've showcased in the last 10 months, the dad, two children and the little mini engine rocket in this photo, may be the best example of High Power Rocketry you will ever see. *"No man ever stands so tall, as when he stoops to help a child .... especially if it's his own."*

To us, it's what this hobby is all about. Amen to that!

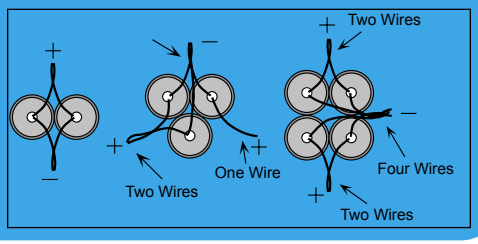
DEFINING MOMENTS

A **Clip Whip** is a way to deliver electrical current to more than one place at once. No matter what kind you make, one end will always have a single wire that hooks up to one side of the launch controller, and the other end will have two or more clips. You'll need small alligator clips and three or four feet of solid core copper wire. Cut the wire into lengths between 6"- 8" long, then strip the ends. Solder clips onto one end of each wire. Take four wires and twist their ends together, then solder it to make a solid connection. This is shown in the illustration at the top right. You could also use different color wires for the four leads to help keep the cluster wiring straight. As we talked about in the last issue, the igniters should be hooked up in a parallel circuit. Hook up the clip-whip to the igniters after you have paired the igniter wires properly by twisting the leads of the igniters together as shown in the bottom illustration.



Clip Whip Illustration

Igniter Setup



TIP OF THE FIN

My tip for this time around is for those projects that require you to attach two launch lugs to a model's body tube when there is a good distance between them. This is an alternative method to the standard one of drawing a straight line down the body tube to make sure that the launch lugs are lined up straight.

What you will need to do is grab the proper-sized launch rod for the lugs, wood glue or whatever you may be using, and a piece of masking tape about 3 inches long. If you like, you can measure and make marks at the proper distances on the body tube so that you have a general idea where they should be placed. Next, slip the lugs onto the rod. Go ahead and put some glue on the launch lugs but be careful not to put too much. Now you may position them the proper distance apart. Carefully place the launch rod on the body tube so that it is straight. Take the piece of masking tape, place it between the lugs on the rod, and tape the whole thing to the body tube. Allow to dry completely, then remove the

tape, and slide the rod out of the lugs so that you can see that the lugs are lined up beautifully! If you need some lugs to try this method on, see our webpage at: http://www.apogeerockets.com/body_tubes_and_rings.asp#launch_lug_anchor and give this a try!