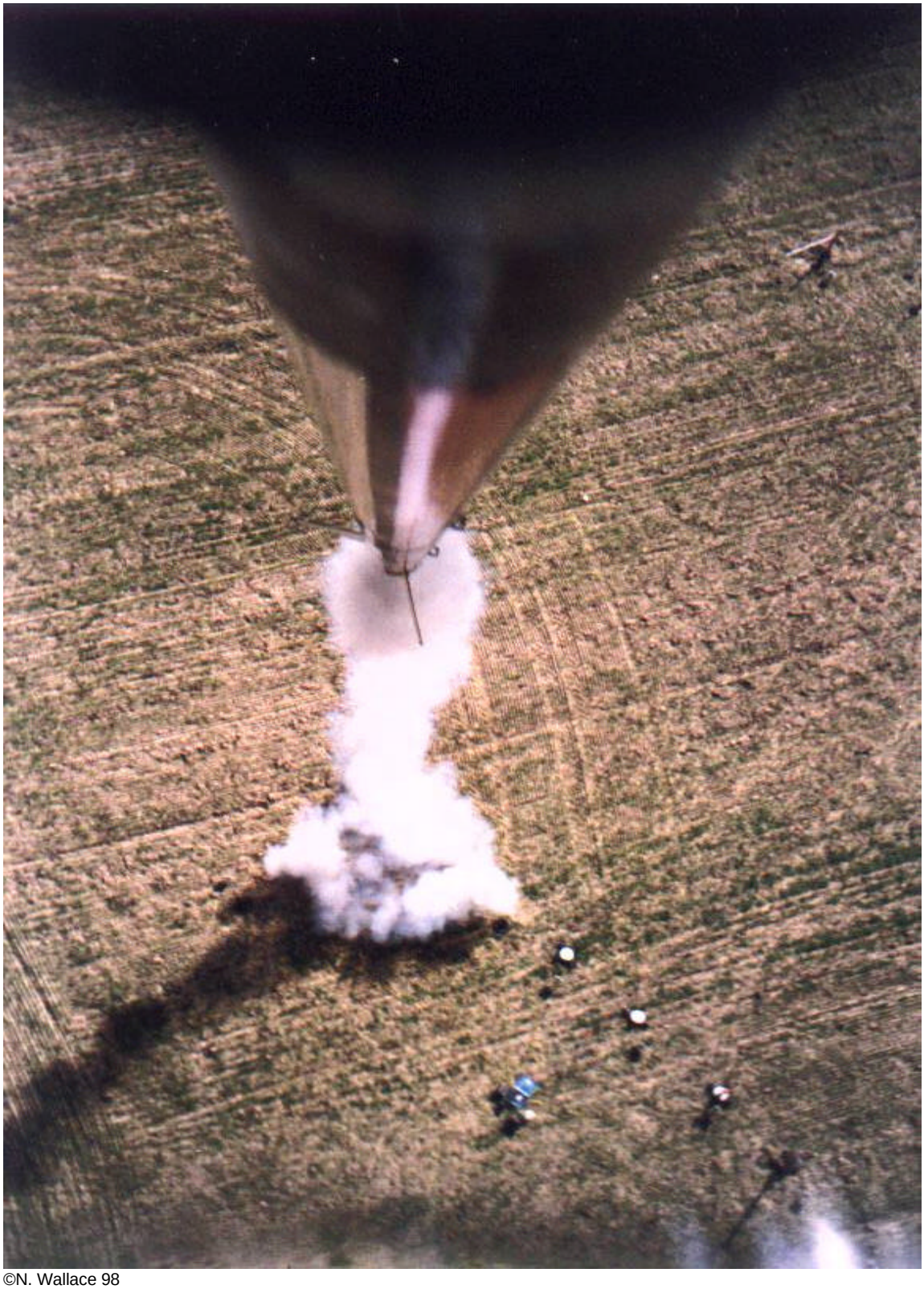
Maryland Tripoli Report



Cover: Nelson Wallace's Mirage at ESL#21.

Editor's Corner:

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Editor Bob Utley

I was going to do an editorial on Tripoli and the TAP membership, but since this issue is so big I will hold off.

Notice there are no pictures except two? To much to say and no more space. Check out our web page that is where they went. They will be back on the next issues, so keep sending them in.

The past issue cover pictures have been from the view of standing on the ground but I thought you might like a different view for a change.

I want to thank Pete Bennett, Mike Banz, and Neil McGilvray for their contribution to this issue of the newsletter. You will find this issue is outstanding due directly to their help.

CORRECTIONS:

No one caught my errors.

Treasurer report:

Treasurer David Weber

January 21, 1999. The bank had $2395.91 of the club money in it.

February 23, 1999. The balance was $2682.79

Meeting summary:

January 21, 1999

D. Bullis let us know that there is still no waver. The waver was sent in the day after New Year's and has not come back yet. The plan for the launches is to have two (2) days per month, for 7 months. They are Feb, Mar, Apr, May, Sept, Oct, and Nov. We hope to have them soon to put up on the web page for the rest of the year. As for the summer months, we still have no field, but with Delaware so close, this may not be a problem right now. Having our own field during the summer would be better, so keep looking. Also we have applied for 6 days this year for experimental launches, no word if we got the approval yet.

Since Dave read a book, he felt compelled to tell us all about it. The title was "Rocket Boys". Of course the down side to this is Dave did tell us the ending of the book. That's ok I really did not want to read it, I'll go see the movie "October Sky's" playing in your local theatre now.

February 23, 1999

The Culpeper launch is set for May 30, April 1-2. Friday is an Experimental Launch and Saturday and Sunday is for regular flights.

A long talk on the new BATF letter that came out (see a copy in the newsletter). The short story, get a LEUP.

Maryland will try to have Experimental launches in March, April, May, Sept, Oct and Nov of this year.

Upcoming launches:

See Calendar at end of newsletter for local launches for March and April 1999.

Launch summary:

ESL # 24

ESL #24
Saturday February 20, 1999

So you say that you don't mind launching in the cold? The February 20th and 21st launch was a true test of the truly committed, or is that the truly committable. The fine line gets blurred there. Both days were cold and windy, with Saturday being the better of the two days. Temperatures were in the mid to lower 30s with moderate winds that actually subsided around 2 o'clock. Sunday on the other hand was simply an endurance test. Regardless which day you choose to fly, chances are that you did your fair share of walking.

Saturday started as usual with some of the smaller projects testing the wind Gods demeanor. The first couple of rockets came back to earth and the launch was on. The Barnsley Clan did their usual efficient job attempting to deplete the countries surplus of black powder with 9 flights, (including clusters and staged flights). But the most notable was Ivan's Whistler, which got everyone's attention with the loud whistling sound it makes. Two flights were made on this rocket flying a G64 and G-104. Brian Bellerose cracked the sky with his PML Patriot on a J-350 to successfully certify level 2. Congratulations, now get out your checkbook. Rumor has it that Brian's wife is building her own rocket now. Who will get their level 3 first? Ed Brun took a step back from latest Higher Power exploits and launched his Air Walker on a G-40 and his Dart on an F-25. I'm sure Ed's itching to get back to the K's. Dustin Crabtree spent the day sampling his H inventory. He successfully flew his Quantum Leap on an H-235, H-180 and H-97. I'm waiting for him to do it with L's. Dave Green had 7 flights ranging from A's to I's. Dave attempted his level 1 with a Minnie Mag on an I-357, isn't that the name of a powerful gun? Needless to say he will be trying again for his level 1.

