



# Altitude!



South Jersey Area Rocketry Society Official Newsletter  
VOLUME 2, NUMBER 6

= \$1.00 =

NAR Section #593  
NOVEMBER / DECEMBER 2000

## Altitude! Wins Best New Newsletter Award!

### SoJARS Annual Report

By Art Treiman

Well, as this is the last Altitude! issue of the year, Joe asked me to do a sort of “summary of the year” report. Not being one to be short of words (although this month I also have to write two launch reports - over 200 flights!) I’m saying a lot even for me. Fortunately, we have enough going on to keep my keyboard busy.

The first thing I want to say is thanks to all those members of the club who have contributed in some way... whether it be for donations, for helping at the range, for giving talks, publishing a newsletter, or for whatever; it is all of us and our actions that make SoJARS the great group that it is. We’ve come

incredibly far in the past year and a half of our existence.

First I’ll talk a little about what we’ve accomplished in the past year. We started this year with a little over twenty members, an empty treasury, and no club-owned equipment. We now have over 50 members of all ages and skill levels. In the past year we’ve grown our treasury to over \$400. We’ve purchased almost all the equipment we need to operate our flight activities. We’ve all got club T-shirts, hats, (and a blanket too!). Our members have done launch demos and outreach activities all over South Jersey, bringing our hobby to dozens of kids.

Thanks, too, to M & G Hobbies, who comes out to all our events.

We are picking up an average of two new members a month. We’ve captured all the NAR members in our area and many in the southern half of New Jersey. Our members come from as far away as Bucks County, PA, to Delaware to Cape May. We’ve had a meeting and flown every month the weather allowed, sometimes twice a month. Our last

launch was attended by dozens of flyers and we flew 126 flights (more than we’ve ever flown). At meetings, we are all learning from the monthly lectures that are given (by both the scheduled speaker and Bob Ross on his latest project!). What is most important is that people are coming out to our activities, liking what they see, and coming back for more.

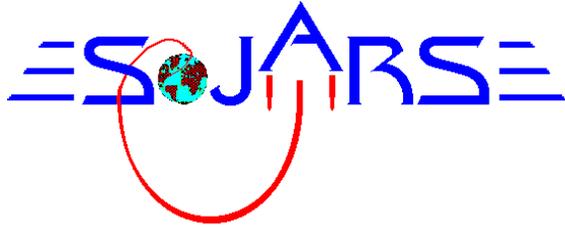


Tom Mitchell and Bob Ross Tie for Model of the Month Winner

Finally, warranting it’s own paragraph, is Altitude! Published every other month since it’s first issue, our newsletter is now our “award-winning” newsletter! Thanks to Joe, Tom, and everyone who contributes to this great effort. I’d urge everyone to contribute to the newsletter regularly. It is members’ stories, tips, plans and ideas that make the newsletter enjoyable to read.

So, where do we go from here? I’d like to see us continue to grow our membership. While I don’t want to get so big that we lose the “everyone knows your name” feel we now have, I don’t want us to be stagnant. It is the new people that are always

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**President:**  
**Art Treiman**  
SirWmOsler@aol.com

**Vice-President:**  
**Steve Childs**  
stephenchilds@hotmail.com

**Secretary/Treasurer:**  
**John Coles**  
john.c.coles@lmco.com

**Director of Safety and Range Operations:**  
**Nancy Rowley**  
quiltrocket@home.com

**Altitude! Editor:**  
**Joe Libby**  
libbyja@home.com

**Print Editor:**  
**Tom Mitchell**  
tmitchell@citnet.com

**Public Relations & Web Master:**  
**Patrick Flanagan**  
morden@nothinbut.net

**Altitude!** is the Award Winning (NAR's Best New Newsletter for 1999 – 2000) Official Newsletter of **SoJARS**, the **South Jersey Area Rocketry Society**, NAR Section #593. **Altitude!** is published bimonthly for the benefit of **SoJARS** members. Information contained in **Altitude!** may be used by anyone as long as proper credit is given. Address all correspondence to our email address:

[SoJARS@rocketryonline.com](mailto:SoJARS@rocketryonline.com)

Please visit the frequently updated **SoJARS** website at <http://www.sojars.org> or call the **SoJARS Hotline: 856-424-5905**

## Calendar of Events

### **SoJARS Meetings**

Unless otherwise specified, all meetings take place at the Cherry Hill Public Library, 1100 North Kings Highway, Cherry Hill, NJ. (856) 667-0300. Directions are available on our web site. For the year 2000, all meetings will be held on the 4th Tuesday of each month from 7 till 9:00pm in Room A.

Tuesday, November 28.

Presentations: High Power, Part 3 – Darren Wright

Tuesday, December 26 – CANCELLED.

### **SoJARS Launch Dates**

Unless otherwise specified, our launch area is at the Gloucester County College. Directions are available on our web site.

Sunday, November 12, 12:00pm to 4pm.

Raindate: November 19.

Theme: NARAM Prep.

Funtest: ½A Boost Glider and C Streamer Duration.

Vendor: M & G Hobbies, Delran, NJ. 856-461-3553.

Sunday, December 17, 12:00pm to 4pm.

Raindate: December 31.

Theme: NARAM Prep.

Funtest: ½A FlexWing Boost Glider and D Helicopter Duration.

Vendor: M & G Hobbies, Delran, NJ. 856-461-3553.

Sunday, December 31, 12:00pm to 4pm.

Raindate: January 21.

Theme, Funtest, Vendor: TBA

Sunday, January 21, 12:00pm to 4pm.

Raindate: January 28.

Theme, Funtest, Vendor: TBA

### **GSSS, NAR #439**

Launches: November 25, December 16 10am – 3pm.

Location: North Branch Park, near Somerville, NJ

GSSS Hotline: (908)-658-9417

Website: <http://www.robnee.com/gsss/>

### **Garden State Tripoli, TRA #74**

Next Launch: RATS X, Spring 2001

Location: Cederville, NJ.

