



2009 Officers

By James Gartrell



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

Special points of interest:

- Oops!! **CORRECTION!!** I referred to the bottom left picture on page 9 of the last issue as being my Squirrel Works Dogfight; actually, it was a test flight carrying a couple of new gliders Don was testing that may be included in future "Glider Packs" for the kit. Sorry!
- Scott Cook is in The Center of Pressure. Find out what this fantastic rocketeer and really nice guy has been doing. Page 2.
- Oohh! Stuart Powley has another nice build article, the Semroc Defender. If you want to know how to make this rocket look really nice, check out page 3.
- ARA special press announcement. The Saucer Fleet has arrived! Page 5.
- Lots and lots of new releases from the vendors. Page 6.
- Did You Know has a Thank You card from the NWHS TARC 2008 team. Page 7.

Inside this issue:

The Center of Pressure	2
The Semroc "Defender" - Adventures in Not Following Directions	3
Tidbits From The Editor	5
Breaking Vendor News!	6
Did You Know?	7
DARS Officers	7



Your new President, Royce Frankum (he's the one in the foreground to the left of the rocket), at the February, 2008 DARS monthly meeting discusses a rocket with Mike McFadden, as various club members in the background catch up on each other's activities. I wasn't there to get a picture of the 2009 DARS officers. Sorry! The rest of your 2009 Officers are: Don Magness, Vice-President; Tony Huet, Treasurer; Terri Magness, Secretary; Sam Barone, Senior NAR Advisor. Photo by James Gartrell.

Well, since I wasn't at the meeting I'm not exactly sure who was running for elections this year. I seem to remember there might have been a couple of challenges to the winning officers, and that's always healthy. Now, the club has spoken though and it's time to get behind our brave and dedicated officers to help them continue the strong tradition DARS has come to know for so many years.

Our officers spend a great deal of their personal time to see that the club is moving forward and meeting its objectives. Our purpose, as stated in our established bylaws says,

It shall be the purpose of this organization to:

1. Promote the aims and goals of the NAR in the Dallas area;
2. Operate and maintain a model rocket

range in accordance with the NAR standards and regulations;

3. Hold meetings for the purpose of aiding and encouraging all those interested in model rocketry; and

4. Engage in scientific, educational, or other related activities, as the NAR may deem necessary or that the section may find desirable.

Now, you know where the officers should be heading in a general direction at least, so get with them, find out what specifics they may have in mind to continue moving our club forward so you can assist. They need you!!

Oh, one more thing. Always be sure to give a big DARS THANK YOU to the outgoing officers: Cheri Sapp for her service as Treasurer last year; and Don Magness who served our club well these last few years as President. Don really got us through some problematic times, and I think our club is better off because of it. THANK YOU!!! ◀

The Center of Pressure

By James Gartrell

DARS member Scott Cook is in the Center of Pressure! I remember when Scott first joined DARS. It hasn't been that long ago. The first thing I noticed was how friendly he is, typical of rocketeers but even more so for Scott. He's a great guy! If you know him, you also know he loves scratch building his rockets. As a matter of fact, he has certified both L1 and L2 using rockets he scratch built. His L1 rocket was a [Nike Ajax](#) and it



is a thing of beauty. He once talked about making kits of it. If he does, I definitely will be getting one. I have not seen a kit of that rocket that even comes close in quality. His L2 rocket, an [AGM Phoenix](#) was just as nice. Obviously, Scott has a penchant for military rockets. If he does get into kitting rockets, this is another rocket I hope he releases. It is a very nice rocket! Recently, his attempt to certify L3 with a huge upscale of the old Estes Der Red Max only went awry due to a tangled chute. Shucks! It was a fantastic flight and is featured on the LDRS 27 video. He also entered the rocket in the recent DARS Fall Classic contest and won 1st place in the Upscale category. It is an impressive rocket.

What you may not know is that Scott uses some really state of the art components and techniques when building his rockets, and they usually incorporate a video camera—at least I remember the Red Max and his L2 AGM Phoenix rockets included a camera. His upscale Red Max used

honeycomb wafer board in many areas to make the rocket lightweight but strong. Scott has access to this material from scraps at his work. Also, the rocket was bolted or screwed together to allow the rocket to be taken apart for transporting; Scott's car isn't big enough to carry the fully assembled rocket, so the component assembly is really handy. It's also a fantastic idea!

