

# PEAK OF FLIGHT

N E W S L E T T E R

## Recession Proof Your Rocket Club

Crazy-Insane Ideas that You Can Use to Grow Your Organization (Part 1 of 2)

## Question and Answer Corner

Designing Rear Ejection Rockets, Mass Overrides, and Measuring Tube Diameters

## EMRR Corner

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## Building Your Rocket Club During a Recession

By Tim Van Milligan

There is no doubt about it, the national economy is in a recession. That means that people are not buying things because they are putting more of their money into their car's gas tank.

I'm not a doom-and-gloom type of person, but I am realistic. And what concerns me right now is that our rocketry clubs are hoping that things will get better for them. I believe that clubs are already feeling the effects of the recession, and it is only going to get worse. Potential members are going to hold back on joining, and current members are going to have second thoughts about renewing.

The result will be fewer and smaller clubs. And when the economy rebounds (which it will), the clubs will be so weak that they won't have the resources to take advantage of the opportunities to grow. Let's make some changes now to fight back against the recession.

In this article, I want to give you six crazy-insane concepts and ideas that will help you grow your rocketry club during the current recession. When the economy perks up again, our clubs will be big, strong and numerous, where we can take advantage and grow even bigger with more political clout. It is a win-win situation for everyone!

Why do I say that these are going to be crazy-insane ideas? Because they are going to be counter to what the *traditional* methods are of growing club membership. You're going to say that "we've never tried that before" or maybe you'll ask the question: "what if we end up alienating someone?" You're right if that goes through your mind; those will be legitimate responses to these ideas.

But there is a phrase that is often spoken in the business world: *"If you want something you've never had before, you'll have to do something that you've never done before."* It is the same with club recruitment. You're going to have to do something you've never done before to get results that are different than what you're currently doing.

First off, let me start by saying that there are some *traditional* methods of club recruitment that are great. For example, you should be putting up posters in your local hobby store where people buy rockets. That is the first method I'd recommend to any rocket club because it does

work. In fact, if you go back through the archives of this newsletter, you'll notice that Apogee Components has simplified the process by producing a great looking poster that you can print out. You'll find it in *Peak-of-Flight Newsletter* #77, which can be downloaded for FREE at: [http://www.apogeerockets.com/Peak-of-Flight\\_index.asp#club](http://www.apogeerockets.com/Peak-of-Flight_index.asp#club).

The other "traditional" methods that do work can be found in my publication *"Recruiting and Retaining New Club Members."* A free excerpt of this report can be found in *Peak-of-Flight Newsletter* #21, and the full version which lists 22 ideas for recruiting can be found at: [http://www.apogeerockets.com/club\\_membership\\_bk.asp](http://www.apogeerockets.com/club_membership_bk.asp)

By all means, try these traditional methods. They are proven to work to get spectators to come to your launches and see what rocketry is all about.

However, attracting spectators is different from getting them to join the club. Rocketry is a unique hobby in that it is relatively easy to attract people to come to a launch. You can go to any park in America and draw a crowd of spectators as soon as you pull out a rocket and get it ready to launch. Getting spectators or people to come to your launch is the easy part. Getting them to pay dues and join your organization is much harder.

Using traditional methods of recruitment seems to have diminishing returns. Eventually, you peak out at a maximum number of people and can't seem to grow the organization any bigger. That is when it is time to try something completely different.

### ***Crazy-Insane Concept #1 – Running a club is like running a business.***

If your club is worth having, then it is worth growing. Identify and write down why it is important for the club to exist. If it is not crystal clear in your mind that it has benefits, then you will treat it like a hobby and eventually it will wither away and die.

If you attend a business seminar for entrepreneurs, one of the first things they will tell you to do is write down your "mission statement." It is important to know the reason why

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you are going to put your energy into the club.

**Crazy-Insane Idea #2 – Recognize that all members have a different value to the organization, then treat them differently according to their value.**

In too many aspects of life, we buy into the concept that everyone is equal and we have to treat them equally. But everyone is different. Treating them the same is what I consider insane. You don't treat a 5 year-old kid the same way as you do a 55 year-old, do you?

I think this is an important idea to grasp because it helps to stop the bleeding -- as it were -- of members leaving the club. It keeps the best people around by helping to identify and set priorities. For example, all clubs lose members because of burnout. Can you imagine how strong the club would be if all your old friends that have left your club in the last 10 years were still around?

Again, in any business seminar they will tell you to identify your customers. More importantly, you need to identify your "BEST" customers. Your best customers are probably generating 80 percent of all your business. Your best club members are probably doing more than 80 percent of the work in running the club.

As a club, write down what you consider the traits of your best members, and try to be laser-beam specific. It can be things like: how long they have been a member, what leadership positions have they held, how many people do they recruit, are they also a member of the NAR or Tripoli, do they pay their dues on time, do they help set up and pack up the range equipment, are they good at fund raising, do they contribute articles to the club newsletter, do they mentor newbies, do they compete in launch competitions, do they take off work to help with demo launches?

You can easily come up with a grading system that ranks each member in order of their importance to the club. It is then a pretty trivial task to determine what a member has to do to move up in value. For example, doing more range duty or donating some equipment to the club could be a criteria for moving up in value. On the other hand, leaving the launch early and not helping to break down the range would define a member that is moving down in value.

To be honest, I do this with my own customers here at Apogee Components. I rank them as "A-level", "B-Level", "C-Level" and "D-Level." Obviously, A-Level is the best.

After you grade your members' value, the next part is to come up with a system to reward those that have higher value to the organization.

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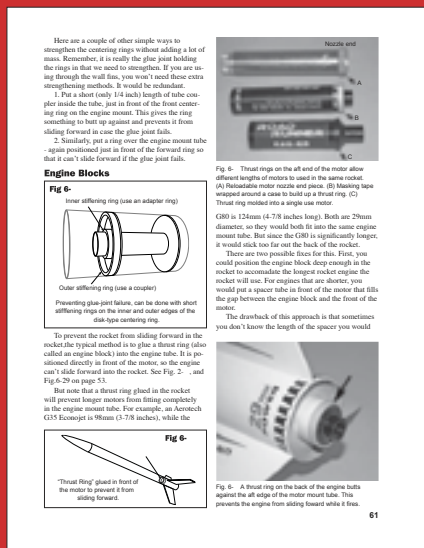
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For example, here at Apogee Components every customer starts out at a C-Level designation. We give them an appropriate level of service based on that value. *By the way, I hope you have noticed that our minimum level of service for C-Level customers is greater than the highest standard of service you'll get from any other rocketry company. That is by design, because I want to earn your business.*

From there our customers can move up levels, or down levels. For example, if they spend a certain amount of money, they move up levels. Or if they are rude to our staff when they call on the phone, then they move down a level. But there are perks for customers as they move up to higher value levels. You can get a glimpse of a few of them at: [http://www.apogeerockets.com/Frequent\\_flyer.asp](http://www.apogeerockets.com/Frequent_flyer.asp)

Do customers feel offended by being treated differently? Absolutely not. In fact, they will take their business to other vendors if we don't treat them differently after they've dropped a wad of money by ordering a lot of rockets from us. People know their value, and they do expect different treatment based on their own perceived value.

You don't get mad at the airlines because the "First Class" passengers get served drinks on the flight, do you? You're probably trying to find out what you have to do to get up to a First Class passenger status.

I think you'll find your club members will respond the same way. They'll see the benefits of being an A-Level member and they'll ask what they have to do to move up to that level. You'll probably see a renewed interest in members volunteering to do range duty just so they can step up to A-Level status.

I urge you to stop and think what your club can do to reward the members based on their value. It is important because you need to keep your best members active in the organization. You can't afford to lose them from a neglectful attitude.

Here are some suggestions to get your ideas flowing: an express-line at rocket check-in, launch priority when there is a long queue of rockets waiting to be launched, first choice at range-duty assignments, 2-for-1 deal on raffle tickets, Gold-colored membership cards, first pick of rockets when there is a give-away, line-cuts at the Christmas buffet, a free adult beverage at the summer picnic, or reserved parking spots at the launch field so they don't have to carry their rockets as far.

Whenever I go to a club launch, I see the visitors giving a higher priority than the veterans when it comes to launch-

ing rockets. They do this in hopes that the visitors will return and join the club. I'm not suggesting that you want to exclude the visitors from the feeling of being welcome. But making the veterans wait around forever to launch their rockets while the newbies struggle with hooking up igniter clips only makes the veterans miffed.

I've heard a lot of people say that they only attend club launches occasionally because they have to stand around a long time waiting to launch their rockets. If your club isn't doing something to improve the launch rate of getting rockets into the air, then you should do more to give higher priority to the "A-level" members.

Speaking of which, what is your club doing to improve launch rates? Do you even consider it a problem? *News flash: it is.*

## **Crazy-Insane Idea #3 – Only recruit from the pool of "A-Level" prospects**

Once you buy into the crazy-insane idea that every club member has a different value, you'll soon come to the same realization about potential club members. There are people that are more likely to join your organization and rise up to the ranks of "A-Level" status. Those are the ones

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you want in your club, right? Go after them!

But too many clubs and organizations waste their energy and resources trying to recruit people that have very little interest in rocketry. They are the C-Level and D-Level prospects. If they are successful in getting them to come to a launch, they will quickly find out that the one launch they come to is *the one-and-only launch that they come to*. They don't stick around for more launches or club activities.

You have to sit down and define the characteristics that make a good prospect. Again, be laser-beam specific. It is hard to do, I'll grant you that. So often it is easier to define the undesirable qualities that you know will make a poor recruit. If you don't do this, the alternative is to waste your time, energy, and resources pursuing the people that are only going to show up one time and then never return.

I'll give you an example from my own business, since we share the same desire to get the best people that will stick around in rocketry the longest period of time. I start by eliminating the ones that I've found out to be in-and-out of the hobby quickly.

Who are the ones that I don't pursue? First, I don't pursue and direct advertising towards kids. *This sounds terrible, doesn't it?* I've said over and over that a lot of what I do is for future generations of modelers – which are today's kids. Then why wouldn't I pursue the kids? Because the average kid isn't a quality prospect. I know from experience that they are only in rocketry until they reach puberty. Then

they are out again because their hormones realign their priorities. Very few kids want to be seen as a rocketry geek, because unlike on TV, real geeks don't get dates in high school (been there, done that...).

The second group of people that I don't spend money on is females. Yep, I've spoken of one of the biggest taboos of all, at the risk that it makes me look like a male chauvinist. But the statistics don't lie if you take the time to examine the membership roles of your club. The average women is not drawn to smoke and fire of rocketry to the same extent that males are. Trying to change the laws of nature is a waste of money and energy. So don't feel bad about not spending time and money on recruiting among females; Mattel doesn't feel bad because they don't spend advertising dollars trying to get boys to buy Barbie dolls.

Let me say that there are exceptions to these two categories. You did notice that in both cases I said the word "average;" such as the *average kid* and the *average female*. The *exceptional kid* and the *exceptional female* are legitimate prospects that you can target with your time and resources. But finding the exceptional one out of a group of 1,000 prospects is very expensive when you have limited resources. I consider it downright wasteful if you do spend limited resources trying to advertise and recruit amongst a group of prospects that have little chance of eventually becoming an "A-Level" member.

What should you do then? Well, follow my lead. My policy here at Apogee is to be kind and courteous to all

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## Rockets Are More Than 3 Fins And A Nose Cone

Some ask, "What is so exciting about model rocketry? They go up and then they come down, right?" Only the true rocket hobbist understands the truth behind the fact that rockets DO go up and then they DO come down! Even if that rocket is a simple design with 3 fins and nose cone, the enjoyment received from this truth is amazing and perhaps even addictive. With that in mind there are various creative ideas that add excitement to model rocketry. Here are a few:

**Canted Motors:** FlisKits Duece's Wild 2-motor canted cluster has made these popular in recent years. The FlisKits Tres uses 3 canted motors and the Sunward Eruption uses 4 canted motors.



**RetroRocket:** Heavenly Hobbies has put this design into their Backdraft kit. It uses a reverse-mounted motor to slow down a descent before deploying a parachute.



**Video Rockets:** Estes Oracle and Astrovision are making onboard videos available to every level of rocketeer.



**Monocopters:** Art Applewhite Rockets have made these rockets easy to obtain and easy to build. Take one for a whirl (get it?).

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## Building Your Club During a Recession

prospects when they show up on my doorstep (*remember that I said that we have defined and provide a minimum level of service to everyone, regardless of who they are*). The “exceptional” prospect, regardless of what age or gender they are will quickly identify themselves as being exceptional. I just have to be attuned to the clues they give off, so that I recognize that they are indeed exceptional.

If you have a set of written criteria to define the value-level of members, it is laughable how easy it is to recognize the average prospect from the exceptional one. For example, I consider a person that physically shows up here at Apogee’s facility to be a much better prospect than someone that only visits our website. They’ve done something to identify themselves as being exceptional, I’ve identified it, and I’ve just moved up from the first-timer “C-Level” to a “B-Level,” or even an “A-Level” prospect.

Once you’ve identified the characteristics of an A-Level prospect, where do you find them? That question brings us back to the beginning of this article. Start by reviewing the traditional marketing approaches that I alluded to before. But concentrate your efforts on the ones where your “A-Level” prospects are hanging out in larger concentrations.

Additionally, stop trying to blaze a new path through the wilderness of marketing. There are people with resources out there that can make your job easier. That brings us to the next crazy-insane idea...

## Crazy-Insane Idea #4 – Work with manufacturers, instead of ignoring them

In the next issue of the Peak-of-Flight Newsletter, I’ll take you through the last three crazy-insane ideas that you can use to grow your rocketry club, whether the economy is in a recession or not.

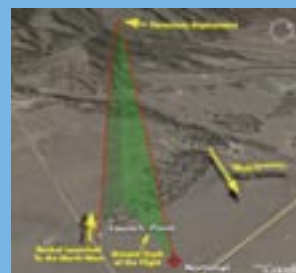
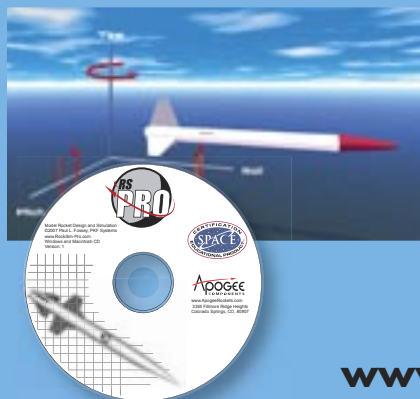
### About The Author:

Tim Van Milligan (a.k.a. “Mr. Rocket”) is a real rocket scientist who likes helping out other rocketeers. Before he started writing articles and books about rocketry, he worked on the Delta II rocket that launched satellites into orbit. He has a B.S. in Aeronautical Engineering from Embry-Riddle Aeronautical University in Daytona Beach, Florida, and has worked toward a M.S. in Space Technology from the Florida Institute of Technology in Melbourne, Florida. Currently, he is the owner of Apogee Components (<http://www.apogeerockets.com>) and the curator of the 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 a FREE e-zine newsletter about model rockets. You can subscribe to the e-zine at the Apogee Components web site or by sending an e-mail to: [ezine@apogeerockets.com](mailto:ezine@apogeerockets.com) with “SUBSCRIBE” as the subject line of the message.

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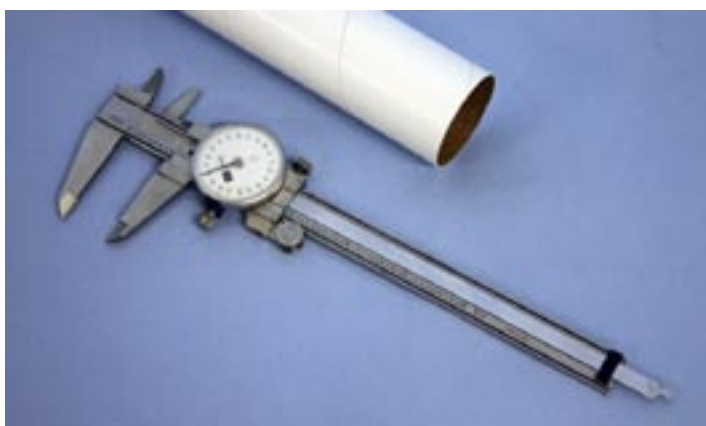
## Question and Answer Corner

### Measuring Body Tube Diameters, and Designing Rear Ejection Rockets

By Tim Van Milligan

Alex DeVor asks: "I am relatively new to rocketry and I got your book. A lot of the steps for making good quality parts call for measuring the inside and outside tube diameter accurately. Is there a tool or a method of doing this?"

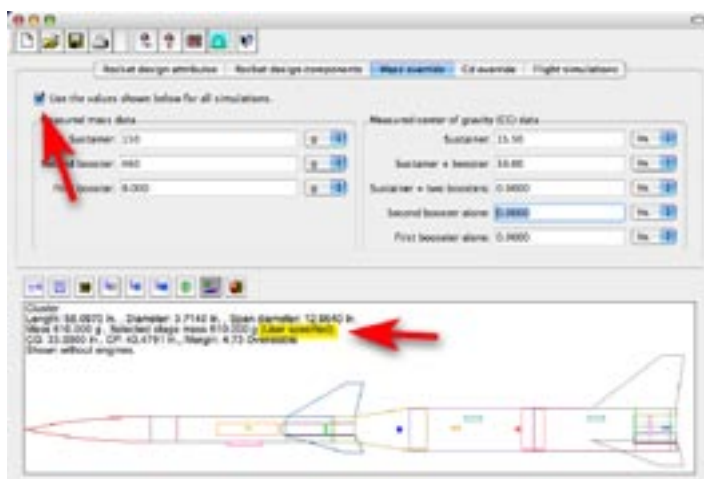
The tool is called a "caliper." You can find them in the tool section of hardware stores or at Sears. They come in two varieties: analog (dial) or digital read-out. Good ones are expensive, but you don't need to have that kind of precision for measuring paper tubes.



Dial Caliper to measure tube sizes

Ed H asks: "Just wondering how to add nose weight to a rocket in RockSim to change the CG, etc. I have tried to add a mass object in the nose and I varied the weight from 5 oz to 3 oz's along with adding motors and the CG CP stays the same."

If you are adding weight to the nose with a mass object and the overall CG is not changing, then you must have the CG override turned on. If you look on the 2D drawing, you'll



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## Question and Answer Corner

see where is says the current mass of the rocket, followed by "(User Specified)". This tells you that you have mass override turned on.

If you click on the Mass Override tab on the top of the screen, you'll see a little box that says "Use values below for all simulations." If you uncheck it, RockSim will automatically compute the overall CG position. Then the nose mass you add to the rocket will be reflected in a shift of the CG position.

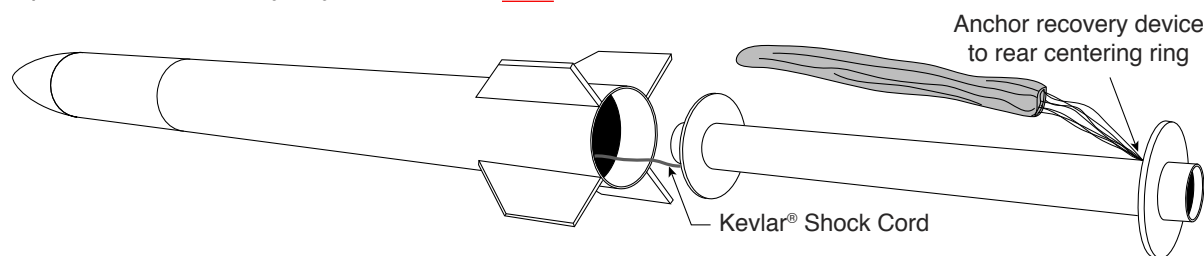
John Marrone asks: *"I have had a look around on the net for a while on viable and easy designs to build for rear mounted parachutes, that is, parachutes that eject at a rockets apogee, near the motor end of the body tube (but to no avail). The reason being is that I would prefer not to have the nose cone pop out every time, for payload and aesthetic reasons. I was just wondering can you recommend any websites or point me towards any of your newsletters that deals with this topic and shows step by step how to build an easy rear projection parachute system?"*

It is relatively simple to build a rear ejection rocket. Just design the rocket so the engine mount can slide rearward out of the rocket. The only other big change you'll need to make is to attach the recovery device to the front of the rear centering ring of the engine mount. Then stow it between the rings of the engine mount to protect it from the heat of the ejection charge.

You will still need a shock cord that is attached between the engine mount and the body of the rocket. I'd suggesting using Kevlar® cord ([http://www.apogeerockets.com/shock\\_cord.asp](http://www.apogeerockets.com/shock_cord.asp)) and attach it to the loop on the base of the nose cone or on the base of your payload bay.

The one downside of rear-ejection is the limited amount of space to stow the chute between the centering rings.

The only kit that I could find that used rear parachute ejection was the Estes Sizzler™. You can download plans at: <http://plans.rocketshoppe.com/estes/est2127/est2127.htm>



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