

Ted Holochuk's Painting and Finishing Models – Part 4

Introduction to Part 4

To refresh your memory, I am writing about "my way" of painting & finishing models. It is not the only way nor is it even the best way (Yes it is! - Darn, I hate it when I say things like that). In this article I will attempt to explain the reasons for using the materials I use.

The Goal: Develop A Consistent System

Sorry, I couldn't resist that last bit. Kidding aside, I rely on experience and familiarity in my system for finishing. I refer to the process of priming, painting, decaling and weathering a model as finishing. It is more than just painting. I believe you should be comfortable and confident when using products and a finishing system. I like to use products and procedures I have experience with on all my models. This allows me to predict the outcome, making the job much easier and more satisfying. I do not change my system often and then only for a good reason. An example of such a change is that I have started to use acrylic paint on vinyl tank tracks. If you bounce around changing products and/or procedures on each project, solving a finishing problem can be a real headache. By the way, although staying with a system eliminates most problems, God knows that even when painting within a system you can still have "hard to, explain problems.". Murphy is a live-in relative of most finishers, painters and model builders.

My System

My "system of finishing" uses lacquer and enamel paints almost exclusively. I tried using water based products some time ago and found myself bouncing from one system to another. Doing this, the glitches started to show their ugly heads. I decided to stick with one system and not try to cover both sides of the road.

I decided to stick with the lacquer and enamel paints because:

1. I am familiar with them.
2. They work well, giving good coverage with thin minimal coats.
3. They dry quickly and can be re-coated within minutes.
4. These products are compatible with each other
5. I can use one thinner/reducer for all my paints and clear coats, eliminating the question, "what do I use with this stuff?"
6. Lacquer thinner based paints "bite" or etch the plastic in our models, the paint sticks better and masking is not a problem.

A side note on lacquer:

Contrary to what I have heard and read on this subject, I have never had any lacquer paints melt or craze any plastic surface that I have worked with. I would really like to see the results of this horror story and hear how it happened. Has anyone out there seen this? If so, bring it to our meeting, I would like to see this.

Storing Paint:

I do not mix a fresh batch of paint for every project. My paint rack is full of what I call RTS (Ready To Spray) bottles of paint. Everything from often used colors such as interior green to seldom used colors (why do I keep these? Being a pack rat , you never know when you

might need that color, right?) . Incidentally, some bottles of color are 4-5 years old. When it is time to spray, I select the color, shake up the bottle, plug it into the airbrush and spray away. When done I recap the bottle and set it back in the rack. Sometimes a bottle of paint will dry up, at which point I dump the material, mix up a fresh batch of RTS color and set it in the paint rack. My laziness in action again!

Now on to the materials that I use in my system.

1. Lacquer thinner

DTL 876 from Ditzler, an automotive product. This is the only thinner that I use as a reducer for all the spraying paint, clears and primers that I use. DTL 876 is a good quality thinner that can be used anytime, even in a cold or damp environment. I buy this thinner at WESCO Autobody Supply. The minimum purchase is 1 quart which costs \$8 (25 cents per oz.). A gallon will cost you \$20 (16 cents per oz.)

2. Primer

Kondar Acrylic Primer Surfacer, DZ3 Light Gray, also made by Ditzler. This material is the foundation of my finishing system. I use this primer on almost everything I paint, especially exterior or large surfaces. There are exceptions, but I will get to that later. Professional painters use primer and so do I. This primer adheres very well to almost all the materials we use in our modeling. It dries fast, builds fast, fills cracks and scratch marks, covers fillers very nicely, sands easily (when dry), can be scribed and provides a good base or foundation for our paint. This primer is also an automotive product available at WESCO Autobody Supply. Minimum quantity is one quart and is priced

around \$25.00 for the quart. Now this sounds expensive but it works out to about 78 cents per oz. which is not too bad. A quart will last a long time.

A word about using this primer; it is a very thick material and for our use it should be reduced about 4 parts thinner to 1 part primer. This material is the only product I use that has a shelf life once it has been mixed with thinner. I usually keep a thinned bottle for 4 - 6 weeks. If the mixed RTS primer does not want to dissolve into itself, looks like buttermilk in the bottle or if it sprays way too grainy, get rid of it and mix up a fresh batch.

3. Clear Gloss

Duracryl Clear Gloss - another Ditzler automotive product. It is a water clear gloss acrylic lacquer that does not yellow with time. Like the Kondar primer, Duracryl is also very thick and has to be reduced 4 parts thinner to 1 part Duracryl. This material dries very fast, can be re-coated in minutes and when dry can be wet or dry sanded with ease.

