Apogee Components

PEAK OF FLIGHT

NEWSLETTER

In This Issue

Painting the Tip Of A Nosecone

Cover Photo: Oddl' Rockets' Corkscrew Kit.
Get one now at:
www.ApogeeRockets.com/oddl_corkscrew_flic.asp

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 e-mail: orders@apogeerockets.com
Phone: 719-535-9335 Fax: 719-534-9050

ISSUE 306 FEBRUARY 14, 2012

Painting The Tip Of A Nose Cone

By Chris Michielssen

I have tried a few methods of masking the upper half of a nose cone with limited success.

For example, years ago, I'd simply brush a second color half way up a nose cone.

More recently, I tried a method suggested in the Apogee Peak Of Flight newsletter, #175 from January 2007 (www.ApogeeRockets.com/Education/Newsletter175.pdf). In that issue, found on page six, under the *"Tip Of The Fin"* section.

Photo 1

This involved cutting a circle in cardstock and setting it over the tip of the nose cone for a mask.

I tried this technique when I painted the black tip on my Starlight Jayhawk model.

Results were good, but not great.

I wanted the same sharp edge color separation I can usually get on the rocket's flatter surfaces.

That's when I start thinking - How can I get a better mask seal on a curved nose cone?

The kits from The Launch Pad sometimes use a conical cardstock "witches hat" to get their nose cones to the correct scale profile. But I needed the reverse - an open hole at the top, masking the lower half of the nose cone.

I started thinking about the curvature of donut shaped shroud patterns and it finally hit me. Cut your masking medium in a curve shape, just like the upper end of a cardstock adapter.

Instead of a cardstock mask, use clear tape (my new favorite masking medium - Scotch Tape) that wraps around the nose cone.

For this example we'll be using the Estes style PNC-60AH, but the technique will work on any nose cone.

Surface Preparation

With any painting project with a mask, your end result is only as good as your surface preparation.

On a plastic nose cone, sand down the raised molding seams and fill any concave seams before applying any paint. On a balsa cone, fill the grain and sand smooth.

Spray a coat of grey primer filler. After it fully drys, wet sand with 400 grit sandpaper. You can wet sand a plastic nose cone this early in the process because the plastic won't absorb the water like a balsa nose cone would.

Photo 2

Photo 2 shows the sanded primer, some primer is still left on the nose cone. You can see where the primer has filled any remaining mold seam.

When you use primer, your final color coats will adhere better. You want your color coats to adhere well when it comes to pulling off the masking tape.

Photo 3

Now the first base coats are sprayed. I'm using Rustoleum 2X Gloss White.

In the end, the lower half of the nose cone will be painted white, the upper half will be gloss black, as shown

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), or by sending an e-mail to: ezine@apogeeRockets.com with "SUBSCRIBE" as the subject line of the message.

Newsletter Staff

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

Continued from page 2

Painting the Tip of a Nose Cone

in Photo 1.

As shown in Photo 3, carefully mark the position of the dividing line using a soft pencil. Don't press too hard, or you could make a depression or even chip the paint.

Next, measure the width of the nose cone at that point as seen in Photo 4. I'm using an engineer's ruler to get 10th of an inch measurements.

Photo 4: Measure the diameter at the pencil mark.

On this nose cone the width from side to side is roughly 1.20".

Photo 5: Online tool for creating transition sections.

This will be the width for the top of the masking arc cut.

Create Your Transition

If you aren't using RockSim to make transitions, you can also find a free online-tool. Go to http://www.payload-bay.com/page-Tools.html

This is a great website for DIY tools for centering rings, tube slotting tools and fin marking guides.

Go down to "Transition Tool" and click on it, and then enter in the diameters to create the transtion pattern that you'll use as the mask.

Note that the base diameter is slightly wider diameter down from the color mask line.

This will be the width of the tape mask going around the nose cone. This may seem like a thin strip, but when cut out of tape, it needs to be flexible.

From here, you'll print out a picture of your transition.

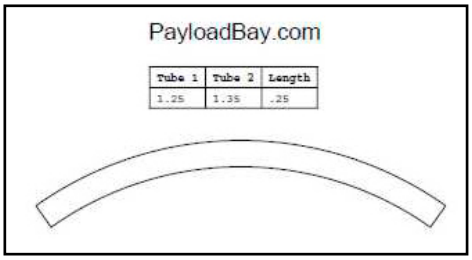


Photo 6: Print out of the transition.

Print this first, test transition on lightweight paper, 20 lb. is good.

Cut out this test wrap and wrap it around the nose cone at the pencil line.

From Photo 7 on the next page, you can see my initial test wrap was a little short .

I'll go back to the Transition Tool and increase both diameters by .05". It doesn't take much to get the transition mask to a larger diameter.

Continued on page 4

Continued from page 3

Painting the Tip of a Nose Cone

Photo 7: Test fit the wrap around the nose cone.

Photo 8: Draw a pencil line around the perimeter.

When you've got it fitting right, print out two copies on lightweight 20 lb. copy paper.

The paper must be thin enough so that light can pass through it.

Cut out one copy to check the fit, leave the other copy whole to make the mask!

Wrap the transition you just cut out around the nose cone at the marked line. Make sure the paper strip is level and even around the nose cone. Tape in place.

Using a sharp pencil, draw a light reference line around the top of the transition piece as shown in Photo 9. Your tape will be placed around this line.

Making the Tape Mask

In Photo 9, I've taped the printed transition page on the outside of my sliding glass patio door. That's right, it's on the outside of the glass with the printing facing in. Tape it at

Photo 9: The transition taped to a glass window.

Continued on page 5

Continued from page 4

Painting the Tip of a Nose Cone

Photo 10: Clear tape over the pattern

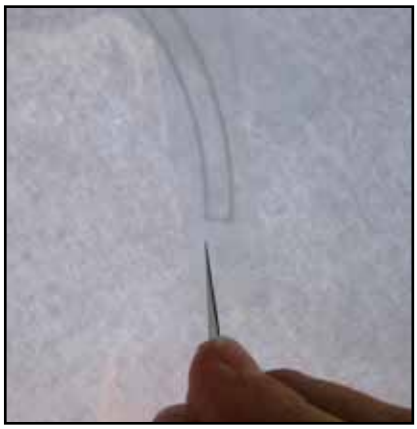


Photo 11: Cut the tape on the glass window.

an angle to allow for the easiest cutting with your hobby knife.

Lay clear Scotch tape on the inside of the glass over the printed lines as shown in Photo 10. I used two pieces of tape for a complete coverage.

What you have done is made a "poor man's" light table.

Do this in the daytime when the sun is shining on the glass.

You'll be able to see the printed transition lines through the back of the paper, glass and clear tape.

Using a sharp knife, cut carefully over the smaller arc.

This line will be the mask. Go slowly and smoothly, making a nice, curved line. Go slightly beyond the ends to make an overlap for later.

The slightly larger outside arc is cut next, this arc line doesn't have to be as accurate as the first cut. This second wider cut line will be covered up.

Photo 12: Cut the tape on the glass window.

As shown in Photo 12, using a wide point permanent marker, make a black line over the inside cut arc.

Photo 13: Tape wrapped around the nose cone.

As this is clear tape, it would be hard to see the edge when setting it over the pencil line on the nose cone. The black marker gives you something definite to line up.

Using the tip of your hobby knife, remove the waste tape from outside the cut arcs.

Now remove the cut, marked tape transition from the glass.

Continued on page 6

Continued from page 5

Painting the Tip of a Nose Cone

Photo 14: Mask over the tape, covering any slits you might have made to get the tape to lay flat.

Set the black edge on the nose cone along the drawn pencil line as seen in Photo 13.

You might find it easier to start the tape in the middle and work your way to the outside ends. This may not be a perfect fit, there may be some buckling of the tape when going around the nose cone. Still this cut arc will be a much better fit than you'd get with a long strip of straight tape. Just get the black edge on and around the pencil line.

Mask off the open rear of the nose cone below the Scotch tape mask (Photo 14).

Here I used masking tape and a square of grocery bag to cover the white base of the nose cone.

Spray the upper exposed tip of the nose cone. I used black, as you can see.

Photo 15 shows the removal of the tape. Pull the tape down and away from the masked edge.

If you haven't used Scotch tape for a mask before, you should give it a try. I learned of Scotch tape masks right here in the *Peak-Of-Flight* Ezine-Newsletter. That article changed the way I masked my rockets.

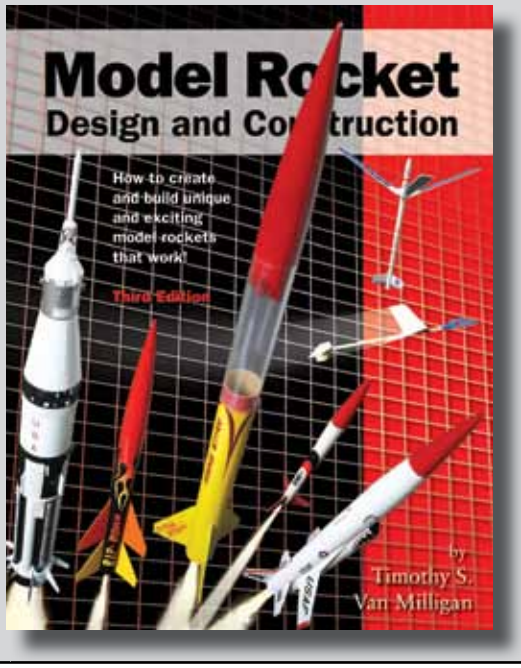
It's cheaper than the expensive "boutique" specialty tapes and can give a great sharp mask line.

A sharp masked line is usually the result of the underlying surfaces being well prepped, clean and smooth.

Photo 15: Remove the tape by pulling downward.

About the Author

Chris Michielssen is a master model builder. He is trained as a graphic designer, but currently is a full-time musical entertainer living in Orlando, Florida. He also has a passion for rocketry, and is currently producing kits as Odd'l Rockets (www.oddlrockets.com). In addition, Chris offers a blog on building rockets at: http://model-rocketbuilding.blogspot.com/



Model Rocket Design and Construction

By Timothy S. Van Milligan

The Expanded 3rd Edition

This massive, 328 page guidebook for serious rocket designers contains the most up-to-date information on creating unique and exciting models that really work. With 566 illustrations and 175 photos, it is the ultimate resource if you want to make rockets that will push the edge of the performance envelope. Because of the number of pictures, it is also a great gift to give to beginners to start them on their rocketry future.

For more information, and to order this hefty book, visit the Apogee web site at: www.ApogeeRockets.com/design_book.asp

Apogee Components
3355 Fillmore Ridge Heights
Colorado Springs, Colorado 80907

telephone: 719-535-9335
website: www.ApogeeRockets.com

APOGEE COMPONENTS