



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

Special points of interest:

- "Ignition!" Ah, Texas in the summer. What could be better?
- Scott Cook shares his adventures with his really, really, really big Red Max
- Stuart Powley gives details on his Klingon Battle Cruiser build.
- Rocket Pics!!!

Ignition!

By J. Stuart Powley



Gary Briggs' DynaStar Snarky eats up the sky at the DARS June launch in Frisco.
Powley Photo

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Here we are once again in the blazing grasp of another Texas summer. Actually, it could be worse because we haven't had those week-long century plus spells yet. Still, they are probably coming soon, so on the launch field remember to bring your water, sun-screen, sun glasses, and a hat! In Texas its not just a good idea, its survival!

Speaking of launches, we had a good one in June that I caught, Yes, it was hotter than blue blazes, but the crowd was enthused and the rockets were screaming. The picture of Gary's Snarky came from that launch, and there are some more inside (plus some from other launches, too). It was good to see a heavy turn out, despite the heat. I saw people from at least as far away as Sherman (hi, Ted!) and all points in between. I must say I'm looking forward to July's launch quite a bit!

In this issue we have (in addition to the before mentioned pictures) an article by "Modular Man" Scott Cook on his famous HUGE Der Red Max. He looks at the pros and cons of building such a beast, and tells us exactly how to do it! He sent me tons of pictures to illustrate the piece, and I've tried to include the best ones here.

Also in this issue we have my adventures in building an Ebay bargain Klingon Battle Cruiser that took a bit more work than I thought. Let's just say that it can be hard to see those little pictures on Ebay. Still, it came with a surprise bonus, so it all worked out in the end.

So, grab your sunscreen, fill up the canteen, and put on your shades and hat cause here we go!

Building a Bigger “Der Red Max”

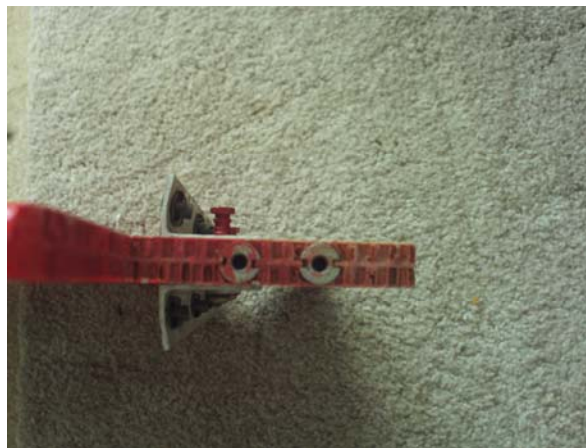
By Scott Cook

The idea for the upscale Red Max began in the early 70's, when I was just a young kid having fun flying model rockets. I had several models that flew regularly, and one was the Red Max. I had enjoyed the silly instruction manual along with the skull and funny decals to apply. When DARS got me hooked in rocketry again, building the ones I liked then for high power helped to keep the memories I had 35 years ago.

Most members in the club have seen my upscale Nike Ajax. I got my L1 and it flew many times at club events. At Airfest 13 the ejection charge failed and its 30th flight was its last. When I got home from that trip I saw an ad for the Red Max, it was being made again. It sparked those memories of my youth and started to turn the gears in my head for a new project. In a single thought, the size went from 4, 6 to 10 inch diameter. I'm going to build it big. Now finding the right material and still stay in a budget was the task.

I bought a current Red Max and scaled it up with Rocksim. The size of the fins became massive and the method of construction would have to be something totally different from anything I had built in the past. This would have to be modular for anything less than a big truck to transport. For the first 2 months I designed, redesigned and redesigned some more trying to make a fin system work. The body and nosecone didn't require much planning; the core of this build had to be the fins. All parts and attachments of this build had to simulate a conventional build.

Starting with the motor tube, it had to support the fin root attachment. I took a standard 4" paper tube and applied 2 wraps of 10oz fiberglass. Attached tabs to sandwich the fin root and secured with 3 bolts. The fins, being as large as they were, would be very heavy in plywood or G10. The search for lighter fiberglass honeycomb began. I continued to fabricate other components while waiting for fin supplies. The lower airframe also had to become a structural part. I glassed the inside of tube in the fin area with more 10 oz . A 5ft balloon was used to compress the glass on the inside. Centering rings were made from aluminum honeycomb as were the bulkheads of the coupler.



