User's Manual
Professional Plug-In Tools for Image Editing

This document provides information about using PenTools.

PenTools are available for Macintosh and Windows systems, and are based on the Adobe Photoshop (3.0 or later) plug-in standard.

About PenTools

WACOM PenTools filters are pen-sensitive plug-ins that work with many graphics applications. PenTools take advantage of the capabilities of your WACOM tablet and UltraPen, enabling you to precisely apply and control image effects based on the nuance and inflection of your hand movements.

When you apply a PenTools filter:

- The filter is applied to the active layer of the selected portion of your image. Depending on how much pressure you apply to your pen, the filter is applied more or less intensely in real time.

- The UltraPen's eraser allows you to remove the filter effect with pressure-sensitive control.

Together, these features enable you to fully utilize the pressure-sensitivity and erasing capabilities of the pen to manipulate your graphics images.

PenTools filters work with:

- Adobe Photoshop 3.0.5 or later

- Fractal Design Painter 4.0.3 or later

- Corel PhotoPaint 7.x or later (PCs only)

You may also find that PenTools are compatible with other graphics applications supporting the Adobe Photoshop 3.0 standard for plug-ins.

To use PenTools, you must have a professional WACOM graphics tablet (such as ArtPad, ArtZ, SD, or UD series) installed on your system. PenTools will not work with a standard mouse or another manufacturer's graphics tablet. For best results, make sure your WACOM tablet is set to "absolute mode" when working with PenTools.

- For Macintosh systems, your WACOM tablet must be using driver version 2.5.5 or later.

- For IBM PCs and compatibles, your WACOM tablet must be using driver version 2.45 or later.

Note that PenTools work only in RGB and CMYK graphics modes within your graphics application.

If you are unfamiliar with plug-in products, refer to the documentation that came with your graphics application for specific information on installing and using plug-ins.

Plug-ins based on the Adobe Photoshop 3.0 standard require an amount of RAM space that is approximately three times your image file size. For example, if you are working with a plug-in filter and a 20 MB image, you will need approximately 60 MB of RAM for optimum performance. If you have less RAM than necessary, you may encounter problems due to lack of RAM. As real-time plug-ins, PenTools require this extra space to perform complex calculations; not only do PenTools process your drawing changes, but they must simultaneously keep track of your previous actions in real-time. Due to the complexity of the 3D Chisel, this filter will require RAM space that is approximately eight times the image file size. For more information on improving performance with filters, refer to the documentation that came with your graphics application.

Opening PenTools

Before you can select a PenTools filter you must first open an image file in your PenTools-compatible graphics application. The image you are working with must be in RGB or CMYK graphics mode. However, in addition to RGB and CMYK, both the Pen Duster and Despeckler filters support Greyscale mode. You then select one of the PenTools filters from the filter, effects, or other applicable menu of the graphics application. The PenTools window for that tool will be displayed. PenTools effects are applied to the active layer of the selected portion of your image in real time.

To open PenTools:

1. From the graphics application's filter or effects menu, select PenTools. Note that some applications may require you to first select an image element before you can access the PenTools window.

2. From the PenTools menu, select the filter tool you want to use. The PenTools window for that tool will display.

The first time the PenTools window opens, it fills the entire screen. If you change the window size and location, it is remembered and used on subsequent openings.

Image area

The image area displays the active layer of the selected portion of your image. Masked portions of a selected layer are not visible.

Controls in common

Grabber Hand button. Click to activate the grabber hand cursor, which enables you to position your image within the PenTools window.

- Press option (for Macintosh) or Alt (for PCs) to change the grabber hand to a zoom out tool.

- Press command (for Macintosh) or Ctrl (for PCs) to change to a zoom in tool.

Zoom button. Click to activate the magnifier cursor, which enables you to zoom in or out of your images.

- By default, the magnifier is set to zoom in.

- Press option (for Macintosh) or Alt (for PCs) to zoom out.