Steve Hacket flew 3 rockets in the F and G range. The most notable flight was his red Alarm on an F-20, which weather cocked severely and recovered with a low altitude deployment of the chute. Larry Harris had 2 good flights on his rockets called Checkers with an H-123 and Mirage on an H-180. Mike Henry flew 2 F motors, F40 and F-52 in his Mustang and PeeWee. Bill Kirby got everyone cranking their necks with a J-350 flight on his Viking 7. Great flight and recovery. Larry Kraemer got permission to fly Marge's Tomahawk on an I-357 for a spectacular flight. I thought people only named their boats after their girlfriends and/or wives. Vince Leonardi joined the big spenders club by certifying level 1 with his Pterodactyl Jr. on an H-242. Welcome to the club! Kevin Mitchell,

never one to keep a rocket around too long stayed true to form with a high velocity flight of Microscreamer powered by an H-240. SeeYa! Dave Morris was burning F-52s in his Lil' Nuke and Arreaux.

Someone else that wanted to demonstrate that they had money to burn was Dennis Sauer, who certified level 2 on his Binder Sentinel with a J-350. You have got to love those motors. Congratulations Dennis, Time to start thinking about launching that M that's burning a hole in your pocket. Dennis also launched a Pterodactyl Jr. on an I-161 for a successful flight. The Sherman clan was relatively quite on Saturday with a couple of flights on Justin's R2D2 rocket. Don Shope flew his LOC Legacy. The only Legacy that was left was the smoke on the pad. It was outta here on an H-120. George Tiger went vertical with his Initiator on a G-80. Shawn Tydings joined the Initiator club with 2 flights with an F-20 and a D-12 flight of the venerable Broadsword. Speaking of Initiators, Nelson Wallace tore up the sky with his on an H-240. Nelson didn't fair as well or as high with his Mongrel rocket. It's made from pieces of Nelsons other less successful projects. The rocket appeared to blow the nozzle on the pad and break in the middle and take on a 20-degree list. I'm sure we will see this rocket back in action soon. Dave Weber had most of his fleet in the air on Saturday. Flying in the F to H range. You all know the names and the typically successful results. Tuber, Sticker Shock, Yellow Jacket, but my favorite was Red-Dog Returns. A big plastic Red-Dog beer bottle with fins and a motor. Quite an engineering feat. Unfortunately the beer was flat and so is the Red-Dog now. Who says you can't teach an old dog new tricks. Dave just wanted to teach the Red-Dog one trick, deploy the chute before you hit the ground. Dave, stick to Heineken.

Dave Young came to fly on Saturday, which he did quite well with his beautifully detailed ¼ scale Patriot. Unfortunately flying is only half of the equation. Launching is optional but landing or recovery is mandatory. Dave sent the Patriot up on J-415, but the chutes failed to deploy properly and the rocket made that all too familiar hollow thunk when it hit the ground. Dave thinks he can repair it, so we look forward to its return. Maybe next time Dave will stick a K-700 in it.

Dave Lucas was back in action with his Am Rammin. This is the rocket that Dave will do his level three attempt on. It is a heavy-duty 5" fiberglass Amraam. After a full day of meticulous preparation with the assistance of Dave (I think I'll leave the motor casing back at my house) Bullis, the rocket was ready to fly on L-850 Kosdon power. A beautiful straight flight was followed by the main at apogee and a spot landing within 50 feet of the pad. We should have made Dave walk to Delaware just for principle.

Fred Wallace arrived with his Bruiser he calls (called) Checkers. Fred who does great work in the building and preparation of his rockets was launching checkers on an Ellis Mountain 3" L-600. The rocket contained 2 altimeters and a

radio control unit for back up. The longer you stay around rockets the more you get to witness things for the first time. This launch was no exception. The motor lit and immediately spit the igniter. Unfortunately the motor refused to pressurize. It just spit sparks for over 2 minutes sloooowly building up pressure. During this phase of the impending disaster, who knew, Fred took his share of ribbing, "Let the clutch out Fred" and supportive "come on light you Bas#$*d". But to no avail. The Motor finally appeared to come up to pressure when the rocket blew apart. The motor blew the nozzle out the back and launched the motor though the bulkheads and into the electronics bay, destroying everything. Most of Fred's rocket was beyond easy repair. It was amazing to see the hole that was blasted and burnt into the ground by the burning AP. The broken nozzle was white hot and there was fuel still burning toward China in an 18" deep hole at the pad. Lots of people are going over to Ellis Mountain for the price, but…Sometimes the price you pay really isn't the price you pay.

Neil McGilvray proved that 3 times is a charm by successfully recovering Smoke and Mirrors after a slightly squirrelly flight on an I-211. The nose cone snapped off at the coupler which could have contributed to the wobble. Other big motors flown were Neil McGilvray's Socially Unacceptable on a K-550 to 4500 feet and The Stainless Steel Tin Man on a Kosdon L-1830 to over 3500 feet. That was the altimeter read out, but it looked higher than that. It was interesting to see the inertia carry the 35 pound, 4" rocket skyward after burn out. It seemed to fall almost as fast as it went up. The chute did come out which is always a relief. An attempt was made to fly the B-2 Bomber shaped "It's a Black Thing" on a G-80. 20 feet in altitude and then the crash, sound familiar?

Sunday February 21, 1999

We thought Saturday was cold and windy. Sunday was a test of wills and skills. Roger Dwyer flew his two stage Aerobee 150A on a D-12 to a B-8. This crashed as I recall. Maybe I was thinking of my rocket. Mike Henry got in two flights with his Mustang on a G-64 and G-33. It seemed to take many tries to kick-start that pony. No one likes to move fast in that cold. Bill Mantell had another one of his typically successful flights with his Arreaux on an F-72. Neil McGilvray launched his Critical Lapse In Judgement on an I-211. Launching it was the easy part, now getting it back in one piece, that's another story. Let's just say that if Tommy wants to run a fence through the middle of his field, there is one less fence posthole he'll have to dig. Kevin McHugh flew his Viking 7 on a C-6 to a nice high altitude. Mike McHugh put up the Black Brandt on a G-75 into Hurricane force winds. A lot of walking was done on Sunday, recovering rockets and just trying to stay warm.

Speaking of Kevins. Kevin Meltugh flew a scale Sidewinder on a C-6 for an easily recoverable flight. Kevin Mitchell tested fate once again

by putting his Psychoscreamer up into the wind on an I-357. This one actually landed in the State of Maryland, so it looks like Kevin is getting tired of waiting for the phone call from a stranger telling him his rocket has been found miles away. David Morris had a couple of good flights. One on an Arreaux with an E-23 and on a Lil' Nuke with an E-16. Drew Onay put up his hyper on a B-6 into gusty winds. Ted Prostus blasted his Javelin skyward on an H-238. There's nothing like a long walk on a cold and windy day.