The manufacturer recommends you apply 3-4 wet coats within minutes. I start my clear coats with 2-3 light coats. This sets up and protects the color coats and will help prevent any unusual reaction. Remember Murphy? After 15-20 minutes I then re-coat with 2-3 wet coats in one evening. However, I also advise allowing sufficient dry time instead of pushing. Remember, take your time. The manufacturer also suggests spraying all coats required in one day. Well, I have re-coated previously sprayed areas with a time lapse of days, weeks or months. However, before doing that I usually sand the project and will apply the

first two coats lightly.

I use Duracryl on all my models from aircraft & armor to rubbed-out auto finishes. I consider Duracryl the best clear gloss I have used. It is the base for decals, oil washes and build up of finish for a rubbed out project (autos). I also use it to build up finish over decals (more of this later) Again, this automotive product is available at WESCO Autobody Supply. The minimum quantity you can purchase is one quart which will cost about \$ 25 (78 cents per oz.).

4. Clear Flat

Testor's Dullcoat. Surprise! For flat finish I have found that Dullcoat works best for me. It provides the sheen I like, looks good and is easy to use. Yes, the same DTL 876 lacquer thinner is used, mixed about 50/50. You can re-coat Dullcoat within minutes because it dries so quickly. Dullcoat works well over the Duracryl or over paints. It can be the final flat finish or the base for weathering (more on this later). Dullcoat can be purchased at most hobby shops for the going price.

5. Color Paints

Although I do occasionally use colored industrial lacquers, I mostly I use the old standard hobby paints, bought at the hobby shop. These paints have finely ground pigments and work very well, as well as having a color selection that fits our needs. I use the following paints:

- a.** Floquil - Lacquer based paint. an old standard, one of my favorites.

- b.** Aeromaster - lacquer based paint made by Floquil.
- c.** Model Master - an enamel paint I like for the range of flats and military colors.
- d.** Humbrol - another enamel, from Britain.
- e.** Xtracolor - another British enamel with a wide range of colors.

6. Notes on particular paints

- a.** Floquil and Aeromaster both give good color intensity and coverage. Each has a recommended thinner but as I said earlier, I use the DTL 876 thinner for both. The recommended thinner to paint ratio is 15 - 25 percent thinner to 75 -85 percent paint. Balderdash! I say, start with a 50/50 mix and reduce more if necessary. Use two or three light coats for good coverage with minimal paint buildup. This paint mixture also dries quickly.
- b.** Modeler Master military and flat finishes are enamels that cover well with thin coats. I find the recommended thinner, a solvent of the mineral spirit/paint thinner family, too slow drying. I use the DTL 876 with this paint and again I start with a 50/50 thinner to paint mix. I spray this paint in 2-3 light coats.
- c.** Humbrol and Xtracolor - thinned 50/50 with DTL 876. Spraying both lacquer and enamel paint mixes with 2-3

light coats allows the paint to lay out smooth and thin, to dry quickly, and does not obscure detail.

7. Metallic Paints

I use Floquil and some Model Master metallic paints that I thin to the same 50/50 ratio and apply in the same 2-3 light coats.

Preparing to Paint

Mixing

Sometimes improper mixing will yield poor results. The solids/pigments in a new bottle of paint, or one that has sat around for a while can settle to the bottom and set like cement. If this happens, I open the bottle, drop a few bb's in the jar and use a stir stick to break loose the solids and stir up the paint. I then recap the bottle, hold it with my thumb on the bottom (I have had bottle bottoms blow out) and I "shake well before using". I then reopen the bottle, check again for solids in the paint , stir and shake again as needed. Some colors are more prone to this solidifying than others.

Straining

I also strain these paints when mixing a RTS (Ready To Spray) batch. Now here is the fun. I use panty hose as a strainer, It works great. I get my panty hose by -- oops! I think I'll let you solve that problem yourself.

Notice how this all works together without a mess of different products and formulas. This is the paint of the finishing system I use.

Compatibility: products that work together without undesirable reactions makes my system easier for me.

A note about gloss paint

I have made this all sound easy and trouble free. However, there is a chuckhole in the road that you can avoid. Guess how I know about that chuckhole? Yep, I've been in it. I have had no problem spraying gloss Duracryl lacquer over flat and military enamels and most gloss enamels. However I had one experience with Model Master gloss black. When I applied the clear coat to a gloss black F-104 wing the surface crazed, checked, and cracked. It was bad a reaction and I had a problem fixing it. I may have been rushing the job, but the experience was enough for me to slightly change my approach to gloss enamels. As I said I always spray the first 2 -3 coats of Duracryl clear gloss with light coats. Now, I make sure the enamel color coat is good and dry before I spray the clear gloss lacquer on with very light coats until I have built up 5-6 coats of the Duracryl. After that I still do not flood the area, but spray moderate damp/wet coats just to slow it down a bit. I have used a number of different colors of Model Master, Humbrol and Xtracolor gloss enamels with no problem - Murphy was at work again I guess.

