ISSUE 152 - DECEMBER 6, 2005

APOGEE PEAK OF FLIGHT NEWSLETTER

Rocksim 8 Booster Parachute Deployment

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- Web Site Worth Visiting
- Custom Decal Tip

APOGEE COMPONENTS

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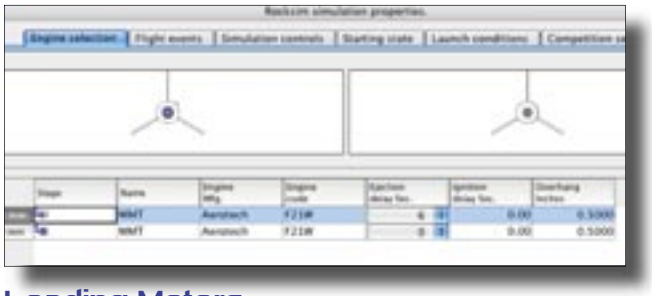
Booster Deployment in Rocksim 8

by **John Manfredo**

One of the newest features in Rocksim is the fact that you may now view the deployment of a booster parachute in the "2D flight profile" mode! Prior to this upgrade you could only put a parachute in the booster component but not view its deployment in animation.

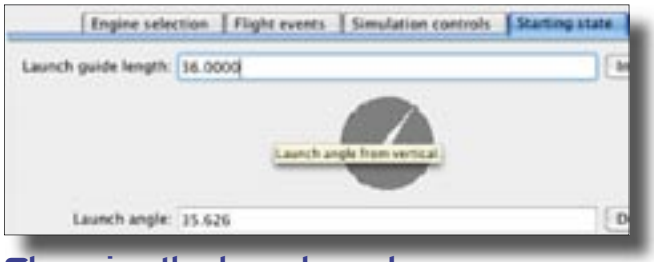
Getting Started

To see how this is done you must begin by opening up a design; in this case I chose the new Dynastar Rip-Roar rocket because the colors really stand out. I added a parachute of decent size so that you will be able to



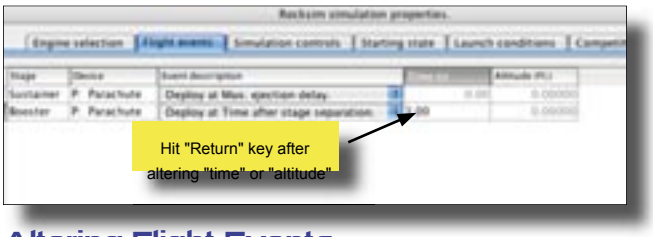
Loading Motors

see the chutes well. Now go ahead and load some motors. I chose the F21s just so that the flight separation will be spread out more. Next, under "starting state" you can change the launch rod angle significantly so that



Changing the launch angle

you'll be able to see flight spread out a little. Also, you should go to the "flight event" tab and make sure that the settings are correct. The sustainer parachute should be set to deploy at "maximum ejection delay". Then you will change the booster chute to deploy at a certain time after apogee. Go ahead and set this time to 1 second so that the booster won't deploy the parachute right away after staging. This will give you a better view of the deployment. ***Please "note": after changing settings in***



Altering Flight Events

this area make sure that you hit the "return" key as shown above. If you don't do this, the changes will not take effect! Take it from me, this frustrated me for quite some time (a small pearl of wisdom for you)!