- To magnify a specific portion of the image, click and drag to create a bounding area that fills the screen when you lift the pen from the tablet.

- At any time, you can press the spacebar to toggle to the grabber hand.

Pen Tool button. Click to activate the PenTools filter cursor, identified by a cross-hair with circle. This is the active mode, enabling you to use the WACOM UltraPen to precisely apply the filter to your image.

- To zoom in, press command+spacebar for Macintosh, or Ctrl+spacebar for PCs.

- To zoom out, press option+spacebar for Macintosh, or Alt+spacebar for PCs.

- At any time, you can press the spacebar to toggle to the grabber hand.

Tool Control area. The controls found here are specific to the PenTools filter you are working with. This area is your primary interface for customizing your tool. For each PenTools filter, you can adjust Tool Control settings to create unique expressions in your work. Your Tool Control settings are saved when you exit the PenTools window.

**Revert button.** Click to discard any changes and revert back to the original image.
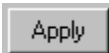
Apply button. Click to apply the current changes to the image. In this manner you can make incremental changes to the image. Changes saved using Apply cannot be canceled, nor can you revert back to the original image.
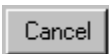
Cancel button. Click to close the PenTools window and return to your graphics application without saving changes.

Reset button. Press option (for Macintosh) or Alt (for PCs); the Cancel button toggles to Reset. Click Reset to return to the Tool Control default settings for the filter you are working with.
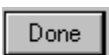
Done button. Click to save your changes, close the PenTools window, and return to the graphics application.

Undo command. All PenTools, except 3D Chisel, feature one level of Undo. To undo your last PenTools stroke, press Command+Z (for Macintosh) or Control+Z (for PCs).

Working with PenTools

PenTools filters are categorized in three groups:

- Productivity tools

- Creativity tools

- Far-out tools

Within each PenTools filter window, only the Tool Control area is different, depending on which filter you are working with.

Remember that PenTools work only in RGB and CMYK graphics modes.

Productivity tools

PenTools filters in this category enhance existing filters (such as Add Noise, Despeckle, and Dust & Scratches), making them into pen-sensitive tools that give you increased productivity and artistic control in your work. PenTools of this type include:

- Brush-on Noise

- Despeckler

- Pen Duster

Brush-on Noise

Brush-on Noise is used to apply pen strokes of visual noise to the image. Noise consists of single image pixel speckles in either color or monochrome.

When you select Brush-on Noise… from the PenTools menu, the PenTools window displays the following tool controls.
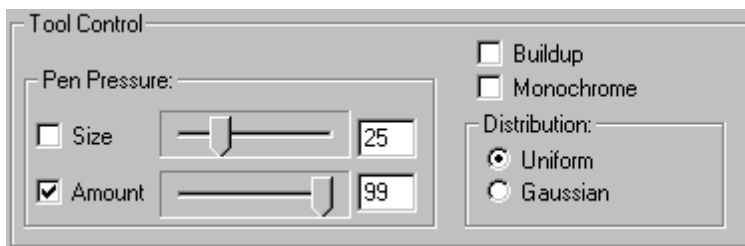
Pen Pressure: Size. Check the Size box to make the size of the brush vary with pen tip pressure. Use the slider (or enter a value from 1 to 99) to set the width of the noise stroke. As you apply pressure to the pen, your brush size will vary from zero to the set value. If Size is not checked, the width of the noise stroke is fixed at the Size value.

Pen Pressure: Amount. Check the Amount box to make the amount of noise applied by the filter vary with pen tip pressure. Use the slider (or enter a value from 1 to 99) to set the amount (saturation) of noise. As you apply pressure to the pen, the noise will vary from zero to the set value. If Amount is not checked, the applied noise is fixed at the Amount value.

Buildup. When checked, this option enables you to progressively build up noise on an image.

Monochrome. When checked, monochromatic noise is applied to the image.

Distribution: Uniform. When selected, noise is applied in a uniform distribution pattern.

Distribution: Gaussian. When selected, noise is applied in a gaussian distribution pattern.

