



Dallas Area Rocket Society ("DARS")

Remembering a Rocketeer—Brian Boyd

By James Gartrell



Member - National Association of Rocketry ("NAR").

Special points of interest:

- Stuart Powley fills us in on the Semroc SLS Laser X. He brought it to a recent meeting. The interchangeable motor mount set-up is fantastic. Turn the page.
- The Center of Pressure is my recap of DARS President Don Magness' achievements, page 4.
- Page 5 is a follow-up from the last issue. How did the Bucky Jones—Space Cadet fly? Check it out.
- Two rocketeers certifying together on both Level 1 and Level 2 flights. Pretty cool. Find out more on page 6.
- More from Doug Sams' book of marvels. Find out what I'm talking about on page 8.
- Another "blast from the past" with an old article from former DARS President, John Dyer. Way cool!

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Don Magness and Royce Frankum prepare the auction table as DARS members gather around. Photo by James Gartrell.



After the October meeting DARS members gathered together to bid on the rocketry items donated to the club by the parents of former DARS member Brian Boyd who recently passed away. Terri Magness wrote, "Brian was a DARS member back in the golden days when we could fly G's out at Allen and our membership had swollen to around 500. I did not have a chance to meet him, he left the club in 2002, but I understand that he was a great guy. A little on the quiet side, he favored H & I flights. He certified level 1 with us in 1999 at Windom, Robert Turner signed his papers. Don had a chance to spend a little time with his Mom last Sunday. She told him that Brian held the club and its members very close to his heart. It seems that even toward the end,

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The Semroc SLS Laser X

By J. Stuart Powley

The original Laser X was released by Centuri in 1968. It quickly became one of their most popular kits, and remained in the catalog until 1981. The kit offered futuristic styling that still holds up to the test of time. Some people say they like it's cousin, the Estes Mars Snooper, better, but I personally think the sharp angles and no nonsense lines of the Laser X are much nicer and better executed.

Semroc Astronautics Corporation released the Laser X as one of its "Retro-Repro" kits. These kits are basically built the way that rocket companies would build them today. They look the same as the originals, but they use modern techniques and materials. The kit was followed by the "SLS" (Semroc Large Scale) version, which is a 175% upscale of the original kit. It's a decent sized model (2.34" diameter and 38.3" long) without being so huge you need an extra vehicle to carry it. I've always liked the Laser X, although I never owned one as a kid. Now I had the opportunity to not only build the kit, but to build it better, faster, and stronger....

I finally got up the nerve to order my model a few months ago. The SLS Laser X has a unique feature that allows you to switch out motor mounts. In addition to the standard 29mm mount, they sell optional 2X24mm mounts and 4X18mm mounts. These mounts give the flyer the flexibility that few other models can offer. I went ahead and purchased the additional mounts because they are actually a really good



bargain. Actually, the kit, plus the additional mounts was much cheaper than even relatively small, basic upscales from other companies.

I didn't have to wait long for the kit to ship. I got an e-mail stating that it had shipped the very next morning. I got it a couple of days later. Semroc is certainly among the best when it comes to customer service. They also put great quality and engineering into their kits. The kit and motor mounts arrived in a white box that protected the parts quite well. The parts were all top of the line. There was a slight groove to the bottom body tube, but certainly no more than any other company would have. The basswood for the fins and mounts was very dense and was easy to sand and shape, without the danger of being easily dinged. The nose cone and transition were lightweight and true in shape. The nylon chute was wonderfully made, and will probably offer many great flights. For the first few days, I was perfectly happy to just go through the parts over and over.

Still, this bird needed to be built, and so I started. There is a lot of basswood in this model, since there are eight fins with leading tabs on each. There are also the "cooling vanes" on the motor mounts, and the mounts themselves. I wasn't really looking forward to sealing all of that wood, but as it turns out the wood was great to work with, and only took a couple of coats of Fill N Finish to be ready for paint. After building the fins, they are set aside to dry while going on to the next step.