Website: <http://www.njtripoli.com/>

## Calendar of Events

Continued

### **PARA, NAR #520**

Next Launch: November 5, 11am – 4pm.  
Location: a farm 9 miles north of Doylestown, PA  
Phone: You may call Chuck Arkens (215) 855-5599  
or David Stoetzer (215) 699-0587 the night before or  
the morning of the launch for verification.  
Website: <http://users.erols.com/dstoetz/para/>

### **Deleware Tripoli, TRA #106**

Launch: November 4 - 5.  
Location: Rhodesdale, DE  
Launch: November 12.  
Location: Coverdale, DE  
Website: <http://www.detripoli.org/>

### **METRA, TRA #94**

Next Launch: November 5.  
Location: Vernon, NJ.  
Web: <http://www.users.nac.net/jdcluster/Metra.html>

### **MARS, TRA #105**

Next Launch: ????  
Location: Allentown, NJ.  
Website: <http://www.njtripoli.org/> (inaccessible?)

### **NARAM 2001**

Next August NARAM will be relatively close, in  
Geneseo, NY! SoJARS should be there!

## Altitude! Deadlines

Submissions for publication are accepted  
continuously by the editor. The Deadline for the  
January / February issue will be January 7, 2001.

## SoJARS Annual Report

By Art Treiman

Continued from Front Page

bringing new ideas, personalities, and interests to the  
group. On the equipment front, we are soon to have  
tracking theolodites and several mid-power pads for  
the E to G powered rockets. Our meetings will be  
lengthened to 10pm to give us more time for the  
lectures and to socialize. We aim to continue to fly  
monthly at GCC. A new bank account is imminent  
so we are not carrying the entire treasury to launches  
in a lock-box. Like any rocket club, we are always  
looking for new field opportunities, and hopefully

(some day!) a farm will present itself to us and we  
can have some high power launches.

Most importantly, we've all picked up at least a  
few (if not more) new friends. The fun is not just in  
flying rockets, but in flying rockets with each other.

See you all at the field.

## President's Report

By Art Treiman

I want to spend this space bringing everyone up  
to date on the latest developments in the ongoing  
legal battle between the NAR and the BATF (Bureau  
of Alcohol, Tobacco, and Firearms). I initially did  
not want to discuss something "political" but the  
course this dispute takes will affect the future of our  
hobby. It has also been some time since I last  
discussed this, and many of our newer members may  
not be aware of what is happening.

To give a little background, Ammonium  
Perchlorate (AP), known to us as the "composite"  
motor propellant used in all the Aerotech motors, is  
regulated by the BATF as a "low explosive." Until  
recently the regulation was somewhat burdensome  
but not a real hindrance to the hobby as the more  
troublesome regulations only usually applied to  
motors from the mid "J" range and up. However,  
about a year and a half ago the BATF stated it  
intended to enforce a tighter standard in several ways  
that would be extremely detrimental to our hobby.

Under the new regulations, in order to fly any  
high power motor (H and above, or obtain Level One  
certification) you would have to first take the  
following steps:

1. Obtain an application from the ATF and apply for  
a Low Explosives User Permit.
2. Send your \$100 application fee for the first year.
3. Wait several weeks to months.
4. Obtain a storage magazine with a special lock  
(\$100-\$150).
5. Build an outdoor shed to keep the magazine (you  
can't store regulated motors in an occupied dwelling  
- so forget it if you live in a condo or townhouse).
6. Check with local fire marshal and state authorities  
to be sure you are allowed to store explosives on your  
property.
7. Have an interview and inspection with an ATF  
agent at your home. This agent will usually be very  
pleasant, professional and helpful within the scope of  
knowing anywhere from nothing to something about  
rocketry. The agent will inform you that you and  
your home will be subject to unannounced  
inspections approximately every year or so. You

must keep your logs perfectly and track every ounce of propellant. Failure to do so is a federal offense.

8. Renewals for your license are for 3 years and are \$50. It is your responsibility to be sure you get the renewal paperwork in a timely manner or you will have to re-apply from scratch.

Well, now that you did all that, it is time to fly. Of course you can't buy your motors at the field because the vendor is only permitted to operate out of his place of business. You must call in advance and pay for your motors ahead of time as you are permitted to take delivery of your motor at the field. If you somehow managed to get a permit "without storage," meaning that the vendor has agreed to store your unused motors for you, you can return any motor that you don't fly that day to the vendor if he is willing (although the vendors are getting overwhelmed with stored motors because of the increasing regulations).

This is the future of rocketry as the BATF views it. As you can imagine, with such a high entry barrier, very few will take the steps necessary to fly high power rocketry. The problem stems from the first sentence of my second paragraph... the BATF defines Ammonium Perchlorate (AP) in all its forms as an explosive. Given this, their regulation of our hobby is not unreasonable based on the BATF's duties to regulate explosives. The unreasonable part is that the AP we use is not an explosive... if it was it would blow up our rockets and therefore not be a suitable propellant. It's classification by the ATF as an explosive also "spooks" the local authorities who are much less likely to allow you to store it on your property.

The National Association of Rocketry (NAR), our parent organization that has made rocketry the safe hobby it is for 40 years, has taken on the BATF in court in an effort to obtain relief from these burdensome regulations. Here is the part where you can help. Several months ago a call was put out to raise funds for this legal effort. \$30,000 dollars were raised and we have an excellent case built for us by expert attorneys experienced in these matters. Unfortunately, all efforts to settle and reach a compromise with the BATF have failed and we must go to court if we are to win relief. In order to do so, an additional \$75,000 dollars must be raised for the protracted legal battle that will occur. Without this money we cannot take on the government. The NAR is soliciting donations (tax deductible) for this legal effort. I urge you to support this action, which I believe is critical to our hobby. High power rocketry is the growth area in our hobby. It breeds new manufacturers, new development, new products, and of course new rocketeers. If it is to survive and continue to grow we must be able to fight and win

this case. There is a form on the back of this newsletter that you can tear off or copy and send directly to the NAR. [*Actually it's on page 14. I put it inside so as many pictures as possible could be in color – JL*] If you want more information, check out the NAR web page at [www.nar.org](http://www.nar.org). I urge you to donate to the NAR Legal Fund. Thanks and see you at the field.

