



Corel® Painter™ 8
Digital Water Color
Visual Guide

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Welcome to Corel Painter 8

Corel® Painter™ 8 is the leading Natural-Media® painting application. Corel Painter lets you simulate a wide range of art tools, from felt pens, charcoal, and colored pencils to water color and oils.

Corel Painter lets you experiment with the widest range of Natural-Media tools. You can expand your digital drawing and painting techniques with a portfolio of new features.

The application features a redesigned user interface, including a new toolbox, Brush selector bar, property bar, Info palette, and new palette design and behavior. Corel Painter also includes a Mixer palette that realistically mimics the traditional paint mixing experience. Digital Water Color, a new Sketch effect, and more than 400 new brushes all expand your creative potential.

You can create custom brush variants using the new Brush Creator, which includes the Randomizer, Transposer, and Stroke Designer. Corel Painter also includes redesigned layer masks and channels that provide a smoother workflow and greater compatibility with Adobe® Photoshop®.

Digital Water Color in Corel Painter 8

Before the advancement of the multiple-layer system that Corel Painter 8 currently uses, the application included a unique, invisible, "Wet" layer. The single level Wet layer was not generally perceived as a layer by users, nor did it offer the flexibility offered by the current layer environment. And as the layering environment became increasingly popular, users began to request an independent Water Color layer that would co-exist with existing layer types.

So Painter 7 introduced the Water Color layer. Many of the characteristics of authentic water color were introduced with this layer, including interactive diffusion, pigment migration, wetness, evaporation, capillary action, and grain sensitivity. While this technology accurately portrays the real-world use of water color, it also requires mastery of numerous parameters.

What was needed was a simpler water color layer. Based on the original pared-down Digital Water Color layer was created for Corel Painter 8. While not a fully accurate portrayal of all the physical qualities available in the Water Color layer, the Digital Water Color layer is easy to control and provides most, if not all, of users' needs in terms of water color simulation.

Digital Water Color Controls

Compared to the Water Color layer's wide variety of controls, control of the Digital Water Color layer is straightforward. Diffusion and Wet Fringe are the primary features used in Digital Water Color artwork, and they can be adjusted in three areas of Corel Painter:

- the Stroke Designer page of the Brush Creator
- the Brush property bar
- the Layers palette menu

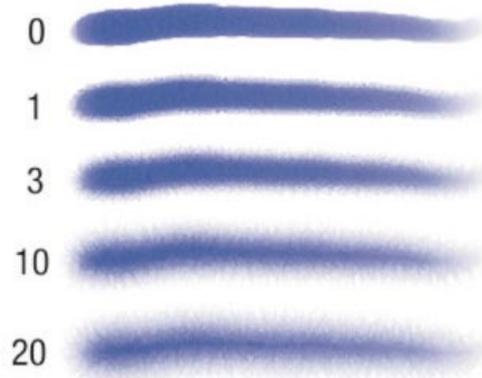
The following sections describe Diffusion and Wet Fringe features and controls.

Diffusion

Diffusion controls the outward migration of color laid down by the brush. When Diffusion is disabled (value=0), applied color retains a crisp edge. As Diffusion is increased, the applied color migrates further from the original edge. The resulting "fingers of diffusion" are influenced by the current Paper Grain. It is as if the Paper Grain's height field is a small mountain range; the pigment flows through the lower "valleys" of the grain. As a result, the visual appearance of diffusion is affected by the choice of Paper Grain.

Unlike the Water Color layer, diffusion does not occur instantaneously. Diffusion is applied when a stroke is completed.

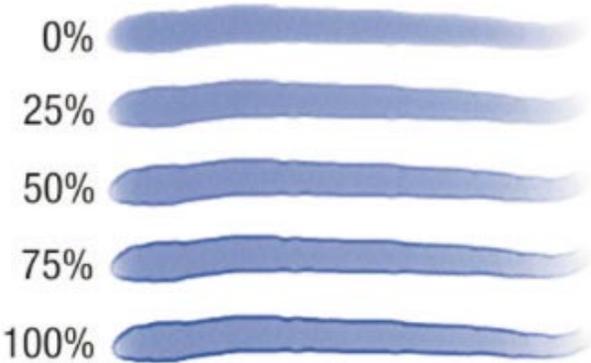
The graphic below illustrates how increasing the Diffusion level increases color migration.