Ben Russell got everyone's attention, flying his Yellow express on something he called a K-1100. Seemed to burn longer than a K-1100, anyhow, lest I digress. A fabulous flight, loud and fast. The two-stage deployment popped the main a little earlier than he wanted. But, it was an invigorating day for a walk, especially if you had a 14-pound rocket to carry back with you. Ted Sherman sent up one of Lesters new kits that he is selling through Kenny Allen at Performance Hobbies. It is called Star Chaser. Ted flew it on an H-123 for a success flight and recovery. Teddy likes walking also. Mains deployed at apogee equals a long walk. Bob Utley decided that it was time for him to stretch his legs. So he launched his Iris on an F-32. Nice high flight and a nice long walk. Thank God there was no corn to contend with. Dave Webber made it back again on Sunday. This time to launch 3 rockets. Yellow Jacket on an F-62 which had a dirt sandwich upon contact with the planet earth and the 96th flight of Tuber. I wish he would let us in on his secret of success. Dave's most impressive flight was his Honest John flown on an H-123. Nice high flight with a loud whistling sound as it streaked skyward.

Dave Young was back at it again also. He flew his Cherokee D successfully on an I-357 and had a minor separation problem with Minor Detail on an H-242. Dave's big project of the day was his joint venture Ultimate Endeavor. Dave and his partner spent a good part of the day putting the rocket together. The rocket was named Over Budget for obvious reasons. Finally the time came to put the rocket on the pad. I mean that literally, all of the other pads had been removed an hour before. Due to the cold the batteries had lost most of their juice and would not light the igniter. Dave Bullis eventually reached into his bag of tricks and dragged out one of the clubs new deep cycle marine batteries. At fist I thought Dave Bullis was going to light the motor with a fuse. But then it occurred to me that he would never do anything like that……would he? After the 100th igniter change the J-415 roared to life and Over Budget was arcing skyward on it's maiden flight. Once again there was a slight problem with the two-stage deployment. But a chute safely bringing your rocket back from apogee is better than none at all. After all the bending over Dave did assembling the rocket, I'm sure the walk was invigorating.

All in all, given the weather and temperature we once again had a successful launch with nothing but some sore legs, achy joints and bruised egos. With the impending

BATF changes and possible closer scrutiny from the “man” as time goes on, lets continue to keep rocketry in the positive spotlight. We can become our own worst enemy by drawing negative attention to ourselves. Let’s continue to keep it safe and fun. That’s what’s it’s all about. Plan your projects and watch out for the weak link. That’s the one that will get you. A crashed rocket is not an unsuccessful project. Everybody crashes them, but we crash them without personal injury. Rockets can be replaced, people can’t.

Also remember that this is your club. All the work is done on a volunteer basis. Please try to take some time before, during or after the launch to help out. Dave Bullis can’t do it alone. If it weren’t for Dave’s unselfish obsession with the sport I would not be writing this article for all of you to read. Dave truly is the glue that holds the club together and with all of our help his job will become easier and his motivation will stay high. Remember many hands make the going light.

Neil McGilvray

Prefect Corner:

Dave Bullis

Dear Fellow Rockeers.

Hopefully this letter doesn't offend anyone.

I'm not writing this to single any person or group of individuals out. I am writing this letter though as a reminder of what we must all do to continue to fly rockets in Maryland.

So... Heads up!

Sitting back and relaxing one night after the launch that was held on the weekend of Feb. 20 & 21 at the Price Maryland site, I got lost thinking. I got to thinking not only about rockets, and the fun, but also what makes a launch successful. Flying the rockets was absolutely great. Getting to talk to old friends and other rocket nuts also added to the fun.

Now, on the other hand, the other half of what makes a launch "successful" is resolving some basic issues. A few of these issues were ignored and could have caused us all a few problems. A few of the issues I want to address are simple. Remember, I'm picking on us all. The first issue to resolve: Volunteers. To hold a highly successful launch, we have to have plenty of volunteers. We need people to set up, take down, and run the launch. The running part is where we need more help. To "run" a launch that is open for 8 hours a day, say 10:00 A.M.. till 6:00 P.M., we need at least 17 people.
Here is how it breaks down:

Times	Position	Volunteers
10:00 A.M.	LCO	1
Till	RSO	1
12:00 Noon	Pad S M	2
Dues & Fee Collector		1
12:00 Noon	LCO	1
Till	RSO	1
2:00 P.M.	Pad S M	2
2:00 P.M.	LCO	1
Till	RSO	1

4:00 P.M.	Pad S M	2
4:00 P.M.	LCO	1
Till	RSO	1
6:00 P.M.	Pad S M	2

Total of people needed on a two hour shift change and an 8 hour launch day = 17

See what I'm getting at? We rarely ever get 12 volunteers. Never the less, we need 17. I do realize too, that we don't do pesky 2 hour shift changes. Now, what I'm getting at is, when the call comes for volunteers over the P.A, somebody please respond. The person you are relieving might want to fly a rocket too.

The second issue to resolve: Trash. Do not forget to pick up after yourself. Pick up everything, including cigarette butts that are left behind. If you have a problem taking trash with you in your expensive Jaguars, Corvettes & Mercedes, then come see me. I always bring a huge trash bag that gets filled up. I just simply take this home and throw it away with my household trash. Don't stuff your trash behind the porta-pot, in ditches or in any of the grain dumpsters. Flying rockets at the farm is just like fishing out in the ocean. If you take something out with you that can become trash, bring it back with you. The fish don't like beer bottles and soda cans in their domain, neither do farmers. Remember, crops grow in the fields we launch from, not propellant bags, soda cans and igniter wires. If you go out, bring it back.

Now, while we are on the subject of fields; the third issue: Parking on the fields. Do not even give thought to parking or driving on any of the fields. If you should get to the field before I do, park only on the gravel driveway or the hard road. Don't park in the fields. Remember we are guests.

Onto the fourth issue: Membership in Maryland Tripoli: Like every other fine organization, to belong to it, you have to pay. The money collect from dues and launch fees pays for a variety of things. Here are a few: the $1000. deductible on the Insurance Policy, the porta-pot rental fee @ $93.00 /launch, new batteries for the launch system, new charger for the batteries and safety flagging for the flight line.

