Adobe

Installation Guide

Adobe Photoshop™ version 3.0

U
UNIX®
Silicon Graphics®

Contents

Introducing Adobe Photoshop 3.0

Welcome to Adobe™ Photoshop™ —software that brings the world of digital image editing and professional prepress production to the desktop. Adobe Photoshop lets you create your own painted images, edit scanned images, and even import rendered 3-D visualizations. Whether you're an art director, photographer, graphic designer, animator, or printer, the variety of built-in painting, editing, and color-correction tools in the Adobe Photoshop program ensures that you'll get the professional-quality results that you need. The large selection of file formats supported by Adobe Photoshop lets you easily import and export most image files. The new layers feature lets you easily create and edit composite images.

Adobe Photoshop also provides many of the capabilities found in high-end color prepress and video paint-box systems. These include the ability to work in multichannel images and use the internal color separator to convert RGB images to CMYK images. You can even preview how images will appear when printed in CMYK and edit images directly in CMYK mode. Separations can then be printed from the program or can be saved for use in page-layout and illustration programs.

ABOUT THIS GUIDE

This guide tells you how to install Photoshop and its license manager on Silicon Graphics™ workstations. To install Photoshop on your workstation, you must be familiar with basic UNIX® commands and with the Indigo Magic™ or Motif™ desktop environment. If you are not, consult your system administrator before beginning this installation. This guide contains the following information:

- A summary of new features in Adobe Photoshop 3.0

- Instructions for installing the Adobe Photoshop software

- Instructions for setting up the FLEXlm™ license manager software

- Instructions on configuring your UNIX environment for Adobe Photoshop

- Instructions on customizing your Adobe Photoshop desktop environment

- System administration information

ABOUT THE ADOBE PHOTOSHOP 3.0 SOFTWARE PACKAGE

The Adobe Photoshop software package consists of a CD-ROM containing the Adobe Photoshop software and online documentation, and the printed documentation for Photoshop.

Software

The CD-ROM includes the following software:

• The Adobe Photoshop 3.0 program, including installation scripts, tutorial files, and calibration utilities

• Photoshop Extras, including stock art photography, textures for lighting effects, and backgrounds and texture sample images

• Display PostScript™ (DPS) NX level 2 software

• PostScript Printer Definition (PPD) files for printing to PostScript printers

• The Software Developer Kit (SDK) for developing Adobe Photoshop plug-ins, including online documentation and sample programs

Documentation

The Adobe Photoshop software package includes the following printed materials and documentation:

• Adobe Photoshop License and Registration Form

• *Adobe Photoshop Installation Guide*

• *Adobe Photoshop Tutorial*

• *Adobe Photoshop User Guide*

• *Adobe Photoshop Beyond the Basics*

• *Adobe Photoshop Online User Guide*

• Adobe Photoshop Quick Reference Card

• *Adobe Acrobat Reader Getting Started*

Note: *The online documentation is provided in the Acrobat Portable Document Format (PDF). For information on how to view these files, see the Read This First card.*

SYSTEM REQUIREMENTS AND LIMITATIONS

To use the Adobe Photoshop software, you need the following hardware and software:

• Silicon Graphics workstation with R4000 or faster processor

• IRIX™ 5.3 Operating System software

• The Indigo Magic desktop environment

• CD-ROM drive

• 32 megabytes of RAM

• 80 megabytes of swap space (minimum)

• 28 megabytes of available hard disk space for the Adobe Photoshop software

• An additional 6 megabytes of hard disk space for the PostScript Printer Definition (PPD) files for all models of PostScript printers in the Adobe printer database

• Up to 160 megabytes of additional hard disk space for the Photoshop sample files and stock photography files

For optimum performance, the following configuration is recommended:

• Silicon Graphics workstation with R4000 or faster processor

• 24-bit color capability

• 96 or more megabytes of RAM

• Additional swap space

The amount of additional swap space depends on whether you run applications in 8-bit or 24-bit mode, your personal Photoshop usage patterns, and the nature of the applications that run at the same time as Photoshop.

What's New in Adobe Photoshop 3.0

Adobe Photoshop 3.0 offers creative control stronger than that provided by previous versions. It includes new features for quickly editing high-resolution files and compositing images, plus a host of new creative filters. This version of Adobe Photoshop also streamlines the user interface and includes color-adjustment features that enhance the program's production capabilities.

STRONGER CREATIVE CONTROL

A number of features new in Adobe Photoshop 3.0 give you more control over the creation and editing of images.

Using layers for compositing

You can now experiment freely with design compositions by manipulating elements of an image on separate layers, much as you would use separate sheets of acetate on a comp. Layers let you quickly composite an image. You can try different combinations and placements of graphics, type, and special effects by drawing, editing, or using effects and filters on separate layers. Until you've achieved the desired effect, you don't have to discard any image data.

You can also create a layer mask on any individual layer by attaching an 8-bit alpha channel to the layer. A layer mask lets you selectively apply effects to a layer, vary the opacity of a layer, and use blending modes on a layer without destroying layer data.

These features are available in the Layers palette. Layers can be rearranged, copied, flipped, linked together, merged, or flattened into one layer for printing. You can easily combine selections from different files or different layers by dragging and dropping.

The Layers palette incorporates the Composite Controls feature, and its opacity and blending modes, for working with layers. To display the Layer Options dialog box, double-click the layer name in the Layers palette. The Layers palette also lets you create clipping groups. In a clipping group, the bottom layer acts as a stencil through which the other layers in the group appear. For more information about these features, see Chapter 8, "Using Layers," in the *Adobe Photoshop User Guide*.

Isolating selections by color

By selecting colors in an image, you can build soft-edged masks and make precise selections. The new Color Range feature lets you make a selection on an image based on a preset range of colors or on sample colors.

New filters and filter capabilities

Adobe Photoshop 3.0 includes several new filters for creating and retouching images:

• The Lighting Effects filter lets you add up to 16 light sources to an image and choose from a range of lighting colors, intensities, and angles.

• The Dust & Scratches filter lets you more easily retouch and restore photos.

• The Mezzotint filter gives you desktop control over grayscale or color mezzotint effects. Previously, these effects could be created only by production houses.

In addition, the preview windows in the filter dialog boxes let you preview effects before applying them.

Quick editing of high-resolution files

The Quick Edit plug-in feature lets you open and edit part of a large high-resolution file for fast, selective retouching. Working with the Quick Edit feature can significantly decrease the time it takes to open large files, especially files larger than 4 MB. You can also open a section of a file when you don't have enough RAM to open the entire file or when you want to speed up processing while trying different painting techniques or special effects. The Quick Edit module opens Scitex® CT and uncompressed TIFF™ files. You use the Export > Quick Edit Save command in the File menu to save the section back to your original file. For more information about using the Quick Edit module, see "Acquiring Quick Edit Files" in Chapter 3 of the *Adobe Photoshop User Guide*.

USER INTERFACE ENHANCEMENTS

Enhancements to the interface include new tools, tool options, and file options; floating palettes; drag-and-drop support for files and selections; operating system support; and new keyboard shortcuts.

New tools, tool options, and file options

Additions and enhancements include the following:

• The program features two new tools—the move tool for repositioning selections, and the sponge tool for selectively increasing or decreasing the saturation of color in an image.

• New blending modes include Behind, Difference, Overlay, Soft light, and Hard Light. In Behind mode, paint appears on the transparent areas of a layer and behind the layer, thus giving the appearance of drop shadows. Difference mode creates a new color by subtracting the color values of the background color from the foreground color. Overlay

mode mixes the base (original layer or image) color with the painting or editing color. Soft Light mode produces an effect similar to shining a diffused spotlight on the image. Hard Light mode produces an effect similar to shining a harsh spotlight.

• The Zoom tool now includes a Never Resize Windows feature to prevent resizing windows when the magnification changes.

• New files can be created with a background that is white or the background color, or with transparent contents.

Floating palettes

It's easier to select options and display image components with the three new floating palettes—Layers, Options, and Commands—and with the six redesigned palettes— Brushes, Channels, Paths, and three color palettes. You can arrange and group the floating palettes in any order. You can also easily collapse, expand, and separate palettes according to your needs and space on the screen.

• The Layers palette lets you create composite images by adding layers to an image. For more information about the palette, see "Using Layers for Compositing" on page 4.

• The Options palette provides a single, convenient location for the tool options (including Opacity, Pressure, and Blending modes). Double-click a tool to display the Options palette.

• The Commands palette lets you quickly access frequently used commands and palettes by using buttons. You can arrange commands in any order, colorcode them, and display them in multiple columns.

• The Brushes palette now lets you create and edit brushes and save groups of related brushes in custom palettes.

• With a mouse click, the Channels palette lets you create individual channels for storing selections or loading selections. You can also convert temporary masks in Quick Mask mode to permanent selections using the Channels palette. To select multiple channels and edit several channels simultaneously, Shift-click the channel name in the Channels palette.

• The Paths palette controls all the Pen tool functions. Clicking the appropriate icon, you can stroke and fill paths and save paths as selections. You can also save paths as clipping paths.

