



# PEAK OF FLIGHT

N E W S L E T T E R

## In This Issue

***What's going on  
here at Apogee  
Components?***

# SR-72 DARKBIRD



Cover Photo: The SR-72 Darkbird rocket glider. Get your own at: [https://www.apogeerockets.com/Rocket\\_Kits/Skill\\_Level\\_4\\_Kits/SR-72\\_Darkbird](https://www.apogeerockets.com/Rocket_Kits/Skill_Level_4_Kits/SR-72_Darkbird)

Apogee Components, Inc. — Your Source For Rocket Supplies That Will Take You To The “Peak-of-Flight”  
3355 Fillmore Ridge Heights  
Colorado Springs, Colorado 80907-9024 USA  
[www.ApogeeRockets.com](http://www.ApogeeRockets.com) e-mail: [orders@apogeerockets.com](mailto:orders@apogeerockets.com)  
Phone: 719-535-9335 Fax: 719-534-9050

ISSUE 395 JULY 14, 2015

# PEAK OF FLIGHT

## Whats going here at Apogee Components?

By Tim Van Milligan

Has it really been six years since I last wrote about what is going on at Apogee Components? (see Peak of Flight Newsletter issue #251 at: <https://www.ApogeeRockets.com/Education/Downloads/Newsletter251.pdf>). I had intended to write one every couple of years as a little way of jotting down the history of Apogee, but six years is way too long. I'll never be able to catch up on all that has happened since 2009, so I'll just jot down what has been going on recently.

To be frank, the rocketry business follows the school calendar. When people ask me how business is going, I have to fill them in on the cyclical nature of rocketry. You'd think that customers would be buying and flying a lot during the summer, but this is actually our slow season. The majority of our customers just seem to make purchases when school is in session. Maybe it is that they have busy summers, with vacations and lots of other activities going on too. Who knows for sure...

With that in mind, here at Apogee we try to schedule major reorganizational projects to coincide with the extra spare time allotted by our customers. Our warehouse is undergoing a major transformation right now. In the last three months, we added 50 new shelves so that we have room to store new items. When I last wrote about Apogee, I said that we had room to grow. But we're out of floor space now, and we have to utilize more of the vertical space in the building.

Since space is now at a premium, about a year ago, we added a storage container and put it in our back parking lot. It is as big as a semi trailer, and we use it to store items that aren't heat or cold sensitive, and that don't need to have easy accessibility. These are things like plastic nose cones, tubes and centering rings. It is also where I store a lot of my own personal junk that I just can't seem to throw away. I've still got college textbooks from over 20 years ago. I keep telling myself that the laws of physics haven't changed, so they are still good books.

One thing that is on my mind is that sooner or later, if we keep growing, we'll have to find a bigger building. Apo-

gee has moved so many times in the past, that I know what that entails. It is a chore to move to a new house, and it is about 100 times worse for a business to move. I can get a few more storage containers in our back parking lot to hold stuff, and hopefully hold off having to move too soon.

But the other big change is the number of employees we've grown to. There are eight people here at Apogee Components now. And if we continue to grow, there isn't any extra office space to put a new person.

### *The Apogee Way*

I know this will sound cliché, but our staff is the big reason that Apogee Components is still growing. I expend a lot of time selecting the people that work here, and then we train them in the "Apogee way." The Apogee way is different from how other companies do business. I personally think it is the only way to do business, because it always means putting the customer first.

I continue to agonize over creating a positive customer experience. That begins by trying to define what that means. And thinking about it, it is what separates Apogee from other companies. Every company will say that they want a "positive customer experience," but how do we set



*Photo 1: Our offices.*

Continued on page 3

#### About this Newsletter

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

#### Newsletter Staff

**Writer:** Tim Van Milligan  
**Layout / Cover Artist:** Chris Duran  
**Proofreader:** Michelle Mason



# PEAK OF FLIGHT

Continued from page 2

## What makes us different?

ourselves apart from what they are trying to accomplish?

Where I think Apogee is different is that we are willing to take the time and educate our customers. This is not the "typical" business strategy you'd learn in business school - far from it. Educating your customers is very expensive and time consuming. The typical business strategy is to steal market share from competitors. Don't take my word for it. Just go to a bank to get a business loan; they'll ask you this simple question: "how big is the market?" The reason is that they assume your company will capture some of that market share in order to pay back the loan. But building a market from scratch? That is crazy-talk to the ears of a banker. They won't ever give you a loan for that business model.



Photo 2: Brandon working the front desk.

First of all, it puts Apogee in a good position within the industry. We don't look at other rocket companies as



Photo 3: Customer photo wall.

Continued on page 4

## Staging Electronics

- Designed to ignite the top motor in two-stage rockets.
- Provides an easy way to stage composite propellant motors

- Fires off igniters after a preprogrammed amount of time following liftoff

- G-switch senses liftoff and insures against a false launch-detection

- Small, lightweight design is great for skinny rockets

- Easy-to-use, and will fire off any igniter, including clusters!

Battery, battery connector, mounting board and igniter are not included.

[www.ApogeeRockets.com](http://www.ApogeeRockets.com)

[www.ApogeeRockets.com](http://www.ApogeeRockets.com)

Continued from page 3

## The Warehouse

competitors to steal customers from. They are often our partners, and we help sell their products.

But the important thing is that an educated customer is one that actually goes out and accomplishes something. They are like a teacher that has the knowledge to actually launch rockets, rather than just talking about doing it some day. In reality, the educated customer also knows how to get around obstacles when they arise. They don't take "no" for an answer.

And that is what our customers want, and what we try to deliver. Our customers usually have gotten a "no" answer from someone else, and they don't understand why. It may be something like: "Why can't I get a rocket motor overnighted to me?" So they come to us, and we can explain why they probably got that "no" answer. To be honest, we can't always solve every problem that comes our way. But we can take the time to explain it to customers in a way that gives them a more complete picture of their situation. And I think that our customers appreciate that. Just receiving an answer that presents new information in a way that makes sense is often enough to be a "great customer experience."



Photo 4: Warehouse Kanban System.

So that in a short synopsis is what makes Apogee different, and what I try to do when educating our staff. This may have seemed like a psychological rambling, but that is the kind of stuff that is always on my mind. I want to make the customer's experience better in a tangible way that I can define.

## What else has changed since 2009?

Did I mention we're up to eight team members here now?

Who are these people? For starters, we have three in the warehouse. Usually they start their day by processing the overnight orders that we receive. The products have to be pulled from the shelves, boxed up, and sent on their way with the proper carrier (Postal Service, UPS, or FedEx). Our guarantee is that if you order by 2 p.m. (Mountain Time Zone), that we'll get it out the same day. We can make that guarantee, because our warehouse team makes it happen. They want to be known as the best in the world!

They also receive shipments from our suppliers. This takes more time than you'd expect. When a shipment comes in, it has to be inspected and entered into our inventory system properly. Unfortunately, it is far too common to receive shipments that are mixed up. The quantities in the box are not what was ordered. This gives us quite the "customer perspective" that you probably experience too.

Another task of our warehouse is to build up inventory of Apogee's own products. This is one other area that we control, and the warehouse team takes great pains to make sure we're not out of stock on Apogee-manufactured items. Don't you just hate going to a manufacturer, and they say they are out of stock? It is part of the experience that tells you how well they are doing their job.

So over the last few years, we've been investing heav-

Continued on page 5

## Laser Etch Your Reload Casing!



*Makes it easier for your casings  
to find their way home!*

[www.ApogeeRockets.com/Customization/Motor\\_Casing\\_Engraving](http://www.ApogeeRockets.com/Customization/Motor_Casing_Engraving)

[www.ApogeeRockets.com](http://www.ApogeeRockets.com)



# PEAK OF FLIGHT

Continued from page 4

## Staying in stock...

ily in our inventory management system. We've gone to a system called "Kanban" to keep tabs on our supply levels better. In essence, it allows us to track inventory in two different ways. The primary system is what our computerized inventory system tells us what should be on the shelves. For example, when you call us on the phone, you can ask the person to see how many of a particular item we have on hand. That person will check the computer and give you an answer almost instantaneously.



Photo 5: Warehouse organization.

But unfortunately, the inventory can be off in the computer system. (Like when I myself go into the back room to get supplies for my own rocketry projects and don't record the removal in the computer system.) The Kanban system is the back-up. Once or twice a week, our team physically eyeballs each bin in the warehouse and see if we have a minimum level on hand. If we don't, little tag is removed from the box and sent to the purchasing department so it can be reordered.

It isn't a fool-proof system, but it far better than trusting the computer system to be 100% accurate. This helps us to further ensure that if you (our customer) go to the Apogee website. The product will be available and ready to ship.

Just so that you know, in the warehouse, we have West, Samuel, and Amy. You'll probably get to know them, because they also send out the tracking information personally when they make a shipment. EVERY ORDER, EVERY DAY! We take the time to send personal emails, because we know you want to know when your order shipped, and when you can expect it. While we can't control the delivery of the box, we do know when it went out, and by which carrier.

In the front office, we Brandon, Michelle, Erin, and Chris.

Continued on page 6

## Pratt Hobbies GO BOX Launch Controller



- Launch controller for mid-power rockets.
- Hooks right up to your car's battery. No more dead AA batteries!
- Plenty of electricity to set off any type of rocket motor igniter.
- 24 foot cord, allows you to stand far back for launch safety.
- Audible continuity buzzer lets you know the circuit is armed and ready for launch.
- Flat-jaw alligator clips (for easy hook-up of igniter.)

Brought to you by:

Apogee  
COMPONENTS

[www.ApogeeRockets.com/Launch\\_Accessories/Launch\\_Controllers/Go\\_Box\\_Launch\\_Controller](http://www.ApogeeRockets.com/Launch_Accessories/Launch_Controllers/Go_Box_Launch_Controller)



# PEAK OF FLIGHT

Continued from page 5

## The Apogee Team



**Photo 6: The Apogee Staff: Erin, Amy, Tim, West, Brandon, Samuel, Chris and Michelle.**

Brandon is the front line for customer service. He goes through each order and alerts the warehouse of any special requests that you might have when you do business with Apogee. He also is phenomenal on the phone. I wish I had his patience and boundless energy. Previously, he was a customer service rep for an airline, so he knows how to handle crisis calls.

Interesting tid-bit about Brandon: he moonlights as a Sci-Fi author. I'll plug his web site for him so you can check out his stories if you have a chance: [www.darkrefuge.net](http://www.darkrefuge.net)

Michelle is our office manager. She's been with Apogee since 1999 and knows rocketry inside and out. There are only a few technical questions that she doesn't know the answer to, and then she researches those to find out. If you ever do a "chat" using our web site, it is typically Michelle that will answer them.

Erin is our web master. Her main job is to keep the web



**Photo 7: The office dog "Pluto".**

site up and running. It is a full time job, because our web site is so technically complex. A few years ago, she coded and replaced our original 20th century shopping cart with a new system. One big feature was that it could calculate much more accurately the shipping cost of each order. We know that shipping costs are typically the bane of customers. So we're doing everything we can to provide a more accurate estimate for you when you place your order.

Continued on page 7



## Rocket Jewelry

- The Perfect Launch-Range Accessory
- Subtle, Tasteful, Fashionable & Distinctive
- Makes A Great Gift for Family and Friends
- Display Your Passion for Rocketry

[www.ApogeeRockets.com](http://www.ApogeeRockets.com)





# PEAK OF FLIGHT

Continued from page 6

## The Apogee Team continued...



**Photo 8: Sam working warehouse production.**

Earlier this year, we switched hosting companies for our web site. It was a nerve-racking time for me, because I didn't know what new problems would crop up. Technology usually has some hidden issues that you don't know about until it is too late. But Erin smoothed the process, and I couldn't be happier. We got dozens of comments from customers saying how fast the site is compared to what it was a few months ago.

While we are content with our current shopping cart and web site, Erin feels it can be better. She is in the process of doing a new overhaul on the website to make your search for common products faster. There will also be a new mobile-friendly version of the Apogee site. The hot



**Photo 9: The amazing laser cutter.**

topic is that people use these new-fangled things called "smart phones" to surf the Internet, and we want to catch up to technology. Look for the changes later this summer.

Our newest team member is Chris, our graphic artist. We've been without someone in this position since about 2008. Chris' main job is to help me to get more new products out the door faster. I can only release new rocketry products as fast as we have instructions and packaging available. That is where Chris comes in. We've got a list of new products that will be released soon. And with his help,

Continued on page 8

### Need A Parachute?

**Apogee Has The One You're Looking For!**

A thumbnail for a YouTube video showing a rocket body, a clapperboard, and a pencil. The clapperboard has "Apogee Rocketry Videos" and "Production: www.ApogeeRockets.com" written on it. The YouTube logo is in the bottom left corner.

**FREE Rocket Construction Videos**

A new Apogee video every two weeks to help you become a better modeler!

[www.ApogeeRockets.com](http://www.ApogeeRockets.com)

### Minimum Diameter Motor Retainers!

**Apogee is your one stop shop for your minimum diameter rockets projects!**

- Fly High
- Fly Fast
- Impress Your Friends!

#### We Have:

- Minimum Diameter Retainers
- Motor Extenders
- Threaded Forward Closures
- Adapters for Cesaroni Cases



[www.ApogeeRockets.com](http://www.ApogeeRockets.com)

## In Summary



**Photo 10: The many completed rockets around the office.**

we'll get them to you far faster than they would if I was trying to do it all myself.

My own job here at Apogee has several facets. My main love is developing new products. People tell me they envy this part of the job. I know exactly why. Creating new products is like "playing." I'm sure I've told you how much I love having a laser cutter. Every day I find a new use for it.

I'll be the first to admit that it has definitely changed me and my approach to rocket development.

Unfortunately, only about 5% of my time is spent in the workshop. The rest of my time is all about running a company. And it isn't a bad job to have either. We've got a great team, and we don't have the typical office politics that other companies suffer with. I think the reason is that we keep an intense focus on the needs of our customers. When your attention is on what really matters, then personal issues take a back seat.

So that is what is going on at Apogee in the summer of 2015. I hope you found some of this interesting and somewhat useful. Maybe you can use this information to compare Apogee against other companies. I don't mind.

### 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.

## Wanted: Your Rocket Products

**If you're a manufacturer of rocketry products, like kits, electronic payloads, parts, construction tools, motors, launch equipment, or something totally cool, we're interested in talking to you. We're always looking for new products to sell.**

### So why have Apogee sell your products?

*We have the best customers that are looking for something new.  
We provide the product support for the customers, so you don't have to.  
We take care of all of the hassles, so you can focus on what you do best.  
We are a volume seller - Our web traffic means buyers will find you easier.  
Our endorsement means you sell more and make more money!*

**Apogee**  
COMPONENTS

**[www.ApogeeRockets.com](http://www.ApogeeRockets.com)**

If you're not getting enough sales, let's talk.