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Barry Haynes
Wendy Crumpler

Photoshop® 5&5.5 Artistry

A Master Class for Photographers, Artists, and Production Artists

By Barry Haynes and Wendy Crumpler

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TRADEMARKS

WARNING AND DISCLAIMER

A MESSAGE FROM NEW RIDERS

At New Riders, we work hard in building and maintaining valuable relationships—partnerships, really—with our authors. We consider ourselves quite fortunate to be associated with such talented, creative, detail-oriented, selfless and genuinely cool people as the authors of this book, Barry Haynes and Wendy Crumpler. Thanks, you two.

New Riders is proud of every title we publish. But some titles… some titles we keep in mind when we really want to show off. *Photoshop Artistry* is one such title.

Judging from the response that Barry and Wendy's previous editions of this book have earned from reviewers, students, and countless satisfied users, *Photoshop Artistry* may well be the best Photoshop book available anywhere, for any audience, for any price. It's a unique book, designed to bring out the uniqueness in you, the Photoshop user. Please let us know how you use the book and how the book works for you. Thanks…

HOW TO CONTACT US

As the reader of this book, *you* are our most important critic and commentator. We value your opinion and want to know what we're doing right, what we could do better, in what areas you'd like to see us publish, and any other words of wisdom you're willing to pass our way.

As the Executive Editor for the Graphics team at New Riders, I welcome your comments. You can fax, email, or write me directly to let me know what you did or didn't like about this book—as well as what we can do to make our books better.

Please note that I cannot help you with technical problems related to the topic of this book, and that due to the high volume of mail I receive, I might not be able to reply to every message.

When you write, please be sure to include this book's title, isbn and authors, as well as your name and phone or fax number. I will carefully review your comments and share them with the authors and editors who worked on the book.

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ABOUT THIS VERSION OF *PHOTOSHOP ARTISTRY*

New Riders and the authors decided to update *Photoshop 5 Artistry* to include coverage of Photoshop 5.5 because it didn't seem appropriate to not have a version of *Photoshop Artistry* available to anyone new to Photoshop during the 5.5 rev cycle.

Suffice to say: If you already own a copy of *Photoshop 5 Artistry*, you may not need this upgrade version of the book, just as if you already own Photoshop 5, you probably already own ImageReady and haven't seen a huge need to go out and upgrade to 5.5. Of course, this all changes when Photoshop 6 releases: Look for *Photoshop 6 Artistry* to be rewritten from the ground up, the better to reflect the changes we're all expecting to see in the next gen version of Photoshop…

ABOUT THE AUTHORS

Barry Haynes uses digital technology to print, show, and sell his photography. In addition to his love for creating photographs, Barry teaches digital photography, creates commercial special effects, and does digital image consulting. His books, *Photoshop Artistry: A Master Class for Photographers and Artists*, and *Photoshop 4 Artistry: A Master Class for Photographers, Artists, and Production Artists* are available in bookstores around the world. He has been teaching Photoshop courses since 1990 to clients including Apple, Oracle, Kodak, Nikon, Pacific Bell, Sony, Tandem, SuperMac, *The San Jose Mercury News*, and many others. He teaches regular digital photography workshops for University of California Santa Cruz and UC Santa Barbara Extension programs, and AD Vantage Computers in Des Moines, Iowa. He has given talks or workshops for the Photoshop Conference, The Golden Gate School of Photography, Seybold Seminars, the MacSummit conference, MacWorld, the Center for Creative Imaging, the Digital Photography Conference, the American Society of Magazine Photographers, advertising agencies, design firms, and other organizations.

His articles have appeared in desktop publishing magazines, and his imaging effects can be seen in brochures, on the Web, and on magazine covers for companies including Apple, Netscape, and Tandem. Barry has a degree in computer science and spent 10 years, from 1980 to 1990, doing software development and research at Apple. There he did research involving desktop publishing, digital imaging, and high-speed networks, and before that he worked on Pascal and Object Oriented software development environments for Apple including Macintosh Smalltalk, MacApp, the Lisa Workshop, and Apple II Pascal.

Wendy Crumpler has been in advertising and design since 1980. She has worked in print, television, CD-Interactive, interactive television, and computer-based training. Prior to her discovery of the computer in 1981 and the Macintosh in 1986, she was an actress and teacher. Since her involvement in digital imaging, she has done production, illustration, design, and training for a variety of clients using Quark, PageMaker, Illustrator, Freehand, Photoshop, and other applications. She has worked for Angotti Thomas Hedge, Boardroom Reports, Deutsch Advertising, J. Walter Thompson, TBWA Advertising, Wechsler Design, Manhattan Transfer, Wells Rich Greene, Canon, Parke Davis, IBM, and AT&T.

SAY YES TO THE UNIVERSE

In three days, we fell in love. In three months, we were married. In four years of marriage, we've produced one remarkable son and three terrific books. A lot can happen when you say, "Yes!"

LET US KNOW WHAT YOU THINK

There's been a lot of student and reader involvement in the shaping of this book. Listening to people who use these techniques helps us to refine and dig deeper to find solutions to our clients' and students' problems. And, we get smarter in the process. We love what we do and invite you to become part of the digital revolution with us. Let us know what you think of the book, what was helpful, what confused you. We are committed to empowering people to use their computers and their software to advance their own artistic abilities and to make a difference on this planet.