Scott's other scratch built rockets included some of those similar concepts. Probably more often than not, even the tubes are scraps such as from industrial paper rolls. If he comes up with surplus he willingly shares it, too. I have a 3-inch tube and other components he gave me that I plan to use someday. Plus, he willingly shares his knowledge. So, if you want to find out how to scratch build a rocket, Scott is someone you want to talk with. His rockets exhibit really high quality work. Nice rockets, nice work, and all accomplished by a really nice guy! ◀



Top—I took this picture of his Red Max in flight from some photos Scott brought to a meeting. Editor.

Left—An onboard video shot from the Red Max over LDRS 27. Photo capture by Scott Cook.

Right—Scott shows off his rocket during the construction phase at a DARS meeting. Probably not visible in the picture but those fins are constructed from honeycomb wafer board. They are huge! What the heck, the whole rocket is huge!! Photo by James Gartrell.

The Semroc "Defender"—Adventures in Not Following Directions

By Stuart Powley

The **Defender** was released in 1967 by the Centuri Engineering Company. It's a three 18mm engine cluster that boasts two transitions and six fins (three a bit larger and three a bit smaller). The triple engine tubes are left visible to give the model a Saturn **IB** look. All in all it's a lot of rocket in a relatively small package (22.4 inches long, and 1.64 inches diameter).

Semroc's version of this classic is a classic unto itself. The paper transitions have been replaced with balsa, and the fins are now laser cut, a real advantage when you're talking about cutting out six of them. The decals are closer to what was shown in the original Centuri catalog than what was included in the original kit, and the single 20 inch chute has been replaced by two 12 inch chutes. All of the parts are first rate, which is a Semroc trademark, and delivery time from ordering to front door was amazingly fast.



Assembly of the bird is fairly straightforward, with one big exception; the painting. Semroc suggests the really cool Apollo-esque black, white and silver scheme that was shown in the Centuri catalogs. This paint scheme looks wonderful, but it's a killer to pull off well. The main problem is the amount of masking in difficult to reach places (such as around those really cool engine tube/ fuel tanks). After studying the model for a good bit, I decided that I would paint mine as I went along. This approach made assembly and finishing much easier, but it meant almost totally ignoring the sequence of assembly as laid out in the instructions. I actually got confused a couple of times as to what to build and paint and when. Therefore, I have laid out the sequence of building and painting for my model. I won't go into a lot of detail, since the real instructions do a good job of that, but I will point out a tip or two when I think of them. Hopefully it will help some future Defender builders avoid some of my confusion!

1. Lay out all of the parts and sand and seal everything, including the fins and "tank vanes." I used Elmer's Fill-N-Finish, but sanding sealer would work.
2. Install the engine blocks in each of the three engine tubes and then assemble the three tubes into a cluster as per the instructions. Remember which end of the tube has the block in it!
3. Paint the engine tubes black. See, you've only glued three tubes together and already you're painting!
4. Glue the launch lug to the upper main body tube. I tried to figure out a good way to identify which tube I'm talking about, but if you look in the instructions you will see what I mean.
5. Assemble the nose cone and payload section. I used all the clay they gave me for this step, and then glued the payload

section closed. I figured it was too small for any kind of really cool payload anyway.

6. Paint the nosecone and payload section silver. I've said it before and I'll say it again, I HATE silver paint (and it apparently hates me). I did manage to get a fairly good finish on it, but it was more luck than skill.
7. Paint the upper main tube white. Remember the tube from Step 4 that you glued the launch lug to? Yeah, that's the one....
8. Slide the fin can (lower main body tube?) on the engine tubes but **DO NOT GLUE IT!** Why? Skip ahead to step 10 if you just have to know...
9. Align the fins on the fin can using the engine tubes for reference. Glue the fins on after double and triple checking them. Be careful to align the small fins with the tubes and the large fins with the spaces in between the tubes. **DO NOT GLUE THE FIN CAN ON THE ENGINE TUBES!**



10. Pull the fin can off of the engine tubes when the fins have dried. (see, that's why)
11. Glue the bottom launch lug to the fin can.
12. Put fillets on the fins.
13. The Defender uses white "fin vanes" between the black engine tubes to replicate the alternating white/black

(Continued on page 4)

(Continued from page 3)

pattern of the Saturn IB, while just using three tubes. Paint these vanes white now, along with the fin assembly.