## **Editorial**

By Joe Libby

For those who haven't heard yet, I am very proud to formally announce that our humble newsletter earned the Best New Newsletter Award. The official announcement appears in the September - October issue of Sport Rocketry, the official journal of the NAR (Volume 43, Number 5, Page 4). Most notable is the fact that this award is not given every year. In the words of Tom Beach, Executive Editor of Sport Rocketry, who notified me of our recognition, "The Best New Newsletter award is not something we award every year... only rarely, when a particularly good new newsletter shows up. Congratulations!"

Indeed, congratulations and thanks go to so many of you... First of all to Art Trieman, who made this all happen over a year and a half ago, who contributed all the fine President's Reports, filled in for Launch Reports, Minutes, and anything else that needed writing, and is just a great guy to have become friends with; to Tom Mitchell, for his excellent printing and many contributions, including Maxi Mosquito plan, Heli-Roc kit review, etc.; to Pat Flanagan, for not only his write-ups but also creating and maintaining our awesome website (I personally think ours is one of the best – so few other sites even *have* a newsletter archive); to John Coles, for his tireless reporting of the Minutes, not to mention enlightening Q & A segments, Stability presentation, etc.; Barry Berman for his many, often humorous launch reports; Steven Childs for his excellent presentation on fibreglassing, his "Rocketry Evangelism" piece, and, well, just being Steve; to Steve Bastow, Steve Wilson, Bob Ross, Mike Rossbach, Darren Wright, the Rowleys, Tony Romano and all the others who have brought SoJARS to so many other venues (not to mention "Secret Launches"), and reported back to us in these pages; to Randy Depasquale and the other Leader members who've also made important contributions; to the many who sent in the photos that really make this more than just a lot of words, for ours is very much a visual hobby; to M & G Hobbies, who not

only comes out to many of our launches and has generously given us supplies but supports and our Newsletter and displays them for sale in their store; and last but not least, to my wife, and now my new little boy, from whom I've stolen away a few too many hours to work on this fun, creative outlet. I hope everyone enjoys reading it as much as I enjoy editing it.

Well, when I made the announcement at the September meeting I asked for suggestions for changes and improvements. It seemed unanimous that we should keep things as is. The point is not to change to win awards, but to make the newsletter work for us, SoJARS. Agreed. I have no plans to change the current format, but could use a little more content at times. Here are some of my thoughts:

- I'd like to have a rocket plan in each issue if possible.
- I considered putting in table of contents, but think it not necessary.
- I'd like write-ups on all presentations (which we usually do get).
- I'd like to see more book reviews, kit reviews, tricks, tips, how to's, dos & don'ts, Q&A, seen-on-rmr (or our own forum), comic relief, quotes, this day in rocket history, etc, etc...
- I like the idea of a cover picture and also a "Photo Finish" section. Now that I have a camera, plus Randy's dad's, and Pat Flanagan's (and I think Steve Bastow also was wielding a camera last launch) the only trouble should be picking which ones to print!
- Likewise I like the idea of a picture of the Model of the Month winner. I got the September winners but wasn't there for October.
- Finally, I'm always open to suggestions as well as submissions

So, What's new in this issue?! Well, not too much. First, we have an Annual Report by our President, Art Treiman. His President's Report encouraged me to review our hobby's various rules and regulations, so I share my understanding of the whos and whats (but not the whys!) of Rocketry Rules. You'll also find a form Art made for contributing to the NAR v. BATF Legal Fund. I put it inside, on page 14, so as many pictures as possible would end up on the back, color pages. Next, given our new "award-winning" status, I tweaked our masthead paragraph. Finally, as suggested by Bob Jonas (I think?) at the September meeting, I've added page numbers (duh!). Would you believe I actually agonized over where to put them? Upper outer, lower outer, lower center... Hope you like my choice because I'm not changing them – just kidding! As always, all feedback, comments, or suggestions are greatly appreciated.

## Launch Reports

**September 17, 2000**

By Art Treiman

September 17<sup>th</sup> came in as a beautiful but breezy day... good for flying but not great. As the first launch under our new "Berman Yellow Light" system, we were able to get a nice turnout and 19 flyers flew 78 flights.

Paul DeCrane and Randy DePasquale flew some beautiful Launch Pad kits (a Pescador and Grail, respectively) for some nice flights. Sydney Treiman proudly flew her "Brittany Spears" for a nice flight, although dad Art's Barbie with Rocket Pack Mark II didn't fare so well. He did keep his egg intact, unlike the fabulous Bastow boys. The Bastows made up for it, though, with a couple of spectacular Super Vega flights while Steven kept up nicely with a screamin' Fat Boy on a C. C.J. Ennis did nicely with his custom Twister.

Ron Rowley checked in with his Check Six and Quest Thunder for a couple of fine flights, while big daddy Rowley flew his Big Daddy for a nice D powered flight. Meanwhile Pat Flanagan's Comanche continues to come back, although it did so ballistically this time. We're sure Pat will be able to repair it while he is up at 3am with his new baby. Steve Childs, meanwhile, will be up at night having nightmares after his PML Bullpuppy decided to eject its chute on the way down (from about 1000 feet) at about 50 feet AGL. It slid in safe at third and will live to see many more days... you have to love the way PML builds a kit.