TAKE ONE OF OUR IN-DEPTH WORKSHOPS

We recently moved to Corvallis, Oregon, an arts-oriented college town where we will be teaching week-long hands-on classes for small groups of students. These classes will be tailored to meet individual needs. Our next book project is a comparative guide to Photoshop, Painter, and Illustrator. We welcome insights you might have into using those three programs together, discussions of work you've done using them, or work that you need to accomplish that we can do for you using all three. Send information on this new project and check for the latest information about the times and locations for our digital imaging courses, as well as book updates, and other useful information on our Web site, www.maxart.com.

WE LOOK FORWARD TO HEARING FROM YOU!

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DEDICATION

For those Tony left behind,
   live fully and do what you love.

ACKNOWLEDGMENTS

FOREWORD

Ansel Adams, discussing the decision to make his original negatives available for future photographers to print, wrote in his autobiography that

> *"Photographers are, in a sense, composers and the negatives are their scores. ...In the electronic age, I am sure that scanning techniques will be developed to achieve prints of extraordinary subtlety from the original negative scores. If I could return in twenty years or so I would hope to see astounding interpretations of my most expressive images. It is true no one could print my negatives as I did, but they might well get more out of them by electronic means. Image quality is not the product of a machine, but of the person who directs the machine, and there are no limits to imagination and expression."*

Ansel Adams had a good vision for the future that we are now living. We hope this book will help you experience that vision in your photographic work.

Seeing an image on the computer screen is a beautiful thing. You bring it up from the scanner and you begin to think, "Now what do I really want this to look like?" If you know the Zone System, developed by Ansel Adams in traditional photography, you know the type of control you can have while taking a photo or printing it in the darkroom. On the computer screen, you can have this control and much more. You can try numerous variations, making extreme or subtle changes easily and quickly. The computer is a tool that enables the photographer to get precisely what he or she wants.

Many people think of using computer imaging for its proven capability to create special effects and image composites. It is very good at this, and we will show you how to create images that you cannot do optically in the darkroom, but I often use my computer darkroom to make a print of nature because it gives me much finer control in making that print. Realistic photography is another area in which we will show you things that you can do on the computer that you can't do easily or at all in the darkroom. Hey, I recently finally sold my darkroom!

This book has developed from Photoshop courses I started teaching in 1990. It's not an exhaustive book that goes through each menu bar and each feature, listing them in order. The examples in *Photoshop 5 Artistry* teach you how to use Photoshop 5 by working with typical situations that you encounter as a photographer, artist, or production artist. This is Photoshop for creating fine images that are sometimes high-quality reproductions of reality and sometimes fine renditions of composites and effects.

In this third edition, we have added all the information you will need to use the new Photoshop 5 features including Color Calibration and Color Management. We not only show you valuable techniques, but we give you a strategy for managing your digital images by creating an RGB or Lab master file for each image, which you can

then use (automating using actions) to create different RGB files for color transparency, digital laser, dye-sub or inkjet printers, multimedia, or Web images and icons. These files, used with other actions, can create custom CMYK images for each of your printing situations.

For each situation, we spell out the detailed, step-by-step process. You can practice the technique yourself because the original images, masks, and progress steps, as well as the final images for each example, are included on the *Photoshop 5 Artistry* CD that accompanies the book. We have taught these examples over the past eight years to thousands of students across the country. Their feedback has helped us refine these exercises to make them easy to understand, concise, and full of special tips for more advanced users. All the the exercises have been updated and changed so that you can take advantage of the latest features, such as the new Photoshop 5 color capabilities, and deal with current trends like making images for the Web. In addition to student tested, step-by-step instructions, *Photoshop 5 Artistry* includes explanations of concepts like color correction, calibration, 24- and 8-bit file formats and compression, duotones, selections, masking, layers, layer masks, Adjustment layers, history, and channels, so you really understand what you are doing and are not just blindly following directions. Understanding allows you to expand the ideas in this book as you apply them to your own situations and creations without wasting your time on unnecessary issues.

We start with simple examples like cropping and color correcting a photograph. We cover color correction in great depth, and then move into things that you normally would do in the darkroom, like changing the contrast, burning and dodging, removing spots and scratches, and making a nice photographic print. Before we get into compositing and special effects, we talk about the importance of having absolute control over the colors in your photographs—which you can do more easily now with the new Photoshop 5 color management features. The masters of color photography have used contrast reduction masks, shadow, highlight, and color masks in the darkroom to make very fine Ilfochrome, C, and dye transfer art prints. Now many of them are switching to digital techniques and making LightJet 5000 prints. Using these techniques, you can make specific colors pop by increasing their saturation and changing their relationship to the rest of the photograph. *Photoshop 5 Artistry* shows you how to do all these things digitally using Adjustment layers, layer masks, and multiple layers of the same image, and how to generate art-quality output to Light-Jet 5000, Fugix, dye sublimation, color laser or inkjet printers, or to the Web. We also talk about enhancing an image for output back to 4x5 and 8x10 film as well as for output to separations for printing on a press. We also show you how to use the above techniques along with sharpening to get great quality prints from Photo CD and Pro Photo CD scans.