14. This is one of two steps in which you actually mask off something. Mask off the nose section and paint it black as per the instructions.

15. This is the second and last masking project. Mask off the small fins on the fin assembly and paint them black.

16. Glue the fin can to the engine tubes. Make very sure you know which end of the tubes have the engine blocks. Make sure you lightly sand the tubes where the glue will go. Also, be VERY careful with your fin alignment. This is where the double and triple checking in Step 9 pays off.

17. Test fit the white fin vanes between the engine tubes. You may need to lightly sand them to get them to fit, but this can usually be done on parts that won't show. Also, remember to sand the areas where glue will go.

18. Glue the vanes in place.

19. Glue the bulkhead and Kevlar shock cord to the engine tubes as per the instructions.

20. Glue the upper main tube (the one from Step 4) to the top of the engine tubes. Make sure you align the launch lugs correctly. Sand the engine tubes lightly where the glue goes.

21. Complete the recovery system by attaching the shock cord to the Kevlar and screw eye and assembling the parachutes.

22. Apply the decals as per the instructions.

23. Clear coat everything.

24. Step back and admire.

There you have it. You only had to mask off two areas and the whole thing went together before you knew it! Ok, maybe it wasn't quite that easy, but it was a whole lot easier than if you had painted it after you built it. Hopefully, this will encourage more prospective Defender builders to take the plunge and fly this really cool, retro model! ◀



The Defender takes off on three Quest A motors, July 16, 2008. Photo by Stuart Powley.

Hmm. I enlarged the photo to highlight the flames from the motors and I can only see two motor exhaust plumes. We'd better ask Stuart if all three motors lit. Editor.

Tidbits from the Editor

By James Gartrell

ARA PRESS Customer Notice**IT'S FINALLY HERE!**

ARA Press is proud to announce the release of *The Saucer Fleet*.

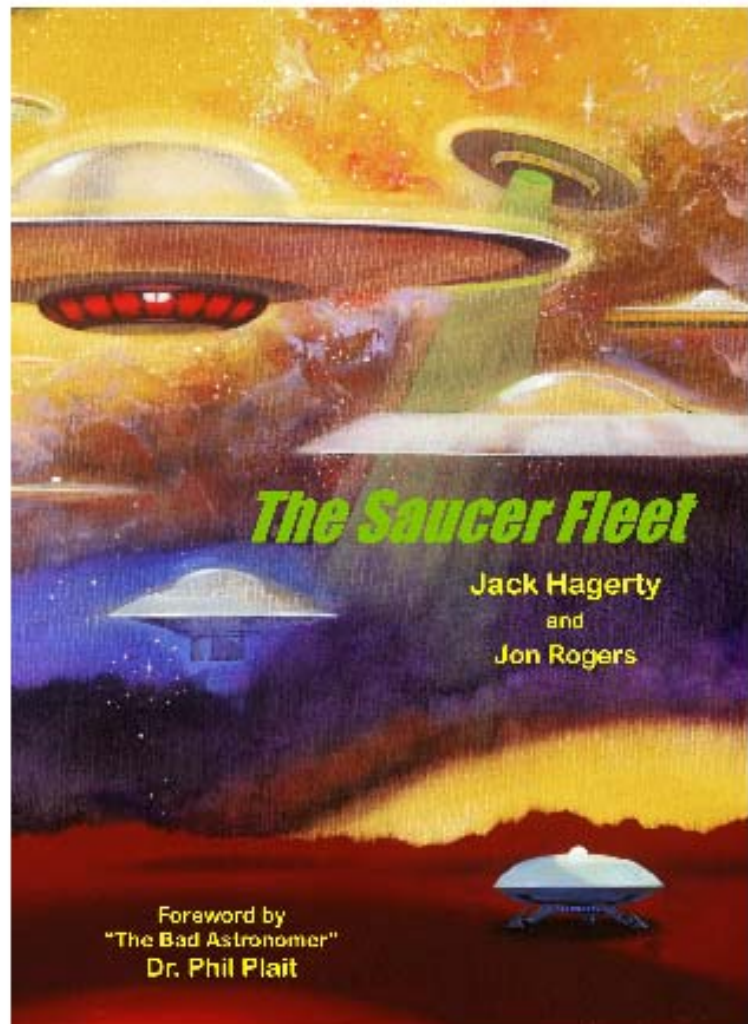
Six years in production, this massively detailed volume contains complete biographies of all your favorite saucer productions:

- The Day the Earth Stood Still
- War of the Worlds
- This Island Earth
- Forbidden Planet
- Earth vs. the Flying Saucers
- Lost in Space
- The Invaders

...plus a few surprises.

This gorgeous 330 page, full color, hardcover volume is available now at the introductory price of only \$49.95 (plus shipping). It will revert to its normal retail price of \$59.95 on January 1, 2009.

Order Yours Today!

**ARA PRESS**

785 Jefferson Ave.
Livermore, CA 94550-3731
(925) 455-1143
www.arapress.com

The Spaceship Enthusiast's One-Stop Data Shop!

Breaking Vendor News!

By James Gartrell

The vendors have been very busy the past two months. Lots and lots of great products to check out!

Oohh! I was looking at [Apogee Components](#) December newsletter and noted an ad for some R/C rocket planes. Very sweet! RockSim version 9 hasn't been officially released, but it is out there! Even sweeter! You might be able to wrangle a special deal with Tim and get him to release an early version to you.

[Aerospace Specialty Products](#) has some new Micro-Maxx stuff and have the Quest bulk-pack motors back in stock.

Aerotech is stretching their competitive muscles too with a new webstore, [www.ValueRockets.com](#)TM to bring their "...entry-level composite propellant rocketry to consumers at the lowest possible cost.." There are no hazmat fees on anything and orders over \$100 get free shipping right now If you like flying 18-24mm composite motors, D10-E30, you need to check this out!! Also, they have a new redline I-motor certified. "Tripoli Motor Testing (TMT) has certified AeroTech's first new single-use high power rocket motor since 2001, the 38 X 356mm I350-10R." Suggested retail price is \$108. "The motor is a 98% 'I'-class, producing approximately 634 N-sec of total impulse, a peak thrust of 106 pounds with a burn time of 1.8 seconds. Propellant weight is 348 grams and loaded motor weight is 616 grams." Also recently certified are two new AeroTech high power Mojave Green propellant reloads to fit AeroTech, Dr. Rocket and Rouse-Tech 75/5120 RMS, an L2200G-P and M1500G-P.

Have some kits you'd like to sell? EMRR has a new low-cost offer for those who are wanting to set up a small kit company without getting

bogged down in all the hassles. You get your own subdomain under his site, email addresses, webstore service and more. Contact Nick at [www.emrr.com](#) (choose Option 7) and tell Nick you are interested. It's a win-win way to support the great activities made available every day to rocketeers across the world.

[Excelsior](#) has a new set of "Red Max" style decals that fit a Big Daddy, specifically Alan Estenson's Grosser Vati design.

[FlisKits](#) has a new T-shirt available; it's unstable! Using CP and CG emblems in just the wrong places. Funny!! \$2.00 pre-order savings available at the time of this writing.

James Duffy's [www.rocket.aero](#) site has some announcements of what looks to be some really cool upcoming DVDs. I'll be watching specifically for his V-2 history in the U.S.

[Mercury Engineering](#) has added a lot of components while I wasn't looking. It looks like you can separately order many of the components included in their kits now.

Seems I remember NARTS having some special items still available from NARAM-50, and perhaps a new hat style.

Wow! I never noticed that PML had a [newsletter](#) on their site. Their December issue included a 20% off Christmas sale that included even there 6" and 7.5" kits. Unfortunately the sale only ran through December 19!! Sorry!!! I'll try to watch for it in the future.

QModeling has released another in their original kit line, the [XP-Raptor](#). It's over 37-inches long, flies on 24mm motors and features all of their usual top quality features, such as a

nomex chute protector, foil lined motor tube, ripstop nylon parachute and much more.