Eraser behavior

Use the pen eraser to remove the filter effect with pressure-sensitive control. The size of the eraser swath and pressure response is the same as the selected Pen Pressure: Size setting. As you apply pressure to the pen, the eraser size will vary from zero to the set value. If Size is not checked, the width of the eraser stroke is fixed at the Size value.

Hints

- Try using Brush-on Noise to selectively add depth to a flat area of an image, and to add grain where retouching has created too flat a result.

- When you add noise to an image with Pen Pressure: Amount checked, the last pressure value sensed is a decreasing amount as you lift the pen from the tablet. For a "sharper" noise break select Buildup, or turn off Pen Pressure: Amount to obtain constant noise pressure. You can also draw slightly beyond the point where you want the noise to end (this takes some practice).

Visit the PenTools site at www.wacom.com/pentools for more hints and other useful information.

Despeckler

Despeckler is used to remove noise speckles and clean up an image with a progressive smoothing process. Pen-sensitive despeckling enables you to selectively despeckle the specific area of an image needing attention – without the overall loss of image quality that can occur with traditional, full-image despeckling filters. In addition to RGB and CMYK mode, Despeckler supports Grayscale mode in Adobe Photoshop.

When you select Despeckler… from the PenTools menu, the PenTools window displays the following tool controls.
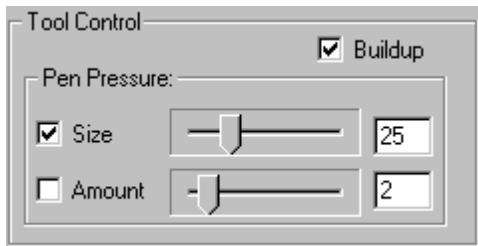
Pen Pressure: Size. Check the Size box to make the size of the brush vary with pen tip pressure. Use the slider (or enter a value from 1 to 99) to set the width of the despeckler stroke. As you apply pressure to the pen, your brush size will vary from zero to the set value. If Size is not checked, the width of the despeckler stroke is fixed at the Size value.

Pen Pressure: Amount. Check the Amount box to activate pressure-sensitive control of the despeckler smoothing amount applied by the filter. Use the slider (or enter a value from 1 to 15) to set the amount of despeckling. As you apply pressure to the pen, the despeckling will vary from zero to the set value. If Amount is not checked, the amount of despeckling is fixed at the Amount value.

Buildup. When checked, this option enables you to progressively build up despeckling on an image.

<u>Eraser behavior</u>

Use the pen eraser to remove the filter effect with pressure-sensitive control. The size of the eraser swath and pressure response is the same as the selected Pen Pressure: Size setting. As you apply pressure to the pen, the eraser size will vary from zero to the set value. If Size is not checked, the width of the eraser stroke is fixed at the Size value.

- Use a small brush size when despeckling areas of high detail. Use a larger brush size for larger areas with less detail (such as backgrounds).

Visit the PenTools site at www.wacom.com/pentools for more hints and other useful information.

Pen Duster

Pen Duster is used to remove dust and scratches from an image by removing dissimilar pixels within a specified radius and threshold level. Pen-sensitive dusting enables you to precisely edit an image -- without the overall loss of image quality that can occur with traditional, full-image dusting filters. In addition to RGB and CMYK mode, Pen Duster supports Grayscale mode in Adobe Photoshop.

When you select Pen Duster… from the PenTools menu, the PenTools window displays the following tool controls.
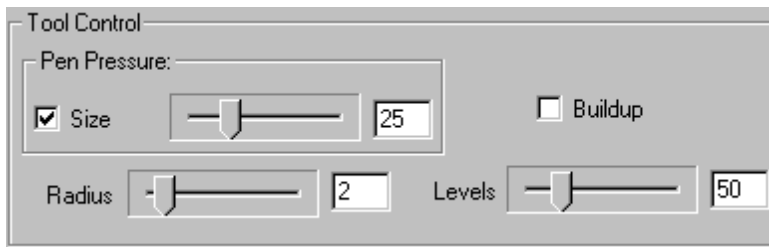
Pen Pressure: Size. Check the Size box to make the size of the brush vary with pen tip pressure. Use the slider (or enter a value from 1 to 99) to set the width of the duster stroke. As you apply pressure to the pen, your brush size will vary from zero to the set value. If Size is not checked, the width of the duster stroke is fixed at the Size value.