Now, here is how it works. If you wish to fly High Power rockets from "H" motors and up, you must join Tripoli Rocketry Assoc. at a fee of $45. Then, you come to a launch hosted by Maryland Tripoli and pay the Dues/Fee collector $10 if you want to fly at the launch. Now mind you, this $10 fee is only for Non-Maryland Tripoli members. To get the $5 rate you will have to join Maryland Tripoli at $20 a year. Dues run from Jan. 1 to Dec. 31 yearly. The dues can be paid at the monthly meeting, the rocket launches. or mailed to Mr. Dave Weber, 53833 Annapolis Dr., Mt. Airy, Md. 21771.
If you only want to fly low power rockets, "G" motors and below, you still have to pay the $20 fee to join Maryland Tripoli to get the $5 rate. You do not have to join Tripoli Rocketry Assoc. If you are only

going to fly low power rockets, you can't fly "H" motors and above and become certified. To fly "H" motors and above, you must be 18 years or older. This also means you have to be 18 to certify. Now for the people who have kids. If you have children that are 17 and under, they can fly under your name. You and your children can fly high power, ("H" motors & above) only if the consenting adult is certified to either level one, two or three. If one of your children becomes 18, he or she can no longer fly under your name. They will have to join Tripoli Rocketry Assoc. to fly High Power. Then, to get the $5 launch rate they will have to join Maryland Tripoli.

If you find out about High Power Rocketry late in the year, say in August, and you have joined Tripoli Rocketry Assoc. and want to join Maryland Tripoli, then the cost if $10. This is due to the fact that the year is half over. Once you have joined, say in August for $10, then you will still have to pay $20 for the new year.

Here is how it worked for me when I joined the High Power Community. In the summer of 1995, I found out about Tripoli Rocketry Assoc.(TRA) Then in Sept. 1995, I found out about Maryland Tripoli and also they were going to have a launch in Oct. of 1995. I went to the launch just to watch and asked questions on how to join. Then, in Nov. of 1995, I bought a rocket, an H-142 motor, built a pad, and built my own launch system.

When Dec. 1995 rolled around, Maryland Tripoli was hosting a launch and I went. I was not only going to join TRA but also to certify. On Dec. 16, 1995, I showed up early at the launch, found the prefect and paid the fees. Here's how they stacked up when I paid the Prefect:

Join Tripoli $25. (Look at how cheap things used to be.)
Launch fees $10. (Because I was not a Md. Tripoli member yet.)
$35.

All this took place on a Saturday. The following Thursday, Maryland Tripoli had a meeting in Columbia, Md. This is when I joined them for $20. Little did I know that one month later I would have to pay another $20 dues for the new year.

A word of advice, for those who want to join, here is the way to take out the "ouch" in joining the clubs when first getting into High Power.

1) See me first for your Tripoli Rocketry Assoc. application. Do this preferably at a club monthly meeting or call me and I'll mail it to you.

2) Send in your application and your $45 to Tripoli. Two weeks later you will get your paperwork back from Tripoli. You will now be ready to certify.

3) Come to the launch and bring your certification paperwork along with your rocket.

4) Now fly your level one rocket successfully and get the Prefect's signature. Mail to Tripoli with the level one paperwork.

5) At the next monthly meeting, join Maryland Tripoli for $20 a year.

For the die hards like me, here's how to join the clubs and still leave out the "ouch".

1) At he launch, see me early in the morning and get the "field application and level one form".

2) Pay your $10 launch fee.

3) Fly your level one rocket successfully and get your required signatures.

4) After the launch, go home and mail your application and your $45 to TRA. Two weeks later you will get your paperwork needed for your level 2 test.

5) Then, at the next monthly meeting see Dave Weber and pay him to join Maryland Tripoli for $20.

See how easy it is? This will not only speed things up in your quest to shoot rockets, but will also allow you to be able to buy that large motor you want to certify on.

Remember, after paying $20 to join Maryland Tripoli, tell Bob Utley your address so you can get the club newsletter if you want it.

I hope this has cleared up a few of these issues. To have a highly successful launch, it takes all of us.

Keep the point end up and the fiery end down. Dave

BATF UPDATE:

Reprinted from the Internet.

JOINT STATEMENT ON FEBRUARY 4, 1999 MEETING WITH ATF.

Mark Bundick, NAR President
Bruce Kelly, TRA President
Pat Miller, NFPA Committee on Pyrotechnics
Mike Platt, HPRMADA

Our thanks to Teresa Ficaretta, Tom Hogue, Bill, O'Brien, Roy Parker, Mark Waller, and Jim Zammillo of the ATF , with particular thanks to Mark who arranged the meeting.

Overview: The ATF has little latitude in the law to provide regulatory relief to the HPR hobby. They are charged by the Congress via the National Firearms Act and the Explosives Act to insure that regulated materials are not used in pathological ways, or diverted from licensed users of these materials. Changes in regulation of materials must be based on assurance that any relaxation poses no greater risks than existing limits relative to pathological use or diversion. It is on that charge that ATF is bound and on which they are proceeding to draft the revised regulations.

1. AP Propellant Issues - AP propellant mixtures cannot be removed from the annual list of explosives. The enabling legislation behind this annual list says "any chemical mixture which may be explosive.....".

The ATF has no latitude to exclude low or inefficient explosive mixtures, or items which, when used as intended don't detonate. The Congressional mandate as written in the law requires regulation of both low and high explosives. They pointed out to us that many of the items on the annual list are lousy explosives, but they have no room to change the list without legislative relief from Congress.

2. Propellant Weight Limits - ATF is committed to the 62.5 gram limit because they believe that limit represents a risk threshold of what

can be safely used and stored by the general public without license. Their obligations under the law are to regulate any quantity of items on the annual list, but by regulation, they exempt selected quantities that don't represent any threat of misuse or increase public safety risks. Since CPSC established this threshold for general, over the counter sale, they believe this definition meets their statutory needs.

If we wish to change this limit to something higher, we will need to demonstrate to ATF that increased exempt limits represent no increase in potential for misuse, or increased public safety risks. NAR and TRA are carrying on a discussion to determine what sorts of data or test can be used to argue for an increased limit.

It was clear that as things stand currently, any motor with assembled weight over 62.5 grams is to become a regulated device. This has been a consistent ATF position since the 1996 Huntsville NFPA meeting.

Also, while the language is yet to be finalized on this limit, we pointed out that a suggested wording could leave single use G motors as unregulated, but reloadable G's as regulated. ATF does not want that to happen, but we were unable to come up with a complete paragraph that accomplished leaving reloadable G's unregulated. TRA and NAR will produce suggested wording for ATF use within two weeks.

3. Destructive Device Determination - We discovered that rules relevant to rocketry are actually embodied in two pieces of legislation, the Explosives Act, which we knew about and the National Firearms Act (NFA), which we did not. Under NFA, any rocket with more than 4 ounces of propellant can be considered a destructive device. ATF counsel strongly suggested we formally petition the Explosives Technology Branch (ETB) for an exemption, provided under the law, for sport rockets. Counsel indicated obtaining such an exemption should not be difficult, but we should do this to further protect our hobby. NAR and TRA will work to draft, complete and file such a letter with ETB within the next two weeks.

4. Criminal Use - ATF data indicated 442 cases where rocket materials were used in an "incident", a case where property damage, injury or death occurred. We expect to obtain a detailed compilation of these incidents, which the ATF was willing to share with us. They contrasted that number to 140 incident reports involving dynamite over the same ten year period. ATF believes the magnitude of rocket related incidents requires them to act. We suggested that 442 incidents over the volume of material used, literally in the millions, showed a much less serious problem, but they were not swayed by that argument. TRA and NAR will review the documentation when it's supplied, or, if necessary, file a Freedom of Information Act (FOIA) Request to obtain it.

