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APOGEE

PEAK OF FLIGHT

NEWSLETTER

Suggestions for a young leader

By Tim Van Milligan

Michael Sinclair writes:

"I am 15, in grade 10 and I live in Bermuda. I ordered a few times from your web-site, and I was amazed at the service I got (well, I haven't ordered from anywhere else but you know what I mean). I started up a small club at my school, but it is more like lessons, I am telling them how to do everything. I couldn't make the last session due to basketball game. They started constructing model rockets, but didn't know what they were doing, so they just wasted my materials. They used a 10.5 mm tube coupler for an engine tube and cut the fins with the grain parallel to the tube. Are clubs always this hard to manage for you?"

To be honest, I haven't managed a club since the early 1990's. But did have similar frustrations.

The answer to your question is that you will have discouragements and set-backs in the new club. It happens with everything new.

The solution is to maintain a positive attitude and stay persistent to your goals and dreams. Being a teenager is hard, and it is difficult to stay focused with all the distractions happening around you. So my first suggestion is to try to motivate an older adult to help you run the club.

Even though you'll still be the leader of the club, the other kids will be more likely to behave themselves when there is an adult in the room. Things probably won't get out of control so quickly.

Being a leader is always hard. To lead others, you have to help them to see your vision for the future; and to try to get them to participate in making that future come true.

Here are some ideas that might help you in your situation.

First, set specific goals. Break up your final goal up into little "mini-goals" that can be reached within a definate time period. For example, if your main goal is to hold a big rocketry contest, you'll need to reach certain milestones before you can hold the contest. What might those milestones be? Things like: holding a building session to teach the others about a rocket that would be good for the events, test flying of the rocket, and recruiting others to join in the fun.

Recruiting new members is often a daunting task for a club. There are many suggestions in the little booklet "Recruiting and Retaining New Club Members." You can find an abbreviated edition of the article at:
http://www.apogeerockets.com/education/newsletter21.asp

We will also include an neat poster in the next edition of the Apogee E-zine. You can print it out and hang it up at a hobby store or around your school to generate some interest in the new club.

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Suggestions for a young leader cont.

Another thing that may help with your club is to remind the modelers what the hobby is all about. Here is an example from my own experience.

I believe that all rocketeers have a common trait; that is they like space things. That includes the space program, astronomy, satallites, etc. It was certainly something that I was interested in. When I was a high school student like yourself, I too flew rockets. I knew deep down that I wanted to be an astronaut and to fly into space. At the time, the standards to be an astronaut were much higher, and it really helped to be a jet fighter pilot first. Unfortunately, I had bad eyesight, so being a jet fighter pilot was pretty much out of the question for me.

So I decided to go to engineering school; where at least I could learn how to build rockets. One guy that I looked up to as a kid was Wherner Von Braun, who was a great engineer that helped to design the mighty Saturn V rocket. So that was my goal.

I achieved that goal pretty early on in my career too. As soon as I graduated from Embry-Riddle Aeronautical University in Florida, I was hired to be a launch operations engineer for McDonnell Douglas. I got to launch the big Delta II rocket from Cape Canaveral. It was a lot of fun!

Being a part of the space program is a big deal. Many young students want to grow up to help others. So they become doctors, teachers, and fire fighters. They help people one-on-one. But in the space program, you get to help millions, if not billions of people all at once. You get to make thier lives better, and occasionally, you do something that helps to save a life too. In my case, I helped to successfully launch the GPS satellites into orbit. Where would we be today if those satellites weren't around?

My point is that model rocketry is what made all this happen. It leads young people to other things later on in life that have a big impact on society. Model rocketry is important! We say in our newsletter that rocketry is the first step into space; and I believe it 100 percent.

So remind the club members that participating in rocketry is not only fun, but will help bring a better future to them and the rest of the people living on this planet. It is something to stay positive about.

Author Information: ----------
Tim Van Milligan is the owner of Apogee Components (http://www.apogeerockets.com) and the new rocketry education web site: http://www.apogeerockets.com/education. He is also the author of the books: *"Model Rocket Design and Construction," "69 Simple Science Fair Projects with Model Rockets: Aeronautics"* and publisher of the FREE e-zine newsletter about model rockets. You can subscribe to this e-zine at the Apogee Components web site, or sending any message to: ezine@apogeerockets.com with "SUBSCRIBE" as the subject of the message. This article may be reprinted as long as this paragraph is included with the text.

Ad Astra

"To the Stars"

About this Newsletter - Apogee Components Rocketry E-Zine Newsletter is a FREE optional newsletter about model rocketry. We have, and we'll continue to discuss a lot of different rocketry topics, including: rocket design philosophy, computer simulations, construction techniques, rocketry in education, happenings in the rocket industry, competition strategies, and new product announcements.

Who is Apogee? Company Profile

Nick Esselman, who runs the www.rocketreviews.com web site, has been reminding me for the past year that the company profile on his web site is getting a bit out of date. Since I need to update that, and write articles for the Apogee e-zine, I guess it is a good idea to do both things at once.

What is your company's mission statement?

"To provide quality rocket kits and accessories to make rocketry fun for the consumer."

Tell us about your company's beginning?

"Ed LaCroix founded Apogee Components in the late 1980's. He envisioned a company focused on the competition market, and basically he picked up where the company "CMR" left off. He started by sourcing some very high-tech materials, and then building a product line around them.

In 1994, when I was fired by Estes Industries, I approached Ed about expanding his product line to include a new type of rocket motor: the 10.5mm micro motor. Ed liked the idea, so I proceeded to design the motor and get it ready for certification. I also designed a new line of rocket kits around this size motor case, as well as writing several technical reports to familiarize the customer with the new product. While I was doing this, Ed was offered a job with Aerotech as their marketing director. I saw this as an opportunity to purchase the assets of Apogee Components and mold it into a different type of company -- sport rockets. In the middle of 1996, I reincorporated the company, and started the journey as a entrepreneur.

Since 1996, company has grown a larger and more diverse set of products. I've move the location of the company twice since I took over, and I'll probably be moving into a bigger location soon.

What events does your company sponsor or attend?

"As the company grows, I find my own personal time more and more limited. So making it to launches is harder and harder. But in the past, I've attended NARAM, NARCON, NSL, and LDRS. I have also attend many regional contests around the country during the summer months. On the education side, Apogee Components has been represented at many National Science Teacher conventions around the country, as well as the RCHTA National Model and Hobby Show held in Chicago in the Fall."

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Lacey - Quality Control / Security

Who is Apogee?

Cont. from pg 3

Where does your company get its rocket designs?

"Since I've collected a large rocketry library, the design part is very easy. There are many designs that I want to produce as kits, but it would be time consuming and expensive to do them all."

Which design would be considered your company's "flagship" rocket?

"That would have to be the RockSim software. It continues to be the one product that we're recognized for. But we continue to add new products all the time, including the huge Saturn V and the Saturn 1B kits.

Any advice for new rocketeers?

"I think it is most fun to experiment with your own rocket designs. To do this, you need to read and study as much as you can about model rocketry. The internet has been a boon for this, but there are many other good books that should be a part of every modeler's library."

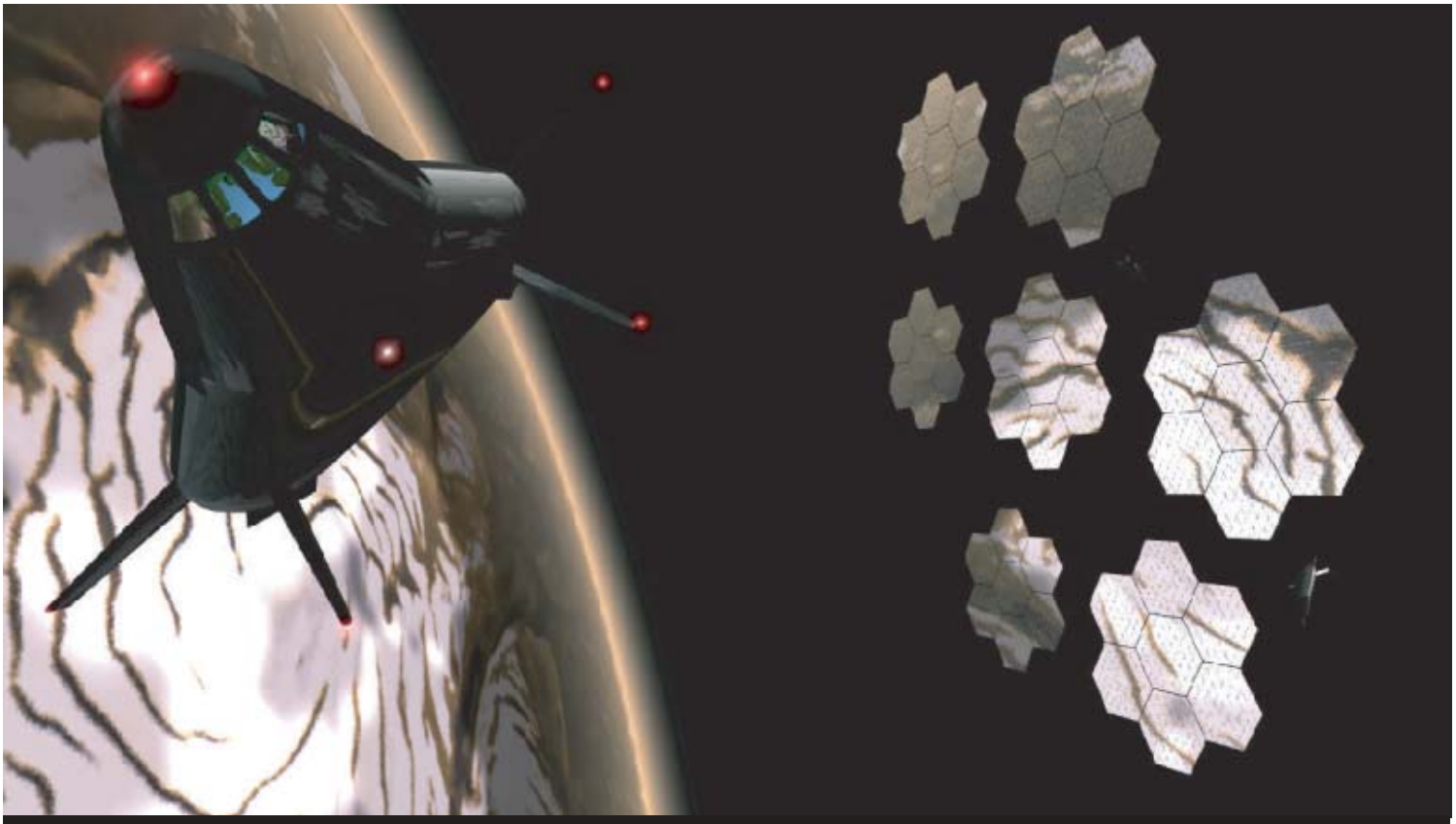
Anything else you would like people to know?

"Being in this business has be both fun and challenging. I've tried to carve a niche out for the company that is different from any other manufacturer. I don't want anyone to confuse Apogee Components with Estes, Quest, Aerotech, or Centuri of old.
And while we're not a rocketry education company, we do try to educate our customers. This makes our customers better modelers, and more likely to educate other rocketeers. This makes rocketry more fun and a bigger hobby. This is better for everyone."

What does the future hold?

"We're always looking for new ways to help customers, and to offer exciting products. That has always been a part of the way we've done business, and what we will continue to strive for. Hopefully we'll continue to grow and help more people realize how much fun rocketry really is."

Best Wishes,
Tim Van Milligan
Apogee Components, Inc.



The first step to colonizing Mars is a model rocket.

Tracking Powder

A Reader Question

Hi Tim

I noticed in the last E-zine that you mentioned tracking powder. I think I have the concept on why you would use it I was just wondering what it is made of. Is it just installed with the parachute and deployed on ejection? I think it would be good anytime you send up a rocket to use it, I've just never had it explained to me as to how and where to use it and what it is made of.

Thank You
Pat Riepl

Hello Pat,

Thanks for the question. If it OK with you, we'll go ahead and share this with the other readers of the e-zine too.

According to the book: Model Rocket Design and Construction, "tracking powder is any nonflamable powder place inside the rocket that is ejected at apogee into a large puff or cloud. The cloud can help you locate your rocket at a very high altitude. Some powders that work well for this include tempera paint, chalk dust, and talcum powder. The colors that seem to work best are black for cloudy days, and red when the sky is blue."

Personally, I don't like to just pour it into the rocket as some modelers do. What they do is put the streamer into the rocket, and then pour the powder in on top of it. They hope that the ejection charge is strong enough to push out the parachute and the powder.

When I use tracking powder, I want to use as much as possible (to get the model up to optimum mass). But sometimes, this really plugs up the tube. When this happens, neither the tracking powder nor the streamer are ejected from the rocket. The result is the rocket comes streamlining into the ground.

What I recommend is to use a little pouch to hold the tracking powder, so that it doesn't clog up the tube. To make the pouch, you'll need a wood dowel that fits inside the tube; and some stiff tissue paper. I've found that Quest type recovery wadding is a good choice for the tissue. The Estes wadding isn't stiff enough for this purpose.

Take the tissue and roll it around the dowel. Then partially slide it off the tube; and fold the edges of the tissue inward (over the end of the dowel). This creates a bottom to the pouch. Now remove the pouch from the dowel. It will be inserted into the rocket on top of the recovery device. But only put it halfway into the tube at this time.

Fill the pouch up with the tracking powder. As you fill it up, tap the rocket with the dowel to settle the powder into the tube, so that you can get more in. Fill the tube all the way up.

DON'T fold the top edges of the pouch inward. You want to leave it open. If
you close off both ends, the pouch may not open at ejection. With one end open, at least it will be able to pour out as it tumbles to the ground. But usually, it bursts open quickly when it pops out of the rocket at ejection.

I hope that this explains what tracking powder is, and how it is used.

Good Luck,
Tim Van Milligan

Ideas Wanted - We pay Top Dollar

A reader writes: "While I was looking in your catalog, it said something like you would pay for ideas, and I was wondering what you mean."

I'm always looking for new products to sell. And I'll pay a royalty if I sell them.

Note: I do not want rocket kits! I've got a million ideas of my own for rocket kits. I'll never be able to produce them all. So I don't need to add to that list with new kits from others.

I'm most interested in things that are "one-of-a-kind." This is hard to put into words. But it can include things like computer software, technical report articles, books, electronic payloads, mechanical payloads and maybe some type of unique construction fixtures.

For things like payloads and other physical items that take up lots of shelf space, I prefer that the inventor produce them, and I just market and sell them. I don't have the space in my shop to store raw materials, nor do I want to stock thousands of finished items when I may only sell a couple of hundred per year. But I have some capability to market items successfully, so this should work out handsomely for the inventor.

If you have a unique item, drop me an email at tvm@apogeerockets.com. I'll be happy to give you my thoughts about it. I do keep things confidential, and I don't steal ideas. So you don't need write me a cryptic note that hints at an idea. You can come right out and say what you mean.

NEW! Saturn 1B Poster

Mark Piatowski has created a beautifully detailed 3D computer rendering of the Saturn 1B rocket. It was such a nice image, I asked him if Apogee Components could make a poster out of it. After a lot of conversing back and forth (Mark lives in England), we finally got the image formatted the way the printer needed it. We wanted to make sure it was a high resolution poster so you could see all the magnificant work that Mark did on this rendering.

These are awesome images of the Saturn 1B. The poster shows the rocket in an exploded 3D view, so you can see some of the internal components of the various stages. Each part is also annotated, so you can see its specifications and a short description of what makes it unique. Finally, there is a short history of each of the eight Saturn 1B missions flown by NASA in the 1960's.
It includes the mission number, booster serial number, when it was flown, which astronauts rode the rocket, and the mission patch. It is an excellent reference that any Apollo historian shouldn't be without.

The Saturn 1B rocket played an important role in America's race to land a man the moon. It was a cheaper rocket than the Saturn V, and was used to test various components of the Apollo program. It was also used to launch astronauts to the Skylab space station, and to link up to the Soviets in the Apollo-Soyuz mission in 1975.

When you hang this poster on the wall, we guarantee that it will make your room much better looking! Plus, when your rocketry friends see it, they'll be impressed by its large size and excellent quality. They will probably want to get one for themselves too.

Special Introductory Price: $9.97 P/N 35530
url: http://www.apogeerockets.com/saturn_1b_poster.asp

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1- 19400 - Apogee Nose cone - PNC-24A
1- 10099 - Apogee Body tube - 24 mm x 12 "
1- 10085 - Apogee Body tube - 18 mm x 2. 3/4"
1- 13029 - Apogee Engine block - CR 13-18 ring
2- 13031 - Apogee Rings - CR 18-24 ring
1- 29005 - Apogee Streamer 36"x2"
1- 13051 - Apogee Launch lug - "1/8"" X 1"
1- 29505 - Kevlar 18 in. line
1- 12 in. Shock cord and mount
3/32 in. Fin stock (balsa or basswood)

Get what you need by phone!
Call Apogee at **719-535-9335**