After we explain how to make a fine color print using Photoshop, we make extensive use of layers, layer masks, and image compositing techniques. You can do commercial compositing techniques easily using Photoshop, and we present step-by-step examples for some simple compositing jobs and then move on to some more complex examples that involve using hard- and soft-edge masks, as well as a variety of shadow and drop shadow effects and all the features of Layers, Adjustment Layers, and Layer Masks. The Apply Image and Calculations commands, as well as the Blend mode variations, are explained in detail along with examples of where to use them.

Photoshop 5 Artistry also includes many tips and techniques on getting the most from the Photoshop filters. We explain Layer options and also get into creating duotones and bitmaps, adding textures to images, and other fun things.

Photoshop is great fun! And the more you know, the better time you will have and the easier it will be to turn the images in your mind into reality. We hope *Photoshop 5 Artistry* helps you have more fun than ever before with photography and digital imaging.

Happy Photoshopping!

P.S. Those of you who already have *Photoshop Artistry* or *Photoshop 4 Artistry* will notice that the techniques in all the *Photoshop 5 Artistry* examples have been improved to take full advantage of the great features in this new version. You can compare this book to the Photoshop 3 or 4 versions and quickly see how to use the new features. Use our "Taking Advantage of Photoshop 5" chapter to get a quick overview of the new features and get through the transitions to the new Photoshop 5 command keys. At the end of "Taking Advantage of Photoshop 5," there is a table of the new command keys added for Photoshop 5. We also have added new chapters to help you learn about the new History Palette and Brush, all the new Free Transform and Transformation possibilities, the new Color Spaces, Preferences and Calibration, Spot Colors, the new Portable and Multimedia Composite examples, and the latest info about creating Web images. Many more new features and techniques are distributed throughout the book. The CD has updated ArtistKeys to set up your Actions palette and to give you a great set of function keys and automated sequences for bringing palettes up and down, converting file formats, and doing other useful but repetitive tasks.

TAKING ADVANTAGE OF PHOTOSHOP 5

Easing the conversion from Photoshop 4 to 5;
making sure you are taking advantage of
*the important new features in Photoshop 5.*

Photoshop 5 is a maturing of Photoshop in which some of the features we have always wanted, like multiple undo and full color and separation support, have finally arrived. This is a major release of Photoshop that daily users, especially photographers and digital imagemakers, will want to have. You will find it to be a much more complete and well-integrated creative tool throughout. *Photoshop 5 Artistry* has been completely updated to take full advantage of the new Photoshop 5 features. The new features are described and used throughout the book. This chapter is a summary of the major new features and will point to the best chapters in the book for you to use to learn about each feature. In this chapter, we point out the features you are most likely to use. Each feature mentioned herein is explained in great detail in the appropriate chapter of *Photoshop 5 Artistry*. To find more detail about a feature, follow the references mentioned here or look it up in the index or table of contents. At the end of this chapter is a table of all the new Photoshop 5 shortcut keys. References in this book to the Option key should be translated to the Alt key on Windows systems, and the Command key here is the Control key in the Windows world.

BETTER SUPPORT OF CALIBRATION, COLOR MANAGEMENT, AND COLOR SEPARATIONS

Photoshop 5 has much more advanced support for Color Management of your files and workflow. Similar to the way that Photoshop 4 modified the appearance of CMYK files on the screen depending on your Printing Inks Setup settings, Photoshop 5 allows you use File/Color Settings/RGB Setup to set the preferences for how your RGB files appear on the screen. This more ideal situation allows you to choose an RGB space to work in that may encompass a wider gamut of colors than what your monitor can actually display. After using the new Adobe Gamma tool, or other hardware/software methods, to characterize your monitor with an ICC profile, Photoshop does its best to preview the images from the color workspace you have chosen onto the monitor you are working with. In theory, this allows people with different types of monitors to work on files within the same RGB workspace and have those files look as close as possible on those different monitors. For this to work correctly, the ICC profile for your monitor has to be accurately produced and you need to choose the correct RGB space for the type of color work you are doing.
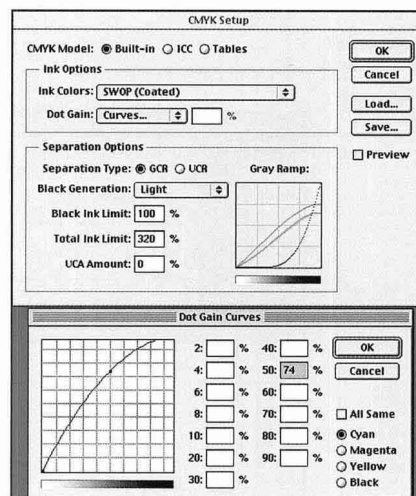
The new CMYK Setup dialog gives you exact control over all your Dot Gain curves when converting from RGB to CMYK. You can also select from different built-In CMYK models or use ICC profiles for CMYK conversion.
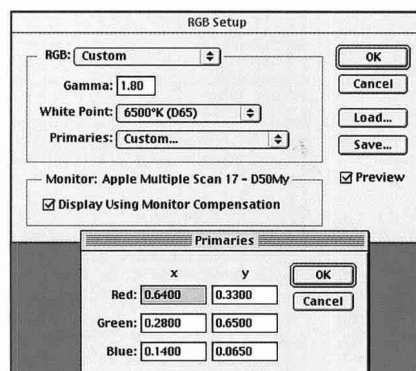
The new RGB setup dialog allows you to set the RGB color space for the type of files you use. Photoshop will then preview that workspace on your monitor using your monitor's ICC profile. This makes setting up for working in RGB more complicated but allows you to get more accurate monitor previews while not throwing out useful RGB data.