• The Picker, Swatches, and Scratch palettes separate the functions of the former Color palette to let you pick and mix colors. The Picker palette can display colors using the program's five color models: Grayscale, RGB, HSB, CMYK, and Lab. Colors within the Picker palette sliders change to reflect adjustments to the color components. The Swatches palette lets you save and load customized palettes. The Scratch palette lets you mix your own colors.

Drag-and-drop support

You can easily combine elements from different files by dragging the elements—including selections, layers, channels, and paths—from one file to another or from one image's Layers, Channels, or Paths palette to another image. The drag-and-drop feature in the palettes lets you easily convert paths to selections, selections to channels, and selections to layers.

Keyboard shortcuts

Alphabetic keyboard shortcuts now let you easily select tools from the toolbox and choose commonly used controls such as the Switch Colors icon (press X on the keyboard) and Quick Mask mode (press Q on the keyboard). For a complete list of shortcuts, see the Adobe Photoshop Quick Reference Card.

Opening files

The Open dialog box is easier to use. You can now choose a file to open by typing the pathname of the file in a text box or by selecting it in a file list. You can also see a thumbnail preview of a file before opening it. For more information, see "Opening, Saving, and Copying Files" on page 30.

IMPROVED PRODUCTION CONTROL

The following new features give you improved control over production and help you prepare professional-quality separations and output:

• *Replace Color*. This feature lets you create masks based on a specific color or range of colors and then replace that color by adjusting the hue, saturation, and brightness values.

• *Selective Color Correction*. You can adjust the ink amounts of primary colors, neutrals, whites, and blacks in other colors by entering absolute or relative values.

• *CMYK Preview*. This preview lets you quickly view an image on-screen as a color proof and display CMYK results without converting the image to CMYK mode. This allows you to periodically check whether or not the colors in RGB mode will separate predictably.

• *Gamut Warning*. This feature highlights any area in an image that is outside of the CMYK gamut. You can then bring these colors back into gamut for correct color output—for example, by using the sponge tool to saturate or desaturate colors.

• *File Info*. Using this feature, you can attach specific information to a file, such as the photographer's name, date and location of the photograph, caption, and other information required by the International Press Telecommunications Council standard for newspapers.

Preparing for Installation

Installing Adobe Photoshop on your UNIX system requires that you choose an installation directory and an installation method (Easy or Custom). If you choose the Custom Installation, you need to make some additional choices. This section guides you through the choices you need to make to ensure that your installation performs smoothly. Use the PreInstallation Checklist at the end of this manual to record your choices. Then refer to the checklist when you follow the procedure in "Installing Adobe Photoshop" on page 14.

UPGRADING FROM ADOBE PHOTOSHOP 2.5.X

If you are upgrading to Adobe Photoshop 3.0, the installation script creates a new directory containing the Adobe Photoshop 3.0 files. Your current Adobe Photoshop data and preference files are not affected. However, you will be prompted to replace the launch script link to /usr/bin with a link to the newer version. To completely delete the older version of Adobe Photoshop, see "Removing Adobe Photoshop Software" on page 49.

If you are upgrading to Adobe Photoshop 3.0, note the following important issues.

• Adobe Photoshop 3.0 creates a new default working directory ($HOME /AdobePhotoshop3). You will need to copy or move any plug-ins or other personal files from your old working directory ($HOME/AdobePhotoshop) into the $HOME/AdobePhotoshop3 working directory. If you hand-edited any files in your old custom directory, you may need to make comparable changes to the same files in the new custom directory.

• Adobe Photoshop 3.0 uses FLEXlm 4.0 for its license management, whereas Adobe Photoshop 2.5.x uses FLEXlm 2.4. Pay particular attention to the section "Installing the Licensing Software" on page 20, which explains how to install the FLEXlm 4.0 software on your system. Also, make sure that you update your /etc/rc2.d/S50flexlm file to point to the FLEXlm 4.0 licensing daemons rather than to the 2.4 daemons (see "Starting the License Server Daemons" on page 25).

• The $HOME/Photoshop resource file has many new entries. If you have a $HOME /Photoshop file, see "Modifying the Adobe Photoshop Resource File" on page 45.

USING ADOBE ILLUSTRATOR 5.5 WITH ADOBE PHOTOSHOP

Adobe Illustrator 5.5 uses FLEXlm 2.4 for its license management, whereas Adobe Photoshop 3.0 uses FLEXlm 4.0. FLEXlm 4.0 is upwardly compatible with FLEXlm 2.4. You will need to make sure that the /etc/rc2.d/S50flexlm file points to the FLEXlm 4.0 licensing daemons rather than the 2.4 daemons. See "Starting the License Server Daemons" on page 25. Keep this in mind if you reinstall Adobe Illustrator 5.5 *after* Photoshop 3.0.

Adobe Photoshop 3.0 ships with Display PostScript NX version 2.1.1, whereas Adobe Illustrator 5.5 ships with version 2.1. It is recommended that you leave the latest release of Display PostScript NX on your system and delete all others. Be sure to run the Make Links script in <installdir>/DPSNXBasic_2.1.1/ installscripts to update symbolic links to point to the 2.1.1 files.

CHOOSING AN INSTALLATION DIRECTORY

Determine where you want to install the Adobe Photoshop software. The default location of the installation directory is /usr/adobe, which is the recommended location for all Adobe applications. If you do not have a /usr/adobe directory, the Photoshop installation script creates one.

If you do not have the minimum amount of available disk space in the /usr partition for all of your chosen installation options, you can choose another directory in a different partition.

The default installation directory of /usr/adobe is usually a directory that resides on a local file system. A local installation guarantees access to the software from that stand-alone workstation, and performance will not be affected by the activity of your network.

Creating a link to /usr/adobe

If you don't have sufficient space in /usr, or you want to install the software in a different location, you should consider making a symbolic link from /usr/adobe to the other location. This strategy can ease installation because you can accept more default installation choices.

In the following example, the software is to be installed in /disk2/apps/adobe. Creating the symbolic link will make it appear as though the software will be installed in /usr/adobe.

```
% su root
password: <root password>
# mkdir -p /disk2/apps/adobe
# ln -s /disk2/apps/adobe /usr/adobe
# exit
```

CHOOSING LOCAL INSTALLATION OR NETWORK INSTALLATION

If you want to install Photoshop in a Network File System (NFS) directory, there are special issues to consider. Network installation allows many users to access the same software installation from their networked workstations. It is easier to allow additional users access to the Photoshop software in a network environment. And it is easier to upgrade a single copy of the software installed on a server than to upgrade individual copies on standalone workstations. However, the disadvantages of a network installation are that the software may become inaccessible or suffer a decrease in performance if there are problems with the network or the server machine.

If you perform a network installation, you must find appropriate network locations for Photoshop and its supplemental items. These files and directories should be located on a network server machine with high reliability. In addition, they should be placed in a location that is remotely mounted at the same location on all machines.

If you choose to install at a network location, it is often helpful to create installation directory names that reflect the CPU architecture and the operating system of the software. For example, Adobe Photoshop for SGI could be installed in /disks/apps/adobe/irix5/adobe. This strategy allows you to easily add support for different networked computing platforms and operating system versions.

For performance reasons, it is very important in a network installed environment that each networked user create a local working directory. This issue is described in "Choosing an Adobe Photoshop Working Directory" on page 28.

SELECTING EASY INSTALLATION OR CUSTOM INSTALLATION

Decide whether an Easy Installation or a Custom Installation is more appropriate. Both Easy and Custom installation methods consist of running scripts from a UNIX shell window and require you to type your responses to queries. If you plan to install Adobe Photoshop on a standalone workstation, and you meet the requirements for Easy Installation, this method is recommended. If you plan to install Adobe Photoshop on a network, you must use the Custom Installation method.

For either installation method, you must have root access on the workstation on which you want to install Adobe Photoshop. To gain root access, you need the root password. If you are installing the software using a CD-ROM drive attached to a different workstation, you need the root password for both machines.

About Easy Installation

The Easy Installation script will:

• Install the selected Photoshop software and options (including DPS/NX) relative to an installation directory of your choice (the default is /usr/adobe)

• Install or update the PostScript Printer Definition database in <installdir>/PPD

• Create symbolic links from /usr/bin to the Photoshop launch scripts in the installation directory

• Install the licensing software in a default location (/usr/local/flexlm/v4.0/sgi_u5)

• Install and integrate icons into the standard desktop locations

• Update your environment to recognize all installed Type 1 fonts

If the previous conditions and default installation locations are acceptable for your environment, use the Easy Installation script. If not, you must use the Custom Installation script.

About Custom Installation

The Custom Installation script will:

• Install the selected Photoshop software options, including DPS/NX in an installation directory of your choice (the default is /usr/adobe)

• Install or update the PostScript Printer Definition database in the location of your choice (the default is /usr/adobe/PPD)

• Prompt you for additional font directory locations

The Custom Installation script will not:

• Automatically create a symbolic link from /usr/bin to the launch scripts in the installation directory

• Install and integrate icons into the desktop

• Install the licensing software

Separate scripts are included for these procedures.

To use the Custom Installation script, see "Custom Installation of Adobe Photoshop Software" on page 16.

SPECIFYING FONTS DIRECTORIES FOR CUSTOM INSTALLATION

If you have decided to perform an Easy Installation, you do not need to specify font directories.