One of the nice features of this model is that it has an ejection baffle. The baffle is a basswood disc, with holes around the edge. A coupler is glued to the bottom of the mount, and the Kevlar shock cord (another nice feature) is threaded through the top.

The main fins are attached using the through the wall method. The instructions say that they will fit tightly so that they will keep the fins aligned



well. I had to sand the tabs a bit before they would fit, mainly because I had sealed them before putting them on the model, and the Fill N Finish had to be removed from the tabs. I used epoxy on both the upper and lower fins, and then used Tightbond for fillets. The slots in the body tube held the fins very straight, and I didn't even need to adjust them after I inserted them. The ejection baffle is glued inside the body tube, on top of the fin tabs. The top fins



are applied like standard fins (no through the wall construction). After adding the launch lugs, the model was pretty much built, except for the motor mounts.

The engine mounts are pictures of good

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engineering. They all use a tab and slot method so that there is a minimum of actual measuring that needs to be done.



It is important to note, however, that each mount goes together a little differently than the others. These mounts were probably the most challenging aspect of the actual build, not because they didn't go together well, but because you have to really pay attention and actually read the instructions while building them. When you are done you have three mounts that are easy to switch out by simply twisting them a quarter turn. These mounts give you three rockets for the price of one, so I really recommend investing in them.

After applying Fill N Finish to all exposed wood that didn't already have it, it was time to paint. I used Krylon H2O primer and paints throughout. I'm allergic to normal spray paint, so this is a must. Fortunately, Krylon has come out with an ever increasing array of colors, so I can pretty much find whatever shade I need. Unfortunately, these paints also have a couple of quirks. First of all, they tend to run much easier than their solvent laden cousins. Secondly, the nozzles tend to clog very easily. For some reason, gloss



white is the worst on both of these counts. I had to sand down and repaint sections several times due to runs and splatters from clogged cans. There is a lot of masking on this model due to the three color paint scheme, and the H2O paints tend to get under tape much easier than typical paint. All in all, it was a struggle, but with pretty good results after all the blood, sweat and tears.

I didn't quite paint my Laser X like the illustrations that came with it. I looked up Centuri catalogs and found that there are at least three different paint schemes included there. I simply took what I liked from each one and split the difference. My model has three red fins and one white, instead of Semroc's recommended two red and two white. Also I painted the nose cone black instead of red, since I couldn't find any vintage illustrations showing a red cone. I painted the engine mount cooling vanes white, with black edges like they are shown in the earlier Centuri catalogs. It was more "authentic," and also far easier than the red vanes shown in the Semroc

pictures. There really aren't any good examples for decal placement from Centuri or Semroc, so I placed the ones I could locate in the old catalogs where they were shown, and guessed on a couple I couldn't find. I had three left over, two "center of pressure, center of gravity dots" and a NASA "worm logo." I felt the logo was too modern for the kit, and would have much rather seen the vintage (and once again current) "meatball logo." After hitting everything with low fume gloss clear, it was officially done.



All in all, I think this was one of my favorite kits to build. The parts are all first quality and went together very well. The instructions were informative, clearly illustrated, and presented in a logical order. The optional motor mounts add quite a bit of value to a kit that already has quite a bit. The final product is a strong midpower model that will fly on just about any class motor. It's also a model that you can really be proud of. Semroc really outdid themselves with this kit.

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when his problems kept him from the hobby, he spoke of DARS as a source of joy in his life.” I didn’t have the opportunity to meet Brian either, but judging from the donated items it looked like he definitely had a lot of fun flying rockets. I think he would be pleased to know that he left a small legacy for future rocketeers.