Roadrunner Rocketry has added a really "makes sense" program, [Roadrunner-Direct](#)TM, in the availability of the E25 and F45 motors through a direct to consumer sales program with some attractive discounts and very reasonable shipping costs. Bob's announcement indicates that this program is especially helpful for smaller clubs who do not have access to an on-site motor vendor (like us!). I'm thinking he might get a few surprise "bulk-pack" orders though!

Semroc only released a few new kits and a neat looking 5-16mm booster unit, the [Booster-16](#), this time! Thank you, Carl! My wallet appreciates that. An interesting release is the 1965 AMROCS [Hawk](#)! At least, that what it looks like to me. He doesn't yet have the "about" section filled in at this time on his site, so you'll have to ask to confirm. The Hawk is an 18mm glider that flies on 1/2A6-2 and B4-2 motors. [Instructions](#) for the old Hawk suggested wrapping a streamer around the motor to provide for a recovery mechanism when the motor ejected. Another fantastic release from my perspective is the [Tau Zero](#). The kit was designed by Jay Goemmer and is a great looking rocket, accented with some very nice decals. It flies on 18mm motors and features streamer recovery. Last, but not least is the huge [SLS Brighton](#). It is a 2.64" diameter kit that is almost 40 inches tall., flying on a variety of motor combinations (18mm 4-C, 24mm 3-D or single 24mm E) depending upon the installed motor mount. The look is very reminiscent of the old Estes Ranger on steroids.

Sirius Rocketry now has the Moldin' [Oldies](#) cones in stock!! ◀

DID YOU KNOW?

By James Gartrell

The image below is a scan of a thank you card sent to DARS members from the Northwest High School TARC team (see last issue's article from Wayne Day) in recognition of the assistance provided by the club. Hey, not only are these kids smart, but they're polite. A good reminder that there are some really classy youth out there. Way to go!!

The [2008 EMRR Challenge](#) winners have been announced! The grand prize winner received the largest [Saturn V](#) on the market from [Sheri's Hot Rockets](#), a \$449 value! Woohoo! Second place was a 6-pack Black Brant variety pack from [Advanced Rocketry Group](#), 3rd place took home a [Cosmodrome Nike Smoke](#) donated by Uncle [Mike's Rocket Shack](#), and eight folks won the [2009 EMRR calendar](#).

Art Applewhite Rockets 
 from deep in the heart of Texas
www.artapplewhite.com
 (830)896-6331

Unique rocket kits at affordable prices.
 20% Discount for DARS members* if this ad is mentioned when ordering.

*Subject to verification of DARS membership. A 20% refund will be given when your order is processed.



DARS Officers

President	Royce Frankum
Vice President	Don Magness
Treasurer	Tony Huet
Secretary	Terri Magness
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.

Vendor Links (DARS member discount—confirm before ordering)*

[Aerospace Specialty Products](#)

[Apogee Components](#)

[BMI Hobbies \(* 10%\)](#)

[CLE Enterprises](#)

[Excelsior Rocketry](#)

[Hawks Hobby](#)

[JonRocket](#)

[Mercury Engineering Co.](#)

[Public Missiles Ltd](#)

[Quest Aerospace, Inc.](#)

[Red Arrow Hobbies](#)

[Roadrunner Rocketry](#)

[Semroc Astronautics Corporation](#)

[Sunward Aerospace Group Limited](#)

[Aerotech Consumer Aerospace](#)

[Art Applewhite Rockets \(* 20%\)](#)

[BRS Hobbies](#)

[Dr. Zooch Rockets](#)

[FlisKits, Inc.](#)

[HobbyTown USA— Dallas, Walnut Store \(* 10%\)](#)

[MadCow Rocketry](#)

[Pemberton Technologies](#)

[Qmodeling](#)

[QuickBurst](#)

[Red River Rocketry \(* 8.25% on field\)](#)

[Rocket.Aero](#)

[Sirius Rocketry](#)

[The Squirrel Works Model Rocketry](#)

*Dallas Area Rocket Society
("DARS")*

James Gartrell
1006 Canton Rd.
Cleburne, TX 76033



Permission to reprint articles is given as long as proper credit is given to author and DARS.

WWW.DARS.ORG

SHROUDLINES

A Dallas Area Rocket Society Production