Entering the Flight Preferences

After you have taken care of all these steps, click on the "flight profile" button. This will not only take care of the launch simulation, but it will also steer you directly into the 2D flight profile screen where all the fun is! Once the simulation ends, let the current sprites and backgrounds load. Now that this is completed you can click on the "preferences" button where you will be altering a few things. I usually turn the smoke effects off so

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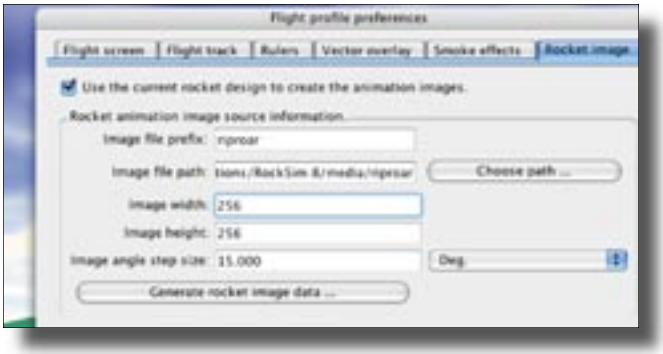


Create New Sprites for the rocket

About this Newsletter

You can subscribe "FREE" to receive this e-zine at the Apogee Components web site (www.ApogeeRockets.com), or by sending an e-mail to: ezine@apogeerockets.com with "SUBSCRIBE" as the subject line of the message.

that I can see staging better. The picture below shows the rocket image screen. It is here that you will change a few things.

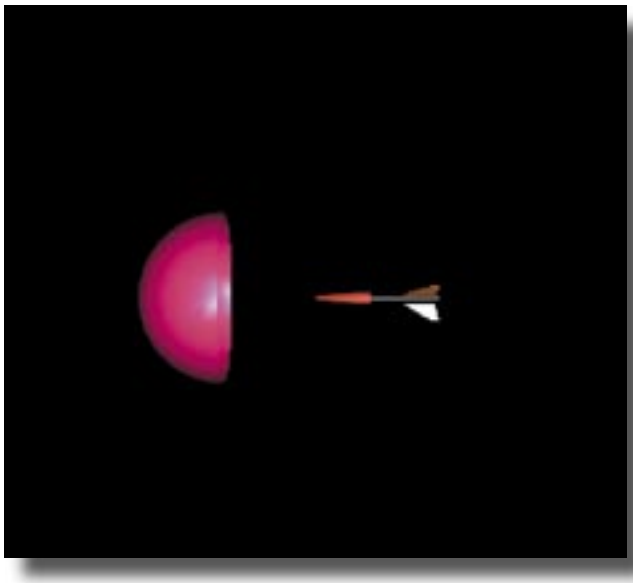
First, alter the image size to 200 height and width. This will make the rocket easy to see. Secondly, change the angle step size to 15. This will make sprite generation much faster as talked about in more depth in POF newsletter 148.

The last thing to change is the path where these sprites will be kept. Click on "choose path" and, after selecting the "media" folder in Rocksim, you will create a new folder named after your current design and click "ok". Now you can select the "generate rocket image data" button and watch both the booster and sustainer images being generated with parachutes in both of them, as shown in the pictures at the bottom left.

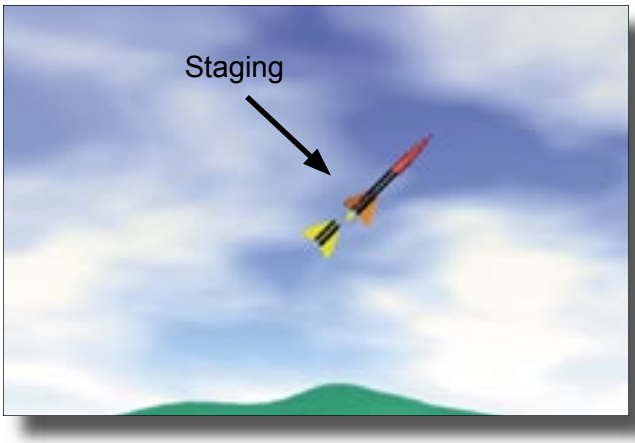
Running the Sim

Now that all our preparations are finished you can click "ok" and the new sprites will be loaded. Go ahead and click the "play" button to begin the animated flight! As shown below you will be able to see staging and, shortly thereafter, the sustainer will take off and the booster will start its descent under chute! Finally, the sustainer will pop its parachute out and as you can see

Sustainer chute being generated



Sustainer chute being generated



Booster separation

Booster under parachute

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below, we have a successful flight with deployment in each stage!

