



# M.D.R.A. Report

Volume 6, Number 3



Cover: David Bathras Strong Arm on his Sparky load L750. Photo by Jill Weber.

## Editor's Corner :

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*Editor Bob Utley*

Well, all that letter writing to the Congress is paying off. I know that there are reports that we have not got what we wanted. In reality we have nothing right now but what the Home Land law states. Try to remember that the current legislations is not a law yet. It has to pass the Senate, who may change it. The House is next to pass it and again they might change it. On to the President who signs it or, may want changes and will send it back. Until the President signs it or the House passes it with a 2/3 vote it really noting more then a paper with no power over anything.

Talking about "I'll do this or that" is fine if you have that kind of time. I'm not going to be to concerned till it's a law, then it has bite to change things.

In the mean time, get a LEUP's if you are going to fly bigger rockets motors then a "G". It's not hard to get, the Government won't know any more about you then they do now and it helps show we are willing to work with the system.

Speaking of Politics MDRA had a board meeting to vote in officers for the club, Neil McGilvray, Dave Bullis and Dave Weber did an excellent job on their articles for the newsletter. I want to thank them for taking the time to get it done.

T-Shirts, "Neil King of T" is making more T-Shirts for the club and we expect everyone to buy them, otherwise we'll cover the Liberty Project with them, rather then paint it. At all club events and some non-club events, Neil has shirts for sale, check them out. Neil has several different types of designs on the shirts so there should be something for everyone. All the money goes back into the club or Liberty Project depending on which shirt you buy. At some point soon, we will have a MDRA Store page on the web for the sale of shirts and hats, and maybe other MDRA related items to generate money for the club, you never can have too much money, as they say.

It's not on the calendar yet, but in Oct DARE 2 will happen. I'll put the dates on the web page as we get closer. In other words I forgot the dates right now.

So on to the newsletter and seeing your name in print....

## Who's Is The best?:

Who is the best? Best at what? I know no one in our little group of rocketeers ever discusses the merits of a fellow rocketeers project without him or her present. God forbid! We all know questions and statements never get raised like what is he doing? That will never work. He's really not qualified. That's not how you recover. You don't put those there. That's not the right color. Look at those fins, what was he thinking. There are many different reasons why people are involved in this hobby as there are ways to do the things we do. Most people go through life seeing the world through tunnel vision and it's their tunnel.

Sometimes you just have to step back and let Darwinism take its natural course. After all the pre-flight conjecture about what is right and what is wrong it is interesting to see what really happens. With the safety record that we have it would seem that a lot of things actually go right. That must be because the guy or the gal was lucky, yea that's it. They were lucky. If I were going to do it would be Blah, blah, blah, (my way). Or maybe they were the best they could be on that given flight.

The toughest thing to do in this hobby is to be the best and continue to be the best at each and every launch. What makes the best the best? The construction? Most rockets seem to stay together in flight and recovery modes. You don't see to many motors flying up through the airframes leaving the rocket on the pad. Most rockets even seem to survive the occasional rough recovery and subsequent hard landing. So does that change best to better? The old closing the gap trick.

What makes the best the best? The paint job? They all look the same to me when they are on the pad. They really bear the same resemblance when they are moving at hundreds of miles an hour, thousands of feet in the air. I particularly like the paint job when you are straining to see that little puff of ejection charge smoke at apogee in a clear blue sky with no rocket visible to the unaided naked eye. You actually have to fly the rocket for the paint job to even count, if you are going to be the best. Just watch the....too late another scratch. That eliminates you from being the best. Perhaps you paint job was better before the scratch.

What makes the best the best? The motors! Now you're talking. I can hear the

big dogs barking from here! The big motor guys are the best. They lift the biggest rockets. They go the fastest, well not with the biggest rockets. But they could if they wanted to. The little motor guys are the best. They lift small rockets to high altitudes...anyone see that? I lost it. The mid power motor guys are the best. They have the best of both worlds. Gee I would really like to step up a level, I love those big motors. Or I'm trashing all my rockets with these mid power motors. This never happened with the small stuff.

What makes the best the best? The recovery. The what? Oh! That thing where you get the rocket back in one piece and do it again. That happens sometimes. Sometimes as planned, right on cue. That guy is the best! No, he's just lucky. It is luck that he spent hundreds of dollars on altimeters, installed them in the rocket, hooked everything up properly and the chutes actually came out. What was I thinking? It must have been luck. He couldn't possibly be the best, if he was lucky.

Why do we do what we do? The answer is simple. To be the best each individual can be on any given day at any given launch. We do it to put a smile on our face, nothing more and nothing less. Well, there is the occasional out of focus picture or monkey cam video. We'll take that too. You can only be the best you can be and that is different for every individual that has ever fallen asleep at night envisioning your next flight you are going to make and visualizing how perfect it going to be. (Other people do this besides me, right?) You're at your best in the fantasy world. The challenge is to do it for real.

Are there fliers out there that always seem to get it right? You bet, but "seems" is the operative word. Everybody has a barrel with his or her name on it. It is not a matter of, if you are going to use it is a matter of when. Some use it more than others and that's ok. It is part of the learning curve. Stay with in your limitations. Understand what they are and build on them. You don't use the barrel every flight because some days you're at your best. You are in your comfort zone. These are the days the smile is the biggest and you breath that sigh of relief. This one is coming home unscathed.

When you get outside your comfort zone things change. It is more difficult to be the best. You might pull it off...just lucky....maybe, maybe not. Maybe you were really ready for the next big step and have entered a new arena to be your best. Don't worry about being someone else's best. Be your best because that is where the biggest smile and fuzziest pictures live.

*Neil McGilvray*

## ESL #60 Sod Farm 5/3 & 4/03

Just what the Doctor ordered! After a long cold, snowy, windy and just plain miserable winter we were finally able to launch in shorts and tee shirts on the well-groomed grass of the Central Sod Farm. Our thanks go out to the Warpinski family, Tom, Bill and Jack, for letting us on this fine field. You really can't say enough for people like this that allow us to keep launching and that keeps us smiling. As is typical with launching at the Sod Farm, the Saturday set up occurs after noon time and the flying is usually limited due to the number of people that show up for an "afternoon" launch. The summer launches take on a more leisurely pace due to fewer big projects and only having to deal with smaller L and M sized attempts. For those of us that run the launches this is a welcome break from those coordination intensive N, O and P attempts.

Saturday did start off cloudy with a slight breeze but as the day progressed the ceiling, temperature and the wind improved with each passing hour. Dave Bathras wanted to let the neighbors know we were back for another season. Dave launched is Strong Arm 4 on a J-300 sparky motor and his Strong Arm 6 on a L-750 sparky. Both motors produced the desired effect belching tons of black smoke and hot white titanium sparks. Glenn Davis wore a path to the pad six times flying his Tomahawk twice on an F-25 and F-40, Strong Arm twice on F-52 and G-40 and Wart Hog twice on a G-35 and G-64. All flights came back alive. This should inspire Glenn's confidence for his Level One attempt in the near future. Kathy Gilliland

once again demonstrated her fashion sense by launching Pink Impulse with not one but two D12s for a nice flight.

Paul Haberlein got the crowds attention with his finely finished Ajax and V-2. Paul really got our attention when he flew the rockets. The Ajax was launched on I-284, which provided plenty of power. There was a problem with the CG and CP of the rocket. Once launched the Ajax looked like Mary Lou Retton performing multiple back flips in the air. The rocket flipped twice and halfway through the third flip the motor burnt out and the rocket fell into a small creek at the side of the field. To add insult to injury the parachute ejected a few seconds latter into the water. The V-2 flew much better then the Ajax, however the H-124 motor provided the power for a rather squirrely down range flight. Kit rockets are supposed to have all the rocket science done so CP and CG calculations are not necessary. Tom Hier got in 4 flights on Saturday. Tom had two daddy flights and two father / daughter flights with Maggie. Tom flew his Amraam IV on a J-280 for a nice flight. Tom also drag raced Glenn Davis's Wart Hog on its G-64 flight with his Minnie Magg on an I-170. Glenn was first off the pad only to be caught by the Minnie Magg. Unfortunately the Warthog was recovered successfully but the Minnie Magg suffered main chute fouling and limped away with a broken fin. Tom and Maggie did successfully launch their Alpha twice with A and B power. We should all have Maggie assistance, it seems she is good luck. Speaking of Wart Hogs Keith Holt launched his twice on a G-35 and F-20 power. Keith also launched his Gear Head for a nice high flight on a purple J-350. Unfortunately Keith had some recovery issues that will send Gearhead back to the shop. But isn't that one of the reasons we show up? At least I do, to see what kind of trouble our fellow rocketeers can get themselves into.

Sean McCorkle took to the air with his Intruder on a H-153. Neil McGilvray launched Socially Un-Acceptable on a purple K-650 motor. Jerry O'Sullivan followed suit with a K-650 motor in his rocket High Five. A nice high flight was rewarded with an equally fine recovery. Lynn Reamy was showing the boys how it is really done as she flew her Tabitha four times all on H-125 power. Lynn had three left-handed

shots and one right-handed shot, all of which were recovered perfectly. John Ritz flew his rocket called Scratchy on a F-40 after a day of six static tests of H and I motors. Nelson Wallace found his way home after a long hiatus from the HPR scene. Nelson was getting back into the groove with his Phoenix on a D-12 and his Night Hawk on a F-20. Nelson was also getting back to the pond with his two stage Navaho on a C-6 to a B-6. The sustainer was later recovered from its watery recovery and should fly again. Larry Zupnyk was down from the South Jersey Shore to fly his Magnum #2 on a K-570. The big rocket turned in a nice high flight with an "in the field" recovery. Yes you can fly high at the Sod Farm and bring it back alive. That wrapped up the flying activities for Saturday.

Sunday started off much the same way as Saturday, some clouds and wind only to turn sunny, warm and calm. Dave Weber, Dave Alewine drag raced their V-2 rockets. John Ritz heard the word drag race and jumped right in the fire with his rocket called Six Pack. I had to wonder if John had drunk a six-pack and thought he heard the two Daves had a drag queen. John was ready either way. Dave Alewine's V-2 was powered by an I-212, Dave Weber's V-2 was powered with an I-195 and John Ritz's Six-Pack was powered by a J-400. All three rockets were 5" diameter and weighed about the same. The button was pushed and the V-2's were in the air in the blink of an eye. Six Pack sporting the bigger motor took a moment to pressurize then roared by the lesser powered V-2's. As all three decided to take a different trajectory it was difficult to see who "won". The important thing is that they did it and all three turned in "cool" flights and can race again. Mariah Alewine flew her Tiny Pterodactyl on an F-50 for a zipping straight flight. Aaron Blizzard kept upping the ante with his Bull Pup. Aaron started off with a flight on an I-212 then an I-282 and finished up the day with an I-350. It would be interesting to see what the altitude difference was on those three flights. James Chalker was test flying his Team America rocket called Peles Dart on a G-80 staging to an E-9. The flight was perfect except for the water landing in the pond. Two of the three sections went for a swim. James was back later in the day with the same combination in a rocket called Doris

Jackson. Apparently Doris is not a good swimmer and the rocket steered clear of the water this time.

