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Welcome to Corel TEXTURE

Often, textures can only be created by making a scan of a textured surface and importing it into a graphics program. Images created in this manner are static and can only be changed by creating a new scan.

Corel TEXTURE™, however, is a much more powerful tool for producing textures as it creates textures algorithmically, giving you the freedom to design and edit them at any time. Corel TEXTURE can create such natural textures of wood, clouds, stone, ripples, and bumpy surfaces. It can also make orderly patterns of checkers, dots, and lines and combine natural textures with these patterns to create unique images and effects.

Corel TEXTURE allows you to have complete control over color and design, and gives you a dimension of freedom and creativity not available with scanned textures. In addition, textures you create with Corel TEXTURE have consistent characteristics over their entire surface and can be produced at resolutions suitable for either electronic or paper production.

In Corel TEXTURE, a texture is a surface produced by slicing a three-dimensional solid. Depending on the type of object, and the angle of cut, a wide range of different textures can be produced. For example, when you slice a block of wood from different angles, you can create surface textures that show growth rings, straight grain, or a veneer effect. With Corel TEXTURE, you can create patterns from rock, marble, wood, a cloudy atmosphere, or other materials. You control the shape of the cutting knife, the direction of the cut, and how the edges of the cut are beveled. You can also enhance the appearance of a texture by adding colors and lighting effects.

Each texture is built by combining a series of layers, each layer providing a different quality, texture, or surface. By looking down through all the layers, a final, composite texture is created.

About textures

A texture is a surface produced by slicing a solid object. To get a clearer picture of how this can create a texture, it is helpful to understand the geometry of a solid material and the dimensions of a sliced surface.

Object dimensions

Mathematically speaking, the material you slice extends to infinity in all directions; therefore, the slice itself is infinitely wide and high. You can slice this material in any direction and from any angle. A texture is the surface that is revealed by slicing the object. Depending on the type of material being cut, a wide range of surface features can be produced. For example, depending on the angle of the cut, a marbled surface can have veins (from a horizontal cut) or splotches (from a vertical cut).

Since the slice is infinitely wide, you must define the size and characteristics of the rectangular that will become your texture. You can zoom in to the image to include surface details or pull back to gain a broader perspective. You can choose to create a narrow, thin texture, or a short, wide one. When you render the texture, the size and resolution you select also determine how much of the surface detail is shown. The Image Setup command in the File menu is used to define the physical size of each rendered texture.

Details and irregularities

Details in rendered resolutions

It's important to understand how the resolution of a rendered texture affects surface detail. Details in textures are like fractals — greater and finer details constantly appear as you move closer to the object. This means that larger images are not just grainier blow-ups of smaller images, as is the case with enlarged photographs. The resolution detail remains the same, and the quality doesn't degrade, as the image is enlarged. This useful characteristic comes from the fractal techniques that are used as the mathematical basis for Corel TEXTURE.

Pattern irregularity

The internal structures of the materials used to create texture often have a regular pattern. When the material is sliced, this regularity is shown, for example, by the grains in wood or the layers in granite. Corel TEXTURE allows you to control the regularity of a pattern — by either creating a uniform texture or allowing the pattern to degrade into chaos. You can even set up a pattern in which half the elements are uniform and half are chaotic.

Creating textures

Corel TEXTURE creates textures by combining four properties:

- Lighting, in which you manipulate one, two, or three spotlights, that shine down onto a texture's surface.

- Shader layers, which are texture layers that contain any of the following settings:
 - Material, such as wood, marble, or granite
 - Color, which acts like the color filter on a camera lens
 - Blend, which specifies the way layers interact to form the final texture
- Topography, in which you define the surface contour of a texture. The shape of the surface, such as waves, ripples, and bumps, is controlled by the “shape” of the computer knife that slices the material.
- Edge, which provides a round, beveled, or flat border for a texture.

Each of these four properties can be subtly altered to adjust specific aspects of a texture. In all, Corel TEXTURE has over 25 options, each with an average of four continuously variable settings. The possible combinations and resulting textures are endless.

Corel TEXTURE formats

Unrendered texture designs include all the property parameters of a texture and a small thumbnail image used to draw the texture on your screen.

All the textures that you initially create in Corel TEXTURE and all ready-made textures are in a texture design format. Corel TEXTURE comes with more than a hundred ready-made textures (called Preset textures). These textures simulate surfaces of numerous real objects, including stone, clouds, carved surfaces, and waves.

Here’s what you should remember about the Corel TEXTURE files:

- Texture designs can only be used in Corel TEXTURE.
- Texture designs can be edited and modified at any time.
- Texture designs have a relatively small file size (40-50 Kb).

Once you create a texture design or edit an existing one, you must render it before you can use it in other applications.

Rendering

When a texture is rendered, it is converted into a bitmap that can either be imported into other applications or printed. You have the option of rendering a texture either to your screen, where it can be reviewed for any final changes, or to a file. It’s important to understand the following points about rendered textures:

- Rendered textures can be used in other applications.

- You can define the specific size and resolution of a rendered texture. Resolution will depend on the ultimate use of the texture — electronic documents often call for a low resolution, printed document may require a high resolution.
- Rendered textures are saved in .BMP format.
- You cannot edit or alter a rendered texture in Corel TEXTURE; however, you can load the rendered image into a paint program and edit it as you would any bitmap.



Getting started with Corel TEXTURE

Corel TEXTURE makes it easy to create unique textures you can use as a background for your World Wide Web site, as wall paper on your desktop, or as a part of a design you work on in another application.

You can create a new texture by designing one from scratch, modifying a template, or using the Texture Wizard.

Creating a new texture

You can export the texture you create into another application.