Booster and sustainer under chutes

John Manfredo. He is the Education Coordinator at Apogee Components. He's Level 1 High-Power Certified and has been building his own rockets for the last 30 years.

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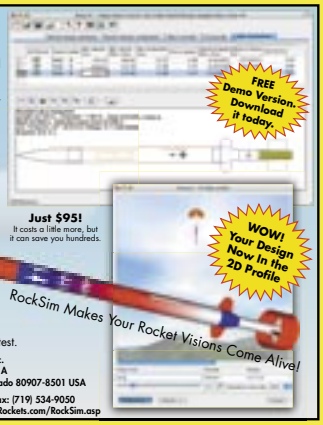

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ROCKSIM Version 8

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WEB SITES WORTH VISITING

G'day Rocket Mates! My website submitted for your approval is that of "Rockets Down Under" found at http://www.users.bigpond.com/DavidBoyd. It is headed up by David Boyd of Paris..... Australia, that is!. So, throw another shrimp on the barbie and let's take a look at

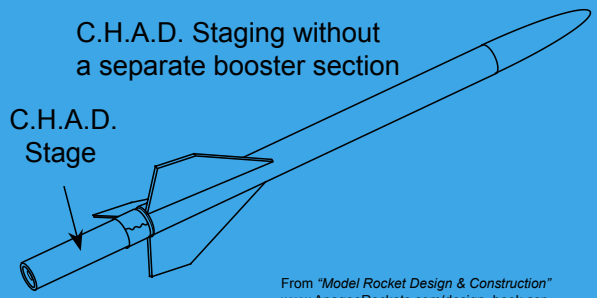
his site! This bloke concentrates not only on his own projects but also gives a broad overview of rocketry in general in Australia. There is a link to the branch of the Tripoli Rocketry Association down under, the Australian Rocketry Association (which is the NAR equivalent), and the New South Wales Rocketry Association, which is a combination of the two.

There are many pages of pictures from launches, each picture having a nice description next to it. I enjoy this because it seems like many rocketry websites that you go to will have a ton of pictures but no captions

or descriptions. This always leaves me wondering what a particular picture was trying to show. David included a nice downloadable MPEG video of his GDT2 video camera rocket project from the ground and on board! He also has a page from when he hopped across the "big pond" to "Springfest" in Nevada back in 1997. Being that he wasn't in the States for long, he decided to make it worth his moolah and got his L-1 cert on an I284 and the next day passed his L-2 written exam and then flew a nice, long-burn J275 to receive his L-2 cert! It was a rip snorter, mates! Thanks for sharing with us David!

DEFINING MOMENTS

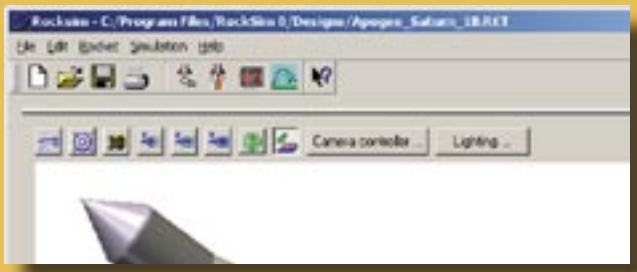
C.H.A.D. Staging stands for "**C.H.**eap-**A.**nd-**D.**irty Staging. This is a form of direct staging in which the booster engine is not housed inside a finned stage. It can only be used on models that are overly stable and can tolerate the extra mass in the rear of the model. Simply tape a booster motor directly to the motor in the upper stage. The motor just hangs off the back of the rocket. At ejection , the motor separates and tumbles to the ground. Use care, though, for the motor can tumble quickly and should have a streamer attached to it in order to slow its descent. This can be accomplished by either a side pod or wrapping it around the motor.