Radius. Use the slider (or enter a value from 1 to 16) to set the duster search radius for dissimilar pixels.

Levels. Use the slider (or enter a value from 1 to 255) to set the contrast threshold level of the duster stroke. The threshold level determines the contrast level at which a pixel is considered to be "noisy" in relation to neighboring pixels.

Buildup. When checked, this option enables you to progressively build up dusting of the image.

Eraser behavior

Use the pen eraser to remove the filter effect with pressure-sensitive control. The size of the eraser swath and pressure response is the same as the selected Pen Pressure: Size setting. As you apply pressure to the pen, the eraser size will vary from zero to the set value. If Size is not checked, the width of the eraser stroke is fixed at the Size value.

Hints

- Find the largest dust particle or scratch that you want to remove and measure its pixels across. Set Radius for equal to or one more than the number of pixels. Use the Levels control to select an appropriate threshold for the image noise you want to eliminate.

- You will need to experiment with various Radius and Levels settings to find an optimum balance between sharpness and removing a defect from an image.

Visit the PenTools site at www.wacom.com/pentools for more hints and other useful information.

Creativity tools

PenTools filters in this category provide you with innovative, pen-sensitive ways to expand your creativity within a graphics application. These filter tools include:

- Virtual Airbrush

- 3D Chisel

- Super Putty

Virtual Airbrush

Virtual Airbrush is used to simulate a physical airbrush, providing you with authentic airbrush performance where droplets of ink are applied to the image.

The distribution pattern of the airbrush is most dense in the middle, with less density at the outer edge of the airbrush flow. By adjusting the tilt of your UltraPen and the pressure you exert upon it, you can vary the airbrush pattern and intensity of the spray.

- Tilting the pen results in an elongated pattern designed to simulate the effects of an airbrush spray that is angled away from the paint surface. On tablets without tilt, the setting for tilt is always at the zero (vertical) position.

- Applying pressure results in a more saturated pattern.

You can also control the color and spatter size of the airbrush spray pattern.

When you select Virtual Airbrush… from the PenTools menu, the PenTools window displays the following tool controls.
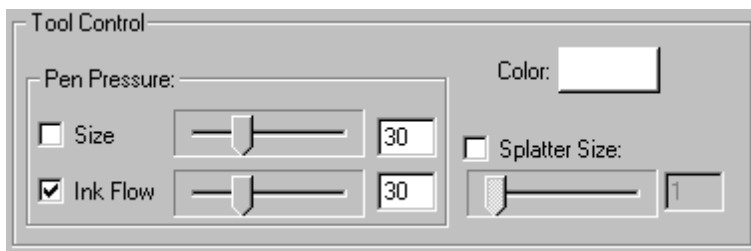
Pen Pressure: Size. Check the Size box to make the size of the brush vary with pen tip pressure. Use the slider (or enter a value from 1 to 99) to set the width of the airbrush stroke. As you apply pressure to the pen, your brush size will vary from zero to the set value. If Size is not checked, the width of the airbrush stroke is fixed at the Size value.

Pen Pressure: Ink Flow. Check the Ink Flow box to activate pressure-sensitive control of the ink flow density applied by the filter. Use the slider (or enter a value from 1 to 100 percent) to set the amount of ink flow. As you apply pressure to the pen, the ink flow will vary from zero to the set value. If Ink Flow is not checked, the amount of ink applied is fixed at the Ink Flow value.

Color. This button displays the current airbrush color. Click on it to open the Color Picker where you can select a new airbrush color.

