



# HOW TO PAINT WWII POLISH CAVALRY



## HORSE COLOR CHART

### DARK BAY



**Shade:** Black SC-00 (Scale Color) + Dark oxide 302 (Vallejo)



**Base:** Dark oxide 302 (Vallejo)



**Light:** Flat brown 984 (Vallejo)

### BLANKETS



**Base:** Chocolate brown 872 (Vallejo)



**Base:** Russian khaki NAC-08 (Andrea Color) or English uniform 921 (Vallejo)



**Light:** mix + Ivory 918 (Vallejo)

### SOCKS AND NOSE



**Base:** Black SC-00 (Scale Color)



**Light:** Black + Dwarf skin 041 (Vallejo)

### WEBBINGS AND SADDLE



**Base:** Chocolate brown 872 (Vallejo)



**Light:** Beige brown 875 (Vallejo)



**Metal:** Gunmetal 054 (Vallejo)

## SOLDIER COLOR CHART

### BLACK LEATHER



**Base:** Black SC-00 (Scale Color)



**Light:** Black + Dwarf Skin 041 (Vallejo)

### SKIN



**Shade:** TAN 066 (Vallejo)



**Base:** Dwarf Skin 041 (Vallejo Game Color)



**Light:** Dwarf skin + Ivory 918 (Vallejo)

### WEBBINGS



**Base:** Chocolate brown 872 (Vallejo)



**Light:** Beige brown 875 (Vallejo)

### UNIFORM



**Shade:** Chocolate brown 872 (Vallejo) + Russian khaki NAC-08 (Andrea Color)



**Base:** Russian khaki NAC-08 (Andrea Color)



**Light:** Russian khaki + Light yellow 949 (Vallejo)

### HELMET



**Base:** Ger. C. Extra Dark Green 896 (Vallejo)



**Light:** Ger. C. Extra Dark Green 896 + Ivory 918 (Vallejo)

### BELT AND POUCHES



**Shade:** Dark oxide 302 (Vallejo)



**Base:** Flat brown 984 (Vallejo)



**Light:** Flat brown 984 (Vallejo) + Orange brown 981 (Vallejo)

### RIFLE



**Wood base:** Flat brown 984 (Vallejo)



**Wood light:** Flat Brown 984 + Orange Brown 981 (Vallejo)



**Metal:** Gunmetal 054 (Vallejo)

## PREPARATION

**W**e start removing the vents and mould lines using metal files and a modelling knife. It is recommendable to wash with water and soap the metal (or resin) components to remove the mould release agent, which can affect the adherence of the paint later on. The horse came in several pieces. After gluing them with cyanoacrylate glue, we can use modelling putty to fill the possible gaps. Alternatively, we can add a little bit of cyanoacrylate glue on the junction between the two pieces. Once it is dry, you can use a file to flatten the surface. Then, we can fix the horse on the base and add a texture using modelling putty or just by applying sand with white glue. We can also add small rocks to add a little bit of variation. It is very important to apply a proper priming coat to facilitate the application of the acrylic paint. Never start painting directly on the metal or resin surface. The primer coat also enhances the durability of the paint. I usually use grey primer because any color covers nicely over a grey surface. I recommend you to use an airbrush or spray in order to obtain a thin and homogeneous primer coat. I usually paint the base at this stage as we cannot ruin anything at this moment. If you paint the



base at the end, you can accidentally ruin a painted area, such as the horse's legs. To paint the base, I started using Chocolate brown 872 (Vallejo) and then I applied a wash from Citadel (Agrax Earthshade shade). Finally, I applied a dry-brush with Iraqui sand 819 (Vallejo).