5. Garage Storage - All garage storage requests now must be handled as a variance from published regulations. The Public Safety Branch is responsible for granting such requests, and will do so provided (a) the storage application is in conformity with NFPA 1127, and (b) it has been approved by the local authority having jurisdiction (AHJ), usually your local fire marshall. Field inspectors do not have the right to deny your request for a variance, nor are they the proper office to make a determination on it. We recommend when applying for an LEUP storage variance, you first clear your storage with the local fire marshall, then make the variance application.

ATF intends to codify the indoor storage variance in the upcoming NPRM, i.e. the new regulations will stipulate NFPA compliance and local AHJ approval as being adequate for sport rocket storage in attached garages of single family dwellings.

If you do not intend to store motors, then you must make alternate arrangements for storage and indicate those arrangements on your application. LEUP holders are required to have some provision for storage per the law, and ATF cannot grant variances to that, i.e. there is no "non-storage LEUP". Your alternate storage can be with either another LEUP holder or a licensed dealer.

However, ATF said sport rocket modelers cannot legally store black powder and AP motors in the same magazine. Black powder, except for the specific exemption granted in the law for antique firearms, must be stored separately from other low explosives.

6. On Field Sales - Licensed dealers cannot legally sell motors on site. You must order motors in advance, and can have them delivered to you, but the transaction must be consummated in the dealer's business location indicated on his license. The reasons for this are embedded in legislation restricting gun dealer sales to a fixed premises that can be inspected. Dealers can take orders to forward to their place of business and fill them from there, but cannot execute the trades on the field. ATF indicated relief on this front would have to come from legislation, and asking for such a change for sport rockets would result in the gun dealer community asking for equal treatment. As a result, we don't think we can obtain any relief on this item, and strongly urge you to order motors for delivery in advance.

Dealers may legally sell at a site only if ATF has granted them an additional license listing that location as a place of business. Dealers interested in the details of this approach should contact either their ATF office or HPRMADA

7. Sport Rocket LEUP - ATF was quite amenable to creating this class of license, generally in line with the elements of the position paper, i.e. lower fee, specifically for sport rocket use, etc.

8. Foreign National Participation - Our discussion of foreign nationals resulted in ATF correcting our

understanding. The term used is "non-resident", i.e. they mean anyone not a resident of a particular state. Thus the regulation is much broader than we thought. There seems to be little relief in store for non-LEUP holder to obtain regulated material.

9. NPRM Scope and Timing - The proposed scope of the Notice of Proposed Rulemaking (NPRM) encompasses more than sport rocketry issues. ATF also intends to revise some other definitions, storage issues for other users, etc. Because of this breadth of items, we expect a 90 day comment period to be applied. ATF plans to complete its work and internal reviews within 90 days; the proposed NPRM would then be reviewed by Treasury staff, a process of unknown duration. Only after Treasury review would the NPRM be published. Our associations will kept informed on the progress and publication of the NPRM.

ATF suggested we can make our response to the NPRM publication more effective by asking our members to respond in effective ways. While you may wish to comment about the relative merits of the law or cite Constitutional passages, this is not effective. The ATF is required, with extremely limited staff, to log, read, review, and classify every response received. If responses don't stick to the relevant items cited directly in the NPRM, then time is wasted, and the final rule notice is delayed. We indicated we had no direct control over the responses, but would suggest to members how they can be more effective in replying to the NPRM. When it is published NAR and TRA will suggest how members can better support our positions with suggested outlines and drafts.

10. Summary - The meeting, 3 1/2 hours long, was cordial, productive and open. In cases where the law constrains the ATF, those constraints were made clear to us, and explained fully. In cases where regulation might be needed, ATF was open to our suggestions, and in many cases incorporated them. Where we had work to do after the meeting, that was also made clear. All in all we had a very productive meeting that set the stage for a clean NPRM publication.

We obviously do not get everything we wanted, but the door is open for us to obtain higher propellant weight limit exemptions if we can provide substantive data to ATF on the risks associated with such increases. The burden is now on the sport rocketry community once again to provide the underlying scientific and technical data to back our case for safe operation.

Finally, we believe that an open dialog has now been established with ATF that can result in a better environment for sport rocketry. Meeting the people involved was helpful, for both sides, and will only make the job easier going forward. As always, we appreciate our members' patience and input, and will strive to keep you informed going forward.

Mark B. Bundick NAR President

Performance hobby

http://www.performancehobbies.com

Currently my recommendation is for everyone who does not have an LEUP to join the club and get one. You know who you are and believe me I know too. I can no longer accept responsibility for what I am now considering just plain stubbornness and not fear. Fear is continuing to attempt to purchase motors that are regulated without this permit. If I didn't apply for one 5 short years ago, I couldn't sell motors bigger than 38mm reloads and single use 29mm H and up. Now we're talking as small as G motors. That means no more easy access. As far as my delivering motors to the sight, nothing has changed except you now have to communicate with me more often. Please do me a favor, a BIG one. Don't call me the night before a launch to place an order.

You wouldn't believe how many calls I get to see if I'm coming to the launch or calling for orders. This is one of the reasons I get to launches late. I don't mean to sound cruel but it's dangerous to drive when you're tired. I drive 40,000+ miles a year and this doesn't include my rendezvous with manufactures in a last ditch effort to pickup much needed items for a launch. If I don't get my rest, one day you may cut on your local news and hear about my truck rolling over my biggest fear! Help me out folks I'm working hard to keep everyone happy and active in this hobby but I can't continue this without your support and cooperation. I do appreciate the email. Since Friday, I've gotten over 60 emails and it's alot easier for me to respond this way than 60 phone calls. I would suggest ordering everything you think you would fly on a picture perfect day. In other words over order if you have to. You can return what you don't intend to fly. If we had a downpour or you lost the only rocket you brought to the launch to fly more than once, I would expect you to either ask me for a credit, a refund or to keep unused motors until the next launch. My new plan for this season and new year is to order weekly instead of monthly. Too many times I have run out of motors before the end of the month. Sometimes I attend as many as 6 launches in one month. The only motors I probably won't be able to keep in stock all the time are the Aerotech High Power Single Use since they only allow ordering times every 6 months. If I can't attend a launch because of a conflict regarding dates, I'll let the group that I won't be attending know in advance that I can't make it but I will ship motors and igniters in advance to customers. I'm flexible. As always, if you have any questions feel free to contact me by fax at (202) 723-0010 24 hours a day or email and if you're not sure whether I carry a certain item you may not see on site or on my constantly expanding website, PLEASE just ask me! I don't know what you need or what you're looking if you don't ask me. The educated consumer is my best customer. Thank you and I'll see you all at a launch coming soon!

Ken-2122

Almost anything you could need they should have. Phone (202) 723-8257.