Profile Setup

Embed Profiles
☑ RGB ☑ CMYK ☑ Grayscale ☑ Lab

Assumed Profiles
RGB: Monitor RGB
CMYK: Photoshop RGB to CMYK
Grayscale: Grayscale - Gamma 1.8

Profile Mismatch Handling
RGB: Convert to RGB Color
CMYK: Ask When Opening
Grayscale: Ask When Opening
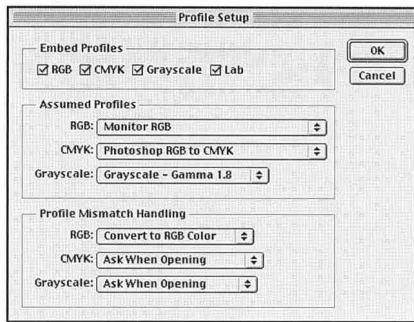
The new Profile Setup preferences dialog allows you to set up what Photoshop does when opening files with different color tags than your default configurations. You should probably set most of these options to Ask When Opening until you get used to the new color system. This way you'll be sure you know what is happening to your files as they are opened.

History

Original Image
Snapshot Version1
Shapshot Version2
Deselect
Crop
Paintbrush
Paintbrush
Paintbrush
Airbrush
Blur Tool
Fill
History Brush
Levels
Paintbrush
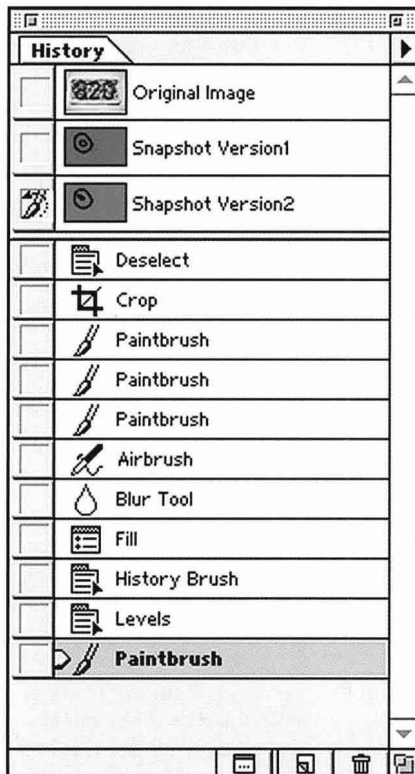
The History palette allows you to keep track of your changes. Command-Z still toggles between Undo and Redo of the last Photoshop command. Now Command-Option-Z marches back through the History palette, undoing one thing at a time, and Command-Shift-Z redoes things in the order that they appear in the History palette. When you save a file or quit, the History palette for that file goes away.

You can now define custom dot gain curves for all four colors in CMYK setup. Your CMYK space and color separations can also be defined using ICC profiles. The Custom Inks setup in CMYK Setup now also allows you to enter Lab coordinates.

ICC profiles are used with ColorSync on the Mac and probably ICM2.0 with Windows. Photoshop 5 does have its own engine for transforming from one profile to another, which Adobe claims is more accurate than the ColorSync 2.5 engine. You have the option to use either the Photoshop built-in engine or ColorSync to do conversions.

It is very important that you read the "Color Spaces, Device Characterization, and Color Management" chapter and then the "Calibration" chapter to understand this new built-in color system. After reading these, use the "Setting System and Photoshop Preferences" chapter to set up your color settings. Do these things before doing serious color work with Photoshop 5, or you could be disappointed and confused with your color results!

THE HISTORY PALETTE AND HISTORY BRUSH GIVE YOU MULTIPLE UNDO AND MUCH MORE

The new History palette keeps track of each step that you make, up to 100 steps, as you work on your image. Every time you do something, a new line is added to the History palette for that step in your process. This is better than multiple undo because by clicking one of these states in the palette, you can instantly return to that state in your image. If you then start editing again, the steps you made after that all disappear. You can also choose the History Options and turn on Allow Non-Linear History; then when you start editing again, your old steps stay in the History palette in case you later want to reuse them.

The History palette also allows you to take a snapshot of your image at any time. These snapshots stay around at the top of the palette and, at any point, you can click one of them to return to that state. The History Brush is a new painting tool that will paint on your current image from any previous snapshot or from any previous history step currently in the History palette. You can remember up to a maximum of 100 steps of history. The actual number you remember is a value you set in the History Options. The old Rubber Stamp or Fill From Saved options have now changed due to the History system. You now use the History Brush instead of the Rubber Stamp with either the From Snapshot or From Saved option. This gives you more flexibility because you can paint from the image at any previous step, or any snapshot, in the history. You can also fill from the state or snapshot specified in the History palette. The History palette and everything in it goes away when the file or Photoshop is closed. For more info about the History palette, see the new "History Palette, History Brush, and Snapshots" chapter on page 89.