Fin detail showing honeycomb construction

After about 6 weeks ¼" honeycomb for the fins was acquired and construction began. I laminated 2 sheets of honeycomb to make the ½" thick fins. Weight savings was tremendous, finished set was only 7 pounds. The redesign continued to change on the fin attach points as parts were fitted.

The final result was to bolt the rings to the top and bottom of the fin edge 2 places each. Attached aluminum angles started out as a T extrusion. One short side was



Fin attachment detail with rings

cut off, the other side was bent to match tube radius. A pair was loosely secured to fin, one on each side. The aluminum was slotted 3/16" to allow the angles clearance for the body and to be drawn tight to the body when secured. This simulated fins glued to body with fillets. The body was slotted so the tube would slide over the assembled fin section.

The centering rings honeycomb was cut along the edge and filled with epoxy. This gave a solid edge for threaded inserts to be installed. With the fin can assembled and the body lowered into place I drilled 3 holes between each fin to the rings. The body was then re-

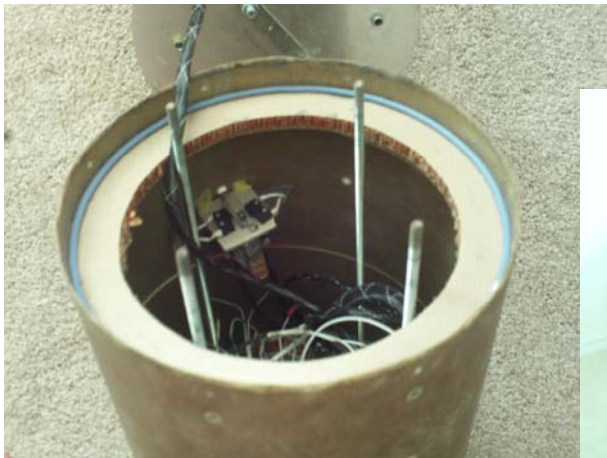
moved and the pilot holes drilled up for inserts.

The electronics for the rocket were taken from another project that used a sled to fit over an all thread. The wiring was done to have 2 charges each for dual de-

with a min. thrust of 1300ns to max. 2400ns. Now is a good time to do a wallet check. The video camera mounted in the lower air-frame prevents a 4 grain motor from being used. Wow, I just saved \$250 without even thinking about it.

the ball when I started, I didn't get the boot.

As with any high power project, big doesn't stop with the rocket. Big means big motor and big means big bucks. With the cost per flight \$300-\$800, it keeps flight time to 2-3 over the life of a rocket. Without a lot of disposable money in tough economy, big projects may be only seen at large regional or national events. I have had the most fun in the L1 range of rocketry because I can fly a project dozens of times. Build to fly and fly often, and as the saying goes the buck stops here.



Coupler with electronics included

ploy. The nosecone used a 2x2 wood core with sheets of Styro-foam laminated. It was then turned on a lathe and fibreglassed. The finished paint is polyurethane with lots of prime and sanding time.



The original sure didn't have a cool video camera set up!

All photos Scott Cook, except as noted.



A honkin-big nose cone!

It took one year to build this from concept to finished product. I was pleased how strong the fins were, and the sheer size of this 6 1/4" upscale turned out. I learned a lot on this build, but I have to say big is very cool but not practical. The wow factor is there when you look at it, but with so much time to make the parts work together with no glue is a major undertaking. Now I can say "been there done that" and I can go

Tango Papa made the great graphics to make this rocket really stand out. The finished project is about 65 lbs on the pad, a full L or 1/2 M motor are the only choice

back to 3", 4" and 6" designs. If you've been thinking of building a big project like this, turnaround bend over and have someone kick you in the butt. Someone dropped



Scott stands proud with his monster Max.

Jorgenson Photo



Hooking her up on the pad.

Fehrenbach Photo

Prepping the beast. The aft end gives a good idea of scale...

Fehrenbach Photo



A close up of the installed motor. Its not going anywhere!

Cook Photo



Left: A video grab from Der Red Max!



She roars to life!!!

Cook Photo

Of Flooded Klingons and Ebay

By J. Stuart Powley
NAR 29573

I have long been a fan of the old Estes Klingon Battle Cruiser. The kit was first released in 1975, along with the Starship Enterprise, and stayed in the Estes catalog until 1979. Both kits were released again in 1993 as "Challenge Series" kits. This time they lasted until 1996 before they were gone forever...or at least for now.