The Custom Installation script prompts you to enter any additional directories where fonts might be located. Note that locating the fonts in the default directories simplifies the font installation process. By default, Photoshop looks for supplemental Type 1 fonts in /usr/psres and $HOME/psres. If you want to specify any additional font directories, record the path or paths in the PreInstallation Checklist at the end of this manual.

CHOOSING A MACHINE AND LOCATION FOR THE LICENSING SOFTWARE

If you have decided to perform an Easy Installation, you do not need to choose a license machine and directory. Proceed to "Installing Adobe Photoshop" on page 14.

If you have decided to perform a Custom Installation of the Adobe Photoshop software, you first need to identify a license server machine and determine a directory for the licensing software.

Adobe Photoshop uses the FLEXlm licensing software. The licensing software consists of a license file that contains an encrypted key, programs that monitor license usage, and various license administration programs. Each time you launch Adobe Photoshop, the licensing software checks to see if a valid license is available. If Adobe Photoshop cannot access a valid license, it will only run in Demo mode, with the Save, Print, and Export features disabled.

Node-locked vs. floating license types

There are two license types: node-locked and floating. Node-locked licenses restrict usage to any one user on a single workstation, and thus can only be used for a local installation. Floating licenses, often referred to as network licenses, enable you to run simultaneously as many copies of Photoshop as you have purchased and licensed. For example, if you have a single floating license, any one user on the network can access that license to run Adobe Photoshop. If you have a five-user license, up to five users on the network can simultaneously run Adobe Photoshop.

The type of license and number of licenses you have are determined by what you purchased. Bundled versions of Adobe Photoshop usually provide a node-locked license.

Using your registration number, Adobe's Licensing Department can determine whether you have a node-locked or floating license. The same steps are required to install a node-locked license as a floating license.

Choosing a license server machine

You must select a machine to be your license server. The license server is where you will install the license file and administration programs, and it will be the machine that runs the license daemon that monitors license usage. It is usually recommended that the system containing the installed software also be the license server so that users are not dependent on more than one machine's availability.

Local installation: Your workstation should be your license server machine.

Network installation: Choose a license server machine that is available to all users on the network and is very reliable. If you purchased multiple copies of Adobe Photoshop, you also have the option of dividing your licenses across multiple license server machines. For more information, see "Dividing Your Licenses Across Multiple License Servers" on page 26.

When you have chosen your license server machine, record the machine name on the PreInstallation Checklist at the end of this manual.

Choosing a location for the licensing software

Adobe's FLEXlm license daemons, lmgrd and ADBED, are background processes launched at boot time from the machine you identify as the license server machine. The license server daemons monitor users' licenses and whether the licenses are active or inactive. The default location for the daemons is /usr/local/flexlm/v4.0/sgi_u5.

The license daemon refers to a single license file that contains the security information required to run Adobe Photoshop. The default location of this file is /usr/local/flexlm/licenses/license.dat.

License administration programs are provided to help you monitor and control the license manager. The default location of these programs is /usr/local/flexlm/v4.0/sgi_u5.

For the license system to run properly, the license daemons and the license administration programs must be located either in the default directories or in another appropriate system directory. For example, you can choose a non-default location for any of these files, but you must make sure that the daemons and administration programs are accessible to the license server machine.

Note: If you choose non-default locations, you will need to manually edit the S50flexlm file to update pointers before you can start the license daemons. Instructions are provided in "Starting the License Server Daemons" on page 25.

When you have chosen a location for your licensing software, record the machine name on the PreInstallation Checklist at the end of this manual.

Installing Adobe Photoshop

Before following the steps in this section, you should first have reviewed the prein-stallation instructions in "Preparing for Installation" on page 8. In particular, you should have chosen an installation directory, and you should have determined whether the Easy Installation or the Custom Installation is appropriate for you. Additionally, if you are performing a Custom Installation, you should have chosen your licensing machine and directory and determined whether you need to specify additional directories for font installation.

LOADING AND VERIFYING THE CD-ROM
Before proceeding with either Easy Installation or Custom Installation, follow these steps to load and verify a locally mounted CD-ROM. (If you are remote mounting a CD-ROM, refer to your system administrator or system documentation for instructions.)

To load and verify the CD-ROM:

1 Insert the CD into a caddy and place it into the CD-ROM drive.

2 Open a UNIX shell window by choosing UNIX Shell from the Desktop menu.

3 Verify that the CD-ROM has been recognized by the system and display its contents:

```
% ls /CDROM
nxbasic photoshop ppd
```

Note: If the CD-ROM does not mount automatically, refer to your system documentation or your system administrator for instructions on mounting the CD-ROM.

EASY INSTALLATION OF ADOBE PHOTOSHOP SOFTWARE
The Easy Installation script prompts you to answer questions regarding the installation. Press Enter to select the recommended defaults or enter your own values when prompted.

If you make a mistake you can either exit at different points in the procedure or press the interrupt key sequence (Control-C on most UNIX systems) to cancel the installation. If you cancel before the "Beginning Installation" message appears, no files are installed in the installation directory.

To run the Easy Installation script:

1 Log in as the superuser on the machine on which you are installing Adobe Photoshop:

```
% su root
Password: <root_password>
```

2 Locate the Photoshop directory on the CD-ROM:

```
# cd /CDROM/photoshop
```

3 Read the Read Me file for last-minute product information:

```
# more readme.pho
```

4 Start the Easy Installation script:

```
# ./easyinst.pho
```

5 Follow the instructions that appear on your screen.

When the installation is complete, a message appears indicating that you have installed the software successfully.

6 Exit from the root login:

```
# exit
```

7 Eject the CD-ROM by typing within a UNIX shell window:

```
% cd /
% eject CDROM
```

Adobe Photoshop is now installed. Proceed to "Setting up Your Software License" on page 21.

Installation messages

During the Easy Installation process, you may receive a warning message under one or more of the following circumstances.

• If any components of the installation already exist in the locations you have specified, you will be prompted to leave the existing files or replace them. If you are upgrading from Photoshop 2.5.x to 3.0, you will be forced to overwrite the symbolic link to the Photoshop launch script in the /usr/bin directory.

• If DPS/NX is already installed because Adobe Photoshop or another Adobe application has already been installed on this system, you have the option of keeping the installed version or replacing it with the version included with this software. Always install the newest version of DPS/NX. (See "Using Adobe Illustrator 5.5 with Adobe Photoshop" on page 9.)

• If not enough disk space exists for your chosen installation options, you will be prompted to choose different installation options or a different installation location.

• Toward the end of installation, the installation script prompts you to decide whether to run the makepsres utility on the /usr/lib/DPS directory to ensure that /usr/lib/DPS/DPSFonts.upr is up to date. If this file is not up to date, Photoshop may not know which fonts are installed on your system.

CUSTOM INSTALLATION OF ADOBE PHOTOSHOP SOFTWARE

The Custom Installation script prompts you to answer questions regarding the installation. Press Enter to select the recommended defaults or enter your own values when prompted.

If you make a mistake you can either exit at different points in the procedure or press the interrupt key sequence (Control-C on most UNIX systems) to cancel the installation. If you cancel before the "Beginning Installation" message appears, no files are installed in the installation directory.

The Custom Installation consists of these procedures:

• Running the Custom Installation script

• Creating links to the launch script

• Running the script to integrate the desktop icons

• Completing the installation

To run the Custom Installation script:

1 Log in as the superuser on the machine on which you are installing Adobe Photoshop:

```
% su root
Password: <root_password>
```

2 Locate the Photoshop directory on the CD-ROM:

```
# cd /CDROM/photoshop
```

3 Read the Read Me file for last-minute product information:

```
# more readme.pho
```

4 Start the Custom Installation script:

```
# ./install.pho
```

5 Follow the instructions that appear on your screen.

Installation messages

During the Custom Installation process, you may receive a warning message under one or more of the following circumstances.

• If any components of the installation already exist in the locations you have specified, you will be prompted to leave the existing files or replace them.

• If DPS/NX is already installed because Adobe Photoshop or another Adobe application has already been installed on this system, you have the option of keeping the installed version or replacing it with the version included with this software. Always install the newest version of DPS/NX. (See "Using Adobe Illustrator 5.5 with Adobe Photoshop" on page 9.)

• If not enough disk space exists for your chosen installation options, you will be prompted to choose different installation options or a different installation location.

• Toward the end of installation, the installation script prompts you to decide whether to run the makepsres utility on the /usr/lib/DPS directory to ensure that /usr/lib/DPS/DPSFonts.upr is up to date. If this file is not up to date, Photoshop may not know which fonts are installed on your system.

Creating links to the launch script

Photoshop includes a launch script that automatically runs the Photoshop program and sets the appropriate environment parameters. Always start up Photoshop using this launch script or the associated icon on your desktop.

Creating symbolic links to the Adobe Photoshop launch script enables you to launch the application from any UNIX shell window. If you do not want to create these links—for example, if you do not want to overwrite links set for a previous version of the software— skip to "Integrating Icons into the Indigo Magic Desktop" on page 19.

If you want to create links to the launch script, determine which directories are appropriate for your environment.

Local installation: You should use the default location of /usr/bin for the symbolic links to the Photoshop launch scripts. This directory is typically in each user's search path. A path is a set of directories that UNIX searches to find commands. UNIX searches directories in the order specified by the PATH environment variable definition, which can be located in your .login or .cshrc file for C-shell users, or your .profile file for Bourne shell or Korn shell users.