❖ To create a unique texture

1. Create a texture design using a blank texture, one of the preset templates, or the Texture wizard.
2. Define or modify the elements that make up the texture.
3. Save the modified texture in an unrendered form as a template for future designs.
4. Render the texture to create a bitmap that you can use in other applications, and save the rendered image.

Creating a new texture from a blank texture

When you select this option, you begin with a “blank slate” in which two lights shine on a flat, black, featureless surface. If you’re an experienced Corel TEXTURE user, you may find this option to be the most efficient way to create your own designs. If you’re new to Corel TEXTURE, you can use this option to experiment with the way in which different elements interact.

❖ To create a texture from a new blank one

1. Click File, New.
2. Click the “Blank” Texture radio button.

Creating a texture by modifying a preset texture

Corel Texture comes with a variety of textures which can be modified to create new images. Use the New Texture gallery to browse through various pages of textures including metal, wood, wild and fabric.

❖ To create a new texture by modifying a preset

1. Click File, New.
2. Click the Texture Preset radio button.
3. Click New.
4. Click a tab to view the contents of the page or use the arrow buttons to scroll through more pages.
5. Browse through the Gallery to find the most appropriate Preset Texture.
6. When you locate the right design, double-click on its file name in the Texture Type window or double click the image.



- You should save the texture using a new filename to avoid overwriting the Preset.
-

Creating a texture using the Texture wizard

The Texture wizard will help you create complex, custom textures from scratch. The wizard takes you through all the steps required to create a complex texture by prompting you for design decisions, making all the required settings behind the scenes, and displaying the results of your work. If you don't like the way your texture is developing, you can always back up and specify different settings. The Texture wizard is the fastest and easiest way to experiment with the wide range of possibilities offered by Corel TEXTURE.

❖ To create the Texture wizard

1. Click File, New.
2. Click the Texture Wizard button.
3. Click the New button.
4. Follow the on-screen instructions.



- Always start with the lowest possible resolution and change to a higher resolution only if necessary. Higher resolutions can take substantially longer to render, redraw, and save.

Defining texture size and resolution

Before you edit an image, you must define its size and resolution. The size you define depends on how you plan to use the texture. You may plan to use the texture as a full-page background, as part of a composite image, or even as a small box on part of a page. The resolution will depend on whether the image will be produced as part of an electronic file or printed on paper. Note that the height and width of the Preview Window will change to reflect the settings you select.

❖ To specify the texture size and resolution

1. Click File, Image Setup.
2. Click one of the Measurement System buttons.
3. Enable the appropriate button in the Resolution section.

Different printing and display situations require different resolution values. Textures intended only for screen display should be rendered at 72 dots per inch (dpi). Most printed textures are acceptable at 150 dpi, regardless of the printer resolution. Geometric patterns, that have sharp line boundaries require a higher resolution.

4. Type values in the Texture Width and Texture Height boxes.

Large images (large Height and Width values) show the same pattern as small ones, but with more detail.



- These choices directly affect the rendering time and the size of the rendered texture file. A large, high resolution texture can be several megabytes in size and take some time to render.



Understanding surface properties

Surface Properties are used to define the characteristics of a texture's surface. Surface properties act like a filter; they control how the lighting properties interact with the shader layers.

Roughness

Surface roughness controls the focus of the overhead lighting. Low settings focus each overhead light into a small, intense circle. As you increasing roughness, the light gradually spreads the light out over the surface of the texture.

Brilliance

Surface brilliance controls the length and depth of shadows on the surface of a texture. Surface irregularities (e.g., bumps, and wrinkles) stand out more clearly as brilliance is decreased.

Metallicity

Metallicity determines how the colors in the overhead lighting and shader layers blend. At low metallicity, a large amount of surface lighting appears in the final, composite texture. At high metallicity, the color is almost entirely taken from the shader layers; little color comes from the lighting. Use 0% metallicity to suppress the surface color and 100% Metallicity to remove all color from the overhead lights.

Graininess

Graininess controls the sharpness and crispness of a texture. An increase in graininess has the same effect as using high-speed film in a camera.

Setting surface properties

You can adjust the surface properties of the image by editing the roughness, brilliance, graininess and metallicity parameters until you are content with the resulting texture. The effects create a realistic, featured surface for the texture.

❖ To set surface properties

- Move the Roughness, Brilliance, Metallicity, and Graininess sliders to adjust the effect of the four surface properties settings on the surface of the texture.



Understanding shader layers

Shader layers are used to apply a color, surface emulation, or picture to a layer within a texture. One or more shader layers make up the body of any texture and provide both its material and color. By blending several layers together, you can create a composite texture that contains different amounts of each layer. Since a texture is created by looking down through each layer, it's a good idea to define the bottom layer first and then work your way up.

Defining shader layers

Shader layers are opaque or transparent layers that make up a texture and alter its appearance. Each shader layer contains editable parameters, such as opacity, pattern and color, that define its appearance and contribute to the overall appearance of the texture itself.

❖ To define shader layers

1. Define the bottom layer by selecting an algorithm, which can be a solid color, a material emulation (such as granite, wood, or marble), a geometric shape (such as checkers, gradient, or spots), or a picture (a .BMP or a .TIF file).
2. Adjust the properties of the algorithm (such as magnification, rotation, and turbulence) to achieve the effect you require. Use the Selected Only button to preview the changes made to the bottom layer. The Blend for the bottom layer will always be opaque.
3. Add additional layers by clicking the Add Layer button on the toolbar. When you define the properties for the new layers, pay particular attention to the Blend setting. The more opaque a layer, the less the layers under it will show through. Blend settings can also be used to add or subtract different colors or to create contrasts through shading or highlighting.

Use the Selected Only button on the toolbar to examine the layer you are working on. Use the Selected and Below buttons to review the texture you're building "from the ground up."

4. Click Preview, Preview All Layers to see the effect of combining all the shader layers.

If you aren't satisfied with the final result, you can edit, delete, or reorder any or all of the layers.