FREE TRANSFORM OF SELECTIONS AND PATHS, PLUS A CENTER POINT FOR ROTATE TRANSFORMATIONS

The Free Transform of a layer that was added in Photoshop 4 has now been generalized and expanded to allow you to also do Free Transform of selections and paths. You can also do the rest of the transforms (Scale, Rotate, Skew, Distort, Perspective, Numeric, and so on) on selections and paths. Most of the Transform commands have been moved from the Layer menu to the Edit menu. When you have a path or point active, the name will change to Transform Path or Transform Points. When you have a selection, you can choose one of the Transform commands from the Edit menu and the area within the current layer that is selected will be transformed. With a selection, you can also choose Select/Transform Selection, which allows you to Free Transform the selection marquee itself! Very cool stuff indeed.
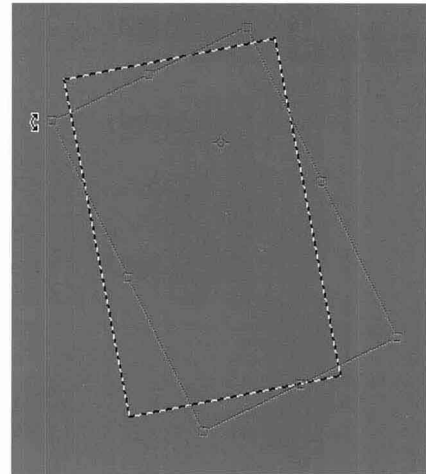
All transforms in Photoshop now also have a center point around which the Rotate transformation happens. Just click the center point and drag to move it to a new location. Command-T gives you Free Transform and now Command-Shift-T repeats the last transform. For more information on transforms of all kinds, see the new "Transformation of Images, Layers, Paths, and Selections" chapter.

Here we see a transform of a selection where we are rotating around a center point that has been moved to the top-right of the box.
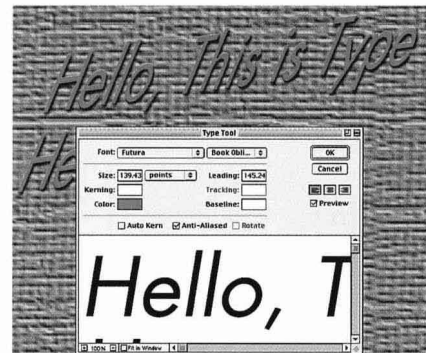
A MUCH BETTER BUILT-IN TYPE TOOL

Photoshop has finally improved its Type tool. There is now a vertical and horizontal Type tool, and selection versions of both of these. For regular type, not selection type, the type ends up in a special type layer than can now be edited after the fact. Within the type layer, you can double-click the layer name and go back to change the font, size or actually change the letters in the text. Type layers can also have Drop Shadows and the other new Layer Effects added to them, and then even later taken away or changed. It's a whole new world where you can even use the new command keys to align, resize, change leading, kerning/tracking, baseline shift, and other useful functions. However, you will still end up using Illustrator or another vector program if you want to set type on a curved path or do anything like that. See the "Tool Palette" chapter for a more complete description of the exciting new type functions. To get the new command keys for type, see the New Command Keys table at the end of this chapter.

The improved Type tool can be re-entered to edit type and change the font, size, kerning, tracking, baseline shift, or color, after the initial type creation. Way to go Photoshop, finally!

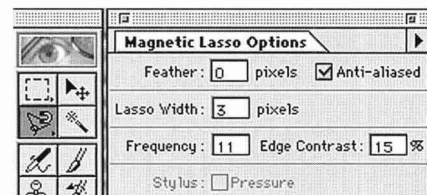## MAGNETIC LASSO AND PEN SELECTIONS, AS WELL AS THE FREEFORM PEN TOOL

The Magnetic Lasso and Pen tools are new for Photoshop 5. They will help you more easily make selections by doing the fine detail selection work along a contrasty edge as you simply move the mouse fairly closely to the edge of the area you want to select. You use the Lasso Width, Frequency, and Edge Contrast settings to hone in on the type of edge you are selecting this time. These seem to work quite well on contrasty edges. Adobe has also added the FreeForm Pen tool, which allows you to make a path by freehand drawing like you would with the Lasso tool. This seems to do a good job defining the path and does it in a way that makes the path easily editable after the initial drawing. For lots more about these new tools, see the "Tool Palette" chapter.
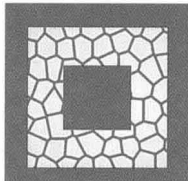
The Magnetic Lasso and Pen tools have this new set of options to help you automatically make a selection.

The shape surrounded by transparency with no effects applied.
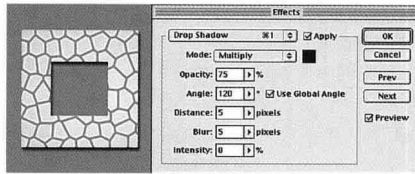
The Drop Shadow effect and its options.

The Bevel and Emboss effect.

Inverted then Inner Glow.

The Inner Shadow effect and its options.

The Outer Glow effect and its options.