From *"Model Rocket Design & Construction"*
www.ApogeeRockets.com/design_book.asp

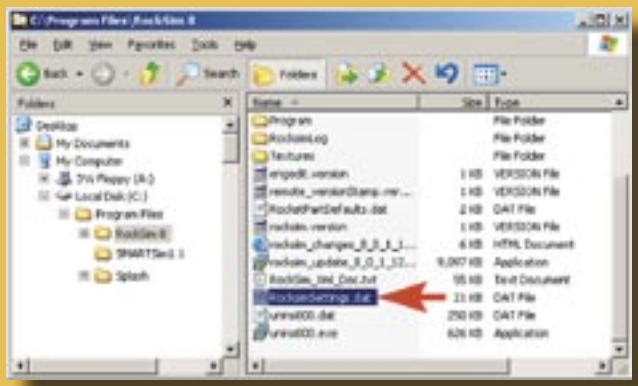
QUESTION AND ANSWER CORNER

A question that was recently raised about what happens if you don't get the results you expected when moving screens around in RockSim v6, v7, or v8.



For some reason, sometimes the default settings get a little wild hair in them. Don't fret, though. YOU DON'T NEED TO UNINSTALL and then reinstall RockSim. This never solves anything anyway.

Here's how to revert back to the default settings of RockSim. First, quit out of the Rocksim program. Once this is closed, just go to the Rocksim folder in Windows or Mac and search out the file that is called "Rocksim-Settings.dat". This is the file that contains the default settings for the program. Next, I'm going to ask you to do something that will seem a bit on the extreme side, but go ahead and delete, drag to the trash, or whatever



else you need to do in order to get rid of this file.

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TIP OF THE FIN

Our tip for this issue comes from one of our readers, Brett Simpkins. His tip addresses the topic of how to deal with odd-color decals.

Brett says, "I could not get the inkjet colors to match the Krylon paint, then the idea hit me that... Hey I'm using clear Krylon and spraying it on the decal material before I apply the decals. Why not spray the decal material with the gray Krylon then cut out the shape I want from the now color-matched gray decal material?

It worked great. I sprayed a piece of decal paper with gray Krylon, then printed out the shapes that I wanted on standard printer paper, spray mounted them to the back of the painted decal material then cut them out using an Exacto knife and/or scissors. Then removed the paper patterns and applied the painted decals in the normal manner.

So now I have the gray alien head and elevators perfectly matched to the rest of the paint job. Cool huh?"

Cool indeed, Brett! For his effort, he earned himself on of our new multicolored, ripstop nylon, 58" Dynastar parachutes! If you have a tip to share, send it to me at johnm@apogeerockets.com and earn one, too!

Brett Simpkins' 3-inch Bolaero-Z Rocket

Plans for the small Bolaero rocket shown above can be download from the Apogee web site at:/www.apogeerockets.com/shrox/bolaero.asp

QUESTION CORNER

Continued from page 6

Now you can open up the Rocksim program again and this time you shouldn't have a problem seeing all the familiar menus and screens that you are used to.

The only thing that you will notice is that your color and font preferences have reverted back to the original default conditions.

If you have a question, please e-mail me at johnm@apogeerockets.com and I will do my best to answer it for you, whether personally or in the newsletter.

This has been circulating for a while, but it's worth repeating. So many rocketeers can relate, I'm sure!

YOU MIGHT BE A ROCKETEER IF...