Manipulating shader layers

Shader layers can be reordered, deleted, copied to the Clipboard, or saved for use in other textures. You can also disable a shader layer to see how the composite texture looks without that layer.

Deleting a shader layer

Shader layers can be deleted from the stack if they are no longer wanted in the texture. Once the layer is removed, the texture will lose all parameters defined in the layer.

❖ To delete a shader layer

1. Click the icon of the shader layer.
2. Click the Delete Layer button on the toolbar.

Changing the order of a shader layer

The shader layers are represented in the three-dimensional model as layers in a stack. The order of the layers in the stack can be shuffled to alter the appearance of the texture or to give the texture new characteristics.

❖ To change the order of a shader layer

1. Click a shader layer.
2. Drag the layer to its new position.

Copying and pasting a shader layer into another texture

Because shader layers are organized within the texture as layers in a stack, they can be moved from stack to stack and ultimately, texture to texture. Once the layer has been inserted into the stack, the texture reflects the properties of the new layer.

❖ To copy and paste a shader layer into another texture

1. Click the shader layer you want to copy.
2. Click Edit, Copy Layer.

3. Click File, Open.
4. Open the texture into which you want to paste the copied shader layer.
5. Select the layer to which you want to paste the shader characteristics or add a new layer to paste to.
6. Click Edit, Paste.
The new shader characteristics will replace the characteristics of the selected layer.
7. Drag the shader layer to the appropriate place in the stack.

Saving a specific shader layer within a texture

Shader layers within textures can be saved to be used again in different textures. You may want to do this if you are creating multiple textures with similar characteristics.

❖ To save a specific shader layer within a texture

1. Click a shader layer.
2. Click the down arrow button in Layer's Title Bar.
3. Choose Save Layer.
4. Type a name for the layer in the Save Layer dialog box.

Disabling a shader layer

Shader layers can be excluded from the stack temporarily without being deleted. You may want to do this if you are experimenting with the look of a completed texture.

❖ To hide a shader layer

1. Click a shader layer.
2. Disable the check box in the upper left corner of the shader layers Title bar.
When the check mark disappears, the representation of the shader layer becomes transparent and the layer is disabled.

❖ Enabling a shader layer

- Enable the check box.
When the check mark appears, the layer is active.

Applying colors using the Color Gradient Bar

You can use the Color Gradient Bar to apply a color or several shades of color to each layer in a texture. The Color Gradient Bar lets you use color pins to define exactly how colors will blend. The placement of a color pin indicates the highest point of intensity for that color. On either side of the color pin, the color gradually fades and blends into the color defined by the closest pin. The colors you place in the Color Gradient Bar are used to create contrasts in the material you've selected for the layer. For example, you can create colored streaks in a marble layer, dark grains in a wood layer, or yellow polka dots in a spot layer. Once you've created a color pattern in the Color Gradient Bar, you can save it for use in other textures or layers.

Colors marked with an "X" are transparent colors — solid colors with transparent bands that allow colors and other elements from lower layers to show through.

Adding a color pin to the Color Gradient Bar

Color pins are used to transfer colors from the Color Swatches Bar to the Color Gradient Bar. The Color Gradient Bar determines the color of the layer. You can view the changes to the layer as you drag color pins to the Color Gradient bar.

❖ To add a color pin to the Color Gradient Bar

1. Click the appropriate color in the Color Swatches Bar and drag it to the Color Gradient bar.

A new color pin appears in the Color Gradient Bar.

2. Drag the color pin to the correct location.

As you drag the pin across the Color Gradient bar, the color will blend with the colors closest to it.

Removing a color pin from the Color Gradient Bar

If you are unhappy with the color of the texture, you can remove a color from the Color Gradient bar by removing color pins. You can view the changes to the layer as you drag color pins from the Color Gradient bar.

❖ To remove a color pin from the Color Gradient Bar

1. Click the color pin you want to remove.
2. Drag the pin off the Color Gradient Bar and out of the Work Area.

The pin vanishes when you release the mouse button.

Changing the color of a color pin

You can add different colors to the color bar by changing the color of the color pins. This is effective if you want to change the colors of the texture but maintain the original color pattern.

❖ To change the color of a color pin

1. Click the color pin you want to edit.
2. Drag the new color from the Color Swatches Bar to the color pin.

Saving a color set contained in the Color Gradient Bar

Once you are content with the look and color of your texture, you can save the color settings for use at a later date. You may want to do this if you are creating multiple textures with the same color pattern.

❖ To save a color set

1. Click the down arrow button beside the Color Swatches Bar and choose Save Color Set from the menu.
2. Type a unique filename for the color set in the Save Color Set dialog box.

Loading a preset color set into the Color Gradient Bar

You can load Color sets to create textures with a previously defined look and color. You may want to do this if you are creating multiple textures with the same color pattern.

❖ To load a preset color set

1. Click the down arrow button beside the Color Swatches Bar.
2. Select the color set you want to import.

Shader layer algorithm settings

The algorithm settings determine the type of graphic effect that is contained in the layer. There are sixteen different settings you can choose from. Once you've selected an algorithm, you can adjust its parameters and its cut (the section of the three-dimensional space, defined by the layer orientation, that you are viewing) to create different effects. You can also apply any color or combination of colors to an algorithm. The parameter settings for each algorithm appear in the Work Area after you've made your selection. The cut, which determines how the simulated material is sliced to create a textured surface, is adjusted by clicking the Layer Orientation button on the toolbar.

Working with algorithms

Each algorithm contains parameters which can be edited to control the look of each texture pattern. Some parameters, such as Magnification and Rotation, are available for multiple algorithms, while other parameters, such as Contrast and Bias, may only be available for some algorithms. Though the parameter controls are the same, they create different effects based on the pattern of the algorithm.