Jack Komorowski's E powered Maniac wasn't so lucky... it ejected perfectly at apogee and as this is being written it is still drifting somewhere over Texas. Ditto for Steve Bastow's Anubis and a few other's I don't recall. Henry Rosenblatt's C powered screamer also led him on a nice walk. Lisa Paulin turned in a bunch of good flights with her Quest Courier and Estes Super Shot. John Coles usual assortment of odd-rocs flew. Some, like the "Finless Wonder" did great, while others, like his ducted two staged Li'l Augie didn't. I'm happy to report that his Mk-81 Snake Eye worked nicely this day!

Other nice flights were made by Tom Mitchell's mini scratch V-2, as well as Mike Rossbach's kit-bashed version on a D. Meanwhile, Katherine and Mike Rossbach Jr's Flash lit up the sky several times. Darkening the sky repeatedly were John Gramick's always nice flying assortment big mid-powered birds, this week showing a few NCR Darkstar motors. Enjoy these motors while you can! See you next time.

## October 15, 2000

By Art Treiman

Wow! This is the only way to describe our October 15<sup>th</sup> launch. It was by far our biggest and best to date in every way. 29 flyers (that's right 29 flyers) made 126 flights in perfect weather. Virtually no wind or clouds, temps in the low 80's, and a nice long day to fly. What more is there to ask for?

There were so many highlights it's difficult to get them all, but we'll give it a try! Since I'm the writer, I'll do mine first... how about the first successful pair of flights for the Rocket Camera on a G80, or the 20 year old Interceptor? Or my Quest Navahoe that staged perfectly (doesn't somebody owe me a buck for that?). Sydney Treiman also did nicely with her in sync N'Sync rocket on a 1/2 A32T.

17 John Coles flights made for many a spectacle too... from his staged flying saucers (a first anywhere?), to his Harpoon actually working, to his Mars Lander salvo (all sizes known to man), SoJARS' resident "Rocket Scientist" picks up the Lavoisier Award for his performance this month.

Meanwhile, Joe "Junk Mail" Libby (also a new dad this month... congratulations!!!) pulled off a hat trick, flying his signature Junk Mail rocket three times for a nice demonstration of the various burn characteristics of different F motors. Speaking of high impulse rocketeers, Mike Roszbach impressed (as always) with his Lil Nuke, PML Amraam, and Nike Smoke all on F's. Following in dad's footsteps, Katherine Roszbach almost reached the clouds with her Flash on a C... very nice!



This day also saw a terrific turnout of new flyers. These folks made themselves known. First we need to mention what was arguably the coolest flight of the day... Tom Bayster flew what would have to be the unofficially highest altitude SoJARS flight ever with a modified Commanche on three D's! That's right, three stages of D motor power, and all fired perfectly.

Unfortunately, the rocket gods took the Commanche for their own. All three stages vanished into thin air! Great job, Tom. David and Drew Barkoff also joined in the fun, with David putting a lot of good mileage on his Silver Comet, while Drew Barkoff did a nice job with his Estes Flash on a B6-4. In another unofficial attempt for the SoJARS altitude record, Mark Russo let his Mach Buster rip on an E15-7 [*Editor's Note: - I'm unsure if he recovered it*]. Rob and Robert Roberts also flew some pretty serious rockets, including Dad's Graduator on a G33, but coolest was the Quest Falcon on an E15-5 Blackjack reload for a great flight.

In the "good to see you back" book goes the Romano clan. They were all out for the nice day (wasn't that baby inside Mrs.'s belly last time we checked?). Dad Tony's Loc Graduator on an F24 was really nice, as was his scratch Taurus-Tomahawk. Meanwhile, Nicholas's Mini-Marz Lander flew a perfect flight, while Robert's Astrocam took some nice pictures of the development across Tanyard Road. Also reaching for some serious altitude was Kathleen Duffy with her "The Big Rocker" on a pair of staged D's. Megan Grimm's "Pip Squeak" also reached some nice height on a B4-4.

The "De's" also made a nice showing today... Paul DeCraene's Venus Probe made a perfect flight (which is more than mine ever did!) and his Fire Streak, well, streaked on a C. Meanwhile, Randy DePasquale's brand new beautifully done V-2 would have made Von Braun proud. Megan Grimm and Danielle DePasquale put some additional mileage on the Pip Squeak (just how many times did that rocket fly... or were there several Pip Squeaks?).



As always, John Gramick burned lots of AP in several impeccably finished models, from his PML Amraam 2 to his NCR Phantom on a Dark Star (I'm gonna miss those motors). The Wilsons made a nice showing, with Steven's rebuilt Sandhawk roaring on

a G80-7 (I love that motor) and dad's Red Max clone on a D. Perhaps their finest hour, however, was the Steve vs. Steve PML Bullpuppy drag race. For those that missed it, the Steves each prepped their Bullpuppies with identical G-64's and stood ready as they were counted off. The Wilson's rocket rose skyward on a column of smoke and flame, while Child's ... well.... just stood there! Not to worry though. Steve Childs got it to fly eventually (and it flew perfectly, I might add), along with his NCR Archer on a G80 (I REALLY love that motor).

Tom Mitchell brought out a bunch of his beautiful models. His scratch Aerobee 150A flew nicely on a B, and his Andromeda static motor test was perfect. Tom builds his rockets so perfectly that they land right back on the launch rod exactly where they started!

You know it is a good day when Steve Bastow breaks out his Long Shot and his Black Brandt... both of which flew perfectly. Son Steven let his Chain Reaction rip on a C6-5 for some nice altitude, while CJ Ennis flew his Skywinder as the only helicopter of the day. In a day of firsts, Henry Rosenblatt flew his PML Io on a G64-4. It was his first flight with a reload and it unfortunately ended up as a "mid air demolition" (as described by the LCO). His SeaHawk did better, turning in a pair of very nice flights. Continuing the naval theme, Michael Rosenblatt flew his Navy Aim 99 successfully on a C5-3.