## THE HORSE

### SKIN

**I**n this tutorial I will show you how to paint a dark bay horse, but you can apply the same concepts to paint any kind of horse. You would just need the right colors, but the idea is the same. To paint the dark bay horse we start painting the whole horse with a dark brown color. In fact, we need a reddish brown. In my case, I decided to mix black and Dark rust 302 (Vallejo) in the same proportion (1:1) and apply couple of layers to be sure that the whole surface is homogeneously covered. This dark color is the shade. Next, I will start working on the lights by applying several layers of lighter colors. This method is known as the "layering technique" and it is based in the classical triad method developed by Kevin Dallimore for Foundry Miniatures. The triad method consists in using only three paints to paint a color: Shade > Base > Light. For example: Black + Dark rust (shade) > Dark rust (base) > Flat brown (light). As you can see, we use a lighter color for the base (Dark rust) and even a lighter color for the light (Flat brown). However, although this method is very visual and perfect for our wargames miniatures, the contrast between layers might be very striking. That is why I prefer the "layering technique". This method continues the idea of the triad, but it adds additional or intermediate layers to create smoother transitions. It looks like this: Shade > Intermediate 1 > Base > Intermediate 2 > Light. As you have noticed, there are two new layers: Intermediate 1 and 2. These intermediate layers are done by mixing the two side colors in the same proportions. That is, for the Intermediate 1 layer we mix the Shade + Base in a 1-to-1 proportion; and for the Intermediate 2 layer, we mix the Base + Light in the same proportion. In sum, the recipes for our dark bay horse would be as follows: Black + Dark rust (1:1, shade) > Black + Dark rust (1:2, double amount of Dark rust; Intermediate 1) > Dark rust (base) > Dark rust + Flat brown (1:1, Intermediate 2) > Flat brown (light). Although very useful, increasing the number of layers is not enough to obtain smooth transitions. Another very important factor is the water: always, ALWAYS, thin the regular acrylic paints with water. Never use them straight from the bottle. By using thinned paints we can work with semi-transparent layers, which do not completely cover the surface. This facilitates the transitions between layers. We can play around with these semi-transparent layers, since we can repeatedly apply



the same mix (paint + water) to increase the intensity of the color. Therefore, if you want to obtain smooth transitions or gradients you need to consider two things: (1) thin your paints with water and (2) increase the number of layers. Remember these considerations, since we will use them when painting the rest of the miniature.

Said this, how to apply the highlights on the horse? We will apply five layers, beginning from the darkest color to lightest layer. As we already saw, we first apply the shade and cover the whole horse. Be sure that you obtain a homogenous coverage. Next, we prepare the Intermediate 1 color by adding more Dark rust to our initial mixture of Black + Dark rust, so that we end up with the double amount of Dark rust (1:2, black:Dark rust). After diluting a little bit the mixture with water, we start applying a general light on the horse skin. This first light will cover a large area, but will not totally cover the surface.

## DETAILS

**W**e can paint in a different color the lower part of the legs (socks) and nose. For instance, here I painted these parts in black. But you could use white for the socks or pink for the nose. When doing this is very important to create a proper transition effect between the brown and the black part. First, we paint the nose and socks in pure black. Next, we apply a glaze. This is just a “filter”, which means a very much thinned paint. We need to dilute black paint with a lot of water. One drop of black paint plus 5 of water (or even more). This paint or filter does cover very little and we can use it to slightly change the color of a surface. That is what we want to do here: darken the brown color towards the black areas. To apply a glaze, first discharge most of the paint on a piece of paper, and then lead the brush stroke from the brown part to the black part. The brush is removed in the black part, because when you remove the brush you leave more paint behind. Therefore, always follow this direction: from the brown to black area. Of course, if you are doing the glaze with the Dark rust, the direction would be the opposite. You can apply as many layers of this filter as you wish, until the junction between the two colors is smooth enough. Finally, we can add some lights on the black socks and nose by mixing black with a little bit of pink or rose. I prefer to use these colors

We do not paint the deepest areas of the muscles. Next, we apply the base, which is pure Dark rust. Similarly, we reduce the area we paint with this color, leading the lights to the most prominent areas of the muscles. If you are not sure about these, you can always lead the lights towards the upper part. Just follow the muscles sculpted on the miniatures. Following the same idea, we apply the next layers (Intermediate 2 and Light). First by mixing Dark rust with Flat brown 984 (Vallejo) in the same proportion (1:1), and then using directly pure Flat brown. As before, we reduce the area we cover with these layers. The last or final highlight should cover a very tiny area, just a dot or thin line. As you can guess, it is extremely important that you do not totally cover the previous layer. Otherwise, the gradient effect is lost. Always reduce the area that you cover with each new layer. Finally, we can use again the darkest color or shade to re-paint some dark areas, if we want.