The following parameters can be edited to adjust the pattern of the algorithm.

Magnification

Controls surface detail. A high level of magnification creates a small number of large patterns while a low level of magnification creates many small patterns.

Rotation

Rotates the pattern on the Z-axis. Since not all algorithms create uniform patterns, rotation affects each pattern differently.

Turbulence

Controls the smoothness of each pattern. In the Clouds algorithm, the turbulence setting determines how the edges of each cloud appear. Low turbulence produces smooth, rounded edges for each cloud. A high turbulence gives each cloud a jagged, indistinct appearance. You can use the turbulence settings to create a wispy effect.

Variance

Controls how uniformly the turbulence setting is applied. Low variance means that most elements in the pattern have the same turbulence setting. High variance means that turbulence settings are applied randomly, so that most elements in a pattern receive a different setting.

Cut

The cut is the section of the three-dimensional space, defined by the layer orientation, that you are viewing. It affects each pattern differently since some patterns are random. You will need to experiment to find the best combination.

Contrast

Determines how the color of each individual pattern is taken from the Color Gradient Bar. For example,

- Contrast = 0%: Colors are taken from randomly chosen positions along the Color Gradient Bar.

- Contrast = 50%: More colors are selected from the ends of the Color Gradient Bar than from the middle.
- Contrast = 100% : Two colors are taken, one from either end of the Color Gradient Bar. Colors in the middle are ignored.

Complexity

A higher level of complexity creates more complex patterns. The individual patterns become more detailed, especially when viewed using a higher magnification.

Inversion

Switches the order and position of the colors in the pattern. For example, red fractal shapes surrounded by blue become blue fractal shapes surrounded by red.

Bias

Uses the Color Gradient Bar to determine the colors used in the pattern. A low bias setting uses the colors found on the left side of the Color Gradient Bar. A high bias setting uses the colors found on the right side of the Color Gradient Bar.

Gain

Uses the gradient to determine the colors used in the pattern. A low gain setting uses colors from the center of the Color Gradient Bar. A high gain uses colors from the edges of the Color Gradient Bar.

Type

Determines the pattern the shapes will make. For example, the single-weave creates a uniform weave pattern with single unconnected shapes. The double-weave pattern creates a uniform weave pattern with interconnected shapes.

Sharpness

Controls the amount the color blends in the background. A low level of sharpness creates a smaller pattern, using colors found on the left most side of the color gradient. A high level of sharpness creates a larger pattern, using colors found on the right most side of the color gradient.

Applying a preset algorithm to a shader layer

You can load previously defined algorithms to give your texture a custom pattern. You may want to do this if you are creating multiple textures with the same pattern.

❖ To apply a preset algorithm to a shader layer

1. Click the shader layer you want to change.
2. Click the arrow button in the Work Area Title Bar, and choose an algorithm preset from the menu.

The preset changes the values of both the Algorithm and Blend settings and loads a preset gradient into the Color Gradient Bar.

Applying the Colored algorithm to a shader layer

The Colored algorithm assigns a solid color to a shader layer. You can use the Colored algorithm to add a tint to a texture or to create different shades by combining different colored layers. The amount of color added by each layer to the overall texture is controlled by the Blend setting

When you assign the Colored algorithm to a shader layer, you must select a gradient for the color. Gradients are used to create surface designs by applying the color as either a solid color or a wash, that flows from light to dark, in various directions.

❖ Apply the Colored algorithm to a shader layer

1. Click a shader layer.
2. Choose Colored from the Algorithm list box.
3. Choose a gradient option from the Gradient list box.

These options adjust the direction of the gradient.

4. Choose a blend option from the Blend list box.
5. Click the *Layer Orientation* button and type values for 3D transformation parameters in the Layer Orientation dialog box if you want to adjust the cut of the layer.



Adding colors to the Color Gradient Bar

The Color Gradient Bar defines the color of the texture. You can add colors to the Color Gradient Bar by dragging pins from the Color Swatches Bar to the Color Gradient Bar.

❖ To add a color to the Color Gradient Bar

1. Drag a color swatch from the Color Swatches Bar to the Color Gradient Bar.

A color pin appears on the Color Gradient Bar.

2. Add colors to create the gradient effect you want.
3. Adjust the position of the color pins to edit the gradient effect.



- You can also create a custom color by double-clicking a color pin and using the Color dialog box to create a custom color.

Applying the Clouds algorithm to a shader layer

The Clouds algorithm creates the effect of a cloudy sky. This algorithm is derived from the Spots algorithm with settings for turbulence added. If you want a cloud pattern without any turbulence, try modifying the Spots algorithm until you get the results you want.

❖ To apply the Clouds algorithm to a shader layer

1. Click a shader layer.
2. Choose Clouds from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level applied to the layer.

A high level of magnification creates a small number of large clouds, while a low level of magnification creates many small clouds.

4. Move the Rotation slider to adjust the rotation angle of the layer.
5. Move the Turbulence slider to adjust the amount of turbulence applied to the layer.

Low turbulence produces smooth, rounded edges for each cloud. High turbulence gives each cloud a jagged, indistinct appearance.

6. Move the Variance slider to adjust the variance setting.

Low variance means that most elements in the pattern have the same turbulence setting. High variance means that turbulence settings are applied randomly, so that most elements in a pattern receive a different setting.

7. Choose a blend option from the Blend list box.



8. Click the *Layer Orientation* button and type values for 3D transformation parameters in the Layer Orientation dialog box if you want to adjust the cut of the layer.

Applying the Marble algorithm to a shader layer

Marble patterns are created by slicing a simulated block of marble in different directions. The direction of the cut determines whether the surface contains streaks, bands, or splotches.

❖ To apply the Marble algorithm to a shader layer

1. Click a shader layer.
2. Choose Marble from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level applied to the layer.