Next Issues:

- Launch Summary, Mar & Apr
- Events for May & June
- More Pictures of your rockets

EPOXY 101:

DO YOU HATE TO FILL SPIRALS, SAND, PRIME, PAINT?

HPR rocketeers tend to fall into one of two camps: The first group takes great pride in that body shop mirror finish reminiscent of a fine Mercedes. They love to spend hours, days, and weeks engaged in the process of: fill, sand, fill,…. prime, sand, prime,…, paint, sand, paint…etc.

The other camp, of which I am a member, views the cosmetic finishing process as a necessary evil which must be completed before their rocket can be flown. It is for this latter group that I offer to share my experiences with pigmented epoxy finishes.

HOW TO GET A GLOSSY DURABLE FINISH IN 5 MINUTES OR LESS

Ok, so now that I have your attention, maybe it takes longer than 5 minutes. My goal was to achieve a reasonable quality finish with a minimum of time.

I define "reasonable" as something that looks pretty good from 5 feet away, doesn't elicit heckling from my peers, and is mistaken for a fair quality Krylon job.

I define a "minimum of time" to mean a total of 1 to 2 hours spent on the ENTIRE process of filling grooves, sanding, priming, and painting.

The ability to perform the entire process *inside* my house and without paint fumes and over-spray is a definite bonus.

THE TECHNIQUE

BODY TUBES

1. **Laminate** your paper or phenolic tubing with fiberglass/epoxy in whatever manner you prefer for structural reasons. ROL and others have published excellent guides detailing the process. I use a single wrap, but that is personal choice. Do not apply a finish or fill coat yet, just the resin and glass. Perform this structural glassing as carefully as possible. Obviously, we have already eliminated the need to fill the spiral grooves.

2. **Prepare the tube** for another coat of epoxy/resin. READ THE INSTRUCTIONS for your specific epoxy to see what is recommended. For West System epoxies, this means allowing it to cure, then washing it with warm water to remove the waxy amine blush. **Lightly sand** the composite after it dries with a electric palm sander and medium to coarse grit paper. This should take no longer than 5

minutes for a 48" long by 4" diameter tube. The goal is just to knock off any burrs, high spots, and imperfections.

3. Now you have to make a decision. If you did a careful job applying the structural glass, then minimal (step 2) sanding should have produced a nice uniform finish. If not, then you may have to do a little fairing and repeat the sanding. Voids are the biggest problem. If the voids are substantial, try using a fairing filler. This will make sanding easier.

4. Now that all the structural wraps are finished, you are ready to **prepare the fill coat** of epoxy resin. Perhaps a little digression is in order. From here on, you must use a good quality finishing epoxy with a low viscosity. I use West System "slow" epoxy/hardener (105/206) because it's thoroughly tested and it's properties are well documented. The small savings from using cheaper epoxies are just not worth it to me. I presume that some of the hobby shop finishing epoxies would also work adequately for small jobs, but I have no personal experience with this. Low viscosity is very important to getting a good finish. Thicker epoxies will NOT give a satisfactory finish. Trust me on this, or ask to see my glassed Mean Machine - ugh!

5. Next, **add pigment** to the epoxy/resin mixture. There are many different pigments out there, so the amount to add will depend on the specific pigment that you choose. The pigments that come in liquid form usually recommend a maximum proportion. Reportedly, this is because the liquid carrier medium might adversely effect the epoxy if mixed in too high a proportion. Powdered pigments don't have this limitation, although they are much messier to work with. Regardless of the type of pigment that you use, make sure that you thoroughly mix the epoxy before you add the pigment. After you mix in the pigment, immediately test a small amount for opacity on a scrap of paper. Keep in mind that a white or light color background will make for a brighter finished product - much like spray painting colors over a white (rather than black or gray) primer.

6. **Apply the fill coat** of pigmented epoxy/resin to the rocket. This is only a base coat, so looks are not important, just be sure to get uniform coverage. I use a 2 to 4 inch disposable bristle brush. They cost about a buck at Home Depot, and can be discarded after use. If you are really a tightwad, you can clean these brushes in acetone before the epoxy sets. However, don't try to reuse them for the finish coat, or the residual particles will degrade the finish. Foam rollers will work ok too.

7. While the pigmented fill coat is still wet, carefully **apply a layer of pre-cut "veil" fiberglass**. Veil is a tissue thin glass mat (appx. wt. ½ oz.) that is available from many suppliers. It has little structural value, but it will aide greatly in obtaining a smooth finish. If you get any wrinkles or air bubbles, you

MUST work them out or they will ruin the finish. This material is very absorbent and if you haven't used too much epoxy/resin, it will dry with a slightly "fuzzy" finish like a peach. A fuzzy finish is good because it will help absorb the finish coat. This veil coat will usually cover all of the minor imperfections in your structural fiber glass.

8. If you did everything correctly, no further sanding will be required. If there are any blemishes, like from wrinkles and air bubbles, you will have sand them off and spot fill them in.

9. The body tube is now ready for the **final coat**. Prepare the tube for another coat of epoxy in the normal manner (for West epoxies, wash off the amine blush). Next, sand lightly by hand with a medium to fine grit paper to abrade the finish and thus assure a good bond. This sanding should only take 20 seconds or so.

10. Mix up some more pigmented epoxy resin (steps 3 and 4). Carefully apply to the tube with a clean, new, soft bristle brush. Don't try to use an old brush. **Apply the final epoxy coat *as lightly as possible***. If you put it on too thick, it will run. Fins are the biggest problem area. Keep rotating your until the epoxy begins to set. A horizontal stand will help greatly. Most brush strokes will disappear after a few minutes.

11. After it dries, take a look at the finish. If it's acceptable, you're done. If not, you may have to apply another finish coat (repeat steps 9 - 10).

NOSE CONES

Yes all you skeptics, even those polypropylene nose cones will accept a pigmented epoxy finish, **IF** it is properly prepared.

1. Nose cone preparation:

Wash off mold release agents with soapy water and an abrasive pad.
Sand out mold flashing.
Lightly sand entire surface.

2. Flame treat the surface with a propane torch (click here to see what this is all about):

Take an ordinary propane plumbers torch, and run the flame briefly over the entire surface of the nose cone. Not long enough to melt or leave soot. This should only take 15 or 20 seconds for a 4 inch nose cone.

3. Pigmented epoxy application:

Brush on a ***very thin*** coat of pigmented epoxy.
Hang pointy end down to dry.
Cut or sand off the droplet that hardens on the tip.
Wash and lightly sand
Repeat once or twice more to achieve the desired opacity.

The resultant finish will be very durable. I have made dozens of flights with **no chips**.

HINTS (if you're new to epoxy):

1. Use surgical rubber gloves so you won't be afraid to get the epoxy all over your hands.
2. Wear old clothes.
3. Keep a roll of paper towels and a jar of alcohol handy to wipe up drips and spills.
4. Make a "rotisserie" stand to hold your body tubes in a horizontal position and facilitate turning them around.
5. If your rocket has more than one body tube section (e.g. payload bay , do one at a time.
6. Do the smallest tube one first.
7. Have everything set up and ready before you begin, since you will only have 20 minutes or so (varies by brand and temperature) before the epoxy begins to set.
8. Count on having problems with the first project (i.e. use a piece of scrap tubing, or a rocket that you don't like).