When Don picked up the donated items, he was unsure what to do with them. He contacted several members to see what they thought he should do with them, and the decision was to sell them at auction and set up a fund in Brian’s honor that would benefit young rocketeers. So, a date was set for the auction. Royce Frankum was our auctioneer, and I don’t think we could have hired a better one. He was fantastic! He really made it a fun event. Barking out the bids in rapid fire motion sort of came naturally for Royce, and he often cajoled bidders into raising up the bid if the price wasn’t up to par for the auctioned item and even over-bid on a couple of items just because it was for a good cause. Regardless, bidders mostly received some really nice items for a very fair price. Thanks to everyone who participated in the auction.

The auction netted over \$200 that has been set aside as an educational fund to assist youth, such as the TARC program. Besides the funds accumulated from the items auctioned off, there were some HP motor casings and motors that are also available for L1 certifications, with a nominal fee that is designed to keep the motors replenished.

If you knew Brian, contact his parents. I’m sure they’d enjoy hearing some of the rocketry stories you could share. If you didn’t know Brian, say a prayer for his family. Hopefully, knowing that Brian has left a legacy to assist young rocketeers will help the family overcome the loss they must feel.

The Center of Pressure

By James Gartrell

With the elections coming up, I thought it might be a good time to highlight some of what our current president has been doing. He’s up for re-election this December, and if you like what Don’s been doing you need to come to the meeting and vote.

It seems like more than a year since Don Magness was voted in as President of DARS. Don’s done a lot since then. Under his leadership, we added three new fields, hosted NSL 2006, revamped the club website to make it more attractive and user friendly, put the newsletter online (including all back issues since I’ve been the editor), put the club’s bylaws and rules online so everyone knows what our rules are, and probably most importantly of all, the membership is growing again. There are other subtle changes that are the result of Don’s leadership, too. Have you noticed how many side events we’ve had at each launch, like the DARS Classic Kit contest, the Iron Rocketeer contest, etc? Don has really pushed to have something exciting and memorable going on at each launch in addition to our regular launch activities. Don’s a true “mover and shaker.”

Like any mover and shaker I’m sure Don has ruffled a few feathers getting things done. Nevertheless, I think if anyone looks objectively at what Don’s accomplished, a few ruffled feathers are worth the price. The club members seem to be more energized and purposeful, launches are attended with larger numbers, and most of all, folks seem to be having more fun. Even Blake, my grandson, has noticed the difference. He commented at the last launch we attended at how much the club is like it was when we first joined. I certainly have noticed it. The BATFE took its toll on the club, and doing things the way we’ve always done them wasn’t working. We were



losing members. The “magic” just wasn’t there any more. Don has restored that magic to the club, and he’s done it while working and managing his rocket business, Squirrel-Works Model Rockets. Regardless of how the votes go, Don has certainly earned my respect. Everything he’s done as president has been for the benefit of the club and its members. In my opinion, a vote for Don is a positive vote for the future of this club.

Regardless of how you might feel, I encourage you to come to the December club meeting and vote. Your vote is also important to the future of the club. The officers will determine the direction the club is heading, but you determine who those officers will be. Make it a priority and come and vote!

Flying the Bucky Jones—Space Cadet

By James Gartrell

Well, last issue I provided the build of my latest rocket, Bucky Jones Space Cadet (“Bucky”) from Pemberton Technologies. As promised, I can now report on the flight.

Blake and I got up early on Saturday morning to head out from Cleburne to Windom for NTHP. It was windy. On the way up we debated about whether I should fly Bucky. I was worried that the larger fins might cause the rocket to weather-cock significantly in the higher wind. Considering this would be my first flight on a motor bigger than an E, I didn’t want it to be catastrophic. On the way, I got a call from Royce who was planning to meet us out there to fly. Royce was going to oversee my first reload motor. Not having flown one of those before and considering the number of folks who tend to have problems with them, I didn’t want to burn up Bucky on his first flight. Unfortunately, Royce had to work and couldn’t make it. I was thinking I had better wait until the next launch before putting up the rocket for its maiden flight.

