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N E W S L E T T E R



In This Issue

How to Apply Camouflage Patterns To Your Model Rockets



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ISSUE 280 FEBRUARY 15, 2011

How To Apply Striking Camouflage Patterns to Your Model Rockets

By Bart Hennin

If you're getting tired of painting those same old solid color patterns onto your rockets and are ready to take it up a level, this article is for you! It shows you step-by-step how you can create and apply authentically detailed camouflage patterns (in whichever variety of colors you like) to transform any ordinary looking rocket into a unique eye catcher that will be the envy of everyone on the launch range!

Many historical military rockets feature a multi-color camouflage paint scheme. As well, many fantasy and sports rocket models can benefit (greatly!) from well-executed, sharp looking camouflage color too. In fact, nothing gives a more unique and professional look to a model rocket than a sharp looking, nicely detailed, camouflage finish. On the firing range such attention-getting patterns always seem draw crowds of admiring spectators.

Getting Started:

For our purposes here, we are assuming that your rocket is built, the body-tube spirals and balsa parts are filled in and sanded smooth, and that your rocket's primer coat has been applied (and sanded). In other words, we're assuming that your rocket is ready for painting. If you need help with how to prepare your rocket for painting, how to paint your base color, or how to do simple masking, see Videos 2 through 6 here: www.ApogeeRockets.com/getting_started.asp

If your rocket is a sport or fantasy model, the specific camouflage pattern and colors are up to you. However, if your rocket is a scale model, you will need to do some research to ascertain the exact colors and pattern of the camouflage. This info may come from a photo, technical drawing of the real rocket, or from information supplied with the kit. See "Getting Scale Data Quickly For Real Rockets" in *Peak-of-Flight Newsletter* #267 at: www.ApogeeRockets.com/education/downloads/Newsletter267.pdf if you need research help.

If your camouflage pattern has more than two colors, apply only one color at a time proceeding in order from the lightest to the darkest hues. Let the paint dry FULLY between coats. For your first 1 or 2 camouflage projects, you'll

want to pick a fairly simple pattern with just 2-3 colors. Also, fat body tubes are easier to work with than skinny ones. As you gain a bit of experience and confidence you can proceed to more complex patterns with more colors on a wider variety of tubes and surfaces.

Your first step is to determine the lightest color in your camouflage pattern. Then use this color as your base coat. After painting, let the base coat dry completely! Then, we'll mask off areas to prepare for application of your second color.

Before we get to masking techniques that allow us to apply the additional colors and patterns, let's review the basic kinds of camouflage that you can run into. We'll use the famous V2 rocket (www.ApogeeRockets.com/LOC_V2_4-inch.asp) as an example.

Over its history, the V2 had almost a dozen different color schemes with at least 4 different camouflage patterns.

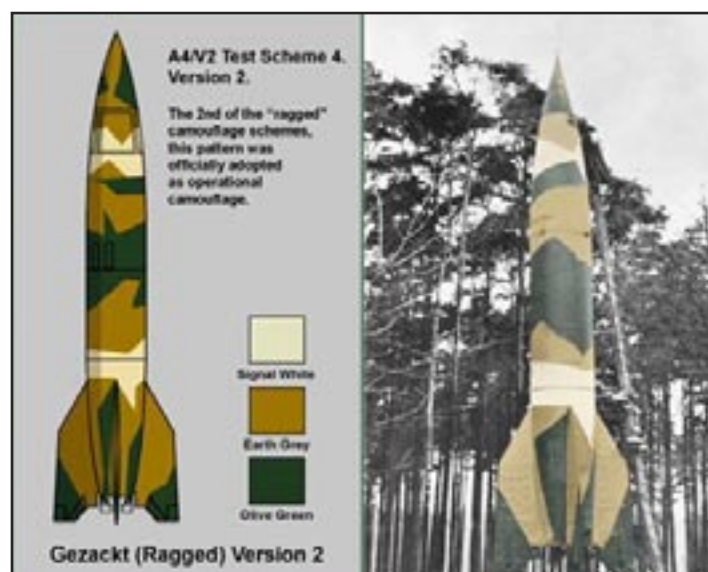


Fig. 1 - V2 schematic & accompanying photo showing the Version 2 Ragged camouflage 3-color pattern (the second ragged camouflage pattern adopted in the V2s history) - NOTE the sharp fairly straight and un-feathered lines.

Continued on page 3

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Continued from page 2

How To Make A Camouflage Paint Pattern

We will consider just three of these camouflage schemes - The "Ragged" camouflage, "Wavy" camouflage, and the so-called "Gebatikt" camouflage (shown in Fig. 1 and Fig. 2). These examples nicely illustrate the problems (and solutions!) you'll face with virtually all types of camouflage patterns. All three patterns have cream white as their lightest color, so this would be your base coat in this example.