BUILT-IN LAYER SHADOW/EDGE EFFECTS AND ALIGNMENT OF LINKED LAYERS
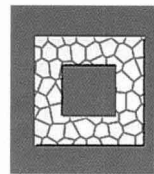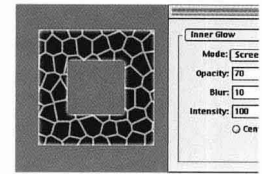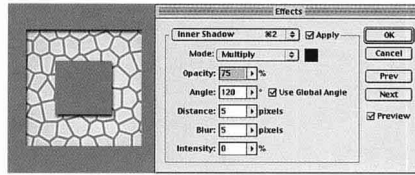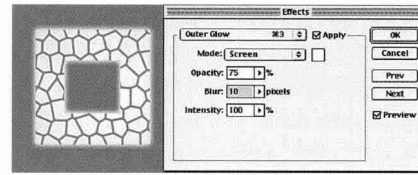
Drop shadows are now as easy as pie! For any layer that has a transparent area around it or inside it, like text or a button for example, Photoshop 5 now has built-in Shadow and Edge effects. Above are some of their names and what they look like.

For more information on these new shadow and edge features, see the "Creating Shadows and Edge Effects" chapter.

Photoshop has also added some useful commands to align or distribute the layers linked to the current layer on the top, vertical center, bottom, left, horizontal center, or right. You can also align the active layer, and those linked to it, to a selection in the same six ways. These features will be very useful to those working on Web and multimedia projects. For more features on these new layer alignment features, see the "Layers, Layer Masks, and Adjustment Layers" chapter.
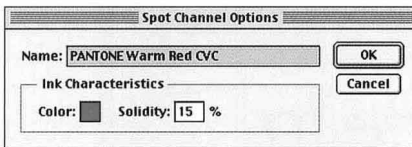
The options for the new Spot Color channels.

BUILT-IN SPOT COLOR SUPPORT WITH OUTPUT TO DCS 1.0 AND 2.0, FLASHPIX & PDF IMPORT/EXPORT

Photoshop 5 now has built-in spot color support, which will come in very handy for some people. When you add another channel to the Channels palette, it can be added as a Spot Color channel. You can then use the Custom Color picker to pick a Pantone or other spot color for that channel. The Spot Color channels can be output as separate channels in Photoshop, DCS 2.0, or TIFF format. When a Spot channel is active, you can also use the Merge Spot Channel command in the Channels palette to merge this channel and its effects into the current RGB or CMYK channels.
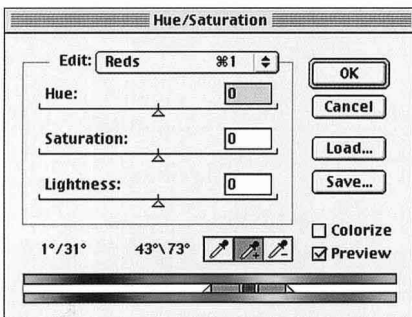
The new Hue/Saturation tool dialog. You can click in the image to specify the color range you want to modify. This makes the Hue/Saturation tool much more flexible because it can now modify any range of colors you select.

IMPROVED HUE/SATURATION AND CURVES TOOLS, AND THE NEW CHANNEL MIXER

The Hue/Saturation and Curves tools have been greatly enhanced for Photoshop 5. You will find that they now allow you to make much more accurate selections of color ranges. The Hue/Saturation tool allows you to use the Eyedropper on the screen to initially select and then, with the new Plus or Minus Eyedropper, tweak the

color range you are going to modify with Hue, Saturation or Lightness changes. To add or delete colors, you can either click or click and drag a range within the image using the plus and minus droppers. You can also move the sliders on the color ramp at the bottom of the dialog to narrow or widen the part of the spectrum you are working with. At the bottom of the dialog, the topmost spectrum shows you the before colors and the bottom spectrum shows you the after colors.
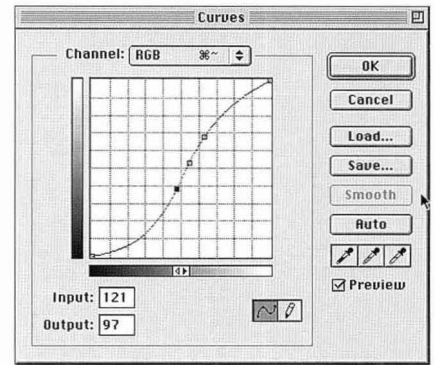
The Curves tool also has some impressive improvements. The display of the points on the curve is easier to see with the active point being all black and the other points being small circles. You can create a point on the curve now by Command-clicking somewhere on your image (use Command-Shift-click to add individual points to each color curve); then you can move the active point one value at a time using the arrow keys (Shift-Arrow for 10 values at a time). You can also type in a new value for the active point. Command-Tab toggles the active point to the next one present and Command-Shift-Tab to the previous one. You can even use Shift-click to select multiple points on the curve and then move them all as a group. Far out! As in Select/Deselect, Command-D is used to deselect all points on the grid.

The new Curves dialog now has the vertical gradient to help people understand the output axis. You can now type in the location values of the current point or you can use the arrow keys to move the point by one value at a time (Shift-arrow for 10 values at a time). You can also add points to the curve by Command-clicking that point on the screen.