In the heartbreaker of the day, Barry Berman's painstakingly cloned Farside Z III made its first and unfortunately last flight. This rocket was the closest thing to a group project short of a group project. Barry has talked about this model for months. Planning help was obtained from John Coles. Barry painstakingly gathered parts from all over the country. Smaller scale versions were flown throughout the year in preparation for Barry's great symphony. Boosted by a 3 C cluster, the rocket

slowly lifted off the pad. At just this unfortunate instant, there was a minimal breeze, which weather cocked the model ever so slightly. As she accelerated into the wind, the second stage lit perfectly. Farside-Z worked too well for her own good as now, moving at trans-sonic speeds in a downrange rather than vertical orientation, the third stage lit perfectly and accelerated the sustainer way out beyond the fields to that place rocketeers call "itsouttherebutIdon'tknowwhere." After fruitless searching, the sustainer was not found.



Barry can't stay depressed for long, though, as Lisa Paullin flew her Prozac Fat Boy to everyone's delight! Lisa also showed some nice Neubauer hardware, including a micro Saturn V and Mercury Redstone. Last but not least, Katie Berman successfully flew and recovered her Mini Mars Lander after a beautiful flight on an A103T.

Well, that's all the flying that's fit to print. Faithfully submitted – Art



Our monthly Silver Comet Drag Race, October 15

**November 4, 2000**  
**DE/MD Launch**  
By Darren Wright

Well as you all know, RATS was cancelled this October... maybe permanently if I have heard correctly. So, of course the first DE/MD launch was expected to have HUGE turnout. Saturday morning I woke up and decided to can it. Winds were in excess of 20mph, and the 2 birds I was going to fly would not have liked that very much. Apparently, there were 400 or so people there, and not many flew.

That week, it was decided that another launch would be held informally at the Rhodesdale, MD site, on the weekend of the 4th. I loaded up the Monster Maniac, and the 1/3 Phoenix, and headed down there. I arrived at about 9:30 or so, and nothing had really flown yet. Every time I see this field, it blows me away... 5 miles square!

I got my loads for my new Kosdon 54x2550ns casing:

1. L850 Slow Load
2. K800 Dirty Harry
3. L650 Red Rhino
4. K1250 Skidmark
5. L1860 Super Fast

(Full K's and Baby L's use the same casing)

I was quite nervous about the Phoenix (I was trying a new airstart board) so I decided to fly the Maniac on the K1250 Skidmark. After getting some pointers on assembling this huge Kosdon casing, I prepped the Maniac, and took her out to the away cell. The countdown started and the adrenaline flowed... this was going to be quite a flight! The Maniac took off, and the K1250 turned out to be more like a K700... man did it think hard! So, it took the Maniac to 2100ft, for a picture perfect flight.

So! The next thing to decide was what to fly in the Phoenix. I had a few options:

1. Kosdon L1860 by itself
2. Kosdon K800 DH with 2 I435T airstarts
3. K700 with 2 outboard J350W clustered
4. K700 with 2 I435T's airstarted.

I ruled out 1 and 2... that Kosdon case was going to need some serious cleaning! #3 would have been a cop-out... I really needed to prove the airstart board. So I went with #4.

I built the K700, and as I was screwing the end caps on, I realized that the grain liner was about 1/8in too long. CRAPOLA! Luckily, someone had a Dremel, and I chewed off a little of the liner... hopefully straight enough that the o-ring would still seal it! GREAT! Not only do I have a new airstart board, but now I may have a K700 that could CATO. Jeez...

So, the K700 went in and I built the I435T's in about 10 minutes, and took the whole thing up to the away cell again. I had to wire up all the airstart igniters there... I used Daveyfire's dipped in Firestar pyrogen, with about 3" of fast thermalite taped to it. Got everything wired up, and backed off. My stomach was a mess now. I knew that if those I435's did not light, that it would be a very ugly flight. Well, the K700 lit and started pushing, it cleared the rail, and at about 200 ft, both the I435's kicked and it moved! All the way to 3800ft!

The chutes were a little large, and I hopped in the van and took off for the landing site. About 1.5mi downrange I found the nosecone, and another 1/4 mile the body touched down just as I got there.

So! 2 absolutely perfect flights in a day. I think a baby M is going in the Maniac next... ::GRIN::

## Rocket Tips

### **Light Weight Filler**

By Bob Ross

At last Tuesday's [September 26] meeting I mentioned a material I sometimes use on some of my rockets for the spirals, fin fillets, or other places that need material for shaping parts or filling gaps. The filler is called Model Magic, Balsa Tint Superlight Filler. It comes in a plastic jar and the label says:

"Model Magic is the stronger, lightweight, non-shrinking filler to use with all modeling woods, foams, and fiberglass. Model Magic's better strength, adhesion, and sandability readily helps get the job done right".

From my experience with the stuff, the label information is pretty accurate. It appears to be water base, but when dry, is very hard and tough. Note that I do not use for a "glue," just a filler.

Hope this helps!!

## Members Forum

### **Rocketry Rules**

By Joe Libby

After reading Art's President's Report I decided to pull out some notes I had made to myself many months ago. I still consider myself a rocketry novice and I certainly don't have all the rules and regulations memorized. So as I re-read my notes it occurred to me that perhaps some of our readership might not be that familiar with the rules that govern our hobby either – or even know such rules even exist. So, as a

public service (and to fill some space so the newsletter balances out with the pictures on the last two pages so they'll be in color) here are the Rocketry Rules as I understand them:

The NAR and TRA: the National Association of Rocketry and the Tripoli Rocketry Association are the national organizations that represent us, the amateur builders and fliers of model to high-power rockets. Both organizations have simple but comprehensive, well thought-out Safety Rules we are to follow to be members. I won't detail them all here but this is from where we get the rules specifying building our rockets out of frangible materials (light weight woods, paper, plastic), using only commercially made motors, specific field dimensions, and age requirements – one must be at least 14 years old to buy any motor up to F and at least 18 years old to buy G and higher or any reloadable motors.

