prancing horse
the quarterly magazine of the Ferrari Club of America
fourth quarter 2005
#157

INTRODUCTION to helmet painting

MICHAEL CHARNESS provides a primer on how you can perform a custom paint job on your helmet.

In racing, we know each driver by their distinctive helmet graphic design and color scheme. The helmet lets us know at a glance which car is being driven by Michael and which by Rubens.

For the rest of us, who like to take our Ferraris out on the track at FCA and other events, it is also important to have a quality helmet that meets current Snell SA safety ratings. But off-the-shelf track helmets are usually offered in plain white. Still, there is no reason that those of us who even just occasionally track our own car should be stuck with the white cue-ball look. In addition to being an important piece of safety equipment, your helmet can be a work of art. Your helmet, like your car, can be an element of personal expression

Painting helmets has been a hobby of mine for some time now and my artwork can be seen all over the country, most commonly at Ferrari club events. The folks who put together the ***Prancing Horse*** magazine asked me if I would share a basic "how it's done" for our members. My purpose is to provide a primer on how to do your own custom paint job on your helmet — if you have the patience and the inclination. We do not have room for every detail, but this will give you an idea of what is involved. The design shown here is quite specific, but the basic methodology would apply to any helmet paint job. This example is a simple design I did for one of our FCA Southeast Region members to complement his beautiful yellow 328. If you would like to see more complex designs, go to my website at www.helmetpainting.us.

First, you will need the following general supplies: wet-and-dry sandpaper in 400, 600, 1,000 and 2,000 grits and fresh masking tape in various widths. Depending on the design, I use 1/2", 1", and 2" standard masking tape, and 1/2" and 1" in low-tack painter's masking tape (often blue or purple so you can easily tell the difference). I also use 1/8" and 1/4" 3M blue vinyl tape for fine line masking work. A roll of butcher paper or masking paper is handy, although you can use plain thick paper towels instead.

Your helmet needs to be in good condition. If it has cracks or other defects that could affect its ability to protect you, you should definitely replace it. However, if it merely has small scratches or scuffs, they can be filled with spot putty (fine-grained Bondo in a tube) and smoothed out before priming.

Decide on a design before you start. Check out magazines with racing photos and decide what you like, keeping in mind that the design will have to be adapted to your helmet. Your helmet may not have the same visor shape, mold lines, chin spoiler, wickers and vents and so might be very different from the one that struck you in a photograph. The differences are greater yet with open face versus full-face models. I usually take a digital picture of the helmet I will be working on before I start. Then, I place and tweak the design elements on top of the photo in a digital sketch using software such as PhotoShop or CorelDraw.

Once you settle on a design, take your helmet apart as much as possible before initial sanding. With most helmets not much will come off besides the visor, some of the vent covers and sometimes rubber molding. Mask the rest as carefully as possible. I use two types of masking tape for this task: the 3M blue vinyl tape in 1/8" and 1/4" widths and regular painter's masking tape in various widths. Do not scrimp on the masking tape — you will want high quality, fresh tape that leaves a clean edge with no residue. I use the 1/8" blue vinyl tape along the edges of the rubber molding and small hardware items. I overlap the blue tape with regular masking tape for the rest of the helmet. When you are done, the only opening in the masking tape should be at the base of the helmet, so you can support it while painting. I use an old microphone stand with a tennis ball on top, and I place the helmet on it while doing most of my painting. Any kind of similar support will be fine.

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MICHAEL CHARNESS PHOTOS

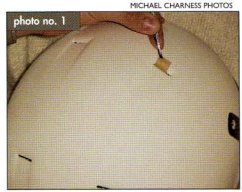
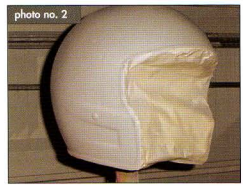


photo no. 1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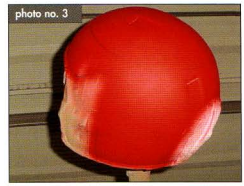


photo no. 3

photo no. 4

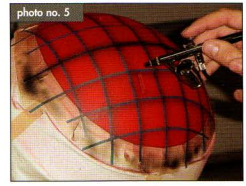


photo no. 5

Some painters ignore the vents when masking, but if you take the time to mask them, it will give your helmet a more factory-like, professional look. It is subtle, but worth the extra effort. In **photo No. 1**, you see me using tweezers to insert a strip of paper into a vent. It usually takes two strips per vent, and it is sometimes a challenge to get them worked in there.