Splatter Size. When checked, this option changes the airbrush ink flow from a smooth spray to a spattery one, simulating the effect of a clogged airbrush. Use the slider (or enter a value from 1 to 99) to set the average droplet spatter size.

Eraser behavior

Use the pen eraser to remove the filter effect with pressure-sensitive control. The size of the eraser swath and pressure response is the same as the selected Pen Pressure: Size setting. As you apply pressure to the pen, the eraser size

will vary from zero to the set value. If Size is not checked, the width of the eraser stroke is fixed at the Size value.

Hints

- To simulate a constant nozzle size, set the Pen Pressure: Size value you want to work with, but turn off pressure.

- To simulate height, turn Pen Pressure: Size on.

- To add noise to an image, turn on Splatter Size with a value of 1 or 2. Then set Pen Pressure: Ink Flow to a small value. Press option (for Macintosh) or Alt (for PCs) to pick a color from the image, and spray lightly. Depending on the level of detail you are working with, you may also want to adjust the value for Pen Pressure: Size.

- To toggle to an Eyedropper tool for color picking, press option (for Macintosh) or Alt (for PCs).

Visit the PenTools site at www.wacom.com/pentools for more hints and other useful information.

3D Chisel

3D Chisel is a pressure-sensitive sculpting tool that simulates the action of a chisel digging a groove into the image. You have complete control over the chisel shape and groove depth, as well as over the lighting controls that enable you to dramatize your chiseled effects. Using the 3D Chisel, you can create multiple texture effects such as freehand bevels, etchings, and more. By reversing the chisel effect you can create embossing effects (causing raised ridges to appear in the image). The intensity of your changes are dependent upon the pressure and tilt you apply to the pen while working.

When you select 3D Chisel… from the PenTools menu, the PenTools window displays the following tool controls.
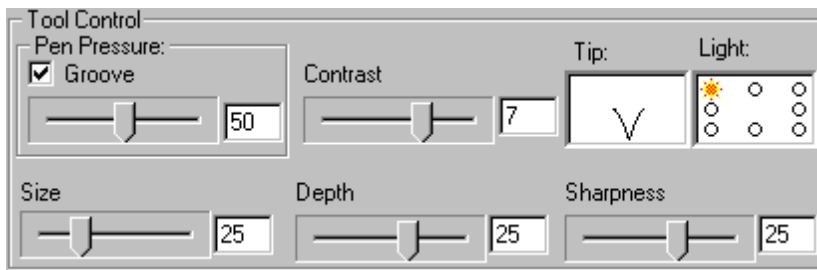
Pen Pressure: Groove. Check the Groove box to activate pressure-sensitive groove depth control. Use the slider (or enter a value from 1 to 99) to set the groove depth. As you apply pressure to the pen, the depth will vary from zero to the set value. If Groove is not checked, the groove depth is fixed at the value set. Typically, this control is set to match Depth, or to some percentage of the Depth value.

Size. Use this slider (or enter a value from 1 to 99) to set the overall size (width) of the applied chisel.

Depth. Use this slider (or enter a value from -99 to 99) to set the groove depth. A positive value will simulate a groove into the image. A negative value simulates an embossed effect (raised bevel).

Sharpness. Use this slider (or enter a value from -100 to 100) to set the sharpness of the chisel tip. Using 0 as a reference, positive values will give you a sharper chisel tip. Negative values will give you a blunter shape.