A low magnification creates a large number of small splotches or veins in the marble surface. A high magnification results in a few large splotches or veins.

4. Move the Rotation slider to adjust the rotation angle of the layer.

Rotation determines the direction, which can be horizontal, vertical, or diagonal, of the veins or streaks.

5. Move the Turbulence slider to adjust the amount of turbulence applied to the layer.

A low turbulence setting produces a flat surface marked with a few irregularities. As the turbulence is increased, more irregularities appear in the marble's surface.

6. Move the Variance slider to adjust the layer's variance setting.

Low variance means that most elements in the pattern have the same turbulence setting. High variance means that turbulence settings are applied randomly.

7. Choose a blend option from the Blend list box.



8. Click the *Layer Orientation* button in the toolbar.

9. Type values in the Rotation, Stretch/Scale and Position boxes.

The 3D transformation parameters are used to determine the cut of the shader layer.

Applying the Wood algorithm to a shader layer

The Wood algorithm simulates the growth rings found in a block of wood. By altering the cut or rotation, you can simulate textures such as grain or veneer.

❖ To apply the Wood algorithm to a shader layer

1. Click a shader layer.
2. Choose Wood from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level applied to the layer.

At a high magnification, you see less grain but more detail in each grain. A low magnification can be used to show many tightly spaced growth rings or a very fine grain.

4. Move the Rotation slider to adjust the rotation angle of the layer.

Rotation is used to alter the orientation of a simulated grain or veneer.

5. Move the Turbulence slider to adjust the amount of turbulence applied to the layer.

A low turbulence setting simulates a straight-grained wood. A high turbulence setting creates a burred wood effect and very high settings hides the grain.

6. Move the Variance slider to adjust the layer's variance setting.

With no variance, the turbulence setting is applied to the grain evenly. With a 100% variance, some of the grain is given no turbulence while some is given full turbulence.

7. Choose a blend option from the Blend list box.



8. Click the *Layer Orientation* button in the toolbar.

9. Type values in the Rotation, Stretch/Scale, and Position boxes.

The 3D transformation parameters are used to determine the cut of the shader layer.

Applying the Checkers algorithm to a shader layer

The Checkers algorithm is a geometric pattern created by slicing a cube made of small, rectangular blocks. Each small block is one solid color that changes from block to block. With magnification set to 1.00, the texture has eight blocks on each side. Checkers are ideal for making tablecloths. With some imagination you can use other layers and properties to make the tablecloth shine, or you can even create the effect of spilled ketchup.

❖ To apply the Checkers algorithm to a shader layer

1. Click a shader layer.
2. Choose Checkers from the Algorithm list box.

3. Move the Magnification slider to adjust the magnification level applied to the layer.

High magnification produces a small number of large blocks, while lower magnification creates a larger number of small blocks.

4. Move the Rotation slider to adjust the rotation angle of the layer.

By adjusting the rotation, you can create diamond, or diagonal, patterns.

5. Move the Contrast slider to adjust the contrast level of the layer.

The contrast setting determines the shades of colors that are taken from the Color Gradient bar.

6. Move the Turbulence slider to adjust the amount of turbulence applied to the layer.

As turbulence increases, the edges of each block become more and more ragged until a “salt and pepper” pattern is produced.

7. Move the Variance slider to adjust the layer’s variance setting.

As the variance is increased, more and more blocks have wider turbulence settings.

8. Choose a blend option from the Blend list box.



9. Click the *Layer Orientation* button and type values for 3D transformation parameters in the Layer Orientation dialog box if you want to adjust the cut of the layer.

Applying the Spots algorithm to a shader layer

Unlike other materials, the Spots algorithm is created by looking down on a surface rather than by slicing an object. The model for Spots is an irregular mountain range. Peaks and valleys are assigned colors from opposite ends of the color range that is shown in the Color Gradient Bar. Colors of intermediate elevations are taken from colors that are located in the middle of the Color Gradient Bar.

❖ To apply the Spots algorithm to a shader layer

1. Click a shader layer.
2. Choose Spots from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level applied to the layer.

A high level of magnification produces a small number of large spots. A low level of magnification produces a large number of small spots.

4. Move the Rotation slider to adjust the rotation angle of the layer.
Rotation moves the texture around the Z-axis. The effect varies with each spot texture.
5. Choose a blend option from the Blend list box.
6. Click the *Layer Orientation* button and type values for 3D transformation parameters in the Layer Orientation dialog box if you want to adjust the cut of the layer.



Applying the Agate algorithm to a shader layer

The Agate algorithm simulates a cut from a block of agate, a translucent quartz that is commonly pale blue or gray, with a wax-like luster.

❖ To apply the Agate algorithm to a shader layer

1. Click a shader layer.
2. Choose Agate from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level applied to the layer.

Magnification increases the grain of the stone.

4. Move the Rotation slider to adjust the rotation angle of the layer.
The texture of agate is almost random and will show only small changes when rotated.
5. Choose a blend option from the Blend list box.
6. Click the *Layer Orientation* button and type values for 3D transformation parameters in the Layer Orientation dialog box if you want to adjust the cut of the layer.



Applying the Granite algorithm to a shader layer

Use the Granite algorithm to create uniform, sandpaper-like textures. In many respects, the texture looks like the mottled grain of a real block of granite. Like the Spots algorithm, the Granite algorithm is a flat surface, not a sliced solid. Random irregularities can be applied right down to the pixel level.

❖ To apply the Granite algorithm to a shader layer

1. Click a shader layer.
2. Choose Granite from the Algorithm list box.

3. Move the Magnification slider to adjust the magnification level applied to the layer.

The higher the magnification, the more detail will appear in the grain shapes.

4. Move the Rotation slider to adjust the rotation angle of the layer.

The texture of granite is almost random and will show only small changes when rotated.