Wet Fringe

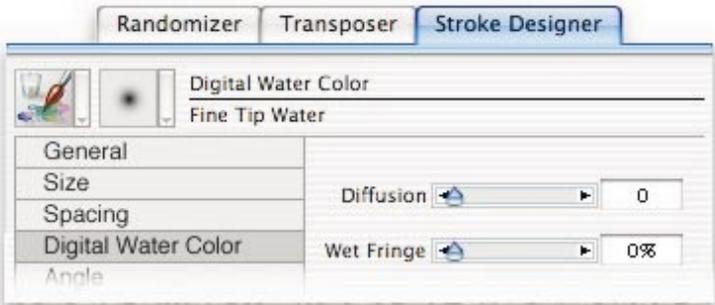
Wet Fringe controls the visual strength of the darker outer edge of a stroke. This darkened edge is associated with traditional water color. As real water color dries on an absorbent paper, the central wet area of a stroke dries more quickly. As a result, some residual pigment migrates to the wetter areas near the edge. When the stroke is fully dried, a darker outer ring remains. This is not always desirable and Wet Fringe can be

selectively adjusted from nonexistent (0%) to very dark (100%).



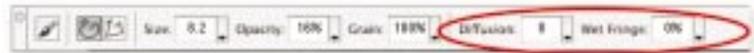
Controls

Diffusion and Wet Fringe controls are located on the Stroke Designer page of the Brush Creator.



Digital Water Color controls on the Stroke Designer page

The controls are mirrored on the property bar when a Digital Water Color brush variant is selected.



Digital Water Color controls on the property bar

Layers Palette Menu

Two other useful Digital Water Color–related controls are found in the Layers palette menu: Dry Digital Water Color and Diffuse Digital Water Color.



Digital Water Color controls on the Layers palette menu

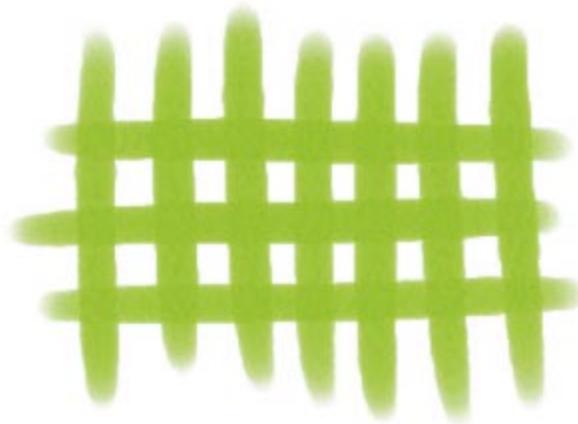
It is likely that the Dry Digital Water Color command will be used frequently when applying strokes. To make this process quick and easy, you can assign a single-key keyboard shortcut to the command in the Preferences > Customize Keys dialog box.

Wet vs. Dry Color Behavior

Overlapping the Same Color

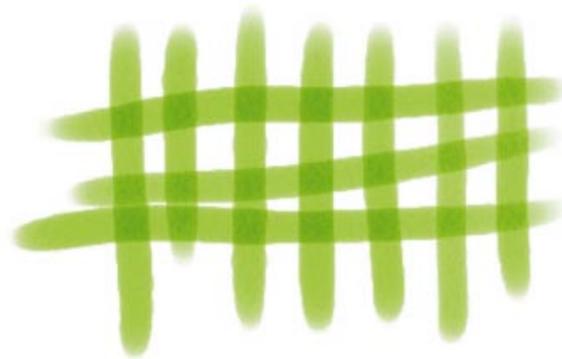
When applying color with Digital Water Color brushes, the canvas remains wet until it is intentionally dried by the user. (The exception is when an image is saved; wetness is not preserved and the re-opened image will have been dried.)

When Digital Water Color strokes of the same color are overlaid, the overlapping areas retain the same color value. This ensures that the application of multiple strokes will provide consistently colored areas. In the illustration below, all of the overlapping areas of the strokes maintain the same color value as the non-overlaid areas.



Overlapping Digital Water Color strokes of the same color

In the illustration below, the vertical strokes were applied first and dried. Then, horizontal strokes were applied. As a result, the overlapping areas of the post-dried horizontally applied strokes are darker. Continued overlapping results in increasingly darker areas.