Once the helmet is fully masked, peel off any stickers and lightly sand the helmet surfaces with wet-and-dry paper. I usually use 400-grit with a light touch, but if you are new at it, you might want to use 600-grit. Use plenty of water to keep the sandpaper and surface fresh. You only want to sand off the shine — sand lightly.

After masking and sanding, make sure you do not have any fingerprints or grease on the surface of the helmet. You can do a quick wipe with lacquer thinner and then use a painter's "tack cloth" to clean off any dust just before spraying. Use automotive primer for the first coat. You do not want to put it on thick, but you do want to make sure all areas to be painted are primed. Primer has better binding properties than most paints, which is why you want to put it onto the factory surface first. Automotive primer out of a spray can is quite adequate. Depending on the major color of your new design, you may wish to use a light or a dark primer. I generally use white or black rather than the more common grey. You can see in **photo No. 2** that I have used white primer, as the base for the white areas in the final design. Since it is the same color as the underlying helmet, I can get by with just a light coat.

Now that the helmet has a good primed surface for the new paint to adhere to, start to mask for patterning. Expect to spend significantly more time preparing and masking your helmet than painting it! Use the 1/8" blue vinyl tape to lay out the basic shapes. It is easier and often looks better to have pinstripes as separator lines between panels, but it depends on the design. This design uses a pinstripe around the top panel. The 1/8" tape is also used in pinstriping.

The helmet paint can be any automotive paint. If you want a high degree of control — and you should — use a paint spray gun and an airbrush driven by an air compressor that has a pressure regulator and a water trap. The airbrush is used for most of the color work and can be either single-action or double-action. The double-action airbrush provides more control, but it also takes more practice to get the feel of it. The paint spray gun will be used for the clear coat and for larger expanses of color, such as the base red of the example helmet. The spray gun should be a "touch-up" gun, a mid-size sprayer such as those made by Binks or Devilbis.

You can actually do a simple helmet design, using acrylic-based paint spray cans purchased from your local hardware or hobby store. You can produce an okay paint job with just spray cans, but your final clear coat finish will not be as durable or as smooth or "deep" looking as a clear catalyzed urethane. It is very difficult to get a good final finish out of a spray can. It may look acceptable from a distance, but it will not look professional up close.

If you are using a spray gun and airbrush, you probably want to get your paints at your local automotive paint supply store or go online to sites such as innate.com or autoaircolors.com and find an online source or local dealer. Using automotive paint also means you will have more choices: regular and metallic colors, and specialty paints: pearls, candies, metal flakes, chameleon flip-flops and other special-effect paints not available in spray cans.

Of course, the colors all have to be done one at a time, remasking everything else as you progress. The particular design shown in this article has five major elements: a red base, a checkered flag pattern on each side, a grid pattern on top and a prancing horse on the back. In **photo No. 3** you can see that the red base has been applied after masking. Since it is a translucent paint, you can see the blue tape through it.

Since the back yellow area is going to have a hard edge without a pinstripe around it, I first painted the entire rear of the helmet in yellow. You can see this with the masking partially pulled away in **photo No. 4**. Using blue tape, I carefully masked off the curved edge and used paper and regular masking tape to protect the inside of that area. Then I painted more white primer over the helmet. This gave a consistent white base for the next application, the dominant red color.

Next, I prepared the top panel for a "Schumacher-style," three-dimensional grid, minus his usual stars. I masked off the entire helmet except for the top and carefully used blue vinyl tape to lay out the grid. I then sprayed the entire panel with a light mist coat of a bronze chameleon pearl, to give it some extra "flash" when viewed in direct sunlight. In **photo No. 5**, I am using an airbrush to add shading around each of the grid lines to provide an illusion of depth. The red underneath forms the square borders when the tape is removed, as you can see in **photo No. 6**. The white pinstripe around that area is also now visible.