Tip. This option displays a relative representation of the chisel tip shape, as defined by your settings for Size, Depth, and Sharpness. For example, each of the following settings create a unique chisel shape:
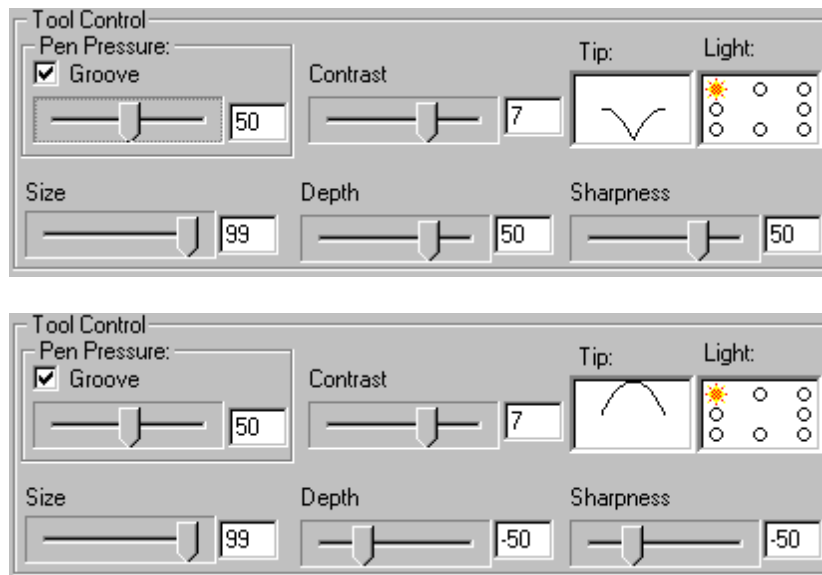
Light. Use this option to control the chisel's light source direction.

Contrast. Use this slider (or enter a value from 1 to 10) to set the contrast intensity level of the light source.

Eraser Behavior

Use the pen eraser to remove the filter effect with pressure-sensitive control. The amount of erasing is based on the Pen Pressure Groove setting.

- If the Groove checkbox is not checked the original image is restored.

- If the Groove checkbox is checked, the groove is removed based upon the selected Pen Pressure Groove setting.

Hints

- The chisel effect is most obvious when you are working at right angles to the light source. For example, when you select a top-center light source and then draw a horizontal line your effect is quite dramatic. However, when you draw a vertical line using this same light source, your effect is greatly subdued.

- Think of Light and Contrast as pen-specific ambient controls. For example, if you are working with a single tool shape and want to vary the lighting, click Apply to incrementally change the image between your lighting changes. Otherwise, if you change the lighting direction or contrast, the light changes will affect all of your chisel strokes under that tool shape.

- To create a straight line effect, hold down the Shift key as you move the tool across the image. Be sure to press Shift before bringing the pen into proximity with the tablet, otherwise the Shift key is ignored.

Visit the PenTools site at www.wacom.com/pentools for more hints and other useful information.

Super Putty

Super Putty is used to stretch and distort the image as if it were painted on soft clay or rubber. You can control the width and severity of the distortion by grabbing and pulling with various amounts of pressure; the image is distorted in a pen-sensitive manner.

When you select Super Putty… from the PenTools menu, the PenTools window displays the following tool controls.
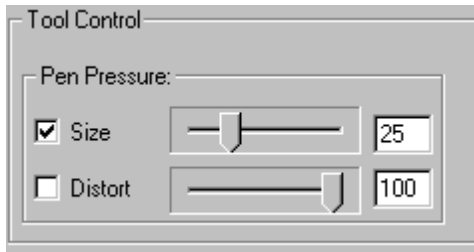
Pen Pressure: Size. Check the Size box to make the size of the brush vary with pen tip pressure. Use the slider (or enter a value from 1 to 99) to set the width of the putty stroke. As you apply pressure to the pen, your brush size will vary from zero to the set value. If Size is not checked, the width of the putty stroke is fixed at the Size value.

Pen Pressure: Distort. Check the Distort box to activate pressure-sensitive control of the distortion applied by the filter. Use the slider (or enter a value from 1 to 100 percent) to set the amount of distortion. As you apply pressure to the pen, the distortion will vary from zero to the set value. If Distort is not checked, the amount of distortion applied is fixed at the Distort value.

Eraser behavior

Use the pen eraser to remove the filter effect with pressure-sensitive control. The size of the eraser swath and pressure response is the same as the selected Pen Pressure: Size setting. As you apply pressure to the pen, the eraser size will vary from zero to the set value. If Size is not checked, the width of the eraser stroke is fixed at the Size value.