rather than white or grey to highlight the black because they have a red tone and the resulting lights are warm and more natural. Similarly, to paint the tail and hair first we paint these parts with black, and then using the brush horizontally we mark the sculpted hair. Note that this is not a dry-brush. We carefully paint each hair. The horse's pupil are huge are in fact quite often you cannot see any white part. To paint the eyes, we can apply a very tiny white dot in the rear of the eye. To paint the hooves, we can first use Chocolate brown 872 (Vallejo), and then mix this color with a little bit of white to paint a line on the lower part.

## GEAR

**T**o paint the webbings and saddle we start using Chocolate brown 872 (Vallejo). Then, we mix this color with Beige brown 875 (Vallejo) in the same proportion and apply the first light. Next, we use pure Beige brown; and finally we can mix beige with a little bit of white to apply the final highlight. You can also apply a shade from Citadel, such as Agrax, to further remark the recesses after applying the Chocolate brown color. To apply the lights on the webbings or straps we can focus on the edges, using the brush horizontally (it is way much easier to paint straight lines using the brush like this rather than using the tip). Using the lightest color we can also add some scratches. To paint the saddle, we direct the lights towards the edges of the different parts, and apply the final highlight as a thin line exactly on the edge. To paint the blankets, I used two different brown colors: grey green and yellowish brown. For the former, we first mix Chocolate brown 972 (Valejo) and Russian khaki NAC-08 (Andrea Color) in the same proportion. Then we use pure Russian khaki; and finally we can apply a single highlight by mixing khaki with a little bit of white. For the latter, we similarly mix Chocolate brown 972 (Valejo) and English uniform 921 (Vallejo) in the same proportion, then we use pure English uniform and finally we mix this with a little bit of white for the final highlight. To paint the lights on the blankets we just follow the sculpted wrinkles and edges. Finally, we paint the metal fittings with Gunmetal 054 (Vallejo).





# THE SOLDIER

## UNIFORM & HELMET

### UNIFORM

**T**he standard Polish uniform during the Second War World was green brown. However, different batches (i.e. dyes) and the daily use would result in different tones of green brown. From a green grey to a yellowish green brown. We can play around these colors using English uniform 921 (Vallejo) and Russian khaki NAC-08 (Andrea Color). In my case, I used Russian khaki.

Taking into account the layering technique that I described before, the recipe to paint the Polish uniform would be as follows: the shade or darkest color will be Chocolate brown 872 (Vallejo) mixed with a little bit of Russian khaki in a 2:1 to one proportion. That is, double amount of Chocolate brown. Or two drops of chocolate brown and one of khaki, if you prefer. Then, we move towards the Russian khaki. The Intermediate 1 layer will be a mix of Chocolate brown and Russian khaki in the same proportion (1:1); and the base, directly Russian khaki. To highlight the khaki, we can use either white or yellow. The former will generate warmer lights, while the second, cold.

Both are totally fine, and in fact you may want to combine both options in different miniatures of the same unit to give it some personality. In my case, I used Light yellow 949 (Vallejo). The Intermediate 2 layers was done by mixing Russian khaki and Light yellow in a 2:1 proportion (two drops of khaki and one of yellow), while the light or final highlight was done with a mix of both colors in the same proportion (1:1). As you can see, we can apply this method to any color we want to paint. Just think about the three main colors (shade, base and light), and then mix the side colors to obtain the intermediate layers. To apply the highlights on the uniform we can pay attention to two tricks: (1) follow the wrinkles sculpted in the miniature, and (2) lead the lights toward the edges of the details, such as the pockets and sleeves. That is, direct the lights toward the most prominent details. Remember to maintain part of the previous layer when applying the highlights. Do not totally cover your previous work. And thin the paint with water. The resulting semi-transparent layers will help to create smoother transitions between colors.