Network installation: You should establish a platform-specific directory for the symbolic links to Photoshop launch scripts such as /disks/apps/sgi/irix5/bin. Users should then include this directory in their PATH environment variable, or they should include a generic directory such as /usr/local/bin, which is often a symbolic link on the local machine to a platform-specific directory.

If you are installing a newer version of Adobe Photoshop, you should replace the existing links, so that you will always launch the newer version of Photoshop. The Make Links script will ask you for approval before it overwrites any existing links. Contact your system administrator if you have any doubts about writing over the files.

To create symbolic links:

1 Become the superuser (root account) on the machine to which the launch script directory will be local, not NFS-mounted:

```
% su root
Password: <root_password>
```

2 Run the Make Links script:

```
# /tmp/photoshop.makelinks
```

Note: If /tmp/photoshop.makelinks is not available on your system, you have the alternative to run the <installdir>/Photoshop_3.0/installscripts/makelinks and <installdir>/DPSNXBasic_2.1.1/installscripts/makelinks scripts.

3 Follow the instructions that appear on your screen.

A message appears indicating that you have created the symbolic links successfully.

Integrating icons into the Indigo Magic desktop

Adobe Photoshop provides a script that integrates the Photoshop icons into your Indigo Magic desktop.

You must run the deskinstall script as root.

To integrate Photoshop icons:

1 In a UNIX shell window, as superuser, locate the directory containing the deskinstall script:

```
# cd <installdir>/Photoshop_3.0/desktop
```

2 Run the script:

```
# ./deskinstall
```

3 Exit from Indigo Magic, then restart it for the changes to take effect.

Completing the installation

To complete the installation, exit from the root account (on both local and remote machines, if applicable):

```
# exit
```

On the machine attached to the CD-ROM drive, eject the CD-ROM:

```
% cd /
% eject CDROM
```

Adobe Photoshop is now installed. Proceed to "Installing the Licensing Software" on page 20.

INSTALLING THE LICENSING SOFTWARE

If you performed an Easy Installation, the licensing software was automatically installed in the default location, /usr/local/flexlm/v4.0/sgi_u5, and you do not need to follow the procedures in this section. Proceed to "Setting up Your Software License" on page 21.

If you performed a Custom Installation, you need to manually copy the licensing software files to the location you chose in the section "Choosing a Machine and Location for the Licensing Software" on page 12.

To install the license administration programs and daemons:

1 In a UNIX shell window on your license server machine, become superuser:

```
% su root
Password: <root_password>
```

Note: If your license server machine is not the machine on which you installed Photoshop, the Photoshop installation directory must be mounted on your license server.

2 If there is not one already created, create a directory for the administration programs and daemons:

```
# mkdir -p /usr/local/flexlm/v4.0/sgi_u5
```

3 Locate the administration programs directory in the Photoshop installation directory:

```
# cd <installdir>/Photoshop_3.0/flexlm/v4.0/sgi_u5
```

4 Copy the license administration programs and daemons to your license directory:

```
# cp * /usr/local/flexlm/v4.0/sgi_u5
```

Note: You must include <installdir>/Photoshop_3.0/flexlm/v4.0/man in your MANPATH to access the manual pages for the FlexLM commands.

Proceed now to "Setting up Your Software License" on page 21.

Setting up Your Software License

Setting up your FLEXlm license for Adobe Photoshop requires that you request your license from Adobe Systems, and then install the license once you have received it. Before performing these procedures, you should already have installed the licensing daemons and programs, either by following the Easy Installation script or by following the Custom Installation script and then manually copying the licensing software files into an appropriate location, as described in "Installing Adobe Photoshop" on page 14.

ACQUIRING YOUR SOFTWARE LICENSE

You must obtain information from your license server machine and provide it with registration information to Adobe in a license request. Two UNIX shell scripts are provided to assist you with this process:

• If your license server machine is capable of sending and receiving electronic mail (e-mail) outside of your company, or if it can print to a Postscript printer, use the Request License script to generate a License and Registration Form.

• If you only have access to a fax machine and need to fill out the License and Registration Form by hand, use the License Info script to obtain the information from your license server machine.

Note: If you are requesting multiple licenses and you intend to place your licenses on multiple machines, read "Dividing Your Licenses Across Multiple License Servers" on page 26 before requesting your licenses.

Running the Request License script

The Request License script prompts you for license and registration information and automatically determines other important information about your license server machine. The script then gives you the option to automatically e-mail the license request or print out the license request for faxing. It also saves the information in ASCII and PostScript files for future reference.

To create a license request using the Request License script:

1 From your license server machine, open a UNIX shell window.

2 Locate the license scripts directory (the default installation directory is /usr/adobe):

```
% cd <installdir>/Photoshop_3.0/installscripts
```

3 Run the Request License script:

```
% ./AdobePhotoshop.requestlicense
```

4 Follow the instructions in the script and enter the appropriate information when prompted.

If any error messages appear, the Request License script may not have successfully e-mailed, printed, or saved the license request information. If you are unable to generate a license request with the Request License script, use the License Info script and fill out the License and Registration Form instead.

If you request a license by e-mail, the Adobe Licensing Department sends you a standard reply e-mail message indicating that your request was received.

5 Continue with the section "Receiving Your Software License from Adobe" on page 23.

Running the License Info script

The License Info script automatically determines your system information. Use this script in conjunction with the Adobe Photoshop License and Registration Form to create a license request that you can fax to Adobe.

To create a license request using the License Info script:

1 Locate the Adobe Photoshop License and Registration Form that came in your Adobe Photoshop software package and fill in the Customer Information section.

2 From your license server machine, open a UNIX shell window.

3 Locate the license scripts directory (the default installation directory is /usr/adobe):

```
% cd <installdir>/Photoshop_3.0/installscripts
```

4 Run the License Info script:

```
% ./AdobePhotoshop.licenseinfo
```

5 In the System Information section of the Adobe Photoshop License and Registration Form, enter the values for your license server machine Host Name and Host ID as reported by the script.

6 After completing the License and Registration Form, fax it to Adobe Systems UNIX Licensing Department at the numbers indicated on the form.

Receiving your software license from Adobe

Once your license request is received by the Adobe Systems UNIX Licensing Department, an Adobe service representative will register you and create your license based on the license server information you provided. They will then send the license back to you using the same method (fax or e-mail) that you used to request the license.

If you have questions about the license or licensing process, contact the Adobe Systems UNIX Licensing Department at the numbers indicated on the License and Registration Form.

Installing the license

Use the Add License script to add your license information to the license file. License information is stored in the text file <installdir>/Photoshop_3.0/custom/LM_LICENSE. You must have write permission to this file. If a license file already exists, a backup copy is saved in the same directory in the file *filename*.old.*yymmdd.hhmmss* (the date and time the backup was created).

To run the Add License script:

1 Log in to your license server machine, open a UNIX shell window, and become superuser:

```
% su root
Password: <root_password>
```

2 Locate the license scripts directory (the default installation directory is /usr/adobe):

```
# cd <installdir>/Photoshop_3.0/installscripts
```

3 Run the Add License script to install the license:

```
# ./AdobePhotoshop.addlicense
```

4 When prompted, enter the location of the license data file:

```
[Press Enter for /usr/local/flexlm/licenses/license.dat]
```

Note: If you later decide to move the license data file to a new location, you must edit the text file <installdir>/Photoshop_3.0/custom/LM_LICENSE_FILE to point to the new location.

5 Enter the directory location of the license daemons and administration programs. (See "Installing the Licensing Software" on page 20.)

```
[Press Enter for /usr/local/flexlm/v4.0/sgi_u5]:
```

The licensing software contains four license administration programs to help you monitor and control the licensing software. For information on using these programs, see "Monitoring Licensing Status" on page 50.

6 Enter the entire SERVER line that you received from Adobe:

```
SERVER adsoft 5425561a 7103
```

Enter every character exactly as it came in your license from Adobe. Include the word SERVER. Any typing errors will cause the licensing mechanism to report an error when launching Photoshop.

Note: Adobe's licensing mechanism uses the single network TCP port number (7103) for network communications. It is unlikely that this port is already in use. However, if you receive a message informing you that the port is in use, ask your system administrator for an alternative port number. When prompted by the Add License script to enter the SERVER line, substitute this alternative port number in place of 7103. You do not need to request a new license password to make this change. Usually, TCP port numbers less than 1200 are reserved and port numbers greater than 32767 are not recommended.

7 Enter the entire FEATURE or INCREMENT line that you received from Adobe:

```
: INCREMENT AdobePhotoshop ADBED 3.000 1-jan-0 1 ELJFLSJFLJFLJWELJLFJ <etc>
```

Enter every character exactly as it came in your license from Adobe. Any typing errors will cause the license mechanism to report an error when launching Photoshop.

When the license file installation is complete, a message appears indicating that you have installed it successfully. You now need to start the license daemons.

STARTING THE LICENSE SERVER DAEMONS

Once you have added the Photoshop license information to the license file, you are ready to start the daemon to activate the licensing system.