For the beginner rocketeer or even veterans of the hobby, patterns like the ones shown here can be a bit intimidating; but they need not be! While it's true that applying a camouflage pattern to your model rocket will involve some extra time and effort on your part, there is no reason you can't achieve stunning results with just a little practice and by doing a few simple steps (outlined below).

In determining the type of masking we want to do, we must note a few things about the camouflage pattern. Unlike other paint schemes, a lot of camouflage does NOT have a hard line between colors. Instead, one color is often blended or feathered into the next, creating a softer boundary. This requires a different masking technique than a pattern where the boundaries between colors are sharp. Also, whether the lines are jagged straight segments or smoothly curved sections will effect our decisions on masking methods.

Scale Camouflage Patterns:

The 1st step in applying any scale model camouflage pattern is to transfer the camouflage outline to the model.

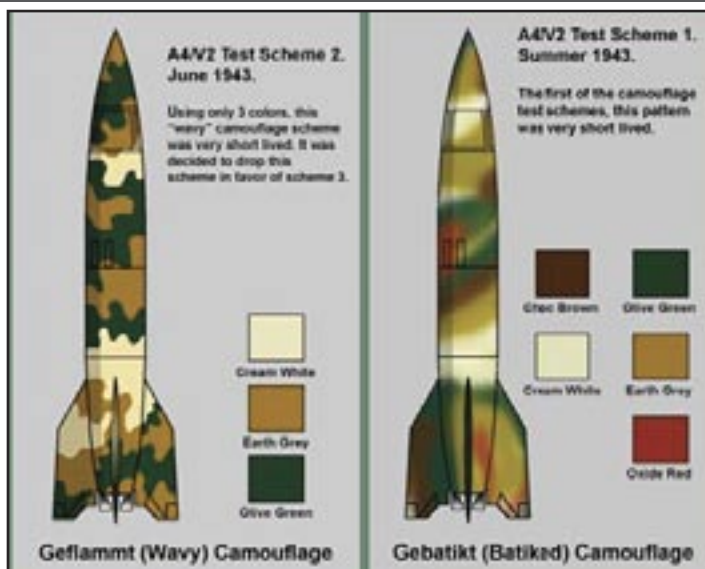


Fig. 2 - V2 schematics showing the short lived Wavy 3-color camouflage pattern (left) & the Gebatikt 5-color camouflage pattern (right). NOTE the wavy pattern is still un-feathered but the curved lines require a more innovative method of masking. Feathered patterns like the one on the right can be achieved without an air-brush by using innovative raised masking techniques (shown later in this article).

To match the pattern on a reference photo drawing to the rocket more easily, you can scan the print into your computer (or download the plan from online if available). Use a graphics program to resize and print it to the exact size of

Continued on page 4

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PEAK OF FLIGHT

Continued from page 3

How To Make A Camouflage Paint Pattern

the model. Use it as a template.

Since the pattern is shown on a flat sheet and your rocket is round, you'll need to transfer the pattern by hand onto the rocket body tube and fins to avoid distortions (or use a graphics program outlined further below). Transfer by hand can most easily be done using a compass or a draftsman's divider with a light pencil. Pen ink can blemish the paint, so don't use it! The photos show ink, but that is just so you can see it in this article.



Photo 1 - Make A Print Of The Camouflage Outline To 100% Scale Of Your Model Rocket (Note: The fins on the drawing are shown flattened out so they are actual size)

Measure off points on the drawing/photo with the dividers and transfer to the model marking the patterns demarcation points with a pencil so you end up with a dotted outline.



Photo 2 - Scaling Off Lengthwise Measurements Of Pattern Pieces As A Series Of Points



Photo 3 - Transferring Lengthwise Measurements Of Pattern To Model (As A Series Of Points)

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Continued from page 4

How To Make A Camouflage Paint Pattern

Here's the specific set up I find easiest when transferring a scale pattern. I place my actual model rocket in line lengthwise with the drawing. Note that length measurements remain true from drawing to model and vice versa. Carefully transfer the pattern piece by piece as a series of dots or points from the print to the model using lengthwise measurements.

Next, use the pencil freehand to connect your points. All lengthwise marks are measured and transferred in line vertically from drawing to model to keep everything lined up. Mark Xs inside the areas to be coated in the new color as you go, so you can easily tell which parts are to be painted (i.e. the Xs) and which parts are to be masked off

(everything else!).

IF your freehand is not that great, just add more points that are closer together. This will take some time but it is not particularly difficult. You want to get as close to the pattern as you can but don't worry if your freehand is off slightly as the masking can correct this to some degree.