When we arrived at the field it

seemed even windier than it was as we were driving up. Don and Terri let us tent with them, as Blake and I had originally planned on tenting with Royce. We got the rockets out and displayed them in the back of the truck and then just hung out to see how the flying went. Surprisingly, there were a considerable number of flights, and the wind didn’t seem to be that big of a factor. There were a few flights that weather-cocked pretty significantly, but most seemed to be flying OK. Several folks came by and stopped to check out Bucky. It’s a very impressive rocket, but needed a good flight before commanding any measure of respect.

I had noticed several motors flying on the new single use Roadrunner motors and since Bob Korman was there selling motors, I thought I’d go by and talk to him about his motors. Doug Sams was there. I’m not sure, but I think he was testing some new motors Bob may be releasing soon. Anyway, I asked Bob what motor he might have that would be comparable to either the Aerotech F-52 or G-64.

He thought his F-60 should compare favorably, and Doug agreed. I decided to pick up two of them, one with the 5-second delay and another with a 7-second delay. OK, maybe I should risk the bad karma and try one of these babies out. I showed the motors to Blake. He said, “You need to fly it, Grandpa! I’ll bet it’ll do fine.”

Well, that cinched it. I loaded up the motor with the 5-second delay and Blake and I headed out to the pads. With all the range duty as Pad Manager over the years, I didn’t have any problems with the pads. The biggest issue was finding something to keep Bucky further up on the pad. Those long fins hung way down. I found a corn cob on the ground that was long enough to serve as a good standoff and we were ready for launch. Blake got a couple of pictures of me with the rocket and then we went back to wait for the countdown. I was nervous. 5-4-3-2-1 Launch! Bucky took off with authority and a beautiful, almost straight up flight. Ejection was just before apogee. Wow! Touchdown was perfect. Great rocket, great motor, and it was a great day after all!

Bucky Jones-Space Cadet, on the pad, in the air and on the ground. Sweet! Photos by James and Blake Gartrell.



Certifying with Style

By James Gartrell

I have promised Royce Frankum and Don Magness for some time now that I would do this story. Finally, I got it finished. While the events may be a little stale now, the accomplishment is no less spectacular.

The story starts back a few months before Shoot for the Stars 2004. Royce had approached me to let me know that he and Don had decided to attempt their Level 1 certification at that event. Royce wanted me to join them. Unfortunately, the company I worked for was being sold and I was tied up in making the transition to the new company. I told Royce I'd try to catch up with them when they got ready to do their Level 2. Royce tried to change my mind, but it just wasn't to be.

They both brought their rockets up to August club meeting in advance of the launch. Man, those were some nice looking rockets. Both were perfect for a Level 1 flight, not so big that they would only make a nominal flight, but not small either. They were really proud, but with the launch about two months away, their nerves

were starting to show a little, too. Not that they were really worried about their rockets, it's just a big event for a rocketeer. Sadly, I couldn't even make the launch. I really hated missing it, too, as both Royce and Don successfully completed their L1 certification. I didn't get to celebrate then with them, but I certainly was proud of their achievement. Royce called me that evening to let me know how things went. He said they were planning to go for their Level 2 certification at next year's Shoot for the Stars. Next year, I thought. I'll be ready to go with them. I told Royce I would be ready to go. Unfortunately, things didn't work out that way and I was still too busy to get a rocket together. Don had been pretty busy, too, and wasn't sure he was going to make it either. Royce was having none of that, though. He stayed after Don and when October 2005 rolled around, they were ready to fly, and this time I was going to be there.

Day 1 of Shoot for the Stars 2005 started out sort of lazily with not much flying, so Don and Royce decided to put up their L2 cert flights.

Royce had brought several radios to use tracking the rockets, so I picked up one, Don had one, and Blake and Jarrod, Royce's son, each had one. After Royce and Don posed for a couple of pre-launch photos, Blake and Jarrod went out onto opposite sides of the field and I went out to the

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Bottom left—Don's L1 rocket at the 8/04 meeting. Bottom middle—Royce's L1 rocket at the 8/04 meeting, posed with Jarrod's upscale Patriot. Photos by James Gartrell. Bottom right—Don and Royce's L1 cert flights on the pad. Above right—Royce's L1 cert flight, getting' high! Photos by Royce Frankum.