Paints For Hand Painting

In addition to spraying the paints above, I use Floquil Polly-S water-based paint for all brush painting of details. I like the good coverage, the ease of use and cleanup at the workbench. Polly-S also dries quickly and can be clear top coated in minutes. Water-based acrylic paints used by ceramic hobbyists are also very good for brush paints. They work like Polly-S and have a good color range. Tube acrylics are also good paints for brush painting and can be bought at art supply stores.

Artist oil colors

Are used for oil washes over the gloss lacquer finish. The wash accentuates panel lines (more on this later). I normally use white, black and raw umber. Burnt umber is also a good color and cadmium orange is a great color for rust (armor, old autos, etc.) These paints are available at art supply stores.

Odorless Paint Thinner/Mineral Spirits

This is the solvent I use with artist oil colors. Regular paint thinner/mineral spirits has a strong, sometimes bothersome odor. The odorless thinner is much more acceptable. Also available at artist supply stores.

Abrasives I use:

Sandpaper

This can be an interesting subject because the type of sandpaper usually recommended is the black wet or dry type. The only time I use this "stuff" is when wet sanding a model that will be rubbed out (*e.g. autobodies*). I use a dry type sandpaper from 3M (*yes I only buy the best*). It is called Tri-M-It Fre-Cut. This type of paper is available from 100 grit to 800 grit. For model work I normally use -220 -280, -320, -400 and -500 grit. This paper does not load up like the black wet or dry type. It is very easy to use, lasts longer, cuts very well and leaves a smooth surface especially when using the -400 to -500 grit. This sandpaper can be bought in single sheets at TAP Plastics and some paint supply stores. (*TAP Plastics is another interesting supply house*) 600 & 800 grits can be bought by ordering from WESCO at about \$25.00 per sleeve of 100 sheets.

Scotch-Brite Pads

These nylon fiber pads are available in various degrees of abrasive (*grit*). The best grits for our use is the gray (*fine*) and white (*very fine*) They are a fine rubbing product like steel wool that is used in conjunction with sandpaper. Scotch-Brite pads are available at WESCO and some paint supply stores. They cost about 85 cents for each 6x9 inch pad. As an aside, let me say that steel wool has been recommended by some builders. I don't like it because it breaks down, leaving metallic fibers that can be hard to get rid of.

3M Softback Sanding Sponges

This is a new product brought to my attention by John Alcorn and Bill Johnson. They are sponge pads about one quarter inch thick and very pliable. There is an abrasive material bonded to one side. They are easily cut and folded, to allow you to get into difficult areas such as wing roots. Some of the guys and myself have been using them and they work great. They come in five "grits". The best for our use are the three finest; superfine, ultrafine and microfine. I found them at WESCO Autobody Supply where they cost \$25 for about 20 pads and they only sell them by the box and they have to be ordered. They are now also available at Galaxy Hobby in Lynnwood for about \$1.50 each.

Doesn't it seem like everything I talk about costs \$25? Boy, I hope I haven't scared you off. This isn't as daunting as it seems. I know some of you are saying everything he talks about costs \$25 dollars & who can afford that? Well, we all talk with each other, find out who else may be interested in this system, pool your dollars and share the products. Also I would like to make an offer here, I use a lot of these paints and supplies in my business and I would be willing to provide

small quantities of these items for what it costs me. Just call me or see me at the meetings.

Next time I will bore you with how I use these materials to achieve the effects I want. Sounds mysterious doesn't it. Tune in next time to hear our editor Bob say, "what the heck is he doing now?"

List of Suppliers:

Your Favorite Hobby Shop, Wherever!:

- model paints, Dullcoat.

WESCO Autobody Supply - 12 outlets ranging from Bellingham to Tacoma with 8 stores in the Seattle area - check your phone book I purchase my supplies at WESCO in Kirkland (425) 823-5887:

- Sandpaper 3M Tri-M-ite Fre-Cut
- Duracryl Clear Gloss
- Kondar Acrylic Primer Surfacer
- DTL 876 Lacquer Thinner
- Scotch Brite Gray or white
- 3M Softback Sanding Sponges.

TAP Plastics

12021 Northup Way, Bellevue

(425) 861-0940:

- Sandpaper 3M Tri-M-ite Fre-Cut

Galaxy Hobby

196th & Highway 99, Lynnwood, WA

(425) 670-0454

- 3M Softback Sanding Sponges - all Grits

Seattle Art

2108 Western Ave Seattle

(206) 625-0711

Daniel Smith Art Supplies

4150 First Ave S

(206) 223-9599