5. Choose a blend option from the Blend list box.



6. Click the *Layer Orientation* button and type values for 3D transformation parameters in the Layer Orientation dialog box if you want to adjust the cut of the layer.

Applying the Polka Dots algorithm to a shader layer

The Polka Dots algorithm creates a uniform pattern of polka dots on the image.

❖ To apply the Polka Dots algorithm to a shader layer

1. Click the shader layer.
2. Choose Polka Dots from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level applied to the layer.

A high level of magnification produces a small number of large polka dots. A low level of magnification produces a large number of small polka dots.

4. Move the Rotation slider to adjust the rotation angle of the layer.

Rotation moves the texture around the Z-axis. The effect varies with each polka dot texture.

5. Choose a blend option from the Blend list box.



6. Click the *Layer Orientation* button and type values for 3D transformation parameters in the Layer Orientation dialog box if you want to adjust the cut of the layer.

Applying the Wrapped algorithm to a shader layer

The wrapped algorithm creates a spiral pattern of circles on the image by “wrapping” the color pattern. At a high magnification the image becomes spiraled like a bull’s-eye, while at a lower magnification the bull’s-eye pattern becomes distorted.

❖ To apply the Wrapped algorithm to a shader layer

1. Click a shader layer.
2. Choose Wrapped from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level applied to the layer.

A high level of magnification produces a small number of large circles. A low level of magnification produces a large number of smaller circles and a less uniform pattern.

4. Move the Rotation slider to adjust the rotation angle of the layer.

Rotation moves the texture around the Z-axis.

5. Choose a blend option from the Blend list box.



6. Click the *Layer Orientation* button and type values for 3D transformation parameters in the Layer Orientation dialog box if you want to adjust the cut of the layer.

Applying the Fractal algorithm to a shader layer

The Fractal algorithm creates a design of circular streaks on the image in the form of a fractal. The pattern has no observable uniformity and looks almost like oil spots on water.

❖ To apply the Fractal algorithm to a shader layer

1. Click a shader layer.
2. Choose Fractal from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level applied to the layer.

A high level of magnification produces a small number of large fractal shapes. A low level of magnification produces a large number of smaller shapes.

4. Move the Rotation slider to adjust the rotation angle of the layer.

Rotation moves the texture around the Z-axis.

5. Move the Complexity slider to adjust the complexity of the pattern.

A higher level of complexity creates more complex fractal patterns.

6. Move the Inversion slider to invert the colors of the fractal.

Inversion switches the order and position of the colors in the fractal pattern.



7. Choose a blend option from the Blend list box.
8. Click the *Layer Orientation* button and type values for 3D transformation parameters in the Layer Orientation dialog box if you want to adjust the cut of the layer.

Applying the Weave algorithm to a shader layer

The Weave algorithm consists of a basket-like weave of individual shapes that interlock together in a uniform pattern.

❖ To create a weave pattern

1. Click a shader layer.
2. Choose Weave from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level of the layer.

At a high magnification level, you can see a few weaves. At a low magnification level, you can see a large number of small, clearly defined weave interactions.

4. Move the Rotation slider to adjust the rotation of the weave pattern.

Rotation determines the direction of the weaves which can be horizontal, vertical or diagonal.

5. Move the Bias slider to adjust the bias of the pattern.

A low bias setting uses the colors found on the left side of the gradient. A high bias setting uses the colors found on the right side of the gradient.

6. Move the Gain slider to adjust the amount of space between the individual weave patterns.

A low gain setting uses colors from the center of the gradient. A high gain setting uses colors from the edges of the gradient.

Applying the Wisp algorithm to a shader layer

The Wisp algorithm creates a wispy, cloud-like appearance similar to a fractal pattern. The wisps are ragged and have no uniformity or pattern.

❖ To create a Wisp pattern

1. Click a shader layer.
2. Choose Wisp from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level of the layer.

At a high magnification level, you can see a few wisps. At a low magnification level, you can see a large number of small wisps.

4. Move the Rotation slider to adjust the rotation of the weave pattern.

Rotation moves the texture around the Z-axis.

5. Move the Turbulence slider to adjust the amount of irregularity of the pattern.

A high level of turbulence creates a large number of ragged, shapeless wisps. A low level of turbulence creates a smaller number of less ragged wisps.

6. Move the Sharpness slider to adjust the shape and look of the wisps.

A low level of sharpness creates a smaller wisp using colors found on the left most side of the color gradient. A high level of sharpness creates a larger wisp using colors found on the right most side of the color gradient.

Applying the Noise algorithm to a shader layer

The noise algorithm creates a static-like pattern similar to television static or signal loss. It has no uniformity or cohesion.

❖ To create a noise pattern

1. Click a shader layer.
2. Choose Noise from the Algorithm list box.
3. Move the Magnification slider to adjust the magnification level of the layer.

At a high magnification level, you can see less noise. At a low magnification level, you can see more noise.

4. Move the Rotation slider to adjust the rotation of the noise pattern.

Rotation moves the texture around the Z-axis.

5. Move the Variance slider to adjust the amount of irregularity of the pattern.

A low level of variance creates an evenly distributed amount of noise. A high level of variance creates a unevenly distributed amount of noise.

6. Move the Contrast slider to adjust the appearance of the noise.

A low contrast setting uses colors found in the middle area of the color gradient. A high contrast setting uses colors found in the entire color spectrum.

Applying the Cellular algorithm to a shader layer

The Cellular algorithm creates a honeycomb-like network of bumps or cells on the surface of the image. The following settings determine the characteristics of the cells.

❖ To create a cellular effect

1. Click the shader layer.
2. Choose Cellular from the Algorithm list box.
3. Select a pattern type from the Type list box.
4. Move the Magnification slider to adjust the magnification level of the layer.