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pad with Royce to help him get his rocket set up and take some pics. After sliding the rocket onto the rail, Royce angled it slightly to shorten the walk, then, posed for a couple of photos. After that, I walked straight out into the field about 400-500 feet while Royce walked back to the range head. Blake, Jarrod and I chatted briefly as we waited nervously for the rockets to take off. Royce's rocket took off first. It leapt from the pad and flew straight up to about 3,000 feet, popping the parachute perfectly at apogee and drifting down almost straight back onto the pad. A perfect L2 flight! While Royce was nervously watching his rocket return, Don's rocket zoomed straight up off the pad and arced over at about 4,000 feet and popped the chute almost straight up from where I was standing. The rocket seemed to just hang in the sky for the longest time. Once the rocket dropped to an altitude that allowed me to walk and keep my eye on the rocket, I started walking towards a

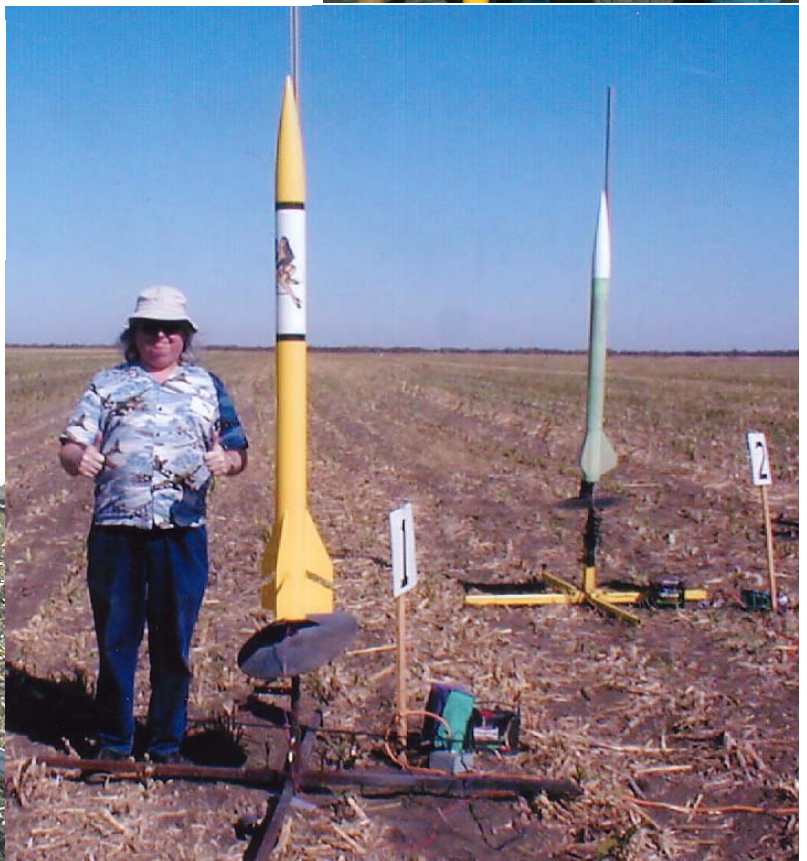
projected landing point. As I was walking towards the rocket, Royce announced that his rocket had landed. Boy, was he excited! It was a perfect flight. Don's rocket landed a little over a quarter mile straight away from the launch pad, lightly touching down in some soft dirt and just laid over. Another perfect flight! I got to the rocket first and the boys showed up right behind me. I'm not sure who was more excited, me or the boys. "Congratulations," I radioed to Don, "it's in perfect shape!" "Alright!", he replied back almost nonchalantly. I don't think he expected anything different. I told him I would leave it as it landed but roll up the parachute after taking a photo, but I couldn't resist smooching his decal. (Tee Hee! Those who have seen Don's rocket know what I mean ;-). Both guys made Level 2 look like a piece of cake. Their flights were picture perfect! To me, their flights were just confirmation of skills they had long ago developed and proven many times before, just done so at a

different level. When we returned to the range, Suzy Sprague proudly put L2 stickers on their launch badges. No time was left for reveling in achievements, though. Our time was due for assistance on the range. It was noon.