If you are an Adobe Illustrator user or are upgrading from Adobe Photoshop 2.5 or 2.5.2, make sure that you update your S50flexlm file according to the instructions in this section. In particular, make sure the LMGRD_DIR=<dir> line in the S50flexlm file points to /usr/local/flexlm/v4.0/sgi_u5 (assuming you installed FLEXlm 4.0 in the default location), rather than to /usr/local/flexlm/sgi/v5. Also make sure the DAEMON line in your license file points to /usr/local/flexlm/v4.0/sgi_u5/ADBED, rather than /usr/local/flexlm /sgi/v5/ADBED.

Note: If you have installed FLEXlm applications from Adobe or other companies on your system, you will need to ensure that either you have merged all license files into a single license file and that you are using FLEXlm 4.0 (or later) daemons, or your license files use different TCP port numbers. (The TCP port number is the fourth field in the SERVER line. See the Note in "Installing the Licensing Software" on page 20.) One way to check for other FLEXlm applications is to issue the following command:

```
% /usr/bin/ps -ef | grep lmgrd | grep -v grep
```

Adobe recommends that you merge all licenses into a single license file, particularly for all of your Adobe applications.

To start the license server daemons:

1 On the license server machine, become the superuser:

```
% su root
Password: <root_password>
```

2 To install a shell script that starts the FLEXlm daemons each time your machine is booted, copy the S50flexlm file to the /etc/rc2.d directory:

```
# cp <installdir>/Photoshop_3.0/flexlm/v4.0/sgi_u5/S50flexlm
/etc/rc2.d/S50flexlm
```

Note: Make sure that the lines that begin with LMGRD_DIR= and LM_LICENSE_FILE= are set correctly. If you installed your license data file or license utilities in a non-default location, you will need to manually edit this file with a text editor.

3 Reboot your machine so that the /etc/rc2.d/S50flexlm shell script is executed:

```
# reboot
```

4 Verify that the license daemon is now running:

```
# cd /usr/local/flexlm/v4.0/sgi_u5
# ./lmstat -a -c /usr/local/flexlm/licenses/license.dat
```

The lmstat information is displayed.

5 Log out of the root account:

```
# exit
```

DIVIDING YOUR LICENSES ACROSS MULTIPLE LICENSE SERVERS

If you have purchased multiple copies of Adobe Photoshop, you can divide your licenses across multiple license server machines. For example, if you have purchased 10 licenses of Adobe Photoshop, you could install two licenses on one license server machine and the other eight on another. You may want to divide your licenses if you have multiple networks or if you want to minimize the risk that Adobe Photoshop might not be available if one particular network server cannot be accessed.

When requesting your licenses, you must specify the number of licenses for each license server machine by running the License Request script separately for each machine. For example, if you have 10 licenses to Adobe Photoshop and you want to make two licenses available from one license server machine and another eight licenses available from a second license server machine, specify two licenses on your first license request session and eight licenses on your second license request session. The total number of requested licenses cannot exceed the number of copies purchased. You must send requests for all licenses to Adobe at the same time.

To divide licenses across multiple servers:

1 Use the Custom Installation script to install Photoshop on each license server machine.

2 Make sure that the directories containing the various Photoshop launch scripts are in each user's PATH.

For example, if you install Photoshop in two locations on your network and the launch scripts are in /server1/apps/bin/photoshop and /server2/apps/bin/photoshop, make sure that each user's PATH environment variable includes these two definition directories.

3 Manually edit each of the installed versions of <installdir>/Photoshop_3.0 /custom/LM_LICENSE_FILE to indicate the colon-separated list of all Photoshop license files on your network.

Starting Adobe Photoshop

This section tells you how to launch the Adobe Photoshop program and describes the Adobe Photoshop file structure. Understanding the locations of the Adobe Photoshop directories and files will assist you in locating accessories that you will need, such as the Plug-ins directory and the Preferences file. This section also provides information about opening and saving files that supplements the information in the *Adobe Photoshop User Guide*.

CHOOSING AN ADOBE PHOTOSHOP WORKING DIRECTORY

Before you launch Adobe Photoshop, you need to choose a location for your Adobe Photoshop working directory. The working directory contains files that the Photoshop program needs to run. For performance reasons, your working directory should be located on a local disk. By default, the location of your working directory is in your home directory. If your workstation is on a network, your home directory may be located on a remote disk. In this case, the default location of your home directory is not the best place for your working directory.

To determine whether your home directory is local or remote, go to your home directory and use the df command in a UNIX shell window:

```
% cd
% df -k .
```

If the file system begins with /dev, as shown in the following example, your home directory is on a local disk:

```
Filesystem      kbytes      used       avail      % use      Mounted on
/dev/usr        1302525     710660     461612     61%        /usr
```

If the file system contains a colon (:), as shown in the following example, your home directory is on a remote disk:

```
Filesystem          kbytes      used       avail      % use      Mounted on
abc:/disks/abc/a1   1302525     710660     461612     61%        /disks/abc/a1
```

If your home directory is on a local disk, proceed to "Launching Adobe Photoshop" on page 29.

If your home directory is on a remote disk, you need to set an environment variable that points to your local disk. Your Photoshop working directory is then created on a local file system, which significantly improves performance. Before setting the environment variable, you need to determine or create a local directory for your working directory.

To create a local working directory:

1 Locate an area on your local file system where you have write permissions, and create a directory:

```
% cd <desired location>
% mkdir AdobePhotoshop3
```

2 Set the value of the environment variable PHOTOSHOP_ROOT to the local directory:

If you're using the C Shell, type the following command:

```
% setenv PHOTOSHOP_ROOT <desired location>/AdobePhotoshop3
```

If you're using the Bourne shell, type the following command:

```
% PHOTOSHOP_ROOT=<desired location>/AdobePhotoshop3
% export PHOTOSHOP_ROOT
```

3 To make this location change permanent, add the environment variable command to a start-up file. Using a text editor, add the previous C Shell command to the .cshrc or .login file, or the Bourne shell command to the .profile file located in your home directory.

Note: If you do not make the location change permanent, a new working directory is created in your remote home directory the next time you log in, which will decrease application performance.

LAUNCHING ADOBE PHOTOSHOP

After you have selected a working directory, you can launch the Photoshop application.

Note: It is highly recommended that you optimize your UNIX environment for Adobe Photoshop (see "Configuring Your Environment" on page 37) and customize your Adobe Photoshop desktop environment (see "Customizing the Desktop" on page 44) before running Adobe Photoshop.

Photoshop includes a launch script that configures your environment when you start the application. Always start up Photoshop by using the launch script in a UNIX shell window or by double-clicking the associated application icon on the desktop.

To launch Photoshop with the launch script from a UNIX shell window, type:

```
% photoshop &
```

The Adobe Photoshop splash screen appears while the application is loading. After the main tool palette, brushes palette, and the main title bar appear, Photoshop is ready to use.

The standard Adobe Photoshop 3.0 files reside in the working directory and can be viewed by choosing File > Open and selecting the working directory from the Open File dialog box. For a description of the installation and working directory contents, see "Adobe Photoshop Installed Files" on page 35.

OPENING, SAVING, AND COPYING FILES
For UNIX platforms, Adobe Photoshop contains some special functionality that is not described in the *Adobe Photoshop User Guide*.

Opening files
To open files, choose File > Open. In the Open File dialog box, you can select a file or directory to open in one of two ways:

• By typing the full path to the file or directory in the text box at the top of the dialog box, and then clicking Open (or pressing Enter)

• By double-clicking the filename or directory name in the file list

To navigate through the file list, type the first letter of the filename or directory or use the scrollbar. To navigate back in the directory tree, double-click the ".." directory. By default, the file list does not display hidden files and directories; however, you can type the name of a hidden file in the text entry field, or you can click the Show All Files option.

You may have problems opening a file if the resource file is missing or if the file does not have the correct filename extension. For more information, see "Transferring Files to a Macintosh" on page 32 and "Choosing Filename Extensions" on page 32.

Getting information about files

You can get information about the file you want to open in two ways:

• To see a thumbnail sketch of the file, click the Show Thumbnail option.

• To get Macintosh-related information on a file, such as the file type and when it was last modified, click the Get Info button. This button is useful only if you are using a Macintosh-to-UNIX file transfer system.

Using the quick access hotlist

The Open File and Copy File dialog boxes have a Hotlist menu that allows you to quickly and easily display the contents of commonly used directories. To access the Hotlist menu, click the button next to the text box at the top of the dialog box, and choose a directory from the Hotlist menu. By default, the Hotlist menu contains the directory from which you launched Adobe Photoshop and your Photoshop working directory.

To modify the Hotlist menu, click the Hotlist button and choose Edit Hotlist from the popup menu. To add a directory, enter the full pathname in the UNIX Path text box and click the Add button. To remove a directory, select it in the Directories list and click the Remove button.

You can also edit the Hotlist menu by choosing Info > File Systems and then adding or removing directories.

Copying files

The Copy Files command allows you to copy files while preserving the resource file (%file in Apple Double format). Choose Copy Files from the Info menu, select the source files or directories and a destination, then click the Copy All button.

Saving Files

Choose Save or Save As from the File menu to save a file. The Save command saves a file to its current filename. The Save As command saves a file to a new filename that you specify. If the Save button is grayed out, you do not have permission to write to the current directory. Either change the UNIX permissions for that directory or select another directory.