You might be surprised to learn that the various logos on Michael Schumacher's helmets are produced using stickers or transfer sheets. Of course, it has been reported that he has over 30 helmets created each season — one for each race, plus helmets for qualifying and practice sessions, so it is not very practical to take the extra time to do those details in paint. Spectators cannot tell the difference from a distance. You can cut the prancing horse out of a sticker purchased from your local Ferrari dealer and apply it before doing clear coat, but I prefer to paint it. I cut a stencil from frisket paper or vinyl mask material as shown in **photo No. 7**, then spray the black with an airbrush. After the mask is removed, I paint the details by hand with a fine-tip brush as shown in **photo No. 8**. I keep a factory sticker handy to remind me where the highlights go on the horse.

After all of the color and pattern work is complete, the helmet needs to be clear coated. This adds brightness and gloss to the paintwork and protects your paint from minor dings and scratches during normal use. To get the best finish, you will need a spray gun to apply the clear catalyzed urethane commonly used on modern cars. In **photo No. 9**, you can see the "touch up" sized spray gun along with cans of clear urethane and catalyst. There are several brands and variations of clear urethane available at automotive paint supply stores. The price can be as high as $80 per quart, much more than most pigmented paints. Read the instructions for your particular brand, but most use one-part catalyst additive to four parts clear base, and require 30-35 pounds of pressure at the sprayer. You will want to put on at least two coats, waiting about ten minutes between coats. For a deeper look and more durability, I use five to six coats.

After the clear coat has adequately cured (usually 24 hours), you will need to wet sand the surface to get out any imperfections, to smooth out the lines between colors and to achieve a mirror-like finish. Usually 2,000-grit sandpaper is adequate, but if it is particularly rough, you may need 1,000-grit first. Always use plenty of water to keep the surface lubricated and your sandpaper from gumming up with residue. Afterwards, use a high quality fine grit liquid polishing compound to bring the sanded surface to a high-gloss finish. For the hand polishing, I use Machine Polish #2 and #3 from Griot's Garage (griotsgarage.com), but there are many brands from which to choose. Finish it off with a coat or two of your favorite automotive wax or polymer sealant. The finished helmet is shown in **photo Nos. 10 and 11**. **Photo No. 12** shows the rear of another helmet I did with a soft edge around the yellow, flared stars on the top, and some sponsor graphics.

There is really not much of an excuse to wear a plain one-color helmet, unless you want that hard-boiled egg look. Although not a trivial undertaking (with prices ranging from $250 to well over $1000), having your helmet painted or doing it yourself can add some panache to your track experience. A nicely painted helmet draws attention and admiring looks every time you take it out of the helmet bag or have it sitting on your car or even in your den on that "special shelf" with your prized models. Many of us consider our Ferraris "road art," and there is really no reason that your track helmet cannot also be a piece of art, reflecting the uniqueness of your car and your personal style.

photo no. 6

photo no. 7

photo no. 8

photo no. 9

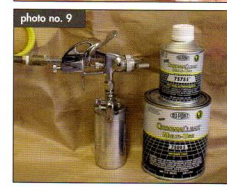


photo no. 10

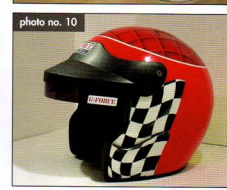


photo no. 11

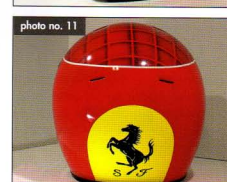
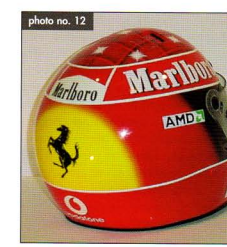


photo no. 12



Michael Charness, who writes the "Concours & Detailing Tips" for the FCA Newsbulletin, is currently the Southeast Region Director. He can be reached through www.FCA-SE.com or through his www.helmetpainting.us.