### HELMET

**T**o paint the Polish Wz. 15 helmet (a version of the French M26 Adrian helmet) we can start using German C. extra dark green 896 (Vallejo) to paint the whole surface. As before, we have two options to highlight this color. We can

either mix it with white (cold) or with yellow (warm). The former will generate cold and greyish lights, while the second will produce warm and greenish lights. You can choose whatever you want. Or even better, you can mix helmets painted in one way or another in the same unit. To apply the highlight on the helmet we mix the Dark green 896 color with increasing amounts of white or yellow. And then we apply these towards the upper part of the hel-

met, and we specially mark the lines of the crest and frontal eagle (just paint a dot). The highlights should also be painted towards the lower part, the edges. Finally, we can use the final highlight to paint some scratches with a thin brush.



## GEAR AND RIFLE

**T**o paint the straps and bag we start using Chocolate brown 872 (Vallejo), and then mix it with increasing amounts of Beige brown 875 (Vallejo). As a final highlight, we can mix beige brown with a little bit of white. To apply the highlights on the straps we can use the brush horizontally to paint a straight line in both edges. This is not only an easy way of painting the highlights on straps, but it is also realistic as this part is the most exposed and can get easily worn out. You can also add some scratches using the lighter color. To paint the bag, we follow the wrinkles and focus on the edges. I painted the second bag and its strap with Russian khaki, as I explained when painting the blankets of the horse. Note that this is exactly the same color I used for the uniform. However, in this case I used white rather than yellow for the highlights. This vividly change the hue of this color, as you can see.

To paint the dark brown leather of the belt and pouches you can use the following triad: Dark oxide 302 (Vallejo) for the shade, Flat brown 984 (Vallejo) for the base and Orange brown 981 (Vallejo) for the light. Since the surface of these elements is very small, we do not need intermediate layers. We apply the lights on the edges of the pouches and belt. Remember not to cover completely the previous layer, even when the surface is as small as it is here.

To paint the wooden part of the rifle, first we use Flat brown 984 (Vallejo), and then we mix this color with Orange brown

981 (Vallejo) in a 1-to-1 proportion and apply the highlights by painting horizontal lines, which represent the veining of the wood. Finally, we apply an extra highlight directly with Orange brown, following the same idea. To paint the metal parts, we use Gunmetal 054 (Vallejo) and apply a wash with the Citadel shade Nuln oil.



## SKIN

**W**e first paint the eyes by painting a thin horizontal white line, and then we paint a vertical black line or dot exactly in the middle of each line. Whether for any reason you are not happy with the eyes, you can re-paint them. Since we have not painted the face yet, this is quite easy now. Next, we paint the face (except the eyes) and hands with Tan 066 (Vallejo). Remember to thin the acrylic paint with a little bit of water. To highlight the tan color, we mix Tan 066 with increasing amounts of Dwarf skin 041 (Vallejo) until we use directly Dwarf skin. We can apply a final highlight with Dwarf skin mixed with white in the same proportion. I normally apply three or four layers or lights when painting the skin. Remember, the more layers, the smoother the transitions will be. To highlight the hands, we can lead the lights towards the knuckles and fingers. The last highlight should be just a dot on the most prominent parts such as the finger tips. You can use darker color, such as Flat brown 984 (Vallejo) to paint a very thin line between the fingers. This will enhance the contrast by clearly defining each finger. When painting the face, work the highlights on the forefront, upper part of cheeks, nose and up-



per and lower jaws. Do not cover completely the previous layer when applying a new highlight. Keep part of the previous layer in order to enhance the gradient effect or transition. You can paint the lower lip with Tan 066 to create some additional contrast.



## BASE

Once the miniature is fully painted, we can finish the base by adding some vegetation. It is very important to consider where you want to place your miniature. The ruins of Montecassino are very different compared with the snow and mud present during the Battle of the Bulge. The initial colors we used (chocolate brown and iraqi sand) can more or less serve for any War Theatre. But the vegetation is very specific. And we should represent it accordingly. For example, I wanted to represent here a Polish forest in September. We can add the vegetation by levels. For example, first I added a basic texture based on green saw dust. Then, I added small pieces of sponge and other similar stuff to represent small plants. And finally, I added bigger plants in form of grass tufts of different shapes and colors, specially some with a particular texture.