ON-THE-FLY PREVIEWS OF DUOTONES, COLOR MANAGEMENT, AND MORE
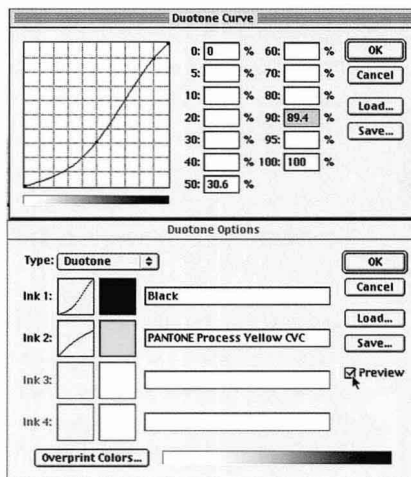
You will notice now that most of the color correction tools, even changing the curves in Duotone mode, give you on-the-fly preview of changes on the screen. For Duotones, you will find this allows you to try many more variations and be more creative while taking up much less time and effort. You will find this especially useful when deciding what color space to work in for your RGB and CMYK files. The preferences changes you make will be previewed on the screen as you are making them. Just make sure the Preview box is checked whenever you are working to be sure you see the changes as you make them.

Make sure the Preview option is checked to see the most accurate on-the-fly previews of many more changes now in Photoshop 5.
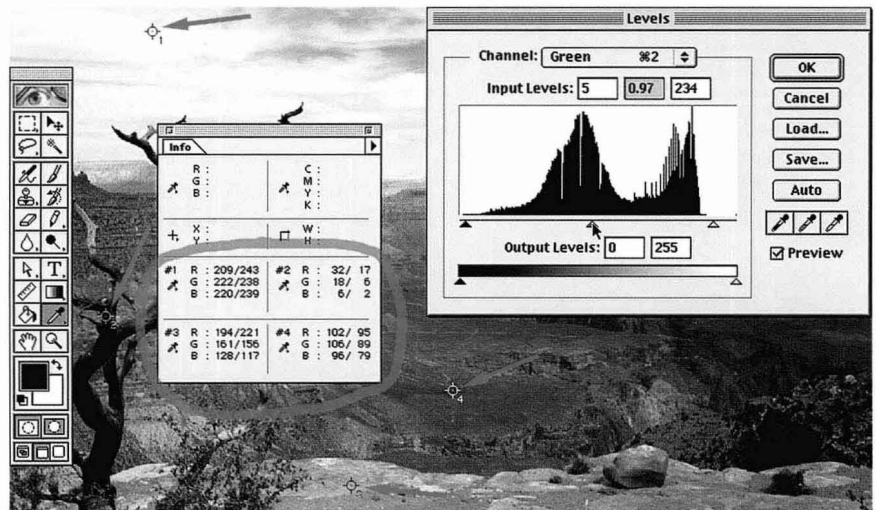
BETTER COLOR SAMPLING AND MORE 16-BIT CHANNEL SUPPORT

The new Color Sampler Eyedropper allows you to click on up to four points within your image whose values are added to the Info palette's

Here we have used the Color Sampler Eyedroppers to enter four locations whose values we want to keep track of while we are color correcting. As we make changes in Levels and other correction tools, we simultaneously see what these changes do to these four points. This is a color corrector's dream!

display. When you are making any color correction changes, those changes' effects on the four Color Sampler points are displayed within the Info palette. You still see the Info readouts for the current location of the cursor as you always have.

Photoshop 5 now supports 16-bit channel files in Levels, Curves, Hue/Saturation, Brightness/Contrast, Color Balance, Equalize, Invert and Channel Mixer. You can also Crop, Rubber Stamp, Image Size and Rotate Arbitrary as well as use the History Brush with 16-bit channel files. The advantage of these files (48 bits per pixel for RGB and 64 bits per pixel for CMYK) is that they allow one to save all the information obtained from a high end scanner, and then manipulate this information without having to throw away values converting to 8 bits per channel. Even though you can't see all the 16-bit color detail on the monitor, working in 16-bit color allows Photoshop's calculations to be done without losing information due to rounding and truncation errors. When the corrections are finished, the final files can be converted to 8-bit color for output and you should end up with a better final 8-bit result. The argument for doing this is similar to the reason you want to do all your Web color correcting in RGB until you get to the final step, and then you convert to a GIF file or save your Web version as a JPG. You still get better results doing all your manipulations within the larger color space. Now that memory is cheaper and hard disk space is larger, I believe we will start to see more people working with 16-bit files.
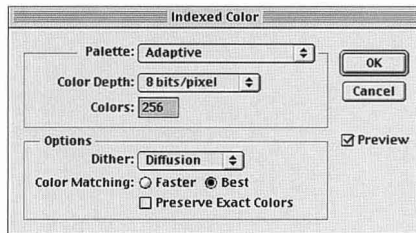
At the bottom of the dialog, you see the new Color Matching options for Index Color. These allow you to produce better 8-bit color files for your Web sites and multimedia documents.
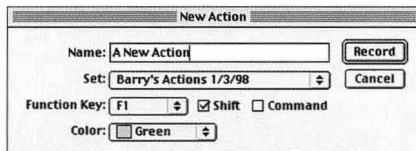
Actions now support different sets of Actions. This gives you a way to organize your Actions. The function keys are global to all the sets, so you cannot reuse the same function key in two different sets. Besides Shift, Photoshop 5 allows you to also use the Command key as a Function Key modifier, and you can use both Shift and Command. This gives you twice as many function keys as you had available in Photoshop 4.
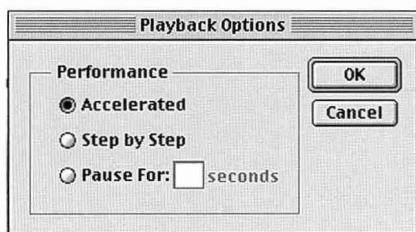
Photoshop 5 also gives you these three choices for your Action's playback speed.