Hints

- As you work with an image, you can always erase back to the last applied changes.

- To stretch an image with less blurring, use a lower Pen Pressure: Distort value.

Visit the PenTools site at www.wacom.com/pentools for more hints and other useful information.

Far-out tools

PenTools filters in this category provide you with far-out, pen-sensitive filter effects that enable you to add special effects and customize your images in novel ways. These filter tools include:

- Metal Leafer

- Bit Blaster

Metal Leafer

Metal Leafer is used to apply customized gold or silver leafing effects to an image.

When you select Metal Leafer… from the PenTools menu, the PenTools window displays the following tool controls.
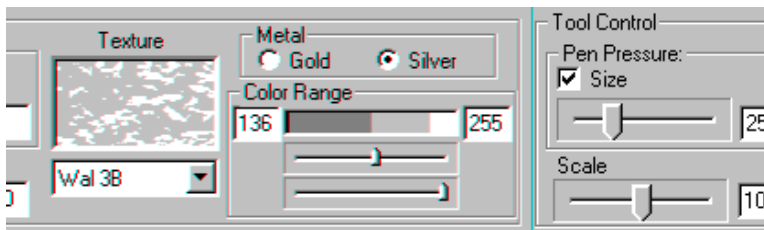
Pen Pressure: Size. Check the Size box to make the size of the brush vary with pen tip pressure. Use the slider (or enter a value from 1 to 99) to set the width of the leafer stroke. As you apply pressure to the pen, your brush size will vary from zero to the set value. If Size is not checked, the width of the leafer stroke is fixed at the Size value.

Scale. Use the slider (or enter a value from 50 to 150 percent) to set the texture scaling. The scaling factor you use determines the size of the texture "grain". You can see this change in the Texture window.

Texture. The pull-down menu provides you with various texture options that add "grain" to your leafing effects. The selected texture swatch is displayed in the texture window.

Metal Gold. When selected, this option provides you with a gold leaf appearance that is applied with the texture you select. You can also modify the color range to change the lighting quality of the gold leafing that will be applied.

Metal Silver. When selected, this option provides you with a silver leaf appearance that is applied with the texture you select. You can also modify the color range to change the lighting quality of the silver leafing that will be applied.

Color Range. Use the sliders (or enter values from 0 to 255) to set the brilliance and texture density of the applied metal effects. Be sure to experiment with

these controls. You can use them to simulate rich, saturated leafing effects, as well as negative image effects to provide striking contrast to your images.

Eraser behavior

Use the pen eraser to remove the filter effect with pressure-sensitive control. The size of the eraser swath and pressure response is the same as the selected Pen Pressure: Size setting. As you apply pressure to the pen, the eraser size will vary from zero to the set value. If Size is not checked, the width of the eraser stroke is fixed at the Size value.

Hints

- Texture and Scale can be used to create a feeling of depth. For example, you can enhance an image using the same texture at different Scale settings. You might also try this technique using different textures and Scale settings.

- To create negative image effects, reverse the Color Range slider positions.

Visit the PenTools site at www.wacom.com/pentools for more hints and other useful information.

Bit Blaster

Bit Blaster is used to apply custom pattern effects to an image. You can use the textures provided with Bit Blaster to create images with a distinctive marble, brick, or wooden look.

When you select Bit Blaster… from the PenTools menu, the PenTools window displays the following tool controls.
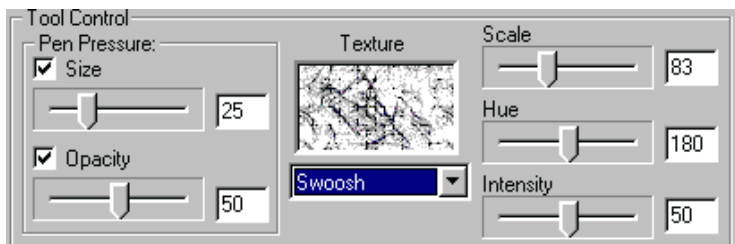
Pen Pressure: Size. Check the Size box to make the size of the brush vary with pen tip pressure. Use the slider (or enter a value from 1 to 99) to set the width of the blaster stroke. As you apply pressure to the pen, your brush size will vary

from one to the set value. If Size is not checked, the width of the blaster stroke is fixed at the Size value.