Back when they were first released, I bought and built both the Klingon and Enterprise. In my opinion, the Klingon is the better model due to the fact that it does not require the huge boom on the nose for stability like the Enterprise does. Instead, it has two extra fins on top of the hanger area. The lines are kept reasonably true to the original, which looks really cool in flight!

Both my Klingon and my Enterprise died of more or less natural causes. After a while I began to miss them, so I started planning on building another set (or at least Klingon). Although I have a bagged example of the first release of the Klingon, I really didn't want to open it and build it. Therefore, I began to search Ebay for a model that would be reasonably priced, and that I wouldn't mind busting open and building.

After quite some time I thought I found what I was looking for. For under ten bucks, I purchased a re-

leased kit. The box looked pretty rough in the pictures, but the parts looked like they were all there. I went ahead and plunked down my money.

When it arrived I found that I got more than I bargained for in a couple of ways. First, it was clear that this kit had spent some time under water! I could almost see it floating in somebody's flooded basement. The box, balsa, and BT50 body tube were all moldy and warped, as was some of the card stock. Still, the vacuformed plastic was intact, and that was really the only irreplaceable part.



The battered Battle Cruiser arrives

In addition to finding that I had actually purchased a U-boat, I found that I had a stow away. In the box was a complete, bagged AMT Next Generation Enterprise plastic kit and instructions! That kind of made up for the fact that I was going to have to replace most of the Klingon kit.



The Next Generation Enterprise bonus!

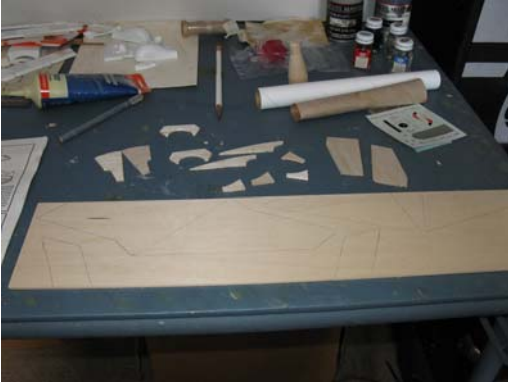
The first thing I needed to do in building my new Battle Cruiser was to see just what I could salvage and what needed to be replaced. I wanted to use as much of the original kit as possible. I found that although much of the balsa was warped, there were a few pieces that I could still use. Also, the BT5 front body tube was fine, and some of the card stock as well.



The good, the bad, and the warped...

Once I had determined what I could use, I started making the

new parts. I used the old warped parts as guides and soon I had replaced all of the water soaked pieces. Now I could focus on the actual building!



The new parts being made.

The Klingon Battle Cruiser is not a straightforward model to build. If you are one who skips reading the instructions, you may regret it in this kit. That being said, if you take your time and actually read how things are supposed to work, the kit goes together fairly well.

Probably one of the more tricky tasks to this model is cutting out and assembling the vacuformed parts. These parts are quite thin and fragile and a slip of the knife or a too tight rubber band clamp can ruin your day. Again, not rushing things is the key.



The vacuformed plastic parts.

The angles on the wings and warp engines are very important. Estes provides a simple, but very effective tool for getting these right, however. The template has a slot on the inside for setting the wing tip angles, and the outside is used to angle the warp drives. All in all, its rather ingenious.



The angle jig really helps get things right!

The model is finished in gray with foil self stick stickers and standard water slide decals. Fortunately, all of these were bagged, so they survived my kit's under sea exploits. The final product is rather striking.



The final product, sans paint and decals.



...and with paint and decals!

I flew her for the first time at the June DARS launch in Frisco. There were some weird winds about a hundred feet up, and it seemed that all of the models that had any kind of wings were having some weird flight characteristics. The Klingon was no exception. She roared off of the pad, and then arced back over the crowd. The chute blew, and she drifted to a perfect landing...in a tree. Fortunately, Bill Gee had his emergency pole with him and he got her down without a scratch (thanks, Bill!)

Therefore, my build was a success. I probably spent a bit more than I would have if the kit hadn't been water logged, and it certainly added some work to the project, but the results are worth it. Now I just may start thinking about that Enterprise...

Pictures and More Pictures!!!
Photos from recent launches



Ted Mauler's Flis Kits Goddard Nell takes flight!
Bill Gee Photo



Stuart Powley's Maxi Pegasus on an E28
Bill Gee Photo



The Klingon Battle Cruiser takes flight!!!