Being able to complete your L1 cert flight with a buddy is pretty special, but getting both your L1 and L2 cert flights together is just certifying with style. Way to go guys! Hopefully, I'll catch up with you soon.



Bottom left—Royce loads his L2 cert flight onto the pad. Bottom right—Don has two thumbs up as his L2 cert flight is loaded and ready to fly. Royce's rocket is ready to go, too. Top right—Royce has a big L2 grin as Don packs up his rocket after a successful L2 flight. Good thing there weren't any clouds out there. I'd never gotten those two off of them. Photos by James Gartrell



Li'l Dougie By Doug Sams

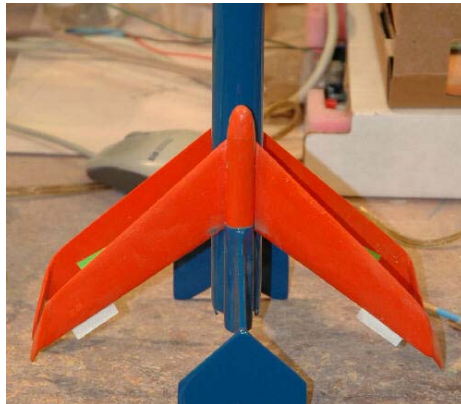
Ever since I received the 1970 Estes catalog, I've been inspired by the Orbital Transport on the cover. I wanted to scratchbuild something functionally similar, but have a powered glider to be staged from the booster.

Not long after I got back in the hobby in 1999, I started tinkering with the idea again. And when I saw the Li'l Beth X-2, I got further inspiration.

Here's the outcome.



Here's a closer look. Two Holverson Zoomie gliders are deployed at staging. A10-0T boosters will be lit on the pad and stage to the Zoomies, likely powered with 1/4A motors, but any T motor can be used.



The Post-It Note ailerons are key to getting these things trimmed. Having the help of a world class glider guru doesn't hurt either :)

From the side, notice how the outboard booster tubes are offset from the airframe to allow space for the Zoomie's launch lug and wing thickness.



4 ounce glass was added to reinforce the span from the main body tube, across the outboard booster tubes, to the outboard fins. This little bit of glass added an incredible amount of stiffness to the flimsy span.



The center motor is 18mm while the outboards are 13mm. Not sure what delays to use for the center motor, but an A8-3 will likely power the first flight. Wire hooks are affixed to the center motor mount to which a burn string will be attached.

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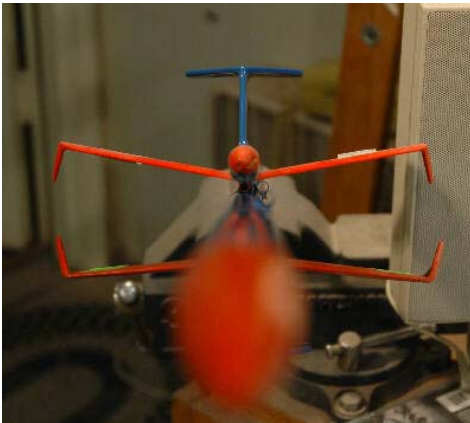


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The back end is a little fuzzy in this shot, but the rocket looks pretty kewl head on.



Here's another head on with the back end in better focus.



Here are some side views. It looks sleek and clean. Can't wait to fly it. If we can just get the weather to cooperate...