BETTER SUPPORT FOR INDEX COLOR

Besides getting a preview in the Index Color Mode Change dialog, there are also improvements in the quality of the Index Color files created. Adaptive palette creation is touted as being better and you now have the options of choosing Faster or Best color matching. If you turn off Best, then dithering and conversion is a little lower quality but a lot faster. The Preserve Exact Colors option does not dither colors in your image that are an exact match for colors that are in the palette you use. This may do a better job of preserving detailed lines and text, depending on the prevalence of those colors within the image and palette. For more information about Index Color, see the "Differences in Creating for the Web and 8-Bit Color," as well as the "GIFs, JPEGs, and Color Palettes" chapters.

BETTER ACTIONS SUPPORT AND BATCH CONTROL

In addition to what Photoshop 4 Actions could do, in Photoshop 5, Actions can be organized into different sets. Now twice as many function keys are available and you can control the speed of Action playback. When in Batch mode, you have the option of stopping an Action upon an error, or just recording the error in a file and continuing. If you are running a Batch from a folder, you can decide whether to Include all Subfolders in the Action or not. Photoshop 5 Actions can now also record things from the Paths, Layers, and History palettes using the Gradient, Marquee, Crop, Lasso, Line, Move, Magic Wand, Paint Bucket, and Type tools; the Lighting Effects filter; and the Calculations, Apply Image, File Info, and Free Transform commands. Actions can also record switching and selecting documents. If you want to be able to record relative positions, set the ruler units to the new Percent option.

PLUG-IN CONTROL OF PHOTOSHOP FUNCTIONALITY

In the File/Automate menu, you will notice Conditional Mode Change, Contact Sheet, and Fit Image, which are implemented using Photoshop's new capability to control functions from within a Plug-In module. The Export Transparent Image and Resize Image commands in the Help menu are also implemented this way. You will probably be seeing some third party plug-ins that use this feature for a variety of purposes. It is a powerful addition to what can be done with Photoshop for sure. We'll just have to see what comes along to make use of this neat feature.
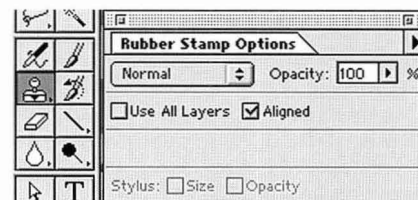
CHANGES TO THE RUBBER STAMP AND PEN TOOLS

Because the History Brush now enhances the old Rubber Stamp functionality of the From Saved and From Snapshot options, these options are no longer available in the Rubber Stamp tool. This tool has been further dissected by dividing it into two tools, the Rubber Stamp and the Pattern Stamp tools. Although we now have two tools, which are both selected from the Rubber Stamp pop-out in the Tool palette, there really is no additional functionality here. Is this a case of Adobe saying, "wow, a new tool," when they just added more user interface to the tool you used before? Well, the History Brush part of the Rubber Stamp's demise is certainly a new and much more powerful tool. The two separate Rubber Stamps that are left don't add anything new to what you had in Photoshop 4. The other changes in user interface are that you turn on the Aligned option to do Clone Aligned or Pattern Aligned, and, of course, you are doing Non-Aligned if this option is turned off; also the old Sample Merged option is now called Use All Layers. Still, both these things allow the same functionality as was available before.

Here is the "new" Rubber Stamp tool. Notice that Aligned is now a checkbox item instead of a different mode of the tool. The old Sample Merged is now called Use All Layers. This name is better!

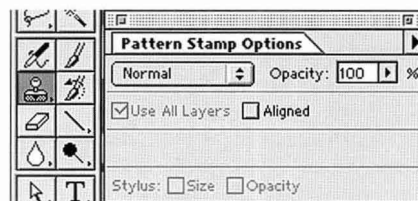Here is the "new" Pattern Stamp Tool!

OTHER NEW FEATURES OF NOTE

- Photoshop 5 now supports Postscript Level 3.
- Brush Sizes can now be up to 32000x32000 on the Mac.
- Tools now show the Cancel sign when they are unusable, due to the current situation. A single click on the Cancel sign will beep once; a double-click will tell why the tool can't currently be used.
- You now can use the Paths Palette only, not the Save As EPS dialog, to set the clipping path.

There are some new features that seem like token user interface changes that don't add much or any functionality. The most prevalent of these is the changing of sliders, like the Opacity slider in the Layers and Brushes palettes, to pop-down sliders. The only added functionality here is that you can always type in a value by selecting the number box and typing the number. I don't usually want to do this because I have to move the mouse and make a selection. The old way of just typing a number still works and is much faster. I'm finding the actual sliding of the slider a bit more awkward because the slider has to now pop down and out when you click the arrow. It seems like in a lot of cases it was faster before in Photoshop 4. Maybe this change was required by Mac or Windows User Interface Standards.