TIP: Mark your pencil points just a touch (about 1/16 inch or 1 mm) inside the area(s) to be painted as this ensures they are fully covered up after the paint is applied.

A More Accurate **ALTERNATE** Method Of Transferring Scaled Patterns To Your Model:

If you find transferring patterns by hand too tedious or desire super accuracy, there is an alternate method to creating your patterns. You can do it using a graphics program to project your tubular pattern onto a flat sheet.

Peak-of-Flight Newsletter #121 www.ApogeeRockets.com/education/downloads/newsletter121.pdf shows how to use projection to transfer a 45 degree cut pattern from a body tube to a flat sheet of paper which can then be used as a wrap-around outline on the body tube to draw

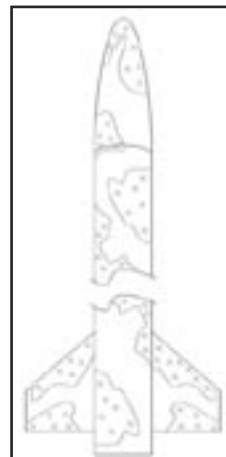


Fig. 3 - Example of pattern transferred to rocket model with Xs marking areas to be painted.



Photo 4 - Connect Your Points

Continued on page 6



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PEAK OF FLIGHT

Continued from page 5

How To Make A Camouflage Paint Pattern

your angled cut line. Any simple computer drawing program will work to create this projected pattern.

You can use the SAME projection technique to transfer your scale camouflage pattern to a flat sheet that you can then use as a template to cut your masking pieces without distortion. This allows you to cut your masking material

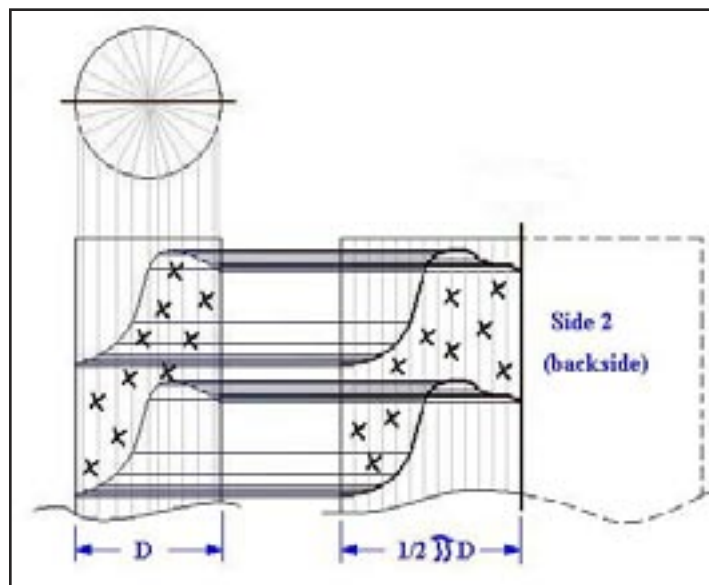


Fig. 4 - Projecting your Curved Body Tube Pattern To A Flat Sheet

BEFORE application to the model so you don't risk cutting into the rocket itself!

Basically, you take your 100% camouflage print (shown left in Fig. 4) and project it onto a flat sheet (on right of Fig. 4). You do this by starting with the top view (the circle up top which is equal to the rocket's diameter). You divide the circle into a series of equal pie slices (the more pie slices you have, the more accurate the final pattern will be).

Next, wherever a pie slice meets the circle edge, you extend a line vertically downwards. Note that for the purposes of copying the pattern, the length (vertical) distances are TRUE lengths but horizontal distances are NOT true to scale as the tube is CURVED (this is evidenced by the fact that the vertical lines are not equally spaced on the vertical view even though they were projected from equal arc segments in the top view).

We now create a flat sheet (shown right in Fig. 4). The flat sheet has a length dimension equal to the length of body tube you are masking off and a width equal to the circumference of the model rocket ($\text{width} = \pi \times D$). We divide the sheet vertically with equally spaced vertical lines to create vertical slices. The number of vertical slices is EQUAL to the number of pie slices in the top circle view.

Now we project the pattern horizontally (point by point)

Continued on page 7

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Continued from page 6

How To Make A Camouflage Paint Pattern

to the flat sheet (right). Note that the flat sheet projection must be done in two parts; we must project first the front side pattern (shown) and then the rear side pattern (not shown) of the camouflage to the sheet. Each half of the sheet is thus $1/2 \pi * D$ in width.

The result is you end up with a 100% sized flat sheet that you can now use as a distortion free template to cut your mask on a flat surface PRIOR to wrapping around the rocket!

Non-Scale Camouflage:

Non-scale patterns are much easier to create as you need not worry about exact duplication and can allow your artistic creativity free range! For non-scale camouflage, you can draw the pattern freehand or simply cut and apply the masking directly.

Selection of masking material for unfeathered HARD lines:

Now comes the selection of masking material. You have a wide variety of choices and some experimentation is helpful and recommended. Masking choices include standard masking tape or auto detailing tape, Frisket film (available at art stores or some hobby stores), and liquid films such as Micro Mask or Bob Dively (available at your local hobby shop) which are shown in Photo 5.

For a jagged straight lined pattern (like shown in Fig. 1 and Photo 1), tape may suffice BUT you can make it much easier on yourself by cutting long narrow strips of tape as these will follow intricate lines more easily.

A better alternative to regular masking tape is 1/4-inch wide pin striping masking tape (found in auto stores or in the automotive sections of department stores). Another auto detailing tape which is even BETTER suited to more



Photo 5 (Left to right): Frisket Film, Bob Dively Liquid Mask, Micro Mask Liquid Mask

precise masking is 3M 2090 masking tape, a lower tack professional grade tape that's blue in color.

For the wavy pattern (2nd V2 drawing, shown in Fig. 2 on page 3), you want to go to yet an even MORE flexible mask such as 3M 218, a vinyl striping tape. This material has low-tack adhesion and excellent flexibility for masking curved lines, and provides sharp edges with virtually no chance of bleeds even on tight curves. This assumes your model is a fairly large scale. For smaller scales with even tighter curves on the camouflage pattern, you may need something even more flexible and precise than tape!

Additional options (that give you almost infinite flexibility and ability to mask even the most intricate lines) are (as mentioned above) artists Frisket film and/or a liquid mask.

Keep in mind that what works best for one person may not necessarily work best for another person. You'll eventually want to purchase every one of these tapes and masks and practice with ALL of them (on scrap body tubes) to see what works best for YOU.

Continued on page 8

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Continued from page 7

How To Make A Camouflage Paint Pattern

Also remember that practice makes perfect. It's always a very good idea to practice and TEST any new product, paint or technique on scrap pieces first before you risk ruining a model you've worked so hard on!

With spare body tubes costing only a \$1.30 to \$2.09 apiece, I find it's always a good idea to keep plenty of spares for such practice and testing. ONE single 18 body tube can be cut up into quite a number of test pieces, and this has saved many of my models from disaster! Tubes are available at: www.ApogeeRockets.com/body_tubes.asp

That said, the techniques here are NOT difficult to master. The biggest hurdle is simply having the courage to TRY it, and HAVE FUN with it!

TIP: If your rocket's camouflage is only over PART of the rocket, there is a handy product found at any paint store called "Ready Mask" or "Easy Mask" that's handy for masking off larger areas. It's a thin brown paper with a low-tack adhesive (like a roll of "Post-It" note material) along its edge. You wouldn't use it for an actual masked edge, but it's good for quickly masking off large surrounding areas from overspray as an alternate to the taped plastic bag method.

How To Use Frisket Effectively As A Mask:

Artist's Frisket is a transparent material with a light adhesive on one side that can be precisely cut to shape with a simple hobby knife. Beware of using Frisket film with solvent based paints as the solvents and Frisket adhesive

can react leaving a mess when you pull the film off the model (again, TEST!). This is why with few exceptions, I **recommend using enamel paints only**. Once completely dry, they are inert to virtually everything including re-applied solvents!

Frisket has a potential advantage in that it can have lines or graphics photocopied directly onto it and be precut prior to application.

If your camouflage is for a sport model or fantasy model, you can get away with photocopying or drawing a camouflage pattern onto the flat Frisket and precut it before applying it to your model.

However, if your camouflage is for a scale model that must be exact, you must either wrap tracing paper around your rocket and trace the penciled pattern that you previously transferred to the model, and then trace this (or photocopy it) onto your flat Frisket (at which point you can precut the Frisket and then apply it to the model.

OR you can simply apply the Frisket to the model UN-cut. Since the Frisket is clear (or at least opaque) you can still see the demarcation lines that you placed on the model through the Frisket sheet and cut the Frisket right on the model. This gives you an exact pattern without distortion that occurs moving from a 2D surface to a 3D surface.

To apply Frisket material to your model rocket, cut a piece to size, and peel away the backing. Press the film gently to adhere it to the model's surface, being careful

Continued on page 9

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to avoid wrinkles or air bubbles. Simply apply it much like how you would apply a large sticker type decal. Go to www.ApogeeRockets.com/getting_started.asp and see video 7 if you need help on applying decals.

Using a hobby knife and a BRAND NEW number eleven blade, carefully cut the design out of the Frisket using the demarcation lines on your model as a precise guide (make sure the pencil marks on the model fall slightly inside the areas to be painted - this would also be the time to make any corrections to slight scale errors in your freehand by cutting the Frisket mask more precisely). Do NOT apply much pressure to the blade. Just drag the blade along the design outline and let the blade and weight of the handle do the cutting work. Change your blades often for best results.

TIP: Your hand will tend to follow your eye's lead; so don't focus on where your hobby knife blade IS but rather focus your vision ahead of the knife where the blade is GOING. Cut the entire design out before doing any painting.

Cutting Frisket:

Some may find it difficult to get the right knife pressure to ensure the frisket is cut all the way through while not slicing up the model. Here are some solid tips to getting consistent results.

1) Be sure your base coat of paint is a bit on the thick side. To ensure the frisket is cut completely through does NOT take a lot of pressure but it will take enough pressure that the blade tip will slightly mark the paint. As long as the knife doesn't go THROUGH the paint you are ok, as the application of the 2nd color will fill the slight marks. If you are going through the paint, lighten up your pressure.

2) The angle of your knife makes a difference too. Too steep an angle and you'll cut too deep and also lose precise guidance of the blade. Too shallow an angle and you'll



Photo 6: With a fresh blade, hold your hobby knife at a fairly fixed angle and use light but steady pressure to cut through the frisket film along the pattern lines (lines should be kept about 1/16 inside the removed portion of frisket to ensure they are covered by paint later).



Photo 7: After the pattern is cut, Use the tip of your hobby knife blade to lift the frisket edge.

Continued on page 10



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Continued from page 9

How To Make A Camouflage Paint Pattern

fail to cut through the frisket. Usually a 45-60 degree angle works well. A bit of practice with a scrap painted body tube will quickly show you the optimum angle and pressure (but you must take notice and make note of it to yourself). Then as you cut, MAINTAIN as fairly consistent an angle and pressure as you can.

3) After cutting, use the tip of your blade to gently lift



Photo 8: Gently and slowly peel away the frisket film to be removed. IF it starts to pull up the part of the frisket that should stay down, reverse direction and reburnish down frisket, re-cut it, and lift it again.

up a corner of the Frisket film, and then use tweezers to SLOWLY remove the parts of the film that will expose the areas to be painted. IF a part of the frisket starts to come up that's not supposed to, reverse your motion, press the frisket back in place, and re-cut the stuck part. Burnish down all remaining mask edges prior to painting.

4) Using steps 1-3 above (with a bit of practice and patience) you should get good results. HOWEVER, if you find cutting the frisket directly on the model too tedious or frustrating, you can always use the tracing paper technique mentioned above to pre-cut the frisket prior to application to the model.

After you are done, double check to be sure all areas to be painted are exposed and all areas to NOT be painted are covered. Burnish down all your edges.

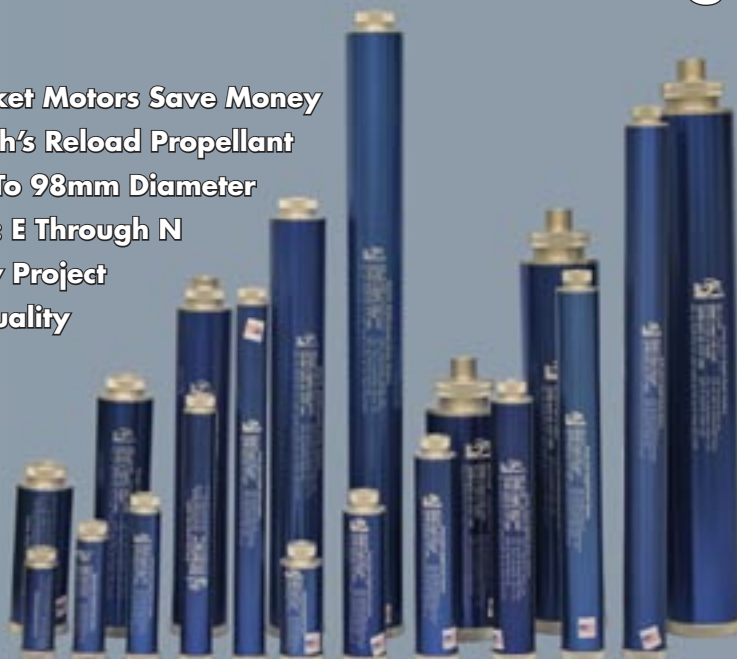
TIP: Use liquid mask to seal off any lines where frisket edges meet (like on the backside of the wrap around the rocket tube etc.). ALSO, spray a light layer of clear coat onto the model before painting and let dry completely. before applying your second color. This helps ensure a good seal at the frisket edges when you apply your second color.

When ready, spray on your second color as you normally would for any masked off model (using a series of

Continued on page 11

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Continued from page 10

How To Make A Camouflage Paint Pattern

light coats). Once done, allow the paint to dry COMPLETELY before removing the remaining Frisket mask!

TIP: You can remove any adhesive residue with rubber-cement remover. Just apply, let set, and then roll it off with your finger.

To add yet more colors to your camouflage pattern, let the current coat dry completely and then simply repeat the process with each new color.

Using A Liquid Mask:

If you have an airbrush, you can use it to spray on a liquid mask. Otherwise, you can just paint it on with a fairly wide brush (since the mask is coming off again, brush marks are not a worry). You may have to apply 2-3 coats. Again some experimentation on scrap body tubes is certainly recommended! You want the mask on thick enough to provide good coverage but not so thick it isn't easily cut.

As shown in Photos 9 & 10, liquid masks are often opaque when wet but turn translucent when dry. They form a thin, rubbery, clear or translucent coating.

Just as with the Frisket above, a hobby knife with a freshly inserted sharp blade is able to cut through the mask using just light pressure. This is obviously great for any



Photo 9 & 10 - Liquid Mask Applied To Nose Cone is opaque when wet (left) and translucent when dry (right)

complex compound curves or intricate surfaces on your model. You can use it to mask off highly curved or detailed parts of your model like nose cones, tunnel covers, panel lines, windows, etc. If you want to know how to give your rockets additional uniqueness by adding tunnel covers, see this simple instructional video: www.ApogeeRockets.com/Rocketry_Videos/Rocketry_Video_34.asp

Next, we mask the rocket for application of its third color (black). For the sake of showing the widest range of techniques possible in limited space, this time we used the

Continued on page 12

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Continued from page 11

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3M 2090 (Blue) lower tack professional grade tape mentioned above.



Photo 11 - Here's the result of a silver on grey color scheme NON feathered. Note the HARD lines between colors (see below for more realistic feathered example).



Photo 12 - Silver / Gray Model Masked Off With 3M 2090 - blue low tack tape

For NON-feathered application of third color.

As with any tape masking, be sure to burnish down all edges and double check that all areas to NOT be painted are thoroughly covered. TIP: As an option you can tape along the edges and fill in the rest with liquid mask. Liquid mask is on the expensive side so you are trading off money for time if you do this.

Again, spraying on a clear coat prior to the color coat can help ensure a better seal at the tape lines and help prevent the paint from running under the tape edge.

In the author's opinion this non-feathered HARDLINE



Photo 13 - The third color in the camouflage pattern (black) has been applied in several coats. Note how the masking covers where we want the silver and gray to show.



Photo 14 - Our finished model. Note the hard lines.

look detracts from the realism of true camouflage (see next section), but some nice color schemes can still be achieved. In the following section we will use an even easier raised Mask method for creating a soft transition between lines to enhance realism.

AN EASIER BETTER LOOKING METHOD - How To Use RAISED Masking To Create A SOFTER More Realistic Feathered Camouflage Pattern!

The V2's Gebatikt camouflage shown in Fig. 2 (on page 3) illustrates a heavily feathered camouflage pattern. Feathered refers to the fact that there are no sharp lines between colors. The color edges run into each other. There are degrees of feathering with this being an example of a very heavily feathered camouflage scheme. Other schemes can have a more lightly feathered look (referred to as tightly

Continued on page 13

Continued from page 12

How To Make A Camouflage Paint Pattern

feathered) where one has to look closer to see the soft lines.

Although an airbrush is best to get feathered looks, they are by no means a requirement! A feathered effect similar to what you can achieve with an airbrush can be accomplished with spray paints and a so-called raised mask.

Applying And Using a Raised Mask:

Personally, I find application of a raised mask is EASIER to do than the above hard mask techniques AND I find it provides a better, more authentic looking result!

Instead of cutting the pattern out of tape, Frisket, or liquid mask as above, the mask is instead made out of heavy paper or light cardboard. It has to be heavy enough that the paint won't permeate through the mask, but light enough to conform to the curve of the body tube / fins of the rocket. A heavy grade of copier paper is suitable, or you might use a light grade of index card stock.

TIP: After cutting the mask to shape, pre curl it by sliding or rolling it over a curved dowel or body tube.

TIP: Personally I prefer to use Bristol board (available at hobby store and art supply shops). The paper fibers in Bristol board run in multiple directions so it is easier to shape and curve it. Plus it maintains its shape well even after wetted with paint! This is the same material Tim Van Milligan recommends for making conical transition sections for rockets in videos *Transition Section Construction Parts*

1-4 found at: www.ApogeeRockets.com/Rocketry_Videos/Rocketry_Video_10.asp

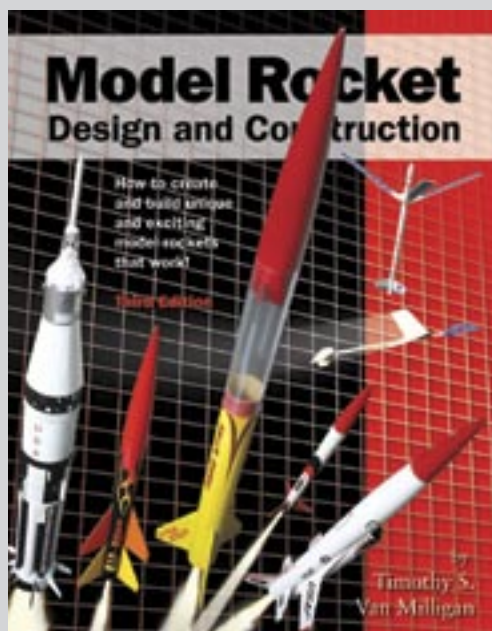
If your model is not a scale model, you can draw the pattern on the paper or card stock free hand, cut it out and attach it to the model. IF, on the other hand, your camouflage is for a scale model that must be exact, you will need to transfer your pattern from the rocket onto tracing paper like the Frisket example above to avoid distortions of the pattern. This allows you to use the tracing paper as a guide to precut your paper / cardboard mask before applying it to the rocket.

When applying the mask. The key secret is to raise the mask a slight amount off the surface of the model. This allows the spray paint to pass slightly under the mask creating your feathered effect. The more the mask is raised from the model surface, the heavier the feathering effect is and the softer or less defined the lines between colors are. Conversely, the closer the mask is to the surface, the tighter the feathering effect is, and the harder or more defined the lines between colors are. Obviously, the limiting case is a mask tight on the surface, which produces sharp lines.

I prefer applying raise masks that vary a bit in distance above the surface so the feathering effect varies. This gives a more rugged and realistic camouflage effect. IF you prefer a tighter or very consistent feathering, simply tighten up on the surface gaps.

The KEY to success with this method is to paint a number of light coats rather than a single heavy coat (which can

Continued on page 14



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PEAK OF FLIGHT

Continued from page 13

How To Make A Camouflage Paint Pattern

produce runs) and make sure your spray paint is applied at an angle that is PERPENDICULAR to the model's surface. This way you don't force a lot of paint under the mask, which will again produce runs. Practice and experiment on a scrap body tube prior to application on your model until you are satisfied with the result produced. HOWEVER, good results are possible with minimal practice.

The paper or cardboard mask can be raised using either rubber cement or folded masking tape (sticky side out). The bigger the blob of rubber cement or wad of tape, the larger the gap between the model and mask, hence, the softer the resulting edge. If you use rubber cement, then after you take the mask off, rub your finger across the glue it and it will ball right up and come off.



Photo 15 - After the base coat is completely dry, we cut, pre-curl, and apply tape to our masking pieces. Place the masking on model where you want the base coat color to show. Be sure the tape is recessed away from the mask edges to allow the paint to feather under the mask. Since this is NOT a scale model we can just cut the masking pieces freehand as discussed above.



Photo 16 - This shows our model rocket with raised mask pieces applied. The second color in the camouflage pattern (Hunter Green) has been applied in several coats. Note how tape on the fin edges (where applicable) prevents overspray from one side of the fin to the other.



Photo 17 - Here is our painted model with masking removed. Note the varied feathered or soft line effect between colors! We could call this done if we wished BUT in this example well show adding a third color (see below).



Photo 18 - Now, once again, raised mask pieces are applied to our model rocket. The third color in the camouflage pattern (black) has been applied in several coats. Note how the masking covers where we want the khaki and green to show.



Photo 19 - Finally, we have our finished model! As simple as this 3-color camouflage is, note how it brings the model alive with ruggedness, realism, and uniqueness.

Continued on page 15

PEAK OF FLIGHT

Continued from page 14

How To Make A Camouflage Paint Pattern

The series of photographs (#15-#19) show a simple example of what can be done with raised masking for the creation of a basic 3-color camouflage scheme with realistic feathering between colors.

BONUS TIPS! On your scrap practice body tubes, if you are seeing that the paint is drying rough or mottled (called the orange peel effect), then this means the paint leaving the spray can is drying too much before hitting the surface of the model. Bring your spray can a bit closer until this unfortunate effect disappears.