Note: Adobe Photoshop for UNIX cannot differentiate between uppercase and lowercase characters in filenames. For example, it recognizes file.psd and FILE.psd as the same name.

If you are saving a file to a Macintosh HFS floppy disk, you can eject the disk and insert a different one by clicking the Eject button.

Choosing filename extensions

You should use the standard filename extensions to enable Photoshop to properly recognize your files and to increase your ability to transfer files across other computer platforms such as Macintosh, PCs, and UNIX systems. When you save or open a file from Adobe Photoshop, add the appropriate extension to the end of the filename:

Filename	Extension
Photoshop 3.0	.psd
Adobe Illustrator	.ai
Amiga IFF	.iff
BMP	.bmp
CompuServe GIF	.gif
JPEG	.jpg
MacPaint	.mpt
PCX	.pcx
Encapsulated PostScript	.eps
PhotoCD	.pcd
Pixar	.pxr
PixelPaint	.pxl
Raw	.raw
Scitex CT	.sct
Targa	.tga
TIFF	.tif
SGI Image	.rgb, .sgi, .bw

TRANSFERRING FILES TO A MACINTOSH

To permit full-feature file transfer between UNIX Photoshop and the Macintosh file system, Adobe Photoshop saves two files whenever you save a file. One of the files contains the file's data information. The other contains the file's resource information, such as what icon corresponds to the file and what applications can launch it. If you are saving files in Adobe Photoshop's default format (Apple Double), the two filenames are stored in the

same directory and are identical if viewed at the UNIX file system level, except that the resource file is preceded by a percent sign. Other formats store the resource information within a hidden subdirectory (with a name that is preceded by a period).

Note: On the Macintosh platform, where each file has a resource fork and a data fork, the two files are combined into a single file. UNIX requires two files for compatible functionality.

The resource file must be available to open files in the UNIX version of Adobe Photoshop or to transfer files to a Macintosh. You may have the following problems if the resource file is not available:

• On a UNIX system, if the corresponding resource file is not available when you try to open a data file, and no extension is added to the filename, Photoshop cannot automatically determine the file type, and the filename does not appear in the Open File dialog box. If you know what the file type is, you can either add the appropriate file extension to the data filename (see "Choosing Filename Extensions" on page 32) or click Show All Files on the File > Open dialog box and choose the file type from the menu.

• On a Macintosh, you cannot preview icons on the Macintosh desktop or from within Adobe Photoshop on the Macintosh. The information in the resource file is also critical for some file types, such as Filmstrip and Photoshop 2.0. Most importantly, you need access to the resource file if you save EPS files with a preview for placement in page layout applications on the Macintosh.

Using network transfer software
You must use supported network transfer software to move data files and resource files to the Macintosh; simply copying the data and resource files to the Macintosh does not recombine them. By default, Photoshop saves files in Apple Double format, which is compatible with file transfer software that is set up in this format, such as NFS/Share™ from InterCon. Apple Double format creates a resource file as %xxx for each xxx data file saved.

If you use K-AShare™ from Xinet (MacShare™ is compatible with K-AShare), Partner™ from IPT, or EtherShare™ from Helios, you can save resource files in a format compatible with the appropriate package. These packages all save the resource file in a hidden file subdirectory (with a name preceded by a period) relative to the directory containing the actual file.

To specify a default file format other than Apple Double, choose Info > File Systems. The File Systems dialog box lets you select the directory in which you want to save files. Click the Options button to see the File Systems Option dialog box. Choose the appropriate entry under Default File Format and click OK. All subsequent new files saved within that directory tree are saved in the specified format.

Note: You cannot change the format of a file that has already been saved. Photoshop preserves the previous format with each subsequent save of the same name. However, you can rename a file with a new name after the format default is changed.

You can specify a default file format for newly added directories (when you add a new directory name in the File Systems or Edit hotlist dialog box) by using the environment variable PHOTOSHOP_DEFAULT_FS.

The supported values are as follows:

- AD — Apple Double

- ETHERSHARE — Helios EtherShare

- K-ASHARE — Xinet K-AShare™(same as MacShare)

- PARTNER — IPT Partner

For example, to define your default file system type as K-AShare or MacShare, use the command appropriate to your UNIX shell type:

C Shell:

```
% setenv PHOTOSHOP_DEFAULT_FS K-ASHARE
```

Bourne Shell:

```
% PHOTOSHOP_DEFAULT_FS=K-ASHARE
% export PHOTOSHOP_DEFAULT_FS
```

You must restart Photoshop for these changes to take effect. To make this change permanent, add the environment variable command to a startup file. Using a text editor, add the previous C shell command to the .cshrc, .login, or .profile file in your home directory.

Avoiding file access problems

To avoid problems opening a file or transferring a file to the Macintosh, keep the data file and resource file together. If you move the data file to another directory manually, at the UNIX file system level, be sure to move the resource file. Don't delete the resource file or rename it so that it does not match the data filename.

ADOBE PHOTOSHOP INSTALLED FILES

Both Easy and Custom Installation scripts install the Adobe Photoshop application and related files in an installation directory. The first time you run Adobe Photoshop, the application creates a working directory that it accesses continuously. The working directory contains symbolic links back to the installation directory. This process allows users to customize and save different Photoshop environments under different login accounts all using the same installation.

Adobe Photoshop installation directory file structure

The default location of the installation directory is /usr/adobe. Within this directory is the main Photoshop directory, Photoshop_3.0. Photoshop_3.0 contains the following directories and files.

• AdobePhotoshop_3.0: a directory containing the main directories accessed from within Photoshop

• bin: a directory containing the Adobe Photoshop launch script and various utility programs

• custom: a directory containing pointers to the license file and to directories containing supplemental fonts

• desktop: a directory containing files for desktop integration

• doc: a directory containing Photoshop documentation files

• flexlm: a directory contains FLEXlm license reference files and utilities

• installscripts: a directory containing installation scripts and files

• lib: a directory containing Photoshop libraries

• readme: a text file containing important information

Adobe Photoshop working directory file structure

The default location of the working directory is the AdobePhotoshop3 directory within your home directory. Many of these files and directories are linked to files and directories of the same name in the installation directory. The Photoshop working directory contains the following files and directories.

• .photoshop_version: a file that should be removed if you want to redo links to the installation directory with the next launch

• .system: a directory containing a link to the main Photoshop executable (AdobePhotoshop3.0), a Photoshop resource file (%AdobePhotoshop3.0), and a directory containing files required by Photoshop (System)

• Goodies: a directory containing auxiliary files such as the default Photoshop brushes and palettes, the command palette, and calibration tools

• Plug-ins: a directory containing the installed plug-ins

• Preferences: a directory containing Photoshop preference files

• Tutorial: a directory containing sample files used for the tutorial

• readme: a text file containing important information

Configuring Your Environment

T his portion of the manual describes environment configuration, printer setup, plug-in management, and memory and performance issues. These topics are critical for ensuring that Adobe Photoshop runs correctly and achieves the best possible performance.

ADOBE PHOTOSHOP AND MEMORY USE

Adobe Photoshop requires storage space equal to approximately three to five times the size of opened files in order to process them. At start-up, Photoshop allocates a large area of memory from the UNIX virtual memory system (physical RAM and system swap area), which it uses for its most performance-critical operations. In general, Photoshop will only allocate small additional amounts of image memory from UNIX VM (virtual memory) while running (although plug-ins might allocate large amounts of memory for their own use).

Note: Adobe Photoshop requires that you have a minimum of 80 megabytes of swap. For instructions on increasing your swap area, see "Adding Swap Space" on page 39. Note also that for better reliability, Adobe recommends that virtual swap be turned off when you run Adobe Photoshop. See "Turning off Virtual Swap" on page 38.

When Photoshop's memory needs exceed the allocated memory, it creates a scratch area on the UNIX file system. It then uses this scratch area as additional space for application processing. Since it is typically much slower to access a file on a hard disk than to access real memory (RAM), performance improves if most of the application processing is done in RAM. However, if too much RAM is allocated for Photoshop, it encroaches on the UNIX operating system and windowing system, and decreases overall performance.

Many of these configuration methods require you to run the application to access certain dialogs. See "Launching Adobe Photoshop" on page 29 for instructions on how to run the application.

Memory configuration guidelines

You must allocate at least 8 megabytes of memory to Photoshop. If you have a large amount of main memory, you may find that Photoshop will perform better if you allocate more than 8 megabytes of memory to it. However, if you allocate too much memory to Photoshop, the Photoshop program and various system components (such as the X server and the window manager) must be swapped in and out of memory, seriously degrading performance. If Photoshop is performing poorly, you may have allocated too much

memory to Photoshop. For guidelines on allocating memory, see the file <installdir> /Photoshop_3.0/doc/PerformanceTuning.pdf, which can be viewed with Adobe Acrobat™ Reader.

The Photoshop scratch area

When processing images that are too large to fit in Photoshop's allocated memory area, Photoshop creates a scratch area on the UNIX file system for additional application processing. When using a scratch area, the speed of your disk directly determines how fast Photoshop can perform certain operations.

The default location of the scratch area is in your Adobe Photoshop working directory.