At a high magnification level, you can see a few bumps. At a low magnification level, you can see a large number of small, clearly defined bumps.

5. Move the Rotation slider to adjust the rotation of the cellular pattern.
Rotation determines the direction or flow of the network of bumps and cells
6. Move the Turbulence slider to adjust the amount of turbulence in the image.

Turbulence determines the raggedness of the edges of the individual cells. At a low turbulence level, you can see well-formed, individual cells, while at a higher turbulence level, individual cells become ragged and blurry.

Using a picture as a shader layer

A layer can be used to hold a picture imported from another application. By filtering the picture through other shader layers and applying a contour, you can achieve dramatic effects. If you use a picture, it is usually loaded into the texture's bottom shader layer.

When you load a picture into a shader layer, Corel TEXTURE doesn't just copy the picture into the texture. Instead, it attaches the picture file to the texture file. This ensures that your texture design always contains the most up-to-date version of the picture file. For this reason, it's important to keep track of the location of the picture files you've attached to any unrendered textures — especially if you're sending the design to another user or computer. (Since rendered textures are texture designs converted to bitmaps, any imported pictures included in the design will become part of the bitmap. If the original picture is changed, you'll need to render the texture again to update the picture.)

How Corel TEXTURE locates a picture file

When you open a texture containing a picture, Corel TEXTURE uses the following methods to locate the file:

- Corel TEXTURE checks the location (i.e. the folder) that the picture was in when the texture was last saved.
- Corel TEXTURE searches through the COREL TEXTURE folder for an image file with the appropriate name.
- Corel TEXTURE searches the folder containing the texture file for an image file with the appropriate name.

If Corel TEXTURE cannot locate the file using either of these three methods, the texture will be loaded without the picture.



- If you are rendering textures that you've received from another user, you should always preview them first to ensure no picture files are missing.

Importing a picture into a shader layer

A layer can be used to hold a picture imported from another application. By filtering the picture through other shader layers and applying a contour, you can achieve dramatic effects. If you use a picture, it is usually loaded into the texture's bottom shader layer.

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- If you are rendering textures that you've received from another user, you should always preview them first to ensure no picture files are missing.

❖ To import a picture into a shader layer

1. Click a shader layer.
2. Choose Picture from the Algorithm list box.

3. Click the import box located in the center-left of the Work Area.
4. Locate the picture you want to import.
5. Choose the filename.
6. Click OK.
7. Click one of the following import options:
 - Stretch to automatically adjusts the picture to fit over the entire texture surface.
 - Center to place the image in the middle of the layer, surrounded by a gray border.
 - Tile to create a tiled pattern from the imported image.

Specifying blend settings

Blend settings define how a layer combines with those layers underneath it to create a composite texture. There are 11 blend settings you can use to create distinct effects. By combining opaque shader layers with layers of varying transparency, you can create very different effects from the same texture. The best way to see the effect of a blend setting is to apply it to a layer and see how it affects the preview of the completed texture.

Applying a transparent color to a shader layer

A fully opaque blend blocks all light coming from below. However, if you assign a transparent color to an opaque layer, portions of lower layers will show through. Transparent colors are those colors marked with an “X” on the Color Swatches Bar. Using transparent colors is similar to placing a colored filter over a camera lens — light can shine through, but it is subtly altered or colored. By combining different opacity settings with transparent colors, you can control exactly how much each layer contributes to the final, composite texture. A layer that contains a solid color and has a fully opaque setting will blot out all layers beneath it.

Since the bottom layer has nothing underneath, it is automatically assigned an opaque blend setting.

❖ To apply a transparent color to a shader layer

1. Click a shader layer.
2. Drag a transparent color swatch from the Color Swatches Bar to the Color Gradient Bar.

Transparent colors are those colors marked with an “X” on the Color Swatches bar.

3. Adjust the position of the color pin until you’re satisfied with the color effect.

Applying the Additive blend setting to a shader layer

In an additive blend, the color values of the additive layer are added to the color values of those from lower layers. Since the resultant color components can only stay the same or become larger, an additive blend never causes darkening. The resultant color is a combination of the additive layer and all other layers.

White in the additive layer swamps any color from the lower layers, resulting in a white texture. Black in the additive layer has no effect on color from the lower layers.

❖ To apply the Additive blend setting to a shader layer

1. Click a shader layer.
2. Choose Additive from the Blend list box.

Applying the Subtractive blend setting to a shader layer

In a subtractive blend, the color values of the subtractive layer are subtracted from the color values of those in lower layers. Since light is always removed, subtractive layers have the effect of darkening the texture. The lighter areas in a subtractive layer create a darkening effect.

White areas are converted to black in a subtractive blend, while black areas don’t change the underlying colors, since black has no light to subtract.

❖ To apply the Subtractive blend setting

1. Click a shader layer.
2. Choose Subtractive from the Blend list box.

Applying the Lighten blend setting to a shader layer

The lighten blend setting lightens all the colors in the Color Gradient Bar. While an additive layer lightens only those colors filtered through it (i.e. all the layers below it), a lightened layer will affect all the colors in a texture.

❖ To apply the Lighten blend setting

1. Click a shader layer.
2. Choose Lighten from the Blend list box.

Applying the Darken blend setting to a shader layer

The Darken blend darkens all the colors in the Color Gradient bar. While a Subtractive layer darkens only those colors filtered through it (i.e. all the layers below it), a layer set to Darken affects all colors in the texture.

❖ To apply the Darken blend setting to a shader layer

1. Click a shader layer.
2. Choose Darken from the Blend list box.

Applying the Shade blend setting to a shader layer

The Shade blend setting is an additive blend in which white brightens a color and black darkens it. By applying a shader layer, you can turn a solid color layer into a layer in which colors gradually shift from light to dark

❖ To apply the Shade blend setting to a shader layer

1. Click a shader layer.
2. Choose Shade from the Blend list box.

Applying the Hue Shift blend setting to a shader layer

When you apply the Hue Shift blend setting, all the combined color pins in the layers below the Hue Shifted layers are inverted.