CPSC: The Consumer Product Safety Commission reiterates the rule given to us by the NAR and TRA that one must be at least 18 years old to purchase any motor of more than 80NS total impulse (G and higher).

BATF: The Bureau of Alcohol, Tobacco, and Firearms is in charge making and enforcing rules regarding their namesake's legal but dangerous substances. It is from them that we get the rule that any motor containing more than 62.5 grams of propellant is considered a Class B explosive – that's pretty much H motors and above, though some heavy Gs might exceed the limit). The significance is that in order to buy, store, and/or use Class B explosives you must be over 21 years old and obtain a Low Explosives Users Permit (LEUP).

DOT: The Department of Transportation is also sensitive to Class B explosives (same BATF definition) giving us the rule that such motors can only be shipped via FedEx to certain sites. Lower power motors can be shipped freely as long as you pay a Hazardous Materials (Hazmat) fee.

NFPA: The National Fire Protection Agency gives us some important definitions that impact what you can legally fly *anywhere in the USA*. From documents 1122, 1127-85, and 1127-94, a “model rocket” is one with total weight (including motor) of less than 1500 grams (= 3.3 pounds = 52.8 ounces) with no single motor containing >62.5 grams propellant or 160NS total impulse AND the total propellant being <125 grams. Anything more is by definition a “high power rocket.”

FAA: The Federal Aviation Administration also gives important definitions that impact what you can legally fly *in FAA controlled airspace* (which is pretty much everywhere for us in New Jersey). From document FAR 101, a “model rocket” is one with

total weight (including motor) of less than 1 (one) pound (<455 grams) and less than 113 grams propellant (Gs and some small Hs). These can be flown without restriction, “so long as they are operated in a way that poses no hazard to aircraft.” “Large model rockets” are those with total weight between 1 and 3.3 pounds (455 – 1500 grams) OR have total propellant between 113 and 125 grams (most Hs). For these one needs to notify the nearest Air Traffic Control Center (ATC) 24 – 48 hours prior to launch. Finally, “high power rockets” are those >3.3 pounds or with >125 grams and require filing for a special waiver to fly in FAA controlled airspace.

So, those are the rules as I understand them. The NAR website as well as RMRs (sadly out of date) FAQ page and Stine's Handbook of Model Rocketry, (Chapter 1) were helpful resources.

## Meeting Minutes

**26 September 2000**

By Art Treiman

### Present

Art Treiman, Tom Mitchell, Pat Flanagan, Nancy Rowley, Bill Rowley, Darren Wright, Lisa Paullin, Bob Ross, Bob Jonas, Steve Wilson, Steven Wilson, Jim Duffy, Paul Lader, Joe Libby, Steve Bastow, Steven Childs, R. Menard, Peter Menard.

Meeting was opened by Art Treiman at 7:10 pm.



### Orders of Business

Initial order of business was presentation by Joe Libby of the letter he received from the NAR informing him that Altitude! had won “Best New Newsletter” award. Joe and Tom Mitchell were congratulated and commended on a job very well done. Some discussion regarding ways to improve

the newsletter were entertained, but the end conclusion was that it is terrific “as is” so we shouldn’t change just to try to win awards.

Previous minutes from August were approved.

### Treasury Report

Treasurer’s report was tabled in the absence of the Treasurer.

### Upcoming Launches

Future launch dates were noted: 10/15 and 11/12; with rain dates 10/22 and 11/19.

Discussion on themes and the lack of interest in them was blended into the discussion on NARAM 2001 to be held relatively locally in upstate New York next August 4th - 10th. Several members are considering going and some general interest was expressed by the group in running contests in the events of NARAM to help us prepare. Tom Mitchell volunteered (or was he volunteered?) to trade his theme designing duties for the considerably more demanding job of club Contest Director. (congratulations Tom!). NARAM Events will be ½A Boost Glider, ½A FlexWing, A Altitude, B Super-Roc Altitude, C Streamer Duration, C Eggloft Altitude, D Helicopter, Sport Scale, and R & D. We will try to do two contests a month, starting with the easier ones and working to the more complicated (both to do as builder and as a club) if interest is sufficient. We’ll be starting with ½A Boost Glider and C Streamer Duration at the next launch. Rules can be found in your Pink Book (if you are an NAR member). If you do not have a Pink Book, it is available for free download from the NAR Website.



We discussed altitude tracking. Several folks will be looking into this. Plans are available in Stine’s book [and Van Milligan’s books, too – JL]. If anyone wants to build them let Art or Tom know and we can get you a set of plans. At meeting end Pat

Flanagan, and the Menards expressed interest in constructing our two needed theolodites.

Reminder also that MD/DE Tripoli will be launching 10/28 – 29. With no RATS this should be a terrific launch.

### Range Ops Report and Failure Debriefing

Deferred due to no recent launches. The new Red/Yellow/Green Condition system for launch days is working so far.

### Lecture Calendar

Lecture calendar has topics: October: HPR Part III; November: Motors.

### Group Project

Darren and Tom have a design in mind and will be getting us an estimate on total cost. We can then see if enough people are willing to make the financial commitment. The plan is for a very big scale model Trailblazer. This model will be around 12 feet tall and fly under “L” motor power. It will also be convertible to dual stage and cluster in the future. Initial cost estimate is in the \$1000 dollar range.



### Upcoming Elections

*[Editor’s Note: Believe it or not we are over one year old and it’s time to think about annual officer’s elections! Last year we “grandfathered” everyone since we were less than a year old and decided we’d have terms of office correspond with the calendar year, just like the dues. – JL]*

A lengthy discussion was had regarding elections, which are coming up in January. The bylaws discuss having them but not the specific method of undertaking elections. After discussing many options, the consensus of the group was as follows: Nominations will be made at the November meeting since there is no December meeting [since the date we now have from the library is the day after Christmas]. Positions are President, Vice President,

Secretary, Treasurer, and Director of Range Operations and Safety. Specifics of these positions and who is eligible are in the Bylaws (listed on the website). Members will then vote in one of two ways: (1) in person at the January meeting, or (2) via email. To ensure neutrality and confidentiality, email votes will be handled by "votemaster" Bob Jonas (Bob volunteered for this as he is not interested in running for an office.) He was unanimously voted into this position. Final details will be made official at the October meeting.

#### Other Business

Discussion on a group social event: It was decided to have some sort of banquet in January or February.

#### Update on alternate fields

Nothing new to report.

#### Model of the Month

Finally, design of the month. Tom Mitchell entered a beautifully done V-2. Bob Ross entered an SR-71. He also did an impromptu demo on his 4" Neibauer Redstone and showed how he used Model Magic, Balsa Tint Superlight Filler [*see Rocket Tips section – JL*] to fill and strengthen the paper shroud on the SR-71. The contest was a tie, with each receiving 5 votes. Darren Wright's ineligible monster 1/2 scale Phoenix got a couple votes too!

Congratulations Tom and Bob.



[See also cover photo – JL]

#### Lecture

Business was then adjourned and Darren Wright gave part two of his talk on high power.

The meeting ended at 9 pm.

## 24 October 2000

By John Coles

#### Present

Art Treiman, John Coles, Steve Wilson, Steven Wilson, Pat Flanagan, Tom Mitchell, Bob Ross, Jeff Gage, Peter Menard, Lisa Paullin, Randy DePasquale, Paul DeCraene, Russ Mozier, Steve Bastow, Bob Jonas, Bruce Canino.

Welcome to new members Tom Bayster, Bruce Canino, Jeff Gage and Peter Menard.

The meeting was opened at 7:07.

#### Orders of Business

September minutes were approved.

#### Treasury Report

The treasurer reported \$466.00 in the cash box, debt free. Art Treiman and John Coles have opened a no-fee checking account in the club's name. Now any future payments to the club (dues, fees, etc.) can be in the form of a personal check made out to "South Jersey Area Rocketry Society." Of course, we still accept cash.

#### Upcoming Launches

12 November will be a NARAM prep with 1/2A Boost Glider and C Streamer Duration. ?? December will also be a NARAM prep with perhaps 1/2A Flex Wing BG and D Helicopter Duration. The rain date is 19 November.

Since NARAM 43 will be held in Geneseo, NY next year (August 4-10, 2001), we've decided to hold funtests to practice the events being held at the nationals next year. Since it is a (relatively) local contest, with rumors of having a great field, an interest has been shown in getting together a road trip for the week.

Although December's launch date is not set yet, we discussed the contests we might hold that month. The remaining duration events are 1/2A Flexi and D Helo. We could also start holding altitude events if we get tracking stations built in time.

#### Range Ops Report and Failure Debriefing

Our October launch was held in near perfect weather, with a total of 124 flights recorded. There were a few losses, including a Comanche 3-D, which flew away. Barry Berman's Farside-Z (upscale of the Farside-X) flew very well, although he lost/shredded some fins on both booster stages and the sustainer flew away. The orbiter on Tom Mitchell's Orbital Transport clone flew in a beautiful, but too straight glide, and it too flew away. John Coles suffered yet another Aerotech "bonus delay", this one causing his 24mm Mars Lander upscale to eject about 10' AGL

on its second flight of the day. Needless to say, the 'chute didn't have time to open and the ML was destroyed on impact.

#### PR Committee Report

Our webmaster, Pat Flanagan, announced that he now has a digital camera, which allows him to input pictures directly onto our web site, as well as into the newsletter.

#### Newsletter

The editor was not present at the meeting. However, he had been in contact with this year's winners of the NAR Best Newsletter award, and received a few issues of "The COS-Rocketeer." It is a well-organized and impressive newsletter, and now we know what our competition is like!

We still are in need of submitted material. A good source of material would be reviews of non-SoJARS launches, such as MARS, RATS or LDRS.

#### Model of the Month

We had two models this month: a Terrier-Sandhawk by Bob Ross, and a WAC Corporal by Steven Wilson. Both modelers stood up to talk for a couple minutes on their respective models.

The voting was held during our break, with the WAC Corporal receiving 11 of 17 votes. Congratulations to Steven Wilson!

#### Lecture Calendar

Darren Wright and Bill Rowley couldn't make it to the meeting, so our lecture on High Power Rocketry, Part 3 wasn't held. It will be held during our November meeting (28 Nov.). There is no lecture scheduled for December (and in fact, it is uncertain if there will be a meeting at all in December, since the meeting date is 26 Dec.). The lecture for the January 2001 meeting is on rocket motors.

#### Group Project

No update.

#### Elections

It was proposed that for the upcoming officer elections the following events occur: At the November meeting, self-nominations should be made supported by a brief speech and written summary. The summaries and ballots would be distributed via e-mail, with voting either in person at the January meeting or by e-mail proxy ballot prior to the January meeting.

The above proposal was put to vote and passed. Bob Jonas will be collecting the proxy ballots and tallying the votes.

#### Dues

The announcement was made that we are now collecting dues for 2001. Art proposed that as an incentive to join the club, new members could pay their annual \$12 fee for 2001 and receive free membership for the remainder of 2000. As incentive for existing members to renew early, any Adult member renewing prior to 1 January 2001 will receive a \$2 discount, paying only \$10 for the year. Leader members and Junior members without an Adult sponsor in the club can renew early for \$5, a discount of \$1. [*This way, our Treasurer doesn't have to track down the procrastinators - JC*]

#### Meetings

Next, Art brought up the subject of our meetings, and the fact that they tend to run long. This results in our getting kicked out of the conference room every month when the library closes, and then we hang around the parking lot for a while longer socializing. Other meeting locations are available, but for a significant cost. The library should remain free, at least for the next year.

With some advance notice and \$15, however, we can stay on at the library another hour by paying for the maintenance man to wait for us before closing. This generated some discussion, and in the end it was decided that we'd give it a try, at least for the winter months when it's too cold to stand around outside.

#### NAR/TRA v. BATF Lawsuit Status

Art spoke next on the status of the NAR/TRA v. BATF lawsuit, which \*will\* be going to court. He urged anyone who has an interest in the outcome of this lawsuit to make a donation to the NAR's "war chest." To this end, the club has an Estes SM-3 Seahawk kit (donated by member Jack Komorowski) with a pack of D12-5 engines (donated by M&G Hobbies in Delran) available for raffle as a set. Art suggested that the money raised from the sale of this set be donated to the litigation fund in the name of the club. There was general agreement, but Art wanted to check with Jack to make sure he doesn't mind his donation going towards this cause. Raffle tickets are \$1 each, and the initial sales have already raised \$20.

#### Other Business

Art made an announcement that MD/DEL Tripoli was holding a launch the weekend of 28-29 October. [*The launch was held as planned, but due to high winds that weekend not much was flown. Another launch is scheduled for this weekend, 4 - 5 November at their MD field - JC*]

We had a general discussion of new and re-released kits coming out. Apogee Components

recently made a product announcement that they are developing 1/70 scale Saturn V and Saturn 1B kits for release next spring. They are currently available to order at pre-ship prices, saving \$15-\$25.

Also, Estes is re-releasing a number of kits, including the Mean Machine, at a rate of one or two per month. (Apparently they have the parts & materials on hand, and are trying to recoup some money lost in the Star Wars: Episode One debacle.)

Russ Mozier announced that the kite club that sometime shares our field now holds their flying days on the 3rd Sunday of the month (when they're not on the road, that is). Art made note of this and stated that he would attempt to schedule our launches away from this date. He also noted that since the kites need wind and we don't like wind, the chances of any future conflicts are slim.

The business meeting was adjourned about 8:55pm.

#### Lecture

None this month. Stay tuned for HPR, Part III next month.

### **FYI**

Did you know SoJARS has an emergency first aid kit? Its contents include:

- Gauze pads
- Kling gauze wrap
- Ace elastic wrap
- Tape
- Band-Aids & Telfa nonstick dressings of various sizes
- Alcohol prep pads
- Antibiotic ointment
- Saline for irrigation
- Penlight
- Tweezers
- Plastic Baggies for soiled items
- Directions to the nearest hospital ERs
- Cellular phone (well, at least someone in the group always seems to have one on hand)

We could use some ice or cold packs, too, but without a cooler I'm not sure how we'd store them. This would be important as cuts, scrapes, bites, strains, and burns are the most likely concerns.

**Yes**, I want to join my fellow members of the South Jersey Area Rocketry Society, NAR Section # 593, and contribute to the NAR's efforts to obtain legal relief from the BATF's regulations.

Here is my tax - deductible contribution for:

\_\_\_\_\_ \$25 (the cost of a Mean Machine kit)

\_\_\_\_\_ \$50 (less than the cost of an Aerotech Initiator or Arreaux)

\_\_\_\_\_ \$75 (less than the cost of an Aerotech Astrobee-D)

\_\_\_\_\_ \$100 (less than the cost of a G-Force by Aerotech)

\_\_\_\_\_ other \$\_\_\_\_\_

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Name & Address

Please make check payable to the National Association of Rocketry Legal Fund and send to:

NAR Legal Fund

P.O. Box 177

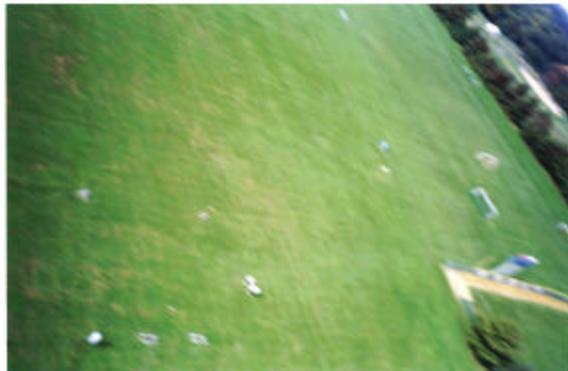
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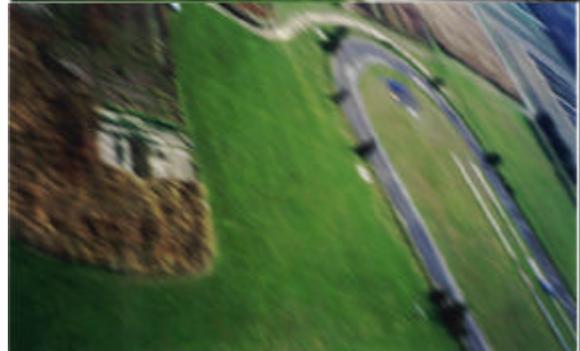
*In this issue all photos are by Joe Libby unless otherwise indicated.*



15 October 2000 - a good day to fly!



2 photos by Art's Rocket Camera System (RCS-1)



3 more photos by Art's RCS-1



Local fireman pressure test a hot-air balloon while we fill the sky with our rockets



Joe Libby's scratch built Junk Mail  
Photo by Randy DePasquale



Steve Childs hams it up as LCO as eager rocketeers (patiently?) wait for a pad assignment



A mid-powered rocket lifts-off from one away cell while another stands ready to the left... and 3 Silver Comets await a drag race on the rack



Randy DePasquale's latest mid-powered bird  
Photo by Randy's dad



Get Your SoJARS Gear Here!  
Hats & Ts still available