Jim Cox put 5 birds in the air. Jim flew his Big Daddy on a E-9 and F-120, Silver Comet on a F-24, Super Bertha on a G-49 and his four motor Viper IV on four E-9's. All the flights were successful even down to all four of the E motors igniting. Bill Davidson launched his Bell X-1 model on an F-39 for a very nice boost. It was almost a shame to the chute come out on this flight. You just wanted to see the plane come in for a nice glide landing. Bill plans to put this design into production. I can't wait to see the M powered version. Gary Deaver trudged out to the pads three times and brought home the bacon once. Gary launched his No Name with an I-350 for a nice flight and recovery. Gary then launched his V-2 on another I-350 but with less than acceptable results. There was enough of the rocket left that it should fly again. Gary Finished up the day by trashing his Mono Copter on a D-11. The Mono Copter has flown plenty of times but this would be it's last for sometime. The nut came off the counterweight making the copter unstable and providing a nice display of aeronautical instability. Mike DeBay mixed it up four times with three Bozo Motor Works design motors and one F-22. Mike flew his Stretch Explorer on a BMW I-300 Blue motor, his Skywriter on a BMW H-150 and H-200. Mike also flew Shorty on the F-22. Bob DeRosa flew LOC IV on a H-123 and his Minnie Magg on an I-211. Both for loud and smokey flights. Robert Edmonds flew two of his glider collections. They were Arcie II boosting with a D-12 and CiCi Stac boosting with a C-6 and B-4. Kathy Gilliland was reaching for new heights with her Lemon Twist on a K-700 White BMW load. The rocket disappeared into the cloudless sky. Once it got back within sight, the mains deployed on cue for a successful flight. Richard Hickok beat a path to the pads six times with his big screw on a D-12, Vigilante on a G-35, Sea Shuka on a F-39 Upscale Yellow Jacket on a G-80 and Harm on a D-12. Richard also brought the Upscale Yellow Jacket back out one more time for his NAR Level One attempt. The motor of choice was a H-128 and all went according to plan. A nice straight boost and a perfect apogee recovery. Congratulations Richard, it's been a long time coming. We are all waiting to

see some of the crazy designed rockets you fly in their High Power versions.

Tom Heir flew his Amraam IV on a J-450 to crack the sky with a rocking flight. Daughter Maggie was back at it with her Alpha on an A-8. Keith Holt was down to his last useable rocket, his John Deer Green. It was powered by an I-200 for a nice flight and recovery. Now see how easy that was! Kevin Johnson owned the pads in the beginning of the day with ten flights Kevin fly everything between the A to F range. Kevin flew his Flash, Delta 6 Inch Saucer, Mega Sizzler, Equinox, Deuces Wild, Excel Jr. and his Alien Space Probe. Kevin Kelly blasted his M&M on a K-450 to 2,531 feet. The low winds of the afternoon where making for some arrow straight flights. Bob Lussier got three birds into the air. Bob flew his Star Burst on a two D-12's and his Forte' on a G-40. Bob also flew his Big Brute on a G-40, but the chute didn't want to cooperate on this day. The rocket was built strong and we will be seeing it again, though maybe a tad shorter. Sean McAndrew took to the air with his Thoy Falcon powered by a J-650. As usual the rocket tore off the pad and was recovered intact.

Neil McGilvray teamed up with Bob Utley, (what was I thinking?), to fly a Bozo Motor Works 98mm blue load in Anthem. Yes we are all Bozo's on this bus. At 42 pounds the L-1500ish motor put the rocket at about 3,700 feet. This is a manageable altitude at the Sod Farm. You want to try to stay out of the rocket eating trees. The second flight was on a purplish load that was flown in Bone Daddy. It was another L-1500 but this time flown in a 75mm casing. The flame was purple and the rocket was recovered, what's not to like? Russ Miller flew his Polish Phoenix twice. Once with a J-205 and the second flight with a J-465. Russ also flew his Pixie Stick on an I-200. Dave Olsen might need some new shoes after his six trips to the pads. Dave flew two three stage Comanche flights, had F-20's power both his Initiator and Air Spike and had a G-80 power his Mirage. Dave also flew his X-Caliber on a H-135 to gain his NAR Level One Certification. Obviously the flight and recovery was perfect. Congratulations Dave. Jerry O'Sullivan teamed up with Sean McAndrew for a loud sparkly flight in High 5. The K-750 was so loud that it set off a car alarm in the pit area. The question is why

was the car locked, you don't trust us? Jerry and Sean teamed up again to fly Jerry's Nike Smoke on a central L-1500 and sequentially air starting in groups of 4 H-120's then two H-100's and two H-100's. All went according to plan with a continuous trail of smoke from the Smoke all the way to apogee. The ARRD recovery made for a dramatic finish. Ken Paduch went three for four on this beautiful day. Ken flew his Big Daddy on a D-12, Shadow on a F-24 and his Phoenix on an E-18 for successful flights. Ken had second stage ignition failure with his two-stage version of a Comanche and suffered a lawn dart as a result.

Ted Proseus also went 3 for four. Ted had good luck with his Javelin on an H-120 for two flights and his Back to Basics on a D-12. Ted upped the ante in the Javelin rocket with an I-200. The motor over-pressurized and left the rocket hanging on the rail. The motor was quickly disassembled with various bits and pieces being strewn all over the field. The autopsy continues. John Ritz got in a second flight of his Six Pack on a J-500 of his own making. This motor had multiple colored grains of blue, orange, yellow and white to provide the power needed to get the rocket in the air. Eric Roberts Flew three times with his Viper IV on 4 D-12's, Vulcanite on an H-73 and Bull Puppy on a H-73. All came back alive. Rob Roberts also had three flights. Rob flew his Un-Easy-I on an AN I-205 for a very nice straight flight. Rob also flew his Aura on a F-120 for a very fast flight and his Lil'-Nuke on a G-90. Ed Romani did a static test on a H-120 that was successful. Ed also flew twice. Ed flew his Equinox on an E-18 for fun and flew his first EX motor, which was an I-500, in his rocket called Black Sabbath. The motor worked and the flight was successful.

New member Mike Russo flew a fun flight with Gut Buster on a B-4 and then Mike certified TRA Level One with his Nickster powered by an I-205. The flight and recovery were perfect and to celebrate Mike did it one more time. Just to show he could. Congratulations Mike! Fred Schumacher wanted to squeeze the wheeze flying a BMW K-800 red load in his Overkill 4 rocket. Bob Utley must have been overhearing the noise about the other drag race and surely mistook the conversation as talk of drag queens. But regardless Bob joined Fred at

the pad with his Sand Hawk and since they left their women's clothes at home they were forced to drag race. Bob also had a BMW red K-800. While Fred had a few extra pounds, something that you don't hear too often when including Bob in statement about weight, he felt up to the task. Fred had become accustomed to losing drag races after his crushing defeat at ESL 59, so he had nothing to loose. The Clown Nose Red motor powered Fred's painfully heavy 4" rocket up and away while Bob's took a moment longer to come up to pressure. Bob's Sand Hawk caught Overkill and ended up exceeding the altitude by a mere 400 feet. Bob's recovery altitude was set lower and he ended up on the field first. The great thing about rocket drag races are there are no rules and if you do, the few that you think you have, they can be changed to suit your needs. That way everyone wins at something. It might be the first rocket to finish last, but it's something.

Lester Sherman was flying again after a long hiatus. Lester is a guy that spends most of his launch time helping others and it was nice to see his rocket on the pad and better yet in the air. Lester flew his 4" Patriot on an I-212 for a great boost and recovery. Ross Sorci trudged out to the pads four times. Ross flew his Nike K on a C-6 to B-6, Black Brant on a C-11 and then a D-12. Ross rounded things out with his bigger Black Brant on a G-80. Joe Sorrentino got in three nice flights. Joe got some air with his Estes rocket on an A-8, Aura on a F-40 and Nike Smoke on a F-24. Tom Thompson dragged his big Bruiser out to the pad, kicking and screaming. Tom wanted to fly it on a K-1100 and then air-start two J-400's. The rocket didn't want any part of the air starts, only Tom didn't know about that part of the plan. The K-1100 lit as planned and boosted the big rocket straight up. Then the wait.... tick, tock, tick, tock, now the rocket was being overcome by gravity. This wouldn't be a good time for the J's to light. They knew better and didn't. Now Tom has Two J's, motors that is, for the next launch. George Tiger launched his Bull Pup on a G-38.

Nelson Wallace was back at it on Sunday. Nelson launched his Night Hawk on a F-20 and the rocket that inspired me back in 1996 at NASA's Goddard Space Flight Center. Nelson blew the dust off his Navy

Jay Hawk and flew it on a D-12. I remember when I first saw this rocket. I couldn't get over how big it was and that there was actually a motor powerful enough to fly it. How things have changed. Dave Weber also got in flight 146 of Tuber. The streak continues. Tuber was powered H-165 and after a short wrestling match with the chute, Tuber won and will keep the streak alive. Dave had less luck with Proboscis, his flying nose cone that is ball stabilized. The chute did win this wrestling match and a couple of the ball extensions broke off, nothing serious however. We should see Proboscis back again. Ray Wright flew his Amraam AIM 120 on two D-12's for a nice flight. With that under his belt Ray decided to really test it's construction techniques. Ray flew his PML Quantum Leap on a K-530 and found out the hard way that fiberglass doesn't stick well to Quantum Tubing. The rocket disassembled itself under power for a really cool flight.

Both days on the Sod Farm were exactly what we had been waiting for. Good weather, good company, good flying. Cool flights and some really cool flights. What's not to like? Once again our thanks go out to the Warpinski's for their generous use of their farm. With their benevolence MDRA can fly year round keeping the dream alive and rockets in the air. Until next time, fly high and recover low.

*Neil McGilvray*

## ESL #61 Sod Farm 5/31 & 6/01/03

Finally, those lazy days of summer are upon us. Time to take a leisurely stroll out to the launch pads, take you time prepping and retrieving your rocket on the finely manicured Sod Farm grass. Let me wake up from this dream and enter the nightmare of the past month in that involves a little climatic occurrence called Maryland Weather. Let me check my watch; better yet let me check the calendar. No even better yet let me check the map. We are in Maryland, right? Then will someone explain to me why it has been raining what seems to be every day for a month and a half? Why

windy in the forecast is only above 25 MPH? Why it is cold even with a sweatshirt on, in June? I was thinking that maybe I woke up with all my rocket friends in Alaska. It just goes to show that the dynamics of the weather are something that will never go away, unfortunately the crowds did.

Saturday, 5-31-03, was drizzly and overcast with a fairly stiff wind out of the Southeast. After the normal set up of the site was complete and with an eye to the sky we were ready to begin the launch. I said were ready to begin the launch. Mmmmm, four people with rockets and no one wanted to be first. Someone had to be so Doug Cameron stood up to the plate with his V-2 powered by an I-205. Even in the stiff wind the V-2 turned in a very respectable flight and was recovered on the field. Something that Doug is getting more accustomed to these days. He certainly lost his share of high altitude, minimum diameter rockets. The big ones are much easier to find. Doug also launched is Tiapan on a J-330. The Tiapan is a nicely finished rocket with big aluminum ornamental nozzle. It flew great on the J motor with another in the field landing.