*All photos Powley,
except as noted*



George Sprague beats the heat!!!



Bob Melton poses with his beautiful IB Bill Gee Photo



The IB leaves for a picture perfect flight! Bill Gee Photo



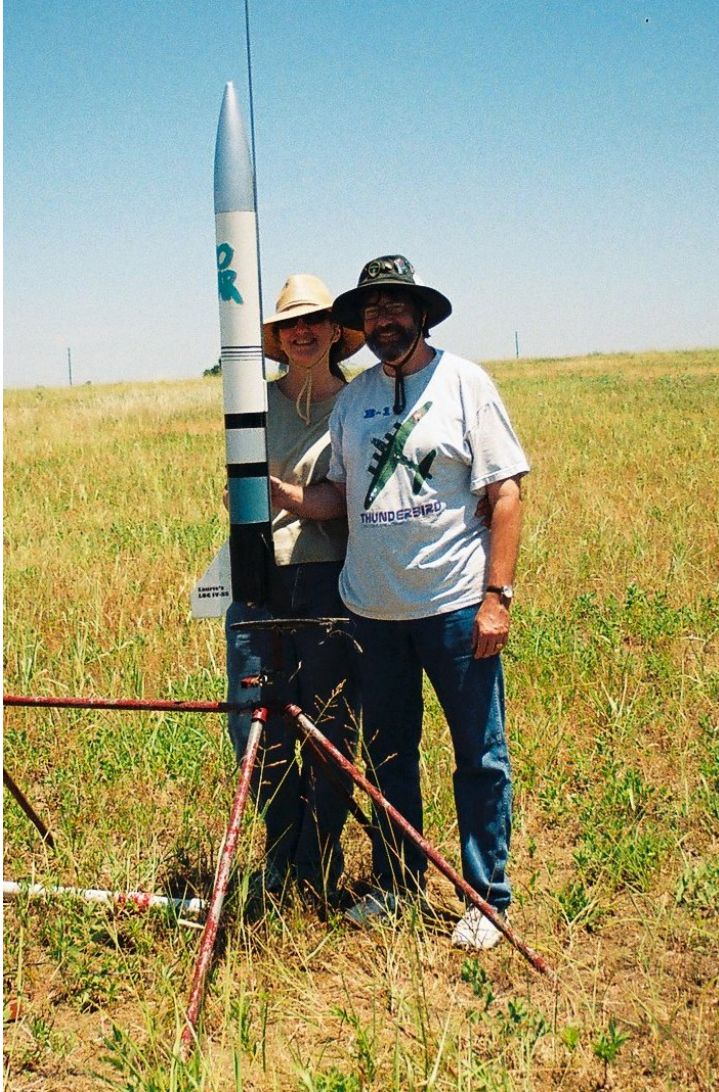
Bill Gee shows the finer points of tree fishing...



Gary Briggs loads up his Wac Corporal



...and lets it fly!!!



It takes flight with a G71!!!

Stu helps Laurie Powley load her first G powered bird!
George Sprague Photo



Jack Sprague holds down the range head!



Sam Barone helps with the technical stuff!

How to Contribute to Shroudlines

And now for the “last page begging part” of our publication. As I have made clear in the past, without you, we have no newsletter. We all have differing interests and areas of expertise, and that is exactly what this newsletter needs!

Once again, I'd like to thank all of those who have contributed material so far. You are very much appreciated! Still, we need more! Therefore, if you have any kind of article, picture, cartoon, rambling, etc., just send it to stu29573@yahoo.com. I usually work best with Word documents, and JPEG files, but I can make just about anything work if I have to. I can also handle stuff that is written down, but that means I have to type and that can be a bit touch and go... But I'll take it anyway!

You can also give me things at the meetings (which I almost never miss...almost), and I promise to try my best not to lose them. I can return stuff at the next meeting if need be.

As I have said many times in the past, I really want this newsletter to be by the club and for the club. You guys can think up much better stuff than I can (as is evidenced by the articles we've been getting lately). So, stop just thinking about maybe writing something and actually do it! You'll be glad you did! (as will everyone who reads it!)



DARS Officers

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Vice President	John Dyer
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Secretary	Bill Gee
NAR Senior Advisor	Sam Barone

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.

Visit the DARS website for the meeting location: www.dars.org



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")

J. Stuart Powley
3501 Christopher Dr.
Rowlett, TX 75088



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