For guidelines on setting up your scratch area, see the file <installdir>/Photoshop_3.0 /doc/PerformanceTuning.pdf.

To change the location of the scratch files or how Photoshop allocates UNIX virtual memory:

1 Choose a directory you want to use as your scratch area.

2 Choose File > Preferences > Memory and Scratch Files.

3 Type in a directory name or click the Select button and choose a directory.

4 Change Photoshop's memory allocation formula by changing the values in the dialog box.

5 Choose OK to close the dialog box.

Your changes take effect the next time the application is launched.

Note: Photoshop scratch files are invisible to standard UNIX commands, such as ls. *To measure Photoshop's scratch area usage, issue appropriate* df *commands before launching Photoshop and again while it is running.*

Turning off virtual swap

The virtual swap feature in IRIX makes it impossible for Photoshop to detect low-memory situations and recover properly. If you use virtual swap with Photoshop on systems with small swap areas, it is very likely that Photoshop or your windowing system will exit unexpectedly. Because of this, Photoshop prints a warning message at startup if virtual swap is on.

To determine if virtual swap is on, type the following command at the UNIX shell prompt:

```
% chkconfig | grep vswap
```

To turn vswap off, log in as root and type the following command at the UNIX shell prompt, and then reboot the system.

```
# chkconfig vswap off
```

Adding swap space

If you do not have sufficient swap space, Adobe Photoshop cannot run to its full potential and Photoshop or your window system may exit unexpectedly.

To add swap space on IRIX:

1 Become the superuser:

```
% su root
Password: <root_password>
```

2 Create a new swap file:

```
# /usr/sbin/mkfile 200m /usr/swap/swapfile
```

In this example, 200m represents the size (in megabytes) of the file named swapfile to be created in the /usr/swap directory. You may need to create the /usr/swap directory or choose a local directory other than /usr/swap.

3 Add the swap file to the /usr/swap directory:

```
# /etc/swap -a /usr/swap/swapfile
```

4 List the new swap file:

```
# /etc/swap -l
```

You should see the new swap file added to the list of original swap areas.

5 To make this change permanent so that extra swap is available every time you boot the machine, add the following line to your /etc/fstab file:

```
/usr/swap/swapfile swap swap pri=2 0 0
```

For more information on the swap command, refer to your system documentation or the man pages on swap and fstab.

CONFIGURING PRINTERS FOR USE WITH ADOBE PHOTOSHOP

The PPD files that come with Adobe Photoshop 3.0 describe all of the various manufacturers and models of PostScript printers within the Adobe database. To identify particular printers on your network so that Adobe Photoshop will know the manufacturer and model for that printer, run the printerconf utility once for each printer.

About PPD installation

If you did not install the PostScript Printer Definition (PPD) files when you installed the Adobe Photoshop software, you will not be able to configure printers for use with Adobe Photoshop. (PPD files are installed by default with Easy Installation.) Instead, Photoshop will display a warning message the first time you attempt to use a given printer in a session, indicating that a PPD file was not available for that printer and a generic PPD will be used instead. If you did not install the PPD files but wish to now, you can either reinstall the Adobe Photoshop software or you can become the superuser and run the install.ppd script located in the ppd directory on the CD-ROM.

To configure the printer and environment:

1 Become the superuser:

```
% su root
Password: <root_password>
```

2 If you installed the PPD files in a location other than the default, set your PPDDIR environment variable to your PPD directory. (Otherwise, skip this step.)

C Shell:

```
# setenv PPDDIR <ppddir>
```

Bourne Shell:

```
# PPDDIR=<ppddir>
# export PPDDIR
```

To make this location change permanent, add the environment variable command to a start-up file. Using a text editor, add the previous C Shell command to the .cshrc or .login file, or the Bourne shell command to the .profile file located in your home directory.

3 Run the Printer Configuration script; the <printername> parameter is the name of the script as known to the lp or lpr printer spooler:

```
# <installdir>/Photoshop_3.0/bin/printerconf <printername>
```

A dialog box appears with a scrolling list of printer manufacturers and models.

4 Choose the manufacturer and model that corresponds to your printer name and click OK. The printerconf utility creates a PPD file with that printer name in the directory containing all of the PPD files. Printer model PPDs are uppercase and printer name PPDs are lowercase. You can edit the printer name PPDs if you know about particular installed options for particular printers.

5 Exit the superuser account:

```
# exit
```

6 If you installed the PPD files in a location other than the default, set your PPDPATH environment variable to your PPD directory. (Otherwise, skip this step.)

C Shell:

```
# setenv PPDPATH <ppddir>
```

Bourne Shell:

```
# PPDPATH=<ppddir>
# export PPDPATH
```

MANAGING YOUR PLUG-INS DIRECTORY

By default, Adobe Photoshop plug-ins are installed in the <installdir>/Photoshop_3.0 /AdobePhotoshop_3.0/Plug-ins directory in the installation directory, and some are linked to the <workingdir>/Plug-ins directory in your working directory. At start-up, Photoshop loads all the plug-ins found in the <workingdir>/Plug-ins directory as well as those in its subdirectories.

You can change the location of the Plug-ins directory from within Adobe Photoshop by selecting it from the File > Preferences > Plug-ins menu. (This is not recommended since it disables some Photoshop capabilities.)

When you update to a newer version of Photoshop, the standard symbolic links are automatically updated.

For information on plug-ins not covered in the Adobe Photoshop documentation, refer to the PostScript (.ps) or Text (.txt) files found in each of the plug-in subdirectories, or their About boxes accessed through the Info > About Plug-ins menu.

MANAGING THE ADOBE PHOTOSHOP PREFERENCES

Adobe Photoshop saves status and configuration information in preference files. These files are located in the Preferences directory in your working directory:

• %Adobe_Photoshop_3.0_Prefs

• Adobe_Photoshop_3.0_Prefs

If Photoshop is not saving your preferences, you may not have permission to write to these files. If these files are deleted, Photoshop re-creates them the next time you launch and exit the program.

In some cases, you might find that you need to delete your preference files to restore Photoshop to its initial default state. To delete your preference files, issue the following commands:

```
% cd <workingdir>/Preferences
% rm *Prefs
```

SGI PHOTOSHOP SUPPLEMENTAL PLUG-INS

The SGI version of Photoshop 3.0 includes the following plug-ins, in addition to the plug-ins described in the *Adobe Photoshop User Guide*:

• Impressario Scanner—If Impressario is installed on your system, Photoshop will launch this software to allow scanning directly into Photoshop

• Screen Capture—Allows images to be grabbed off your monitor and imported directly into Photoshop

• Video Capture—Allows images to be imported from a video camera, such as ships standard on Indy models, directly into Photoshop

• Impressario Printer—If Impressario is installed on your system, Photoshop will launch this software to allow printing to Impressario printers

MONITORING SYSTEM PERFORMANCE

You can use an IRIS system utility, `gr_osview`, to monitor your system performance while Photoshop is running. This allows you to check CPU, swapping, and disk usage when Photoshop is performing its most time-consuming operations. The best performance is when CPU usage is very high and there is little or no swapping.

To launch the `gr_osview` utility, enter the following in a UNIX shell window:

```
% gr_osview -a &
```

Refer to the man pages or system documentation for more information on this utility. Options of particular interest are adding wait and pswap lines to your .grosview file. These options will give you an indication as to whether your system is swapping too much. If you are experiencing excessive swapping, you might find that Photoshop will perform better if you allocate *less* memory. You can do this by selecting File > Preferences > Memory and Scratch Files.

Customizing the Desktop

You can customize several aspects of the Adobe Photoshop functionality in the user environment, including modifier keys, menu defaults, and input focus. This portion of the manual describes each of these procedures.

CUSTOMIZING PHOTOSHOP MODIFIER KEYS

Adobe Photoshop supports four modifier keyboard keys. The default modifier key locations for the Photoshop platforms are shown in the following table.

Key name used in documentation	Macintosh Equivalent	Windows™ Equivalent	SGI Equivalent	SUN™ Equivalent
Shift	Shift	Shift	Shift	Shift
MKEY1	Command	Control	Control	Control
MKEY2	Option	Alt	Alt	Meta
MKEY3	Control	None	None	None

You can remap the default UNIX modifier keys to other locations. To do so, select the Keyboard dialog box from the Preferences submenu within Photoshop. This dialog box lets you choose from standard default UNIX modifier key mappings, modifier key mappings similar to the Macintosh locations, or your own custom modifier key mappings. If you choose Macintosh modifier key locations from this dialog box, the new modifiers are as listed in the following table.

Key name used in documentation	Macintosh Equivalent	Windows Equivalent	SGI Equivalent	SUN Equivalent
Shift	Shift	Shift	Shift	Shift
MKEY1	Command	Control	Alt	Meta
MKEY2	Option	Alt	Ctrl_L	Alt
MKEY3	Control	None	Ctrl_R	Control

To customize your own keyboard locations, select Custom Keyboard from the Keyboard pop-up menu. Then select the keyboard button that corresponds to the key you want to set. A dialog box instructs you to press the key of your choice.

You must restart Photoshop for these changes to take effect.

CUSTOMIZING DEFAULTS, MENUS, AND WINDOW FOCUS

You can customize the Adobe Photoshop windows and menus by modifying the Photoshop X resource file.