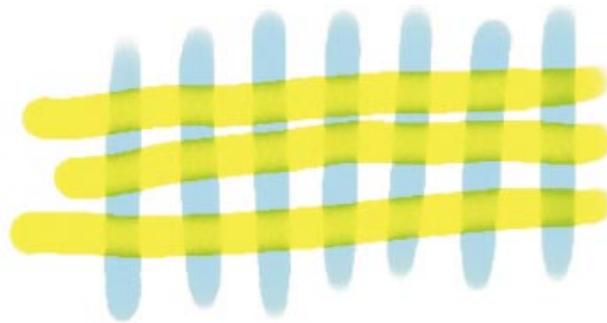


Overlapping Digital Water Color strokes of the same color, dried at different rates

Overlapping Different Colors

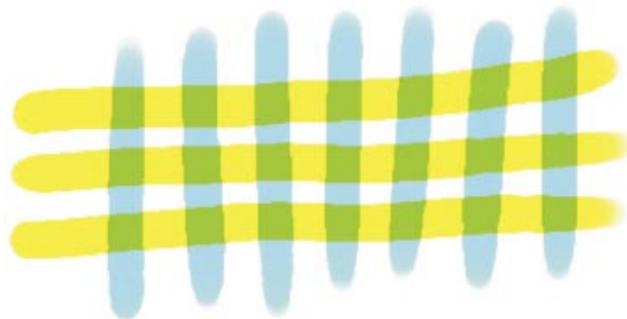
When Digital Water Color strokes of a different color are overlaid, the overlapping strokes overwrite the underlying color. (This statement is somewhat of a generalization, since Well controls can affect the manner in

which a particular brush will behave.)



Overlapping Digital Water Color strokes of different colors

In the illustration below, the vertical strokes were applied first and dried. As a result, the overlapping areas of the horizontal strokes exhibit a gel-like overlapping.

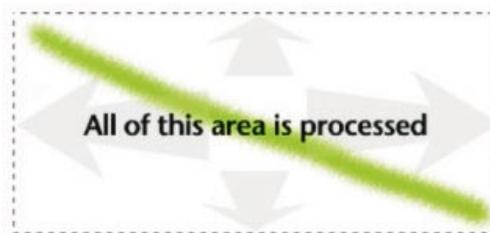


Overlapping Digital Water Color strokes of different colors,
dried at different rates

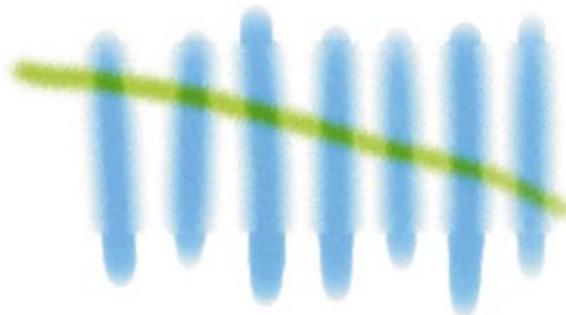
Wet vs. Dry Diffusion Behavior

Overlapping Existing Water Color Strokes

When a Digital Water Color brush with Diffusion enabled is applied over existing wet water color, it processes all areas of the canvas or layer bounded by the stroke.

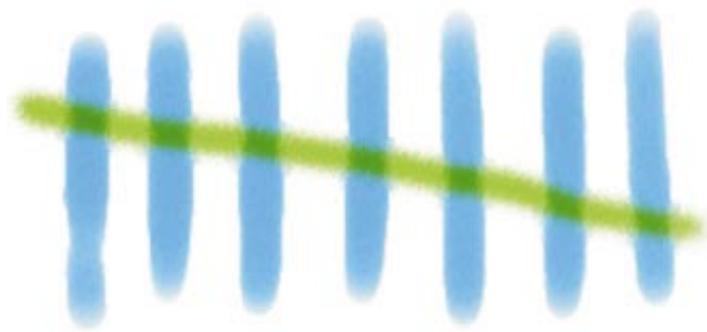


As a result of this behavior, it is possible to encounter an undesirable visual result as illustrated below. In this example, a diagonal stroke with Diffusion enabled is drawn over several vertical undiffused lines. This results in the unwanted diffusion of parts of the underlying art.



Unwanted Diffusion effect

To avoid unwanted diffusion, drying the existing Digital Water Color first results in only the Diffusion-enabled stroke and the immediately adjacent parts of the Digital Water Color art being diffused.



Drying the Digital Water Color layer before applied diffused strokes

Color Behavior

Unlike the Water Color layer, Digital Water Color does not actually model pigment. Rather, color interaction is based on an internal color mixing model. This model has a predictable behavior that can be utilized when mixing colors on the canvas or a layer.

It is seemingly easy to produce mixtures of color that quickly muddy up and become black. This is due to the tendency of the color mixing model to produce black when Hue/Saturation/Value (HSV) levels are either less than 35 per cent Saturation and/or less than 50 per cent Value.

Considering these levels can be used to visualize a “safe area” within the Color picker on the Colors palette.