You know all the motors and their thrust curves.
You can identify motors by their launch sound.
Your computer desktop background is a rocket.
You use the kitchen mixer to make propellant.
Your answering machine has a recording of a countdown.
You know how high every rocket you own will go on any motor.
You can eyeball the CP of a rocket and know how much nose weight to add.
You can calculate center of pressure on a hand calculator.
You tell your wife you are buying rockets for an investment.
You know the life stories of John Cato, Jerry Irvine, Bob Kaplow, Frank Kosdon, Dave Gawlick, Ron Schultz & G. Harry Stine, and can recite them on demand.
You can recite the Cato Chronicles from memory without laughing.
You own a shopsmith and have never made any furniture.
You buy an M casing and tell your wife it is a lamp stand.
You took out a second mortgage for that M motor.
You ever had to move because the neighbors were nervous.
You buy a cordless drill and use the battery in your launch system.
You have ever tried to fly an Estes kit on an H motor.
You always upscale Estes rockets to absurd sizes.
You dream about being on the cover of HPR.
You look at sonotube concrete forms and think rockets.
You ever considered doing a 1:1 scale atlas.
You buy a video cam to remember those great rocket launches with no intentions of taping family reunions.
You ask the wife to sit in the back seat cause you want to put your rocket in the front seat belt.
It starts raining at the launch and you first put the rockets in the car and then the kids.
You sleep outside at a launch and put your rockets in the tent.
Your bumper sticker reads “High Power Rockets”.
Your personalized license tag reads “ROCKETS”.
Ross, Ron, and Frank know you personally.
You know the UPS drivers’ first name.
The UPS driver does not have to look at the address to know where the big box of tubes is to be delivered.
You put your Tripoli number on your business card.
You put your Tripoli card in front of your driver’s license in your wallet.
The first thing you do when entering a new town is check the phone book for hobby shops.
You go to the library to check out the latest Missiles of the World magazine.
You have ever tried to get classified missile documents from the government so you could build a scale model.
You buy a van or truck to have a rocket transport vehicle.
You rummage through the neighbor’s or your business’s trash looking for cardboard tubes.
You call in sick so you could go to a launch on Friday.
You’ve ever told the boss you were sick so you could stay home and finish a rocket.
You look at farmland and consider its use as a launch site.
You buy a perfectly good Rat Shack pager system and convert it to an ejection charge system.
You want your rockets to be buried with you.
You go on a vacation back east and just happen to stop by a certain small town in Ohio on the way.
You plan your vacation around LDRS.
You spent $2,500 for a computer so you could look at other people’s rocketry web pages and RockSim files.
Your wife’s curio cabinet is filled with rockets.
You have the only house in the neighborhood with an explosives bunker.
You specify to the real estate agent that you want a rocket building basement with a house on top of it for your new residence.
You cannot get your car in the garage because your rockets are in there.
You have to build a storage building just to put your rocket stuff in.
All your T-shirts are from launches.
You have rockets sitting on top of your TV in the living room.
You check the mail every day until that next issue of HPR shows up and get grumpy when it doesn’t.
You save burnt out single use motor casings “because...”
You peruse all your catalogs and the surplus stores looking for rocket parts.
You smell the inside of your rocket after you recover it.
You skip buying lunch for 6 months to save for that BIG cert motor.
You feel superior to R/C plane people.
Your only friends also fly rockets.
Your wife asks, “Don’t you think of anything else but rockets?”
You spend more time with your rocketry hobby than you do with your wife.
You have ever spent 4 days in the Nevada desert in summer and then told your wife it was too hot to mow the grass.
You got married at a launch!
The only reason you go with the wife to the cloth store is to check out parachute material.
You use the sewing machine more than your wife does.
You invite your friends and neighbors over to show them rocket videos!
Your kids wonder what it would be like to have a normal dad.
You get your kids rocket kits for Xmas cause you know they don’t want them and will give them back.
You have more invested in power tools than you have saved for your kid’s college fund.
You have pictures of your rockets instead of your kids in your wallet .
You look at your kid’s bike and think “K550...”
You put up an EZI65 on a J350 just so you can watch it rain cardboard confetti!
You did not know that AP was also a grocery chain.
You know the way to 12 launch sites but need a map to find your mother-in-law’s house.
You epoxy your rockets together on the kitchen table.
You string Thermalite on your Xmas tree and use your altimeter to light up the lights.

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