Doug - Feb 4, 2006

Slowly from a Coreburner

By John Dyer

(Here's another blast from the past. I retrieved this article from Stuart Powley's Dallas Rocketry archives. This is from the November, 1988 issue, when John Dyer was the President of DARS. There is some interesting stuff in here that provides an opportunity to connect with some of what was going on with club members back then. John Dyer, Ben Jackson and Martin Katt are still DARS members. Ask them about the details. It should be fun. Bulletin Boards, Teflon Rockets, PHOTON, yeah! What's up with that? Editor ;-)

By the end of December, our Bulletin Board service will be through with its testing phase. If you have any suggestions for changes please make them by then. The board is for exclusive use of DARS members I would like to thank our official SYSOP Martin J. Lollar for his time and effort in this project. By the way, any DARS member who has not signed on by DEC. 31st will have to go through an official sign-on procedure, so save yourself a hassle, and sign on now. Contact any of the DARS executives for details.

DARS has planned a Section contest for November 19 - 20, 1988. Look elsewhere in this issue for the list of events.

Discussions about hosting NARAM in 1990 are underway.

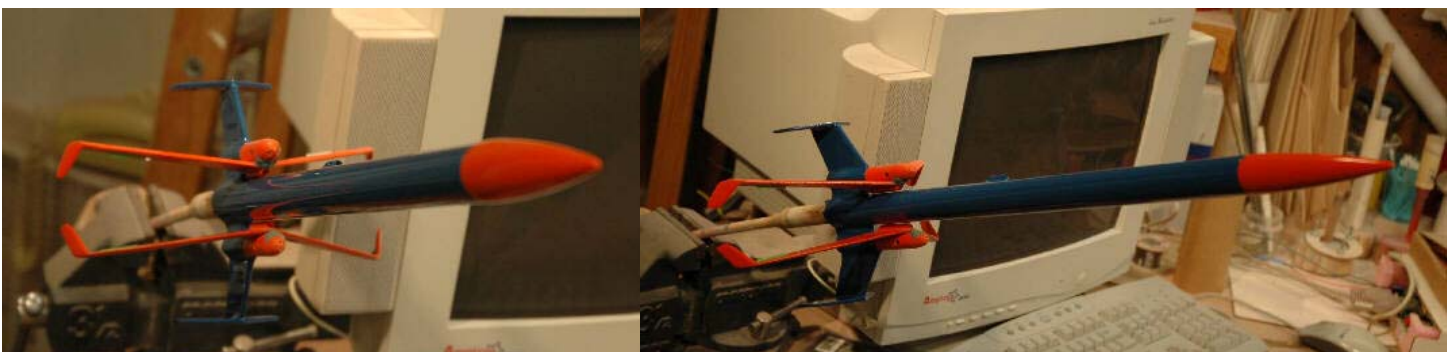
Martin Catt has volunteered (been hornswaggled) into being the C.D. We are currently looking for a flying site, and hotel/motel accommodations.

I would like to welcome the latest members to DARS. Ariston, Arthur, and Daniel Kendrick joined October 9th. They first met DARS at the CARS (Editor's note: CARS was the Carrollton Area Rocket Society) Boy Scouts Demo in McKinney on October 1st. Daniel should bring some interesting ideas to the club (ask him about a Teflon Rocket he and Ben Jackson are working on).

Martin Catt recently busted a wing (paw?) playing PHOTON. Normally the game isn't dangerous but Martin forgot to look down while storming the enemy base. Enemy 1: Martin 0.

Speaking of PHOTON, there seems to be some interest in playing a team game against willing members of CARS. No, our NAR insurance will NOT cover accidents on the PHOTON game field, but it might be interesting. I will contact everyone by phone to try to get things set up.

That's all for now.



DARS Events By James Gartrell

Well, the year is almost up. Besides the Christmas party and maybe a model rocket launch, there's not much going on the rest of the year. So, check the website for the latest. The Christmas party is fantastic and I know everyone would like to see a lot of folks come out for that. Make your plans now.