WHAT'S THE FLAME TREATMENT ALL ABOUT????

Why do polypropylene nose cones take paint so poorly? Why do they chip as soon as they hit the ground?

Good Question. I posed this question to my friend Scott one day. Scott happens to be a research chemist with two graduate degrees, who works with lots of coatings and polymers. Here is a synopsis of our conversation:

S: Of course, everyone knows that it's because the polymerized molecules form very long chains which prevent bonding with various agents….

M: What….?

S: They're waxy and stuff won't stick to them.

M: Ok, that I understand. But what can I DO about it?

S: I recommend that you replace some of the hydrogen atoms at the ends of the long polymer chains with oxygen and hydroxyl groups.

M: What !!??!!??

S: Sorry…. Oxidize the surface, dummy.

M: OK hot shot, how?

S: Try a thermal Scottification" process.

M: What's that?

S: Run a flame over the surface (snicker, snicker). It only takes a few seconds.

M: And this will leave those oxygen and hydroxyl things?

S: Yep!

M: Can I see them on the surface of the nose cone?

S: Nope! Just trust me, they will be there.

M: OK, and then the epoxy will stick?

S: Yep! Epoxy, paint, glue, … you name it, and it will stick.

M: How long will this stuff last before I have to slap on the epoxy?

S: Forever, just don't sand it off, dummy.

Soooooo, there you have it folks. And it DOES work. Just don't ask ME to explain it.
Good luck!
Mike Banz

E-Matches:

Pete Bennett provided the table on the next page.

With all the flier starting to leave flash bulbs for e-matches, it's about time you know what the amps are to fire them. I suspect some of you have no idea and that can cause trouble.

On the table N28B and N28F are the ones most commonly used. What's the difference? The F is for more fire, which means a bigger head as compared to the B.

Take a good look at the "All Fire" and "No Fire" amps. On the B the differences is only 0.17 amps, on the F it's 0.6 amps. That's not a lot of difference, so be real careful when using them.

New Members:

Welcome to Maryland Tripoli.

Steven Hackett
1400 Willow Oak
Frederick, MD 21701

David Green
9220-A Bridle Path Ln.
Laurel, MD

Bill Kirby
22540 Watson Rd.
Leesburg, VA 20175

Michael Ash
2610 Amber St.
Finksburg, MD 21048

Roger Dwyer
6074 Goshen Rd.
Newton Sq., PA 19073

NOTE: Renew-membership is due the beginning of the year. Otherwise you will not receive this wonderful newsletter.

KEEP THE POINTY END UP AND THE FIERY END DOWN
D. BULLIS

http://www.mdtripoli.org/.

Designation	N15B	N18B	N20B	N20F	N24B	N26B	N28B	N28F	N32B	N32F
Bridgewire Resistance (ohm)	5.20 0.5	3.35 0.9	2.60 0.4	2.60 0.4	2.15 0.3	1.80 0.3	1.60 0.3	1.60 0.3	1.20 0.2	1.20 0.2
All Fire Current (Amp)	0.15	0.21	0.25	0.60	0.26	0.36	0.37	1.00	0.45	1.15
No Fire Current (Amp)	0.09	0.11	0.13	0.30	0.15	0.19	0.20	0.40	0.25	0.45
Average Firing Time with/Amp	0.7 ms 1A	0.76 ms 2A	0.8 ms 2A	40 ms 1.6A	1.45 ms 0.5A	1.5 ms 1A	2 ms 1A	40 ms 2A	1.5 ms 1.5A	40 ms 2.3A
							X	X		

E-Match Table

Flight Log February 20, 1999 ESL #24

Flyer		Manufacturer	Model	Motors	Result
Ash	Michael	Scratch	Kit	B 6	
Barnsley	Ivan	Scratch	Whistler	G104	Nice Opener
Barnsley	Ivan	Scratch	Whistler	G64	loud
Barnsley	Ivan	Scratch	Get the Point	C6, C6	
Barnsley	Ivan	?	Ranger	D12, C6	good
Barnsley	Ivan	Scratch	Mamona	A 8	Amama burned
Barnsley	Ivan	Scratch	Leftovers	C6,C6,D12	
Barnsley	Jeanie	Scratch	Mercury Red	D12	Good flight
Barnsley	Jeanie	Scratch	Mercury Red	D12	
Barnsley	Jeanie	Estes	Demon	D12	good
Barnsley	Jeanie	Scratch	Upscale midget	C6,B 6	good
Barnsley	Jeanie	Estes	S.P.E.R.	B 6	
Belleros	Brian	PML	Patriot	J350	<cert2> Got it
Belleros	Brian	Aerotech	Initiator	G 35	GF&R
Brun	Ed	Scratch	Air Walker	G40	nice flight
Brun	Ed	Scratch	Dart	F25	

Flight Log February 20, 1999 ESL #24

Flyer		Manufacturer	Model	Motors	Result
Crabtree	Dustin	PML	Q-Lear	H 235	GF&R
Crabtree	Dustin	PML	Q-Lear	H180	GF&R
Crabtree	Dustin	PML	Q-Lear	H97	GF&R
Gligo		Aerotech	Hot Stuff	G 35	GF&R
Green	David	LOC	Mini Mag	I 357	<cert1> no go
Green	David	PML	Explorer	G 125	Nice
Green	David	?	Torque	A 34T	GF&R
Green	David	Estes	Fury	A 34T	GF&R
Green	David	LOC	Onyx	F62	
Green	David	LOC	Speeder	G125	nice
Green	David	Estes	Snitch	C6	cato
Hacket	Steven	NCR	Lance This	G35	nice flight
Hackett	Steven	Scratch	Alarm	F20	weathercock
Hackett	Steven	Scratch	Red	F62	
Harris	Larry	Scratch	Checkers	H123	good
Harris	Larry	Aerotech	Mirage	H180	nice
Henry	Mike	Aerotech	Mustang	F40	GF&R
Henry	Mike	Scratch	Pee Wee	F52	
Kirby	Bill	Scratch	Viking 7	J330	<cert2> got it
Kraemer	Larry	PML	Marge's Tomahaw	I357	nice
Leonardi	Vince	PML	Pterodactyl Jr.	H242	<cert1> Got it
Mask		Estes	Aim 97	B 6	weathercock
McGilvray	Neil	Scratch	Tin Man	L1860	Beast
McGilvray	Neil	Scratch	Socially Un-Acc	K550	Good flight
McGilvray	Neil	Scratch	It's A Black Th	G80	oops!
McGilvrat	Neil	Scratch	Smoke + Mirrors	I 211	
Mitchell	Kevin	Scratch	Microsecreamer	H 240	
Morris	David	LOC	Lil' Nuke	F52	GF&R
Morris	David	Aerotech	Arreaux	F52	
Sauer	Dennis	Binder	Sentinal	J350	<cert2> Got it
Sauer	Dennis	PML	Pterodactyl Jr	I161	Nice
Sherman	Justin	Estes	R2D2	C6	hard landing
Shope	Don	LOC	Legacy	H120	quick & gone
Tiger	George	Aerotech	Initiator	G80	
Tydings	Shawn	Aerotech	Initiator	F 20	GF&R
Tydings	Shawn	Aerotech	Initiator	F 20	
Tydings	Shawn	Estes	Broadsword	D12	
Wallace	Fred	Scratch	Check-off	L 600	not good
Wallace	Nelson	?	Mungrel	H 320	no joy
Wallace	Nelson	Aerotech	Initiator	H240	Hot
Weber	David	Weber Eng.	Tuber	G 75	Great 2nd Flight
Weber	David	LOC	Mini Mag	H 123	as advertised
Weber	David	Weber Eng.	Yellow Jacket	F 14	GF&R
Weber	David	Weber Eng.	Sticker Shock	H123	GF&R
Weber	David	Weber Eng.	Red Dog Returns	G40	
Young	Dave	PML	Patriot	J 415	many pieces