Modifying the Adobe Photoshop resource file

Adobe Photoshop uses a UNIX resource file for saving certain application defaults. These settings can be modified to customize Photoshop in various ways (such as menu bar behavior).

Note: If you are upgrading from Adobe Photoshop 2.5.x and have a $HOME/Photoshop application defaults file, you should rename it. For example, locate your home directory with the cd *command and use the* mv *command to move the Photoshop file to Photoshop 2.5.*

To modify the resource file:

1 In a UNIX shell window, copy the Photoshop resource file from the installation directory to your home directory:

```
% cd $HOME
% cp <installdir>/Photoshop_3.0/AdobePhotoshop_3.0/app-defaults/Photoshop .
```

2 Using a text editor, edit the Photoshop file in your home directory, using the instructions provided in the file. If you have an old Photoshop file from version 2.5.x, merge the contents of that version into your new Photoshop resource file.

3 Save the file.

Your changes will take effect the next time you launch Photoshop.

To return to the original default settings, move or delete the Photoshop resource file from your home directory.

Using a floating menu bar

By default, Photoshop attaches its main menu bar to each document as it is created or opened. This allows for easy access to the menu items when working with documents. You can choose a single floating menu bar instead. If you choose this option, your keyboard focus policy should be set to click-to-type mode rather than pointer-focus mode.

In pointer-focus mode, moving the pointer over a window makes the window active. In click-to-type mode, you must click a window to make it active. Using click-to-type mode helps prevent you from executing a menu command on the wrong file.

To use a floating menu bar:

1 With a text editor, remove the exclamation point from the following line in the Photoshop resource file:

```
!*menubarPlacement: +floating
```

2 Restart Photoshop.

To set the window behavior to click-to-type mode:

1 Use a text editor to open (or create) the .Sgiresources file in your home directory.

2 Add this line to the file; if the line exists, make sure the focus policy is set to explicit:

```
4DWm*keyboardFocusPolicy:explicit
```

3 Restart your window system.

Note: This setting will apply to all other applications. Refer to your workstation documentation for further details.

Photoshop automatically raises document windows when they are in focus. When in pointer-focus mode, a delay is set to prevent unintentional window raising as the pointer is dragged over other documents to floating tool and menu palettes. By default, the delay setting is one second. You can modify this setting with the activateDelay resource setting in the Photoshop resource file (see "Modifying the Adobe Photoshop Resource File" on page 45).

CALIBRATION

This section provides calibration information supplemental to that given in Chapter 2 of the *Adobe Photoshop User Guide.*

Adobe Photoshop for Silicon Graphics calibrates images by adjusting values in software (the calibration applies only to the contents of the Photoshop windows). A companion program named calibrate found in <installdir>/Photoshop_3.0/bin is provided for saving calibration settings for Photoshop to use.

To launch the calibrate utility, enter the following in a UNIX shell window:

```
% /usr/adobe/Photoshop_3.0/bin/calibrate &
```

To update the gamma settings in Photoshop after setting them from the Calibrate application, do either of the following:

- Restart Photoshop so it can read the new monitor default file, or

- Open Preferences > Monitor Setup from the File menu and make the desired changes to the settings within the Monitor Setup window. The new system gamma settings are loaded and the changes are reflected on the screen.

Your Silicon Graphics system also comes with a built-in mechanism for performing basic gamma adjustment of your display. The X server tries to adjust your display so that it responds with a gamma setting of 1.0. To make this adjustment, the X server needs to know the actual response curve of the display so that it can compensate. By default, the X server assumes your display has a gamma of 1.7. You can adjust this value by using a system utility named `gamma`. (Refer to the system documentation for more details.) This utility takes a parameter that specifies the display's actual response curve; for instance, 1.8.

When performing monitor calibration for Adobe Photoshop, remember that the X server is also adjusting the gamma. For example, suppose you are using the default system gamma of 1.7 and your monitor's actual gamma response is in fact 1.7. When you run the Adobe Photoshop Monitor Calibration program, you'll find that the best match for gamma is 1.0. This is because the X server has adjusted your monitor to act as if it had a setting of 1.0, although it actually has a setting of 1.7.

You can bypass the X server's gamma correction using the gamma utility. By giving this utility a parameter of 1.0, the X server functions as if your display already had an adjusted gamma setting, and the system performs no gamma correction. If you then run the Adobe Photoshop Monitor Calibration program, you'll see that the closest match for your display's gamma response is 1.8.

TELLING ADOBE PHOTOSHOP WHERE TO FIND FONTS

If you installed Photoshop using Custom Installation, you answered a prompt that asked you to indicate the directories where Type 1 fonts are installed. Your response was written into the file <installdir>/Photoshop_3.0/custom/SITE_PSRESOURCEPATH. You can add or remove font directories by editing this file by hand. (The default value for SITE_PSRESOURCEPATH includes $HOME/psres and /usr/psres.)

Alternatively, you can set the PSRESOURCEPATH environment variable to tell Photoshop where to find Type 1 fonts, in addition to the locations specified in SITE_PSRESOURCEPATH. The value of this environment variable is a colon-separated list of directories that usually contain PostScript resource files (files with .upr extensions). PSRESOURCEPATH should also contain two consecutive colons, which is the way to tell Photoshop that it can also use PostScript resources/fonts that come standard with the Display PostScript system.

For example, to specify the directories /disks/share/psres, /localdisk/fonts, and the standard locations, you could set PSRESOURCEPATH as follows:

C Shell:

```
% setenv PSRESOURCEPATH /disks/share/psres:/localdisk/fonts::
```

Bourne Shell:

```
% PSRESOURCEPATH=/disks/share/psres:/localdisk/fonts::
% export PSRESOURCEPATH
```

To make this location change permanent, add the environment variable command to a start-up file. Using a text editor, add the previous C Shell command to the .cshrc or .login file, or the Bourne shell command to the .profile file located in your home directory.

System Administration

System administration of Adobe Photoshop includes printer setup, administration of the installed software, administration of the licensing daemon, and troubleshooting. This portion of the manual describes these procedures. Be sure to also review the Troubleshooting chapter of the *Adobe Photoshop User Guide*.

REMOVING ADOBE PHOTOSHOP SOFTWARE

You can remove any version of Adobe Photoshop software by manually deleting the files and directories that were created during the installation procedure.

To remove a particular version of Photoshop software:

1 Copy any personal files from each user's working directory to another location before deleting the directory.

2 Remove the working directory (~/AdobePhotoshop for version 2.5.x and ~/AdobePhotoshop3 for version 3.0, by default, or the directory specified by the PHOTOSHOP_ROOT environment variable):

```
% cd
%/bin/rm -rf AdobePhotoshop3
```

3 Become the superuser:

```
% su root
Password: <root_password>
```

4 Enter the following commands to remove a particular installed version of Adobe Photoshop:

```
# cd <installdir>
# /bin/rm -rf Photoshop_<version>
```

5 Adobe Photoshop 3.0 also installs Display PostScript NX (DPS/NX) version 2.1.1 and (optionally) PostScript Printer Definition (PPD) files in the directories <installdir>/DPSNXBasic_2.1.1 and <installdir>/PPD. These directories are meant

to be shared across other applications. (Nearly all Adobe applications use DPS/NX. Most future Adobe applications will use PPDs.) If you have no applications that use these directories, you can remove these packages as follows:

```
# cd <installdir>
# /bin/rm -rf DPSNXBasic_<version>
# /bin/rm -rf PPD
```

6 To remove symbolic links to the launch scripts, use the following command to delete the files /usr/bin/photoshop and /usr/bin/dpsnx.agent.

Note: If you are upgrading to a new version of Photoshop, the installation process may have already overwritten /usr/bin/photoshop consistent with the new version. If so, do not delete /usr/bin/photoshop as shown in this example. If you have other installed applications that use DPS/NX, do not delete dpsnx.agent.

```
# cd /usr/bin
# rm photoshop
# rm dpsnx.agent
```

7 Exit the root account:

```
% exit
```

LICENSING UTILITIES
You need to be the superuser on the license server machine to execute the following license utilities. By default, these utilities are installed in /usr/local/flexlm/v4.0/sgi_u5.

Monitoring licensing status
The lmstat utility lets you monitor network licensing status, including the list of daemons that are running and the list of users for each daemon.

To monitor the status of the license daemon, use the following syntax:

```
# lmstat -a -S daemon -f feature -s server -t value \
-c license.dat -A -l regular_expression
```

where

–a   displays all information about daemons that are running

–S   daemon lists the daemon's features

–f   feature lists all current users of the feature

–s   server displays the status of the servers

–t   value sets the lmstat time-out to the value you specify

–c   license.dat uses the specified license file

–A   lists the active licenses

–l   regular_expression lists users with matching licenses

Shutting down the daemon

Whenever you add a new user to the license.dat file, or whenever active users find that they are having trouble getting a license, you may want to shut down the license daemon. Use the lmdown utility with the -c option to shut down the license daemon:

```
% lmdown -c <license file>
```

Removing a license

The lmremove utility lets you remove a single user's license. Do this only if a licensed user was running software on a host that crashed. lmremove removes all instances of user on the machine host on the display. To remove a license, type:

```
% