



Go Digital!

How-to Paint Digital Camouflage



Digital camouflage was developed to combine large and small patterns with the goal of providing military camouflage over a varying range of distances. While often creating a pixelated appearance, it's been effectively used on vehicles and clothing since its development.

Looking for a change of pace from my scale building interests, I decided to get a sport jet. After careful consideration I felt the Elite Aerosports Shockwave met my criteria. EA have done a great job providing a huge selection of pre-painted schemes for customers to choose from, over 50 in fact! Despite all the options offered, I wanted to create something unique and always wanted to put my painting skills to the test by attempting a digital camouflage paint scheme. As I made plans to repaint the Shockwave, I felt it would be the perfect opportunity to incorporate the digital pattern into a portion of the paint scheme for added interest.

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While it may appear very complicated at first glance, it turned out to be relatively simple, as I'll describe in this article.

First step was to sand and prime the surfaces in preparation for colors. The wing tanks are shown in these photos.



Then the area to be painted with the digital camouflage was masked off and cleaned.



I chose to do a three color camouflage pattern and picked the following colors:

- BMW Dark Graphite
- BMW Mineral Grey
- Porsche Carbon Grey

These I had mixed up in PPG's shop line grade paint. The automotive base coat / clear coat system provides a nice surface to mask over, as well as drying quickly.

After colors are chosen, then you need to decide how much of each color you want to be seen in your final product. Because I was using the camo pattern in an area that was essential black I wanted my colors to all be dark, but not so similar that the pattern

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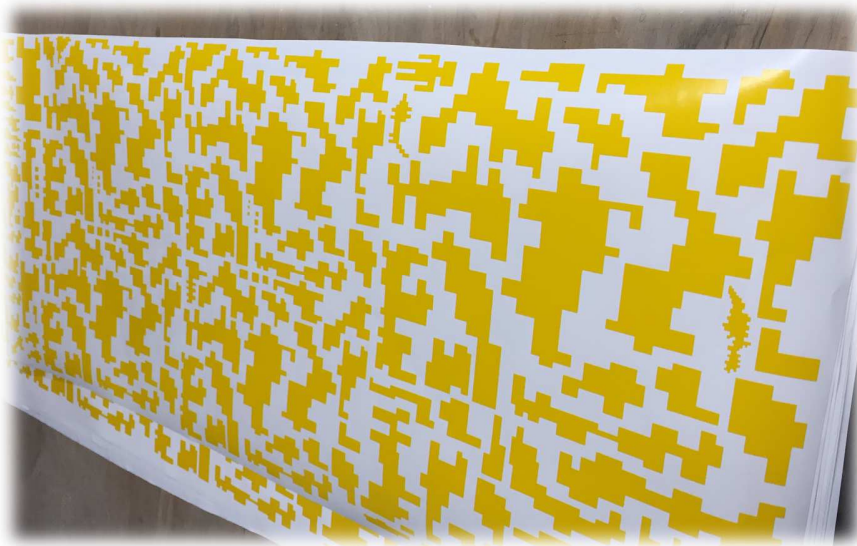


wasn't noticeable. Essentially, I wanted people to not see it from some distance away but as they got closer the camo pattern would become apparent.

I started with the dark graphite as my base color. Typically I like to work from the lightest color to the darkest but with the opaque nature of the PPG base coat paint I've found the order of colors not to be as critical.



Now the fun starts. How to effectively mask off this area for the digital camo pattern? Well, this is where the computer and computer assisted vinyl cutter becomes your best friend. The random pixel patterns are drawn on the computer and cut by the vinyl cutter out of masking film. The orientation and spacing of the patterns on the sheet isn't critical, in fact if you bunch them up it's a more economical use of the film.



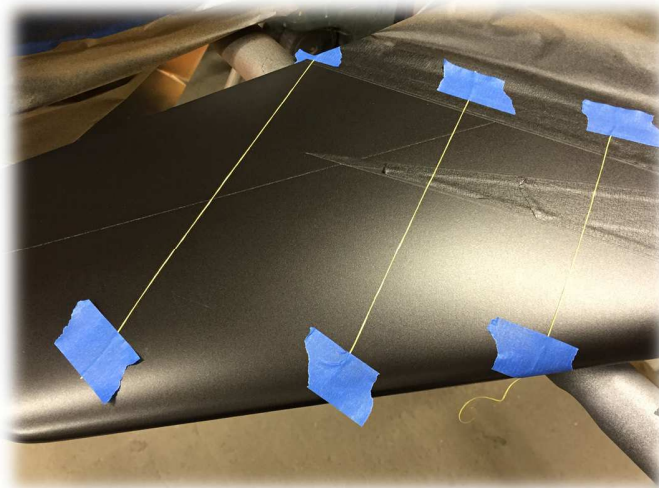
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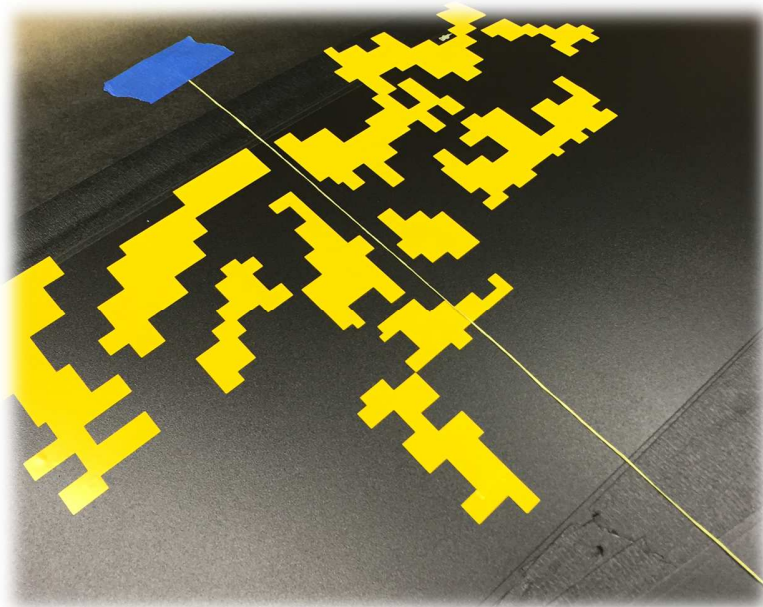


For the sake of my sport jet scheme, the locations of the masks really weren't critical, however due to their shape, it was very important that they all be applied parallel and perpendicular with each other. Any misalignment would stick out like a sore thumb so patience and care is key when applying the masks.

To aid in keeping the masks lined up I used some string measured off and taped on the surface to act as a guide.



Then as the masks are placed on to the surface it's immediately apparent if they aren't perpendicular to each other.





It takes some time to get them all placed as you desire but it's worth the effort to take your time. If your base color is dark and you want an overall darker camo pattern, then add more masks. Wherever you have a mask will be your base dark color on the final pattern.



After you are happy with the coverage of your masks you can spray the second color.



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Once the paint is dry, AND without removing the first set of masks, the next step is to apply the second set of masks. This will cover the second paint color. All exposed areas after these masks will receive the third and final color.

The trick of using the string for an alignment aid is not required now as it's easy to use the previous masks as reference to keep perpendicularity. When you lay out the new masks, make sure you overlap the previous masks in numerous and random areas.



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Once you are satisfied with the coverage, you can spray the third and final color. After this color is dried you can carefully remove all the masks. This step is time consuming but rewarding at the same time, as the final result starts to become evident.

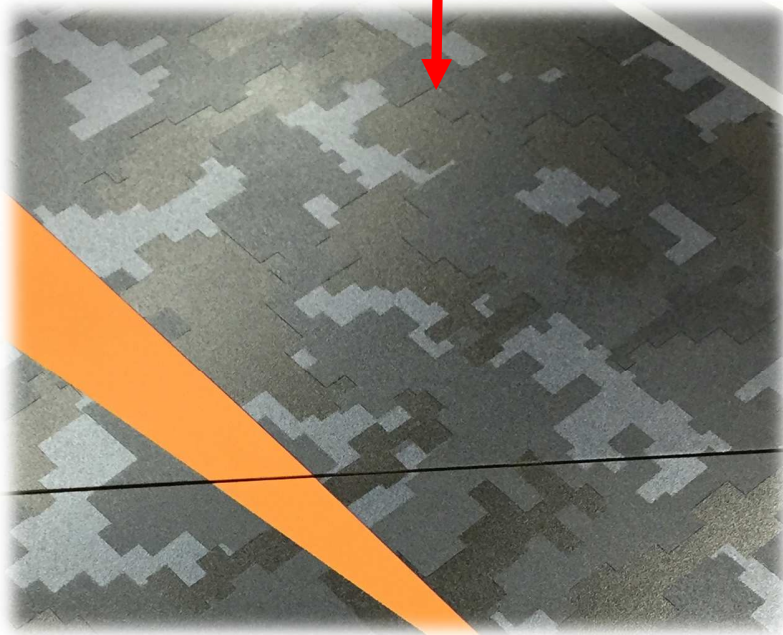
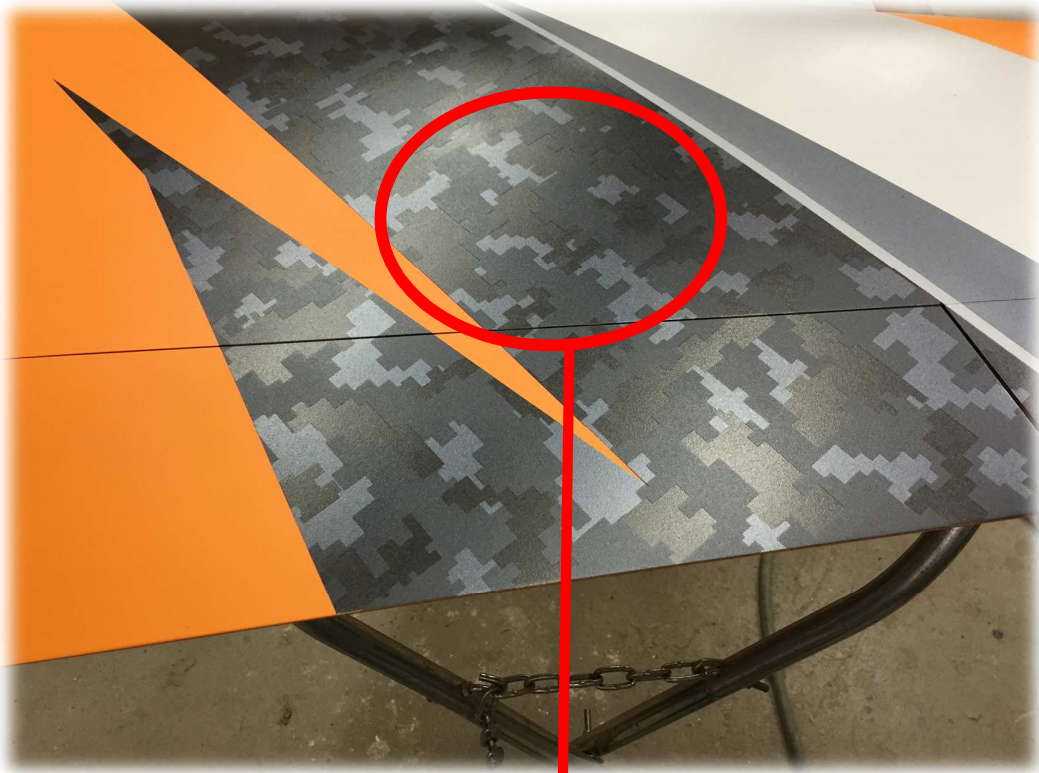


During this step of removing the masks, it's very important to make sure to find and remove them all. If you don't they will be trapped by the clear coat and cause issues when you sand out the clear.

After carefully removing what I thought was all the masks, I left the model for a day and came back the next day. Sure enough, I found two small masks I had missed the day before!

As with any masked paint job, once the mask or tape is removed you will feel a slight ridge where the mask was, as a result of the overlapping paint. On a complex scheme such as this these ridges were evident all over the camo pattern.

These ridges are evident in the following photo(s):



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To properly eliminate these ridges, I first sprayed the entire surface with a PPG 2-part gloss clear.



After the clear had a chance to cure I wet sanded (400 grit) it smooth by hand with a sanding block. This sanding leveled out the surface nicely and also removed the 'orange peel' from the clear coat. In this photo the top tank isn't sanded, while the bottom one has been. If you look at the light reflection you can see the smoother surface.



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At this point I could have continued to wet sand with progressively finer grit paper, followed by polishing and buffing to create a sparkling gloss finish common with most sport jets.

After much deliberation and multiple test samples, I elected to go with a more matte finish. Knowing that the surface was perfectly smooth, I just dusted on a light matte clear coat to complete my painting.



The completed photos demonstrate the importance of getting the surface smooth and eliminating all the paint ridges we had from the masking process.

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I will be the first to admit that the thought of a matte finish really worried me. Not so much as applying it, but more so how would I keep it clean and void of unsightly fingerprints?

Well, thankfully the exotic car folks had the answer! I found a company called Dr. Beasley's who specialize in automotive detailing products. The PPG paints are an automotive staple and thus the care for those were an ideal source for my Shockwave. Dr. Beasley's offer a complete matte car finishing kit that has been very effective in keeping the Shockwave clean.

While a digital camouflage paint job may not be for you, I hope at a minimum this article will demonstrate how simple a process it can be when looked at as a series of steps. In conclusion, I'll add a few overall photos of my final color scheme. Hope they provide some inspiration!



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