Flight Log February 21, 1999 ESL #24

Dryer	Roger	Scratch	Aerobee 150A	D12,B8	
Henry	Mike	Aerotech	Mustang	G64	
Henry	Mike	Aerotech	Mustang	G 33	
Mantell	Bill	Aerotech	Arreaux	F 72	
McGilvray	Neil	Scratch	Critical Lapse	I 211	
McHugh	Kevin	Estes	Viking 7	C 6	

Flight Log February 21, 1999 ESL #24

Flyer		Manufacturer	Model	Motors	Result
McHugh	Mike	PML	Black Brandt	G 75	
Meltugh	Kevin	Estes	Sidewinder	C6	
Mitchell	Kevin	Scratch	Psycoscreamer	I 357	
Morris	David	Aerotech	Arreaux	E23	Good flight
Morris	David	LOC	Lil' Nuke	E 16	
Onay	Drew	Quest	Hyper	B6	
Prostus	Ted	V.B.	Javelin	H 238	
Russell	Ben	Scratch	Yellow Express	K1100	
Sherman	Ted	Scratch	Star Chaser	H 123	
Utley	Bob	?	Iris	F 32	
Weber	David	Weber Eng.	Yellow Jacket	F 62	Good flight
Weber	David	Weber Eng.	Tuber	H 128	flight #96
Weber	David	Public Enemy	Honest John	H 123	maiden flight
Young	Dave	PML	Cherokee D	I 357	
Young	Dave	?	Over Budget	J 415	
Young	Dave	PML	Minor Detail	H 242	Separation

Motor Usage

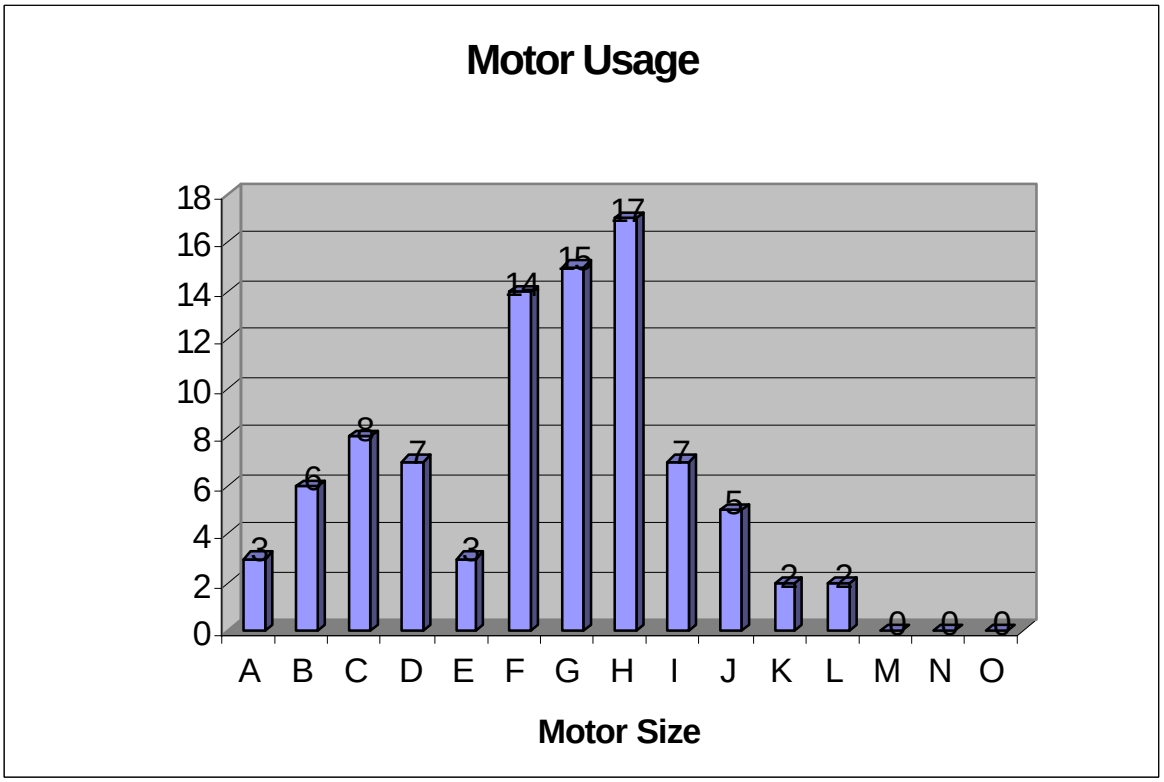
A	3	7.5
B	6	30
C	8	80
D	7	140
E	3	120
F	14	1120
G	15	2400
H	17	5440
I	7	4480
J	5	6400
K	2	5120
L	2	10240
M	0	0
N	0	0
O	0	0

89 TOTAL MOTORS 35577.5 NEWTON/SECONDS

Sean McAndrews Rocket.

Atlantic	0
Aerotech	13
Binder	1
Dynacom	0
Estes	10
Hawk Mountain	0
High Flight Tech	0
Hobby Lab	0
JD Cluster	0
LOC	7
Launch Pad	0
MSH	0
NCR	1
PML	12
Pratt Hobbies	0
Public Enemy	0
Quest	1
Rocketman	0
Rocket R&D	0
Rogue Aero	0
TCB	0
Thoy	0
Scratch	27
V.B.	1
Unknown	5
Weber Eng.	6

84 TOTAL ROCKETS



March 1999

Rocket Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20 Mary land Trip ...
21 Mary land Trip ...	22	23	24	25	26	27 Whitakers, NC
28 Whitakers, NC	29	30	31			

February

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

April

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

April 1999

Rocket Calendar

March

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

May

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17 R.A.T.S.
18 R.A.T.S.	19	20	21	22	23	24 Whitakers, NC EXP
25 Whitakers, NC	26	27	28	29	30 Culpeper, EXP	