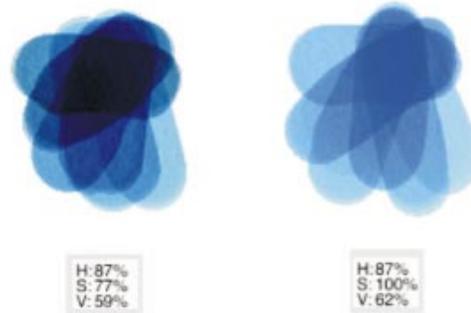
The image below illustrates this safe area.



By selecting colors within the safe area, colors will not easily move towards black when mixing. This is a somewhat generalized rule, as each Digital Water Color variant's particular settings can either shrink or expand the range of HSV-safe colors.

The example below compares the repeated over-painting and drying of two shades of blue. The image on the left has a Saturation of 77 per cent and a Value of 59 per cent, which is approaching the limit of the safe area. Each successive application of the color after drying progresses towards black. The image on the right has a Saturation of 100 per cent and a Value of 62 per cent, which is located more securely within the safe area. As a result, the progressively over-painted and dried colors never migrate towards black.

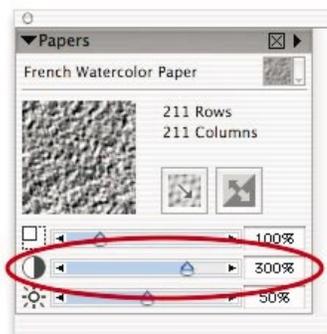
This example additionally illustrates that the safe area is not a hard-and-fast border. Each Digital Water Color variant's unique settings will affect the brush's color-mixing tolerance.



Color mixing with different Saturation and Value levels

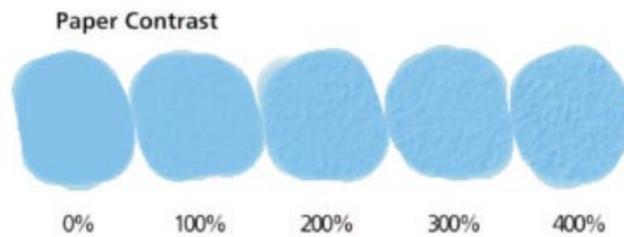
Paper Grain Appearance Control

The current Paper Grain is visible in many Digital Water Color brush strokes. The visual emphasis of the grain can be adjusted using the Paper Contrast slider on the Papers palette.



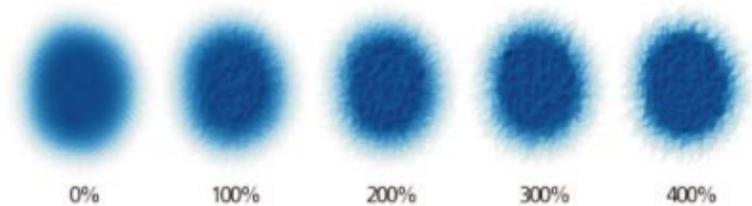
The Paper Contrast slider on the Papers palette

The illustration below shows how increasing Paper Contrast emphasizes the appearance of grain in a Digital Water Color stroke.



Different Paper Contrast settings and their effect on Digital Water Color brush strokes

Increasing Paper Contrast affects the visual appearance of diffusion applied to Digital Water Color strokes. Higher settings emphasize the individual fingers of diffusion at the stroke's edge (the exact appearance depends on the current Paper Grain).



Different Paper Contrast settings as applied to varying Paper Grain settings

Transferring Digital Water Color to the Water Color Layer

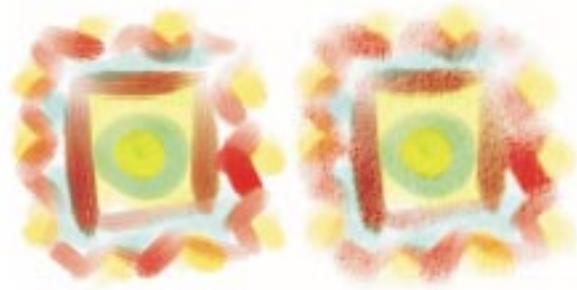
Digital Water Color art can be transferred to a new Water Color layer for additional adjustment. The Digital Water Color art to be transferred must reside on the canvas. Digital Water Color art on a layer can be dropped to the canvas using the Layers > Drop command.

To transfer the contents of the canvas to a new Water Color layer, choose the Lift Canvas To Water Color Layer command from the Layers palette menu.



Once the canvas art has been transferred, the former Digital Water Color art can be further enhanced with the Water Color variants.

The illustration below shows a sample design initially created with Digital Water Color variants. The image on the left was created using only Digital Water Color brush variants. In the image on the right, the Digital Water Color art has been transferred to a new Water Color layer. The Wet Entire Water Color Layer command on the Layers palette menu has been applied to the art, introducing characteristics of the currently selected Water Color variant.



Corel Painter 8

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