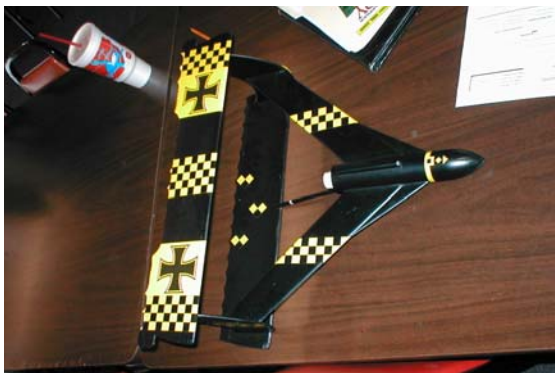
Also, the most important meeting of the year is upon us. If you make any meeting, the December meeting is the one to make. Club officers will be elected, so come out and let your voice be heard.

Since there aren't a lot of events to talk about, I thought I'd use the space for some pics I took at the past September meeting. Enjoy!

Stay in touch!

Below—Jack Sprague's nicely built and finished Squirrel-Works Red Baron model trimmed in monocoque. Sweet!

Right—Someone's Cola Wars rocket sitting next to a cola. Wonder which one's going to fly? :-)



Bottom left—Randy McDonald with his AMRAAM. Nicely done!

Bottom right—I think the rocket is Jack's dozen-egg egglofter. Regardless, it's one sweet rocket.



Below—Two ads from premier model rocket companies, both members of DARS. I haven't been to a club meeting where they didn't have some of their kits available. Plus they usually bring in finished models of their latest issues. No company supports DARS activities like they do. Want that support to keep coming, buy some of their kits! You'll be glad you did. They both have some fantastic rockets!

Below—Some of John Dyer's rockets he has for sale, plus what looks like the Hawks Hobby Cherokee 3-D and maybe holding a nicely done Squirrel-Works JX-1. His latest model is the one with the yellow bottom, Scorch. Photo by James Gartrell.





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DID YOU KNOW?

There's a nice rocketry news site out there you should check out if you haven't been there before, the Rocketry Planet. www.rocketryplanet.com

Have you seen the new rockets from Semroc. Carl has released some really nice classics recently, bringing out the 1/70th scale Saturn 1B to complement the Apollo Capsule he released not long ago, a companion 1/70th scale Little Joe II, and the very nice Centuri Taurus. Very nice!

Don't forget our local vendors, Squirrel-Works and Red River, who both have released some really nice kits recently, too. The Stratos is a beautiful rocket from Red River, and Don's newest release, the Dragonfire, is a fantastic D-powered model that is another work of art. Check 'em out. You'll be glad you did.

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Vice President	Royce Frankum
Treasurer	Suzy Sprague
Secretary	Terri Magness
NAR Senior Advisor	Annie Scheidemantle

DARS

The Dallas Area Rocket Society is a non-profit chartered section of the National Association of Rocketry ("NAR"). Its purpose is to promote the hobby of consumer rocketry in the Dallas/Ft. Worth metropolitan area.

Membership in DARS is open to all interested persons. Membership in NAR is encouraged, but not required. Annual dues are \$10.00 for individuals and \$15.00 for families. The entire family, including children, are welcomed to the meetings. Go to the website and fill out and send an application to join or renew your membership.

The club normally meets on the first Saturday of each month at 1:00 p.m.

Meetings are held in Plano, TX at:

Plano Late Night Bingo
 1805 Ave K (18th and K St.)
 Plano, TX 75074

Exit off Hwy 75 to East Plano Parkway (just north of George Bush Turnpike—Hwy 190) and go east, turn left on K St., and turn right into the shopping center just north of 18th St.



Stay connected! All of us will reach greater heights with your attendance at the club meetings.

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Dallas Area Rocket Society (“DARS”)

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SHROUDLINES

A Dallas Area Rocket Society Production