Opacity. Check the Opacity box to make the opacity of the brush vary with pen tip pressure. Use the slider (or enter a value from 0 to 100) to set the degree of opacity for each blaster stroke. As you apply pressure to the pen, your texture opacity will vary from clear (zero opacity) to the set value. If Opacity is not checked, the opacity of the blaster stroke is fixed at the Opacity percentage.

Texture. The drop-down menu provides you with various texture patterns. The selected texture swatch is displayed in the texture window.

Scale. Use the slider (or enter a value from 50 to 150 percent) to set the texture scaling. The scaling factor you use determines the size of the texture pattern. You can see this change in the Texture window..

Hue. Use the slider (or enter a value from 0 to 360) to select hue. The hue value you use determines the color of the texture pattern. You can see this change in the Texture window. The default setting of 180 is the neutral, or "natural" color of the texture.

Intensity. Use the slider (or enter a value from 0 to 100 percent) to set the intensity. The value you use determines the intensity or brightness of a textured greyscale pattern. You can see this change in the Texture window.

Eraser behavior

Use the pen eraser to remove the filter effect with pressure-sensitive control. The size of the eraser swath and pressure response is the same as the selected Pen Pressure: Size setting. As you apply pressure to the pen, the eraser size will vary from zero to the set value. If Size is not checked, the width of the eraser stroke is fixed at the Size value.

Hints

- Textures can be used to quickly create artificial backgrounds similar to those created with more complex layering effects in Photoshop.

- When working with textures, consider the perspective of your original image. You may want to select a texture that closely adheres to the line of the image. Or, you may want to select a texture that is completely opposite this to produce a specialized effect.

Visit the PenTools site at www.wacom.com/pentools for more hints and other useful information.

Troubleshooting

PenTools are based on the Adobe Photoshop 3.0 standard for plugs-ins, and have been tested with Adobe Photoshop 3.0.5 (Macintosh only) and 4.0 (Macintosh and Windows), Fractal Design Painter 4.0.3 and 5.0, and Corel PhotoPaint 7.0.

If you are unfamiliar with plug-in products, refer to the documentation that came with your graphics application for specific information on installing and using plug-ins.

Out of memory messages. PenTools use an amount of RAM space that is approximately three times your image file size. (Increase this value to approximately eight times the image size for the 3D Chisel.) If you are working on a large image and get a "not enough RAM" error message, you have a number of workaround options:

- Instead of selecting the entire graphic, use the marquee tool to select a portion of the image to work with before launching your PenTools filter.

- Add more RAM to your system and allocate it to your graphics application.

- Set your application to use more memory. Many applications allow you to use virtual memory (i.e., to use disc space as RAM). Note, however, that if you use virtual memory, your application's response time will be significantly slower.

For more information on improving performance with filters, refer to the documentation that came with your graphics application.

For Windows 95 only. When accessing PenTools, if you receive a dialog warning that you need to have a WACOM tablet connected, do the following:

- Verify that you are using a WACOM professional tablet (ArtPad, ArtZ, SD, or UD series) and that it is functional in your graphics application.

- Verify that you have copied the PENTOOLS.EXE file to your WINDOWS\ SYSTEM folder.

How to get technical support

24-hour support can be found by visiting our Web site at:
www.wacom.com/pentools

This web site contains answers to frequently asked questions, user hints, and a technical support forum. U.S. and Canadian residents can also order Fast FAX document #1090 for information on commonly asked questions.
(Dial 1-800-922-7590 for 24-hour FastFAX information.)

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