Mitch Guess was determined to set the record straight with his demonstration that all things lifted from the launch pad don't have to look like a rocket. Mitch was flight-testing a design for the upcoming LDRS-22, 16-pound Bowling Ball Loft. This was certainly a strange looking contraption. Big bowling ball, small fins, little or nothing fiberglassed, never been launched before. Looked good to me. Most of the Bowling Ball Rockets look just like this. After some adjustment on the pad we were ready to go. The Manassas Bowl America was sent screaming skyward powered by a K-570 to 2,200 feet. Once at apogee there was too much stress for the rocket portion to contend with and that portion fell back to the empty grass field below. The ball did deploy the chute as planned but floated over the tree line. We thought it was never to be seen again. It was recovered though by the owners, the Warpinski's, on Monday when they returned to work the Sod. Opps! I can't even imagine what they must have thought.... Well, yes I can. Mitch also flew his Mono-Copter 24 on a D-12 for a fun, spinning flight.

Nelson Wallace was on hand to join in the fun. Nelson launched his Phobos on a F-20 for a short, but successful flight. Nelson also launched his Mirage-D on another F-20. He calls it Mirage -D because it is made of parts from different rockets. I wonder where they came from? I think the two flights combined accounted for about 400 feet in total altitude. Nelson has been away from the flight line for sometime and states that he is working his way back up to another L and M flight. You want to be there for those.

Neil McGilvray put two rockets in the air on Saturday. Unfortunately one of them stayed there. The first flight was Socially Un-Acceptable powered by an Aerotech K-550. Been a long time since I flew one of those. It launched the 19-pound rocket into the wind with a substantial weathercock to about 3,000 feet. This worked out well because it landed the rocket parallel to the B rack about 100 feet to the right. Sweet! I got this down. How about a 2 Grain L motor in a 42-pound rocket? Should be no problem, what could go wrong? Let me tell you what could go wrong. The L-950 lifted Anthem straight up with no weather cocking at all on a nice blue flame. It was one of the few times that you will see an arrow straight shot like that and think "oh-no!" The rocket blended in to the gray sky and was lost until we heard the deployment well down wind and above the tree line. After searching until dark the rocket was nowhere to be found. What's the first rule of recovery? All together now. "The rocket and it's associated parts always drift farther than you could ever imagine" Thanks to Fred Schumacher and John from the Sod Farm in the initial search. We were out there and still no rocket. Surely we were far enough down range and on the right heading, if so where was the rocket? The eighty-foot tall trees were not real reassuring to look at even if we found it that night.

The most prevalent theory was that the giant mosquitoes that practically carried the three of us off must have absconded with the rocket. As darkness began to fall we called it a day and Fred had listen to me moan and groan about losing another rocket at the Sod Farm until the next day.

Sunday dawned, actually it didn't dawn it was just a lighter shade of dark, to rain and screeching high winds. What a pleasant surprise, we needed the rain! Upon our return to the field the search was on

again with myself and Fred Schumacher, (he had nothing else to do), until more of the troops arrived. Thanks to Dave Weber, Kathy Gilliland and Bob Utley (for driving Kathy to the field). Kathy and Dave found the rocket hanging from the trees across John Brown Road in another section of woods that Fred and I never even thought the rocket could reach. Now, once again so we don't forget. What's the first rule of recovery? All together now. "The rocket and it's associated parts always drift farther than you could ever imagine" Just goes to prove the point. The nosecone was never recovered from the thick woods. Ahhh, the fun of flying high at the Sod Farm.

Kathy Gilliland was the only brave soul to attempt a flight on Sunday with her V-2 powered by a mighty D-12. At least she got hers back. Plus she made all the guys look bad, as they kept their rockets securely tucked away in their trucks. The day was a wash for Dave Bathras and Bill Schworer who were hoping for a break in the weather to attempt their Level 3 flights. Disappointing, yes, but better to wait for that nice day that has to arrive at some point. He said with a grin. After all even a broken clock is right twice a day. Our thanks go out to the Warpinski's for the use of the Sod Farm and their assistance in keeping the rocket dream alive and well in Maryland. Until next time, fly them high, recover them low and watch out for those damm trees.

*Neil McGilvray*

## ESL #62

### Sod Farm

### 6/14 & 15/03

After being rained and winded out of the ESL #61 at the Central Sod Farm, the Warpinski's were kind enough to allow for ESL #62 to be held two weeks later. That was something that everyone could live with, a warm weather launch every two weeks. As Dave Bullis likes to say, "works for me". This was also Fathers Day Weekend and it looked like some of the dad's in the group got a wish come true. No "Honey Do's", just a weekend burning AP. It was also Flag



Day. A perfect day to begin selling the newest version of MDRA launch wear. We will be selling many more different styles of Tee Shirts this year and Sweat Shirts for the cooler weather. This weekend was the unveiling of the "And Rockets Red Glare" Tee Shirt that sports the fifteen star and fifteen stripe "Star Spangled Banner" that survived the bombardment of Ft. McHenry in Baltimore in 1814. It also sports the philosophy of the MDRA "Freedom To Fly". All the proceeds will go to support the Liberty Project. Remember a well-dressed Rocketeer is a happy Rocketeer. The Saturday weather started out sunny and warm, a perfect day for punching holes in the sky. But as crazy as the weather has been for the past couple of months everything is subject to change and as the day wore on, it did. The wind slowly picked up and the inevitable rain did come, but not until all but one rocket was flown.

Dave Bathras pulled out his Strong Arm for a ripping flight on a L-750 sparky motor of his own making. Dave is a Fireman, (Fire Fighter, Fire Person, I keep forgetting the P.C. name you call these guys today), and no stranger to smoke and fire. The lift off of the Strong Arm, (those who know Dave can see where this name comes from), was belching black smoke and brilliant yellow / white sparks was no stranger to the crowd of onlookers. This was by far the nosiest of Dave's Sparkies yet and was quite a crowd pleaser. Aaron Blizzard didn't melt in the warm sun; instead he heated things up with three flights of his Bull Pup powered by I-350's.

Dave Bullis had a full quiver of rockets that were left over from the Wheels and Wings demonstration that had been painfully rained out the previous weekend. Dave launched and recovered five rockets. They were his Wing and a Prayer, Prayer Aloft, Heavenly Egg all on C-6 power. The Heaven Bound Finally was powered by a D-13 and the saved was launched on a F-25. Glenn Davis had a busy day launching five rockets including one of which certified him Level One. Glenn flew his Mini 5 on a F-20, Yo Mamma on a D-24, Krypton on an E-28 and Slim Jim on a G-80 for the test flight of his Level One attempt. Glenn used a H-128 for the successful attempt in the Slim Jim Rocket. The motor provided more than enough power to send the rocket screeching

skyward for a perfect flight and recovery. Justin Gleiter fly his Lil'-Nuke on a F-24. Justin also got everyone's attention with his static test of a K-400 White Load, (White Lighting Clone). All started off well as the motor came up to pressure then it over-pressurized as a result of flame propagation on the outside of the propellant grains. There was too much surface area exposed and now Justine is out one 1440 casing and a few of the fliers might be out a pair of underwear.

Richard Hickok trudged out to the pads five times also. Richard flew his A-10 Wart Hog Glider on a B-4, Fred's Frog on a B-4, DC Thunder Glider on a D-12, Vigilante on a G-35 and his Amos on a G-35. All for nice flights. Keith Holt who is still in a rebuilding stage got in two flights with his Arcas. Keith flew the Arcas on a F-25 and G-38 for some nice straight, high flights. James Kelly flew his appropriately named June Bug on a C-6 and his Terra Firma on a F-25 for a cranking flight. Dad Kevin Kelly got his jollies with a Skywinder on a C-6.

Jerry O'Sullivan blasted his High Five to about 5,000 feet on a K-700. The recovery was perfect except for the fact that it was over the tree line. Jerry was able to recover the rocket but the nose cone is another colorful ornament in the woods that surround the Sod Farm. Rob Roberts was making efficient use of one rocket for three flights with his Vulcanite. Rob launched the rocket on a H-170, H-190, and H-200 all of his own making. Hopefully he is getting some good data that he will share with the other EX guys and gals. Fred Schumacher had his Overkill 4 out once again, this time for blue flame shot to the sky. Fred flew a Bozo Motor Works Blue K-800 for a neck cracking and ultimately a rocket cracking flight. It seems that in the hast to get the rocket out to the pad Fred forgot one important element of flying rockets, the recovery portion. It can happen to anyone and it can happen to you. Fred forgot to connect the quick link to the booster webbing. This became abundantly clear when the booster section came screaming into the pond from apogee. To add insult to injury the payload section did deploy as planned, but that also ended up in the pond for a swim.

Jeff Taylor flew his Iris on a G-120, testing out his new Loki Research line of 29mm motors. By the looks of the flight Jeff

is once again on to something. Jeff also static tested a J-1200 38mm motor for an impressive fast burn. George Tiger got in three flights with his Cherokee D on a D-12, his Initiator on a G-35 and his Bull Pup 2X on a G-35. Dave Weber got in one flight on this fine day with his Sticker Shock powered by an I-211. A loud, smokey lift off was followed by successful recovery from 1,627 feet.

The day wrapped up about 5 p.m. as the rain reared its ugly head. But as quick as it the rain came it left with lots of sunlight left and calm winds. The core group had gone back to hotel to get some dinner when the talk of going back to the field to launch Jerry O'Sullivan's previously prepped Nike Smoke that got scrubbed due to the impending rain. It was an easy decision to make, especially for those that didn't own the rocket. Jerry was all for it, so off we went. The rocket was to be launched on a L-750 and everybody on hand was anticipating this flight. The final prepping of the rocket was accomplished quickly, by Jerry standards, and the rocket was soon on the tower. The button was pushed and the 7.5" Nike Smoke roared into the sky. The nose cone came out at apogee as scheduled but the drogue chute didn't seem to be filling the way it should have. The rocket continued down to the point where the ARRD was released and nothing happened. The nose cone and the rocket were falling in sync and there was no tension on the main parachute bad to dislodge it from the airframe. The rocket pitifully continued its drop into the soft grass of the Sod Farm. However, it was not soft enough. One of the fins was broken off the rocket, meaning it was back to the shop for another repair. The lesson learned here is to ensure that the recovery system will function as planned. Obviously easier said than done. It is critical that the chutes remain clear of any other webbing, bags and rocket components. If things can, they will get tangled, just ask Jerry. Though disappointed with the end result, Jerry can take pride in the flight and the effort. This would not be the only heartbreak of the weekend.

Sunday started off as good as it gets, sun, warmth and a light NW wind. It was officially Fathers Day and dads from all over had control of the remote or at least what would remotely propel their creations

skyward. Doug Cameron flew his nicely finished Tiapan on a J-800. The rocket blasted straight up and was to be recovered via ARRD. The drogue was out and all was looking good, what could go wrong? Can you say tangled main chute. When the ARRD released the main chute bag, one of the shroud lines got on top of the chute, collapsing it causing the booster section to break in half upon impact. It just goes to prove that everyone gets his or her time in the barrel. There is one with your name on it. It is not a matter of if; it is a matter of when. Dad and son team of Chris and Jim Cox flew ten rockets ranging from the B powered Tri-Foil flights to the H-155 powered Excalibur flight.

Glenn Davis was burning lots more AP with five more flights with his Strong Arm on a G-40, Russian Krypton rocket on a F-24, Harpoon on an E-28, Tom A. Hawk on a F-40 and his Bull Pup on a F-24. Mike deBay was in the five flight club also with his two stage Dart on a C-6 to C-6, Arreux on a F-40, Tri-Star on a B-6, Razor on a C-5 and his Shorty on a G-80. All for nice flights. Tom Dwyer flew is Sandhawk on a d-12, two times. Tom also attempted Level 1 with his Cirrus. Unfortunately the high deployment of the main caused the rocket to float off into the Netherlands of the Sod Farm and it has not been recovered, as of this writing. It was a great flight, but you have to bring them back alive and kicking to get those pesky certification papers signed. Ivan "Mr. Hybrid" Galysh was pressurizing and popping twice with two different rockets. Ivan launched his Black Brant on a J-270 for a nice smokeless flight. Ivan also launched his Phobos on a Ratt works H-70. Kathy Gilliland launched her To the Stars on a K-450 BMW Red Load. With the trajectory the rocket took she should have put the motor in her Sun Seeker as the rocket found the sun and went right for it. A stiff upper level wind put the rocket over the southern tree line, but it was recovered after a long walk. Kathy also lent a hand to Maggie Hier getting her Alpha 3 in the air on an A-8.

Richard Hickok launched four of his models. Richard had his HRAM in the air on D-12 power, Silver Fox on a D-21, Blue Meanie on a D-12 and his Vigilante on a F-23. James Kelly launched the Skywinder on a C-6 twice. Dad Kevin Kelly launched his M&M on another of the BMW K-450's for a

nice white smokey accent. Tom McDonald looked into the warm sun twice with his Viper on an I-285 and his Eclipse on a J-285. Neil McGilvray, your truly, attempted to launch a K-550 in Socially Un-Acceptable, however the Transolve P-6 didn't want to take a ride. The ejection charges fired on the pad apparently as a result of a momentary opening and closing of the power circuit. The manufacturer of Transolve, John Fliasher, had told me to use switches. Was I going to listen to him? ....well now I think I might. I re-created the symptom and low and behold the manufacturer actually knew what he was talking about. I did get to launch Bone Daddy on a purplish colored L-1500 for an arrow straight flight to about 4,200 feet and yes, it was recovered by Transolve, without switches. Russ Miller launched his Black Adder on a J-400 twice and his Polish Phoenix on a J-500. All for nice flights.

Dave Olson launched his three staged C-powered Comanche, Xcaliber on a H-123, and his Mirage on a G-80. Dave also combined with George Sechrist on an Initiator drag race with both rockets powered by F-20's. George thought he would get a jump on Dave and placed his rocket about 2 inches higher on a stand off. When the button was pushed it was Dave's Aerotech F-20 that came up to pressure first and went screaming off the pad. Georges Aerotech F-20 took an extra second to pressurize and boost the rocket skyward. Cheat, cheat, never beat. Jerry O'Sullivan was fresh out of rockets and the only thing he had left to trash was a single use H motor of his own making. These motors will be going in a future flight of the soon to be re-built Nike Smoke, or will they? The motor came right up to pressure and never stopped. In other words if it was in a rocket it would have helped to qualify the flight as "really cool". Some weekends it just doesn't pay to show up at a launch. If your not willing to trash them, don't fly them. Thankfully we have lots of fliers and lots of trash bags.

Wayne Parker was squinting at the sun to see his Thor fly on a G-64 and his Mustang zoom off the pad on F-25. The father, son and daughter team of Joe, Michael and Sara Ruzzi combined for five flights. They flew their Storm Caster on a D-12, Arcon Hi on a c-6 to C-6, Upscale Sprint, Groove Tube and Aero-Dart on F-20 power. All flights worked well and will see another

day. Karl Schuler spent the day burning up some black powder. Karl flew his Rim-67A on four D-12's for a very nice cluster and motor ejection flight. Karl also flew his rocket called Grenade on a C-6, Black Brant on a D-12 and his Strong Arm on a G-35. Fred Schumacher teamed up with Bob Utley to drag race his Overkill 4, (Bob was nice enough to pick up and deliver Fred's second booster to the field, BTW you normally will not see the words Bob Utley and nice used in the same sentence). Bob was launching his Sandhawk and BMW K-500 White Loads powered both rockets. Fred was re-using the same electronics that had taken a swim on the previous day and they worked out just fine. I guess God does watch out for fools and Rocketeers. When the button was pushed Fred's rocket leap off the pad first and attained a pretty good lead. The lighter Sandhawk powered off the pad and caught the Overkill rocket as it's motor was burning out and sailed right on by. Something tells me that this was a set up as Bob had pulled this drag race trick on Fred at the last launch and the results were the same. Some people never learn, I wonder if Fred is still interested in that Bridge in Brooklyn I have for sale?

This was finally the day Bill Schworer was going to attempt his Level 3. As anyone knows this is a day that the Rocketeer anticipates for months prior to the launch date. Many things race around in your head, visualizing the different scenarios concerning the prep, boost and recovery. Bill was flying his rocket called Orange on an AMW M-1350. Due to the wind direction on this day the launch tower was moved down onto the access road to give us the safe distance for both the participants at the launch and for the recovery effort. Once the set up was complete and the rocket was on the pad we were ready to push the button. The rocket thundered off the pad on thick column of white smoke to over 6,000 feet above the Sod Farm. The electronics did their job and separated the rocket right at apogee and all seemed right with the world. As the rocket got closer to good old mother earth the nose cone was seen dangling from the airframe. As it got even closer you could see the back up charge, but still no main. The pucker factor meter was reaching maximum at this point for Bill, I am sure. Finally after what had to seen like an eternity

the bag was stripped off and the main deployed. Normally this is considered a good thing and it was, sort of. Even though the main was finally out the rocket was about 200 feet above the ground. The nose cone chute became tangled in the webbing and main chute D-bag. The nose cone bounced off the "tin roof" of one of barns with a resounding wallop. The rocket was also descending to the roof, thankfully under chute. The chute did substantially slow the rocket before it's meeting with the roof but the result did have train wreck like qualities to it as the booster section rolled off the roof and fell unaided about 25 feet to the ground. Onboard telemetry, an RDAS unit recorded a 3 G landing on the roof and a 27 G whack when the rocket hit the hard ground. The booster sustained a damaged airframe near one of the fins as a result of the fall from the roof. At this writing the initial word on the certification is negative due to various recovery issues. Remember that barrel that I keep mentioning? There is a guy named Murphy that is in charge of barrel placement and the rumor has been confirmed that he has one with everybody's name on it, beware. You never know when he is going to show up with yours.

Lester Sherman also had a run in with Murphy and his famous barrel. Though Lester got out of his rather quickly. Lester had been working a customized Syonic for over a year and was going to fly it on 2 ½ " L motor. The weather never seemed right for the launch until today. Lester brought the finely finished and painted rocket out to the pad and when the button was pushed the aft retainer ring failed dumping the grains onto the ground. The top grain with that was initially ignited free burned and the other grains remained in tact. Lester took the rocket off the pad and luckily had a K-570 as a back up and stuffed that in the business end of the rocket. Lester's red, white and blue Freedom put in a great flight, with a slightly high deployment of the mains. That Murphy guy wanted a piece of this rocket bad. Ross Sorci put in nine flights. One of which was his Level One Certification. Congratulations! Ross flew his Black Brant on a H-128 for the certification flight. Needless to say everything worked according to plan. Ross's other eight flights were in the C to G range to fill out his day. Joe Sorrentino busted off a couple of F

motors on his two flights Joe flew his Nike Smoke on a F-24 and his Aura on a F-40.

Dick Stafford flew seven times and didn't break 200 feet with most of his flights despite powering his "rockets?" with G motors. If you can make it through the RSO then I am going to push the button. Dick decided to push the outer edges of aerodynamics with rockets like his Hat of Death. This was an old stained floppy fishing hat that Dick was able to secure a G-35 in. The Hat flew straight as an arrow and flipped upside down using the brim as recovery stabilization. The beauty of the flight was that Dick was able to wear his rocket again after the flight to protect his noggin from the hot sun. You have got love that. How many people can wear their rockets. Dick also flew a couple of saucers on Micro Hybrids. These little motors were D class Hydrides with little reservoirs for the Nitrous. There is always someone building a better mousetrap. George Tiger had a nice flight on his Initiator powered by a G-64.

We thought that rockets like Un-Ruley were a thing of the past. So much for thinking. Just when you thought it was safe to launch a rocket, Bob Utley showed up with one of those flying Outhouse's that are advertised on ROL. The picture on ROL showed the Potty flying straight and true. Obviously the picture was an artist's conception of what it "should" fly like. Bob flew the Outhouse on two motors. A F-25 for the first flight and a F-50 for the second flight. By the looks of the trajectory the flight characteristics were designed by UTZ pretzels. I still get dizzy just writing about it. Dave Weber snuck in 4 flights. Dave kept raising the bar and avoiding Murphy and his barrel with flight #149 and flight #150 of the venerable Tuber. Flight #149 was powered by a H-128 and flight #150 was powered by a H-100. Dave did have Murphy onboard when he flew his Black Hole Betty. The flight was great on the way up with H-128 power. The recovery was less than spectacular and the classic rocket sustained some major, but repairable, damage upon landing. Dave also teamed up with Jeff Taylor for a rocking flight on a very fast burning I-300 in sticker shock. Larry Zupnyk flew his EZI-Super on a J-375 for a super straight flight on a signature Aerotech trail of white smoke and a good recovery.

It was great two days of launching rockets finally in the sun and warm weather. Many thanks go out to the Warpinski's for the use of their sky and land. Remember that when you are at any of the MDRA launches you must take out what you bring in. Double check your systems and bring them back alive. Though we did have our share of issues, we maintain an excellent safety record and it is up to each individual to do their part. Until next time fly high and recover low.

*Neil McGilvray*

## MDRA Board of Directors Change

On 6-11-03 a MDRA Board of Directors meeting was held to determine what the future of the MDRA administration would look like for the next two years. As required by our by-laws the BOD must vote for four positions that are occupied by BOD members. It was first determined that as a matter of policy the positions that we would be voting for would occur every two years. This would give the new administration time to see through to the end any special programs they may embark upon during their tenure. We also decided that at the end of the two years there should be a change in all of the positions held by the previous administration. That means that whoever is the President, Vice President, Treasurer and Secretary will no longer hold their position for at least the next two years. This means that each and every current and future BOD member must be willing and able to take the responsibility of functioning as one of the aforementioned positions.

The procedural measure was passed and that meant that some long time holders of positions were out of a job. Dave Bullis, a name synonymous with the leadership of Maryland Tripoli and the MDRA would no longer be the President of MDRA. Dave Weber an other name synonymous with leadership in both Maryland Tripoli and MDRA would no longer be the MDRA Treasurer and Secretary. Kathy Gilliland who has served as the Vice President of MDRA was also out of a job.

Dave Bullis has been the guiding hand on the helm of rocketry in Maryland since I first got involved, over seven years ago. Dave always has a vision that rocketry should be something bigger and better than the self imposed limitations that the big two have lashed them selves to the deck with. Dave sees the future with an enthusiasm that is infectious. He knows where he wants to be and does everything in his power to get there with the least resistance. Dave also recognized that would be roadblocks in the way. Some were internal resistance to change and some were external resistance coupled with regulations and mis-perception of what launching rockets was all about. Dave persevered through the surf break of the naysayers to deeper and smoother waters. Dave was still riding on the swells of doubt and discontent but the hard part had been accomplished. He broke us away from the limitations of being bound to the beach of Tripoli and NAR and now we had a clear sailing to discover the MDRA's future.

The original members of the MDRA Board of Directors adopted the vision and the result of many hours of hard work is a Rocket Club that is revered by the entire experimental rocket community and most of the certified rocket community. They all want to know how we do it. Dave has worked, planned, begged, borrowed and stole to see this day come true and now it is a reality. Though Dave has given up the helm as President he is still an active BOD member and an active voice when it comes to the staying on track with the vision. Every journey starts with those small first steps. Without Dave pushing, pulling and carrying us along in those first days there is no doubt in my mind that we all would be wondering when Aerotech would be back in production and how we could separate the commercial and experimental launches by the Tripoli require 24 hours to have an EX day once or twice a year. Thanks to Dave's vision we have the best of both worlds. The rear view mirror has been thrown out on the road and we will not be looking back.

Dave Weber, like Dave Bullis has been a fixture in the leadership of this club since I first joined. Dave Weber use to take care of all of the clerical tasks that were required. Dave wrote the newsletter, all one page of it (those who were there remember). Dave kept the finances straight; at times the

treasury even grew past \$100.00. I remember when it broke \$1,000.00; we thought we were walking in high cotton then. Dave acted as secretary at the meetings and kept track of who was there and what was said. Dave has and will always be an Ambassador of Good Will when it comes to rocketry. It is because of the hard work that Dave has generously given to the club selection for the new President of the MDRA was so easy. Welcome Dave Weber as your new President of MDRA.

Dave is one who knows the ropes and supports the vision. We could not have a better person to see us through in the next two years. With his working knowledge of the club politics and operational needs Dave is well versed and committed to take us through what could be a rough if not interesting ride over the next couple of years. We will see fruition of the TRA/NAR lawsuit and we will see if Senator Enzi's bill S-724 bears a fruit or only serves as a mechanism to poison the well. Despite the outcome of either of these initiatives the MDRA will be here. With Dave's leadership we will stay creative and we will keep pushing the button. Join me in helping Dave continue with the vision maintaining our freedom to fly.

Kathy Gilliland has given up her seat as the Vice President. Kathy has been instrumental over the past couple of years in her support of the programs and philosophies that have taken us this far. The start of any organization is it's toughest days. You have to break new ground constantly. Kathy was always there with innovative ideas and a fresh approach to make things happen. Kathy will be switching hats this time around. She will be changing her "Princess Perchlorate Tierra" that she wore as Vice President of MDRA for an accounts visor as she becomes only the second true Treasurer that the club has ever known. This in my humble opinion is the most difficult job on the BOD. Kathy will be responsible for registration, fund raising, and special project funds like the Liberty Project. Kathy is a stickler for details as any of you that have a bad paint job on your rocket can attest to as you passed through her scrutiny at the RSO table. Please welcome her in this new position and thank her for accepting this new assignment.

Bob Utley has been a main contributor to the MDRA. I can say without any reservation that Bob literally eats, breaths and sometimes sleeps MDRA. I know this because I am always bugging about some "he" needs to do. Bob is one of those behind the scenes guys that make things happen. Bob has taken on the responsibilities of producing the Newsletter, updating the Web Site, building the launch system, (that actually works and is reliable) and the list goes on. Bob is truly the man behind the curtain. Welcome him as your new Vice President of MDRA.

The Secretarial Position will be taken up by yours truly, Neil McGilvray. I too have been terminally infected by the rocket bug and believe in the vision. It will be an easy transition for me to fulfill the responsibility previously held by Dave Weber over all these years. If he could handle two jobs I can only hope to do as well with one. My goal is to continue to promote the MDRA is the most positive light while still maintaining the fun aspect of what we do. As I have said many times when the day is done all you have is the memories and a smile on your face. That is why we endure the cold, wind, rain and even the heat, for that simple smile.

So there you have it. The MDRA has gone through its first major change. How things have changed and how they will continue to in the future. It is important to remember that we work for you, the members. If you have issues, ideas, suggestions, complaints please let us know. We endorse involvement. We want your input. We also want your help. Step up to the bar and lend a hand. Put in some time as an RSO, a Pad Manager, help set up or break down, meet the other members. It is always said that most people participate in rocketry because of the people. Let me tell you that we have the best. There are very few clubs out there that compare in the friendly atmosphere that permeates every launch. Participating in the operation of a launch gives you a whole new perspective on who and what we are. It helps give you ownership in the best organization that has ever held a launch. We are all in the same boat, so start rowing.

*Neil McGilvray*

## Passing the Sword:

Greetings my dear friends from across the realm,

I am writing this letter to you announcing the conclusion of my term as your President of the Maryland/Delaware Rocketry Association. I have passed the sword to your now residing President, Mr. David Weber. He has handled our club's finances for years as our treasurer. I believe he will be a fine leader. Many Blessings to him as he navigates our club into the future.

I look back upon the last seven and a half years and remember what brought me to run as Prefect/President of this fine club back on December 16, 1995. My decision was based mostly to keep up the "fun". One unforeseen problem lay below the surface out of sight though. That problem was how was I going to "lead" this club? I had never really run anything like this before. Yeah, I managed a few big projects at some construction sites and a couple at Calvert Cliffs Nuclear Power Plant, but this was "different". Projects at construction sites and nuclear plants a lot of times have "sheltered environments" due to security and or locations behind fences. This rocket club though was out in the public with authorities having jurisdiction to deal with. Along with the AHJ's was land owner relations, FAA, BATF, insurance, porta pots, having enough volunteer help, people with differing views, and the constant in the back of my mind, the threat of a major accident that would shame rocketry for all time. I was asking the same question Moses did while standing at the Burning Bush on Mount Sinai while GOD instructed him to go to Egypt to lead the people, "Why me?" What had I got myself into? The night before the votes that would install me as Prefect/President, I got on my knees and prayed like Soloman did before he was crowned as King of Israel so long ago. Soloman, like myself prayed for wisdom, not riches or fame. This wisdom from GOD I sought would be the only driving force that could lead us as a group forward. Many times before a launch after dealing with the FAA to activate the wavier, I would go way over their heads and ask through prayer that the launch would go smooth, safe, and by the numbers. Lots of times

folks would ask me, "What's your secret? Why do you get the good weather? How do you get the good launches?" I would always tell them, "You have to go and ask the Ultimate Authority. He will always deliver." Always remember, all good things come from above.

What happens now? I am not President or Prefect. What will I do? Well the answer for those questions is a simple one, launch rockets. That is the reason I joined this group December 16, 1994 at ESL-2. The people I have come to know while being involved in this club are by some of the finest friends a person can have. You all are my friends. You have stuck with me through thick and thin, rain and shine, wind and cold. Without you and your faith in me and yourselves, we would not be where we are today. So give yourselves a good pat on the back. For if you all did not come to our launches, and not my launches, to volunteer to help and most importantly fly rockets, this club would have dissolved years ago.

Keep the pointy end up and the fiery end down.

May GOD Bless you all.

*Your Friend: David A. Bullis*

## Taking the Helm:

Greetings Fellow Rocketeers:

It is with great joy that I take over the helm as your President (actually it is with great joy that, after 6½ years I no longer hold the Secretary & Treasurer's jobs!). First I have to thank Dave Bullis for his vision and leadership as our first President ... it was mainly his efforts that helped create MDRA a couple years ago and obtain our own insurance policy that allows us to combine certified and experimental motors. Also, as a founding member of Maryland Tripoli in 1994 I saw how Dave acted when he first joined and then became the Prefect... his concern for safety was paramount and set a great example to follow. Thank you again Dave Bullis!

As for myself, I believe that my experience in running my Engineering Firm for the past 17 years has taught me that one of the best qualities of the president is to know when to lead and when to listen to the advice of others. My 36 years in rocketry

and the past 10 years in HPR gives me a good foundation to lead and advise others. I enjoy helping the newer/less experienced rocketeers gain knowledge and move thru the Certification process. Now that my former time consuming duties are passed on to Kathy Gilliland and Neil McGilvray (best wishes), I will have more time to help others at our launches. I also will have more time to help out at the pads as a Pad Manager, a job that was excellently performed by Bill Mantell (whose real life job duties have temporarily precluded his rocketry hobby).

We are an organization of rocketeers and I believe that we are pretty creative people. I welcome your ideas and advice for improving MDRA. My vision of our future has many facets and safety continues to be paramount. All of us must remain attentive and aware at launches. If you observe an unsafe condition/activity, politely bring it to the attention of the person. If you do not feel comfortable doing so, find me or one of the other Board Members.

Dealing with the new regulatory environment also has a very high priority. I was one of the 11 rocketeers that took time to visit every Senator's office and talked with staffers and senators about S.724. I have written both my Senators, my Representative and the BATFE in hopes of deregulating our hobby...I hope you all did the same. While trying to change the Law, we must all be in compliance with the Law. Along these lines, I now have a Type 2 Explosives magazine on my property.

Maintaining our four excellent flying fields is a job for all of us. We all have a duty to the owners to respect their property, keep it clean and safe while we are their guests. We must support all of our fields. Rhodesdale and Coverdale launches seem to be less actively attended than Price or the Sod Farm and they are great fields! You guys are really missing some wonderful flying if you do not attend those launches.

I think I will end it here for now. Remember that while launching the rockets is probably the most fun part of our hobby, we are a pretty cool bunch of people. I know this from my Treasurer duties, I spoke with everyone! Introduce yourself to someone new at the next launch and ask about their rockets or rocketry components...it is fun and you just might learn a new procedure or technique. Again,

please call me and let me know what's on your mind. Fly Safe.

*ad Astra!*  
Dave Weber

## Lil' Johnny Review:



As many of you might remember, I use to fly "Unruley" a small Crayola Time capsule. Well, to the delight of one club member, it flew it's last flight 2 years ago at the Sod Farm into the woods. I've been looking for another one to make when I found "Lil' Johnny" a flying port-a-john. I have a hundred jokes I could say about it, but I like to think this is a family newsletter. For \$47.50 delivered to my door, how could I go wrong?

Lil' Johnny got delivered to my door the Thursday before the upcoming Sod Farm launch. I took it to my shop and check to make sure everything was there, which it was. Looking over the instructions, yea I can read pictures, I figured I could get it done Friday during the day and be ready to fly it that weekend.

The kit uses the roof as the nosecone and the body as the tube, with clear fins on the sides. The roof has a plate that washers are glued to. I used 5 min. epoxy for everything, since I was out of liquid nails. On the nosecone plate you glue a 2-inch dowel of wood that fits inside the motor tube. This acts as a piston for recovery. Included are two centering rings, ok, so they are square to fit the square body but do the same job. Mount the 29mm motor tube to them and glue it to the inside of the



box, attach the fins, rail guides and it's ready to go.

The kit calls for using E30-4 and F21-4. My kit weighed in at 1.2lbs empty (adding the blue water was now out of the question) and I didn't think the E30 or F21 would handle the flight. I called Kenny and got a F25-4 and a F50-4 to be delivered at the field. Since I didn't do any sims on this, we put it way out on the rack. On the F25 it almost flew right on the F50 it was worse.

Mike from H3 emailed me a couple of days later. Seems someone told him of my flight and he wanted to see if he could help me fix the problem. All I really needed to know was where CP was, which Mike provided. I'll add the weight and be back at the next launch to fly it again. I'm sure it will fly right this time.

This was an easy kit to build, considering the last kit I did was 3-4 years ago. It was fun to fly and I expect to fly it as long as I can get motors for it. Even if you don't fly it, it's a great kit to have around the house, just tell everyone you built a ¼ bath for the house. Here is the link to order your own.... <http://www.newtons3drocketry.com/>

You should remember that this is not the typical rocket model, so when you DON'T use what is recommended for motors, expect problems, as I did. This is no reflection on the manufacture or their kit. A few folks thought that since it didn't fly right it was a bad kit, it's not, I made some changes to the motor selection without making corrections to the model before flying it.

*Bob Utley*

## PERFORMANCE HOBBY

<http://www.performancehobbies.com>

Pro 38, 54 and Animal Works Motors is in stock now. Need parts for your rocket, tell Kenny and he'll bring them to the launches.

Almost anything you could need he should have. Phone (202) 723-8257, fax (202) 723-0010.



MDRA "Freedom" t-shirt for the Liberty Project.

## NEXT ISSUES:

- More words from Neil.
- Launch report of July & August.
- Events for Sept & Oct
- Review on Missile Works WWRC.



MDRA newly designed hat in two styles of hats.

Keep The Pointy End  
up and the Fiery  
End down.

D. Bullis

<http://www.mdrocketry.org/>

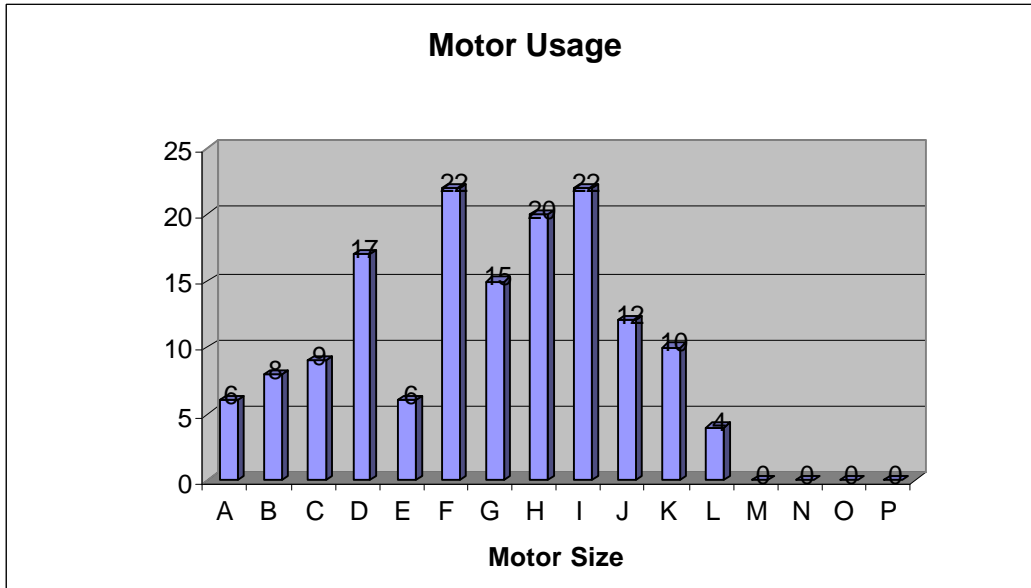
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## Log May 3-4 , 2003 ESL #60

Flyer		Manufacturer	Model	Motors	Result
Bathras	David	Scratch	Strong Arm	L750	
Bathras	David	Scratch	Strong Arm 4	J300	
Davis	Glenn	Aerotech	Tomahawk	F25	
Davis	Glenn	Aerotech	Strong Arm	G40	
Davis	Glenn	Aerotech	Wart Hog	G64	
Davis	Glenn	Aerotech	Wart Hog	G35	
Davis	Glenn	Aerotech	Tomahawk	F40	
Davis	Glenn	Aerotech	Strong Arm	F52	
Gilliand	Kathy	Estes	Pink Impulse	"D12,D12"	
Haberlein	Paul	Scratch	Ajax	I284	
Haberlein	Paul	PML	V2	H124	
Hier	Tom	LOC	Minnie Magg	I170	
Hier	Tom	PML	Amraam 4	J280	
Hier	Tom/ Maggy	Estes	Alpha 3	A8	
Hier	Tom/ Maggy	Estes	Alpha 3	B6	
Holt	Keith	Aerotech	Wart Hog	G35	
Holt	Keith	Aerotech	Wart Hog	F20	
Holt	Keith	Scratch	Gear Head	J350	
McCorkle	Sean	PML	Intruder	H153	
McGilvray	Neil	Scratch	Socially Un-Acceptable	K650	
O'Sullivan	Jerry	Scratch	High 5	K650	
Reamy	Lynn	LOC	Tabitha	H125	
Reamy	Lynn	LOC	Tabitha	H125	
Reamy	Lynn	LOC	Tabitha	H125	
Reamy	Lynn	LOC	Tabitha	H125	
Ritz	John	Scratch	Scratchy	F40	
Ritz	John	Scratch	static test	J200	orange
Ritz	John	Scratch	static test	H120	WL clone
Ritz	John	Scratch	static test	I220	orange
Ritz	John	Scratch	static test	H120	WL clone
Ritz	John	Scratch	static test	I200	WL clone
Ritz	John	Scratch	static test	I200	WL clone
Wallace	Nelson	Estes	Phenix	D12	
Wallace	Nelson	Estes	Navaho	"C6, B6"	
Wallace	Nelson	Estes	Night Hawk	F20	
Zupnyk	Larry	PML	Magnum #2	K570	
4-May					
Alewine	Dave	LOC	V2 5.5	I212	
Alewine	Mariah	PML	Tiny Pteradactyl	F50	
Blizzard	Aaron	Scratch	Bull Pup	I350	
Blizzard	Aaron	Scratch	Bull Pup	I212	
Blizzard	Aaron	Scratch	Bull Pup	I282	
Chalker	Jame	Scratch	Pele's Dart	"G80,E9"	
Chalker/High	Jame/Wakefield	Custom Rockets	Doris Jackson	"G80,E9"	
Cox	Jim	LOC	Viper IV	"E9,E9,E9,E9"	
Cox	Jim	Scratch	Super Bertha	G49	
Cox	Jim	Estes	Silver Comet	F24	
Cox	Jim	Estes	Big Daddy	E9	
Cox	Jim	Estes	Big Daddy	F120	
Davidson	Bill	Vertical Concepts	Bell X1	F39	
Deaver	Gary	????	no name	I350	
Deaver	Gary	LOC	V2	I350	
Deaver	Gary	Alien	Mono 24	D11	
DeBay	Mike	Scratch	Shorty	F22	
DeBay	Mike	Scratch	Skywriter	H200	Blue BMW
DeBay	Mike	Scratch	Skywriter	H150	blue BMW
DeBay	Mike	PML	Stretch Explorer	I300	blue
DeRosa	Bob	LOC	Magnum #2	J450	
DeRosa	Bob	LOC	IV	H123	
DeRosa	Bob	LOC	Minnie Magg	I211	
Edmonds	Robert	Scratch	Arcie II	D12	
Edmonds	Robert	Scratch	CiCi Stac	"C6, B4"	
Gilliand	Kathy	Scratch	Lemon Twist	K700	WL BMW
Hickok	Richard	Scratch	Harm	D12	
Hickok	Richard	Shrox	Vigilante	G35	
Hickok	Richard	Scratch	Sea Skua	F39	
<b>Flyer</b>		<b>Manufacturer</b>	<b>Model</b>	<b>Motors</b>	<b>Result</b>
Hickok	Richard	Scratch	Upscaled Yellow Jacket	G80	

Flyer		Manufacturer	Model	Motors	Result
Hickok	Richard	Scratch	Big Screw	D12	
Hickok	Richard	Scratch	Upscale Yellow Jacket	H128	*Cert 1*
Hier	Maggy	Estes	Alpha 3	A8	
Hier	Tom	PML	Amraam 4	J450	
Holt	Keith	Scratch	John Deer Green	I200	
Johnson	Kevin	????	no name	A8	
Johnson	Kevin	Quest	Flash	A8	
Johnson	Kevin	Scratch	Delta 6 Inch Saucer	B4	
Johnson	Kevin	Estes	Mega Sizzler	D12	
Johnson	Kevin	Quest	Flash	A8	
Johnson	Kevin	Scratch	Equinox	F120	
Johnson	Kevin	Scratch	Dueles Wild	"C6,C6"	
Johnson	Kevin	Binder	Excel Jr.	F20	
Johnson	Kevin	Scratch	Duece's Wild	"C6,C6"	
Johnson	Kevin	Estes	Alien Space Probe	C6	
Kelly	Kevin	Scratch	M & M	K450	2531feet
Lussier	Bob	LOC	Starburst	"D12,D12"	
Lussier	Bob	NCR	Big Brute	G40	
Lussier	Bob	LOC	Forte	G40	
McAndrew	Sean	Thoy	Falcon	J650	
McGilvray	Neil	Scratch	Anthem	L1500	blue BMW
McGilvray	Neil	Scratch	Bone Daddy	L1500	Purple BMW
Miller	Russ	Scratch	Polish Phoenix	J465	
Miller	Russ	Scratch	Pixie Stick	I200	
Miller	Russ	Scratch	Polish Phoenix	J205	
Olson	Dave	Aerotech	Mirage	G80	
Olson	Dave	PML	X-Caliber	H135	*Cert 1*
Olson	Dave	Estes	Comanche	"D12,C6,B8"	
Olson	Dave	Aerotech	Initiator	F20	
Olson	Dave	Aerotech	Air Spike	F20	
Olson	Davie	Estes	Comanche	"D12,C6,C6"	
O'Sullivan	Jerry	Scratch	High 5	K750	Sparky
O'Sullivan	Jerry	Scratch	Nike Smoke	"L1500H160, H160"	
Paduch	Ken	Estes	Big Daddy	D12	
Paduch	Ken	Estes	Shadow	F24	
Paduch	Ken	Estes	Phoenix	E18	
Paduch	Ken	Estes	Commanche	"D12,B6"	
Proseus	Ted	Scratch	Javelin	H120	
Proseus	Ted	Scratch	Javelin	I200	
Proseus	Ted	Scratch	Back to Basics	D15	
Proseus	Ted	Scratch	Javelin	H120	orange
Ritz	John	Scratch	6 Pack	J500	blue,orange,WL,yellow"
Ritz	John	Scratch	6 Pack	J400	ML BMW
Roberts	Eric	LOC	Viper 4	"D12,D12,D12,D12"	
Roberts	Eric	LOC	Vulcanite	H73	
Roberts	Eric	PML	Bull Puppy	H73	
Roberts	Rob	LOC	Aura	F120	
Roberts	Rob	Scratch	The Un-easy I	I205	
Roberts	Rob	LOC	Lil-Nuke	G90	
Romani	Ed	Scratch	Equinoz	E18	
Romani	Ed	Scratch	static test	H120	
Romani	Ed	Scratch	Black Sabbath	I500	
Russo	Mike	PML	Nickster	I205	
Russo	Mike	PML	Nickster	I205	
Russo	Nick	Estes	Gut Buster	B4	
Schumacher	Fred	Yo-Yo	Overkill 4	K800	Red BMW
Sherman	Lester	Scratch	Patriot	I212	
Sorci	Ross	PML	Black Brant	G80	
Sorci	Ross	Estes	Black Brant	C11	
Sorci	Ross	Quest	Nike K	"C6, B6"	
Sorci	Ross	Estes	Black Brant	D12	
Sorrentino	Joe	True Modeler	Nike Smoke	F24	
Sorrentino	Joe	LOC	Aura	F40	
Sorrentino	Joe	Estes	no name	A8	
Thompson	Tom	Scratch	no name	"K1100, J400,J400"	
Tiger	George	Scratch	Bull Pup	G38	
Utley	Bob	Scratch	Sandhawk	K800	Red BMW
Wallace	Nelson	Estes	J-Hawk	D12	

Flyer	Manufacturer	Model	Motors	Result
Wallace	Nelson	Aerotech	Night Hawk	F20
Weber	David	LOC	V2	I195
Weber	David	Weber Eng.	Tuber	H165 #146
Weber	David	Weber Eng.	Proboseis	F21
Wright	Ray	PML	Quantum Leap	K530
Wright	Ray	Launch Pad	Aim 120	"D12,D12"



A	6	15
B	8	40
C	9	90
D	17	340
E	6	240
F	22	1760
G	15	2400
H	20	6400
I	22	14080
J	12	15360
K	10	25600
L	4	20480
M	0	0
N	0	0
O	0	0
P	0	0

151 TOTAL MOTORS 86805 NEWTON/SECONDS

Alien	1
Atlantic	0
Aerotech	12
Apogee	0
Binder	1
BSD	0
Centuri	0
Cluster R	0
Custom Rockets	1
Dynacom	0
Edmonds	0
Estes	23
Giant Leap	0
Hawk Mountain	0
High Flight Tech	0
Hobby Lab	0
Impulse Aero	0
JD Cluster	0
LOC	19
Launch Pad	1
MSH	0
NCR	1
Neubauer	0
PML	13
Pratt Hobbies	0
Public Enemy	0
Quest	3
Rocketman	0
Rocket R&D	0
Rocket Teck	0
Rogue Aero	0
Rocket Vision	0
TCB	0
Thoy	1
True Modeler	1
Scratch	56
Shrox	1
Smokin Rockets	0
V.B.	0
Unknown	0
US Rockets	0
Vertical Concepts	1
Weber Eng.	2
Yo-Yo Dyne	1
	137
	TOTAL ROCKETS



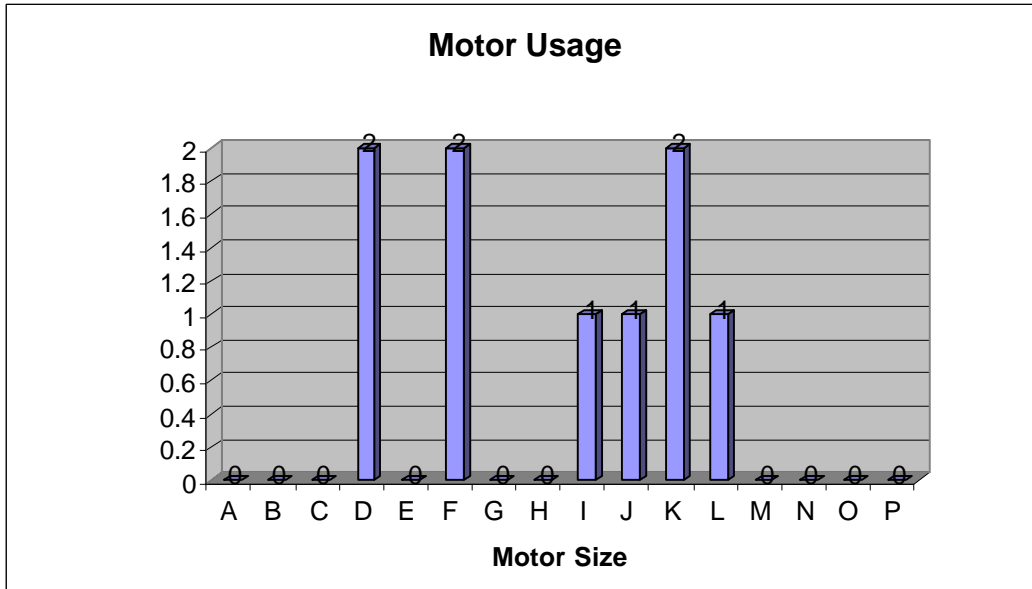
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**Log May 31, June 1 , 2003 ESL #61**

Flyer		Manufacturer	Model	Motors	Result
Cameron	Doug	LOC	V2	I205	
Cameron	Doug	PML	Tiapan	J330	
Guess	Mitch	Alien	Monocopter 24	D12	
Guess	Mitch	Scratch	Manassa Bowl America	K570	
McGilvray	Neil	Scratch	Anthen	L950	blue
McGilvray	Neil	Scratch	Socially Un-Acceptable	K550	Red
Wallace	Nelson	Aerotech	Phobos	F20	
Wallace	Nelson	Aerotech	Mirage-D	F20	
1-Jun					
Gilliand	Kathy	Scratch	V2	D12	



A	0	0
B	0	0
C	0	0
D	2	40
E	0	0
F	2	160
G	0	0
H	0	0
I	1	640
J	1	1280
K	2	5120
L	1	5120
M	0	0
N	0	0
O	0	0
P	0	0

9 TOTAL MOTORS 12360 NEWTON/SECONDS

Alien	1
Atlantic	0
Aerotech	2
Apogee	0
Binder	0
BSD	0
Centuri	0
Cluster R	0
Custom Rockets	0
Dynacom	0
Edmonds	0
Estes	0
Giant Leap	0
Hawk Mountain	0
High Flight Tech	0
Hobby Lab	0
Impulse Aero	0
JD Cluster	0
LOC	1
Launch Pad	0
MSH	0
NCR	0
Neubauer	0
PML	1
Pratt Hobbies	0
Public Enemy	0
Quest	0
Rocketman	0
Rocket R&D	0
Rocket Teck	0
Rogue Aero	0
Rocket Vision	0
TCB	0
Thoy	0
True Modeler	0
Scratch	4
Shrox	0
Smokin Rockets	0
V.B.	0
Unknown	0
US Rockets	0
Vertical Concepts	0
Weber Eng.	0
Yo-Yo Dyne	0

9 TOTAL ROCKETS



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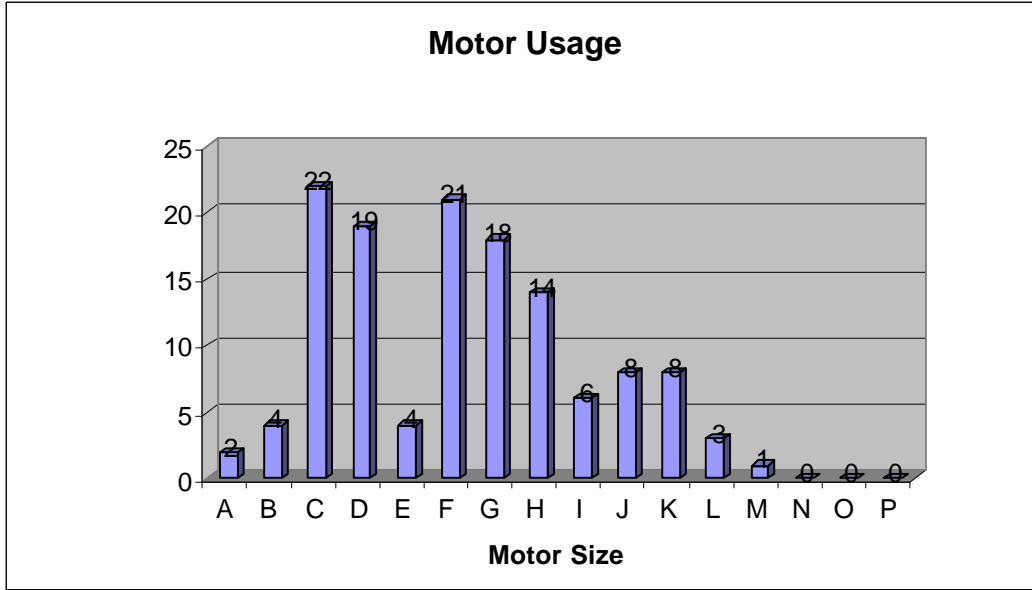
Fred Schumacher's Overkill 4.

## Log May 31, June 1 , 2003 ESL #62

Flyer		Manufacturer	Model	Motors	Result
Bathras	David	Scratch	Strong Arm	L750	sparkly
Blizzard	Aaron	Scratch	Bull Pup	I350	
Blizzard	Aaron	Scratch	Bull Pup	I350	
Blizzard	Aaron	Scratch	Bull Pup	I350	
Bullis	David	Estes	Wing and a Prayer	C6	
Bullis	David	Estes	Prayer Aloft	C6	
Bullis	David	Estes	Heavenly Egg	C6	
Bullis	David	Estes	Heaven Bound Finally	D13	
Bullis	David	Estes	Saved	F25	
Davis	Glenn	Launch Pad	Kryton	E28	
Davis	Glenn	Scratch	Mini 5	F20	
Davis	Glenn	Scratch	Slim Jim	G80	
Davis	Glenn	Scratch	Slim Jim	H128	*Cert 1*
Davis	Glenn	Scratch	Yo Mamma	D24	
Gleiter	Justin	Scratch	static test	K400	whiteload
Gleiter	Justin	LOC	Lil Nuke	F24	
Hickok	Richard	Scratch	Amos	G35	
Hickok	Richard	Scratch	A-10 Wart-Hog	B4	
Hickok	Richard	Scratch	Fred's Frog	B4	
Hickok	Richard	Edmonds	DC Thunder	D12	
Hickok	Richard	Shrox	Vigicantee	G35	
Holt	Keith	Aerotech	Arcas	G38	
Holt	Keith	Aerotech	Arcas	F25	
Kelly	James	Estes	June Bug	C6	
Kelly	James	Estes	Terra Ferma	F25	
Kelly	Kevin	Estes	Skywinder	C6	
O'Sullivan	Jerry	Scratch	High 5	K700	whiteload
Roberts	Rob	LOC	Vulcanite	H170	
Roberts	Rob	LOC	Vulcanite	H200	
Roberts	Rob	LOC	Vulcanite	H190	
Roberts	Rob	LOC	Graduator	H65	
Schumacher	Fred	Yo-Yo	Overkill 4	K800	BMW
Taylor	Jeff	Scratch	static test	J1200	38mm
Taylor	Jeff	Scratch	Iris	G120	
Tiger	George	Estes	Cheakee D	D12	
Tiger	George	Aerotech	Initiator	G35	
Tiger	George	Scratch	Bull Pup X2	G35	
Weber	David	Weber Eng.	Sticker Shock	I211	"1,627feet"
15-Jun					
Cameron	Doug	Scratch	Tiapan	J800	
Cox	Chris	Scratch	Tri Foil	C10	
Cox	Chris	Scratch	Tri Foil	C6	
Cox	Chris	Scratch	Aston Ranger	C6	
Cox	Chris	Scratch	Probe	B8	
Cox	Chris	Scratch	Mini Callisto	D12	
Cox	Chris	Estes	Screemin Mini	D12	
Cox	Chris	Estes	Storm Caster	D12	
Cox	Jim	Scratch	Spool	F23	
Cox	Jim	Scratch	Roto Rod	C4	
Cox	Jim	PML	Xcalibur	H155	
Davis	Glenn	Aerotech	Strong Arm	G40	
Davis	Glenn	Scratch	Kryton	F24	
Davis	Glenn	Launch Pad	Harpoon	E28	
Davis	Glenn	Aerotech	Tom A Hawk	F40	
Davis	Glenn	Scratch	Bull Pup	F24	
deBay	Mike	Scratch	Dart	"C6,C6"	
deBay	Mike	Aerotech	Aerreux	F40	
deBay	Mike	Scratch	Tristar	B6	
deBay	Mike	Scratch	Razor	C5	
deBay	Mike	Scratch	Shorty	G80	
Dwyer	Thomas	PML	Cirrus	H???	
Dwyer	Tom	Estes	Sandhawk	D12	
Dwyer	Tom	Estes	Sandhawk	D12	
Galysh	Ivan	PML	Black Brant	J270	
Galysh	Ivan	PML	Phobos	H70	rattworks
Gilliand	Kathy	Binder	2 the stars	K450	BMW whiteload
Gilliand/Hier	Kathy/Maggy	Estes	Alpha 3	A8	
Hickok	Richard	Scratch	Harm	D12	



<b>Flyer</b>		<b>Manufacturer</b>	<b>Model</b>	<b>Motors</b>	<b>Result</b>
Hickok	Richard	Scratch	Silver Fox	D21	
Hickok	Richard	Scratch	Vigilante	F23	
Kelly	James	Estes	Skywinder	C6	
Kelly	James	Estes	Skywinder	C6	
Kelly	Kevin	Scratch	M&M	K450	BMW whiteload
MacDonald	Tom	Missle Works	Viper	I285	
MacDonald	Tom	PML	Eclipse	J285	
McGilvray	Neil	Scratch	Bone Daddy	L1500	Sweet Lips Motors
Miller	Russ	Scratch	Black Adder	J400	
Miller	Russ	Scratch	Polish Phoenix	J500	tigertail
Miller	Russ	Scratch	Black Apper	J400	
No	Name	Scratch	Blue Meanie	D12	
Olson	Dave	Aerotech	Initiator	F20	won drag race
Olson	Dave	Estes	Comanche	"D12,C6,C6"	
Olson	Dave	PML	Xcalibur	H135	
Olson	Dave	Aerotech	Mirage	G80	
O'Sullivan	Jerry	Scratch	Nike Smoke	L750	
O'Sullivan	Jerry	Scratch	static test	H120	
Parker	Wayne	Scratch	Thor	G64	
Parker	Wayne	Aerotech	Mustang	F25	
Ruzzi	Joe	Scratch	Aero-Dart	F20	
Ruzzi	Joe	Scratch	Arcon Hi	"C6,C6"	
Ruzzi	Michael	Scratch	Groove Tube	F20	
Ruzzi	Michael	Estes	Storm Caster	D12	
Ruzzi	Sara	Scratch	Upscale Sprint	F20	
Schuler	Karl	Scratch	Grenade	C6	
Schuler	Karl	Launch Pad	Rim-67A	"D12,D12,D12,D12"	
Schuler	Karl	Estes	Black Brant 2	D12	
Schuler	Karl	Aerotech	Strong Arm	G35	
Schuler	Scott	Scratch	Bee Sting	C6	
Schumacher	Fred	Yo-Yo	Overkill 4	K500	"BMW WL
Schworer	Bill	Scratch	Orange	M1350	*Cert 3*
Sechrist	George	Aerotech	Initiator	F20	lost drag race
Sherman	Lester	Scratch	Freedom	K570	
Sorci	Ross	PML	Black Brant	H128	*Cert 1*
Sorci	Ross	Scratch	Sputnik	E9	
Sorci	Ross	Estes	Echostar	"C6,A8"	
Sorci	Ross	Estes	Helicat	C6	
Sorci	Ross	Scratch	Sputnik	E9	
Sorci	Ross	Estes	Black Brant	C11	
Sorci	Ross	Estes	Sidewinder	C6	
Sorci	Ross	PML	Black Brant	G80	
Sorci	Ross	Estes	Echostar	"C6,C6"	
Sorrentino	Joe	LOC	Aura	F40	
Sorrentino	Joe	True Modeler	Nike Smoke	F24	
Stafford	Dick	Scratch	7.5 Saucer	D??	Micro-hybrid
Stafford	Dick	Scratch	7.5 Saucer	D12	
Stafford	Dick	Scratch	El cheapo Pyramid	G38	nice flight
Stafford	Dick	Scratch	Hat of Death	G35	"hats off, nice flight"
Stafford	Dick	NCR	Big Brute	G80	
Stafford	Dick	Scratch	Vlad the Impaler	G80	
Stafford	Dick	Scratch	7.5 Saucer	D??	Micro-hybrid
Tiger	George	Aerotech	Initiator	G64	
Utley	Bob	Newton 3rd	Shotty	F25	
Utley	Bob	Newton 3rd	Shotty	F50	
Utley	Bob	Scratch	Sandhawk	K500	"BMW WL,
Weber	David	Weber Eng.	Tuber	H128	flight #149
Weber	David	NCR	Black Hole Betty	H128	
Weber	David	Weber Eng.	Tuber	H100	Flight #150
Weber/Taylor	David/Jeff	Weber Eng.	Sticker Shock	I300	
Zupnyk	Larry	Scratch	EZI-Super	J375	



A	2	5
B	4	20
C	22	220
D	19	380
E	4	160
F	21	1680
G	18	2880
H	14	4480
I	6	3840
J	8	10240
K	8	20480
L	3	15360
M	1	10240
N	0	0
O	0	0
P	0	0

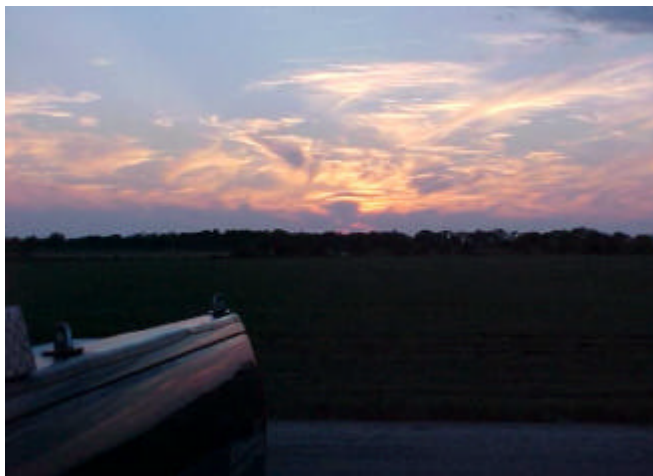
130      TOTAL MOTORS    69985      NEWTON/SECONDS



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Kevin, Fred, and Jerry.

Alien	0
Atlantic	0
Aerotech	12
Apogee	0
Binder	1
BSD	0
Centuri	0
Cluster R	0
Custom Rockets	0
Dynacom	0
Edmonds	1
Estes	24
Giant Leap	0
Hawk Mountain	0
High Flight Tech	0
Hobby Lab	0
Impulse Aero	0
JD Cluster	0
LOC	6
Launch Pad	3
Missile Works	1
MSH	0
NCR	2
Newton 3rd	2
Neubauer	0
PML	8
Pratt Hobbies	0
Public Enemy	0
Quest	0
Rocketman	0
Rocket R&D	0
Rocket Teck	0
Rogue Aero	0
Rocket Vision	0
TCB	0
Thoy	0
True Modeler	1
Scratch	60
Shrox	1
Smokin Rockets	0
V.B.	0
Unknown	0
US Rockets	0
Vertical Concepts	0
Weber Eng.	4
Yo-Yo Dyne	2

128 TOTAL ROCKETS



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# July 2003

## Rocket Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday																																																	
<table border="1"> <caption>June</caption> <thead> <tr> <th>S</th> <th>M</th> <th>T</th> <th>W</th> <th>T</th> <th>F</th> <th>S</th> </tr> </thead> <tbody> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr> <tr><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td></tr> <tr><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td></tr> <tr><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td></tr> <tr><td>29</td><td>30</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>		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						1	2	3	4 Independence Day	5							
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13 MDRA Sod Farm Launch	14	15	16	17 LDRS 22 Ar- gonia, Kansas	18 LDRS 22 Ar- gonia, Kansas	19 LDRS 22 Ar- gonia, Kansas																																																	
20 LDRS 22 Ar- gonia, Kansas	21 LDRS 22 Ar- gonia, Kansas	22 LDRS 22 Ar- gonia, Kansas	23	24 MDRA Club Meeting	25	26 Whitaker Sport Launch																																																	
27 Whitakers EX Launch	28	29	30	31	<table border="1"> <caption>August</caption> <thead> <tr> <th>S</th> <th>M</th> <th>T</th> <th>W</th> <th>T</th> <th>F</th> <th>S</th> </tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td><td></td><td>1</td><td>2</td></tr> <tr><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> <tr><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td></tr> <tr><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td></tr> <tr><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>		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						
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# August 2003

## Rocket Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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3	4	5	6	7	8	9 MDRA Sod Farm Launch
10 MDRA Sod Farm Launch	11	12	13	14	15	16
17	18	19	20	21 MDRA Club Meeting	22	23 Whitakers Sport Launch
24 Whitakers EX Launch	25	26	27	28	29	30
31						

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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

## Last Page Funny



One of MDRA members sent this in, thanks.....

***No one is exempt from this page, we are starting at the top and working our way to the bottom of the barrel.***