❖ To apply the Hue Shift blend setting

1. Click a shader layer.
2. Choose Hue Shift from the Blend list box.

Applying the Multiply blend setting to a shader layer

The Multiply blend setting acts like a color filter, allowing some color to show through while blocking others. In a multiplied layer white allows all colors to show through, a color with a medium brightness allows some of the color to show though, and black blocks all colors.

❖ To apply a shader layer

1. Click a shader layer.
2. Choose Multiply from the Blend list box.



Rendering Textures

Rendering transforms a texture design into a bitmap that can be used in other applications. A rendered texture cannot be edited in Corel TEXTURE.

You can choose to render your texture in one of two ways: you can either render the image to a window, where you can review its final, rendered appearance, or render the image to a file. When you render an image to a file, a bitmap is created from the texture design. Rendering to a window is considerably faster than rendering to a file, and ensures that the rendered texture matches your design. This feature is particularly useful with large, complex textures that may require a considerable amount of memory to convert into a bitmap.



- Before you render an image to either a window or a file, you should verify that the size and resolution settings are correct.

Rendering a texture to a window

Rendering a texture to a window allows you to immediately view the texture you have created. This is an effective way to ensure that the settings you have chosen are correct and that the texture itself suits your needs.

❖ To render a texture to a window

1. Click Texture, Render To Window.

When you perform this step, a window appears that is gradually filled by the texture in its final dimensions. A Status Bar under the Title Bar illustrates the speed at which the image is being rendered and shows the portion of the image that remains to be rendered.

2. If you're satisfied with the rendered image, click File, Save As.
3. Locate the folder where the texture is to be stored and enter a unique file name.



- To suspend the rendering process, click the Stop button. You can resume the process by clicking the same button, now labeled Refresh.

Saving a texture to a file

Rendering a texture to a file allows you to create a bitmap of the texture. This process is slower than rendering to a window and does not let you preview the texture before you save it.

❖ To save a texture file

- Click Texture, Render To File.

If you haven't saved the texture design, you will be prompted to save it now.

You can monitor the process of rendering by observing the Status Bar. To suspend the rendering, click the Cancel button.

Rendering is a background operation. During the process, you can run other programs; however you may find the other programs a little slower than usual.

Creating a file pattern from a texture design

Tiling the image is a way to create a larger texture pattern using a smaller portion of texture. The tiling process places the smaller portions of texture side by side to create a larger texture made up of smaller textures.

❖ To create a tile pattern

1. Open or create the pattern you want to tile.
2. Click Texture, Generate Tiling Image or click the Tiling button in the toolbar.

This step prepares the image for tiling.

3. Click Preview, Test Tiling to view the image before rendering it. Click anywhere on the screen to remove the pattern window that appears.
4. Render the tiled texture.

Saving the rendered texture

Once you are satisfied with the rendered texture, you can save it for use at a later date.

❖ **To save a rendered texture**

1. Click File, Save As.
2. Type a name for the rendered texture in the File name field.
3. If you want to save the texture in a different folder, click the Save in list box and choose a new folder.
4. Click Save.

The file is saved in .BMP format.

Saving texture designs in an unrendered format

If you have not completed editing a texture and you do not want to render the texture at this time, you can save the texture in an unrendered format.

❖ **To save a texture in an unrendered format**

- Do one of the following:
 - Click File, Save to save any changes you've made to the current texture.
 - Click File, Save As to save the file under a different name and location. This leaves the original texture unmodified.



- If you have selected one of the Preset Textures you should save it with a different file name before performing any edits.
-



Lighting properties

Lighting Properties are used to determine the amount, intensity, and quality of the illumination on a texture's surface. In Corel TEXTURE, lighting effects are created by manipulating up to three lights suspended above the surface of the texture. You can switch on some, all, or none of the lights and adjust their position over different parts of the texture (Note: you don't need to switch on any lights to see a texture's surface).

By using the Color Swatches bar, or the Color Palette, you can assign a different color to each light. Note that the overall lighting will also be affected by the settings applied to the Surface Properties of the texture.

You can adjust the following properties for each light:

- Ambient: Sets the intensity of the ambient lighting.
- Shading: Determines the amount by which color values are reduced to create shading.
- Highlights: Sets the amount of contrast to be created by each light.

Setting lighting properties

Corel TEXTURE provides you with a simple to use interface for setting lighting properties. You can view a three dimensional representation of both the texture and the shine of the lights on the surface of the texture. You can turn on up to three lights and position them anywhere above the 3D representation of the texture. Similarly, you can change the colors of the lights by dragging colors from the color swatch bar onto the color pin.

The texture preview window allows you to view the effects as you make them.

Setting lighting properties

The lighting properties control the way the light shines onto the surface of the texture. To begin setting the lighting properties, select the number of lights that you want to use.

❖ To set lighting properties

1. Click the Lighting Properties layer.

2. Click the check box of the light number you want to turn on or off.

When you turn a light on, a pin representing the light appears on the representation of the texture's surface in the Work Area.

3. Position the light over the surface of the texture by dragging the light's pin.
4. If you want to color the light, drag the appropriate color from either the Color Swatches bar or the Color Palette and drop it onto the light's pin.
5. Adjust the controls for the Ambient, Shading, and Highlights settings of the light.

Placing lights on a texture's surface

Once the number and color of the lights has been chosen, the lights can be positioned around the texture. The texture is divided into four quadrants with an arrow in the middle that indicates the top of the texture.

❖ To create and position lights

1. Click one or all of the Light check boxes.
2. Drag a light pin to the desired position on the Lighting preview.

The Preview window displays the results of the move.