If your camouflage colors do not contrast well with the sky, OR are in greens / tans that tend to blend in with the ground, be sure to use tracking powder, PLUS a big bright orange parachute or streamer and / or use a locator beacon (www.ApogeeRockets.com/Pratt_MicroBeacon.asp) so you can track and find your rocket after its flight!

Recap - Baby Steps To Great Camouflage:

As with any new technique(s), take things one step at a time and progress at your own pace. The following points should get you off to the right start!

- For your first couple of camouflage projects, it's easiest to do a non-scale as a start.
- I find feathering using raised masks much easier than hard masking techniques. Start with a somewhat loose and varied feathering arrangement, then progress to a tighter feathering patterns according to your taste.
- If you decide to try hard masking, the order of difficulty

from easiest to hardest is 1) Tape (easiest), 2) Fris-ket (takes some practice), 3) Liquid mask (compound curves and variable mask thickness offer the most challenge for consistent results).

- If doing a scaled camouflage pattern, whenever possible, project your pattern onto a flat sheet as its easier to cut your masking pieces on a flat surface, rather than cutting it on the model itself.
- DONT WORRY about small imperfections!! As with anything, a bit of experimentation will work wonders!
- Most IMPORTANT, have fun!

Conclusion:

Model rocketry is a great hobby in that just when you think you've done it all, a new fun challenge arises to seduce you once again! Who would have ever thought that painting your model rocket could be just as challenging and enjoyable as building it?

Now if you're imagining that having a large number of camouflage painted model rockets will start to make them all look the same, think again! Or should I say imagine again!!

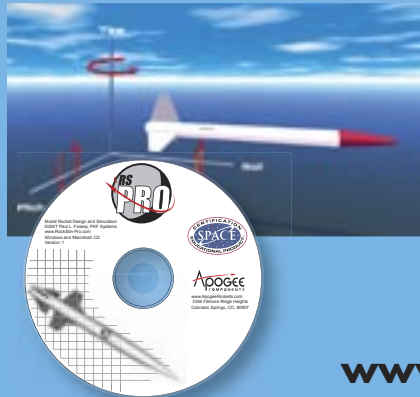
The possibilities are endless. Camouflage can be given spectacular uniqueness by choosing unusual color themes. You can go with green shades or green and black shades for a jungle look, or use earth colors (browns and tans) for a desert look, or my personal favorite, metallic silvers and grays for a more aeronautical look.

Here's a crazy project idea. Imagine obtaining a bulk

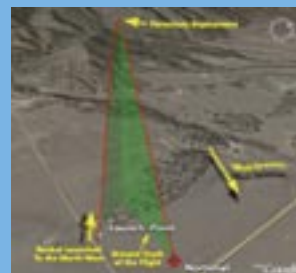
Continued on page 16

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PEAK OF FLIGHT

Continued from page 15

How To Sand Fin Radial Taper

pack of relatively simple rockets and adding different pattern and color of camouflage to each model to make them all look like completely different rockets! Add a couple tunnel covers and some panel lines in different configurations and you have completely different, sharp-looking original rockets! No one will believe they all came from the same kit! www.ApogeeRockets.com/bulk_rocket_kits.asp

Don't be afraid to use aircraft, ships and military vehicles as inspiration for designing your own attractive and distinctive camouflage patterns! I've yet to see a model rocket that combines multiple camouflage colors as spectacularly as the aircraft models shown below. It shows what can be done with bold imagination!

The latter 2 examples could be combined with a third black (or dark) color to make the rocket more visible for



Sky theme



Winter theme

tracking purposes. IN FACT, I find that black goes with anything and added as a final color increases flying visibility and also brings out a nice contrast.

The techniques above can also be used to apply ANY complex multi color or blended paint scheme to your rockets such as flames, rings, even lightning bolts! I can't wait to try painting Apogee's LexxJet www.ApogeeRockets.com/lexxjet.asp with blended soft feathered lines between the body tubes brown, orange, yellow and white colors! (With maybe a thin strip of black wavy camouflage along the leading edge of each wing!) Whoa!

About the Author

Bart Hennin graduated in 1984 with a BaSc in Mechanical Engineering from the University of Windsor, Ontario. His senior year thesis was "Optimization Of A Model Rocket For Highest Altitude" which earned a top of the class mark of A+. Following graduation, Bart worked for several years in auto manufacturing engineering, then migrated to technical sales, and eventually ended up in general sales and marketing.

Bart is currently married and is living in New York state. Bart says that his family consists of one obnoxious cat named Thor.



MiG-21 PF - 4 color Camouflage.



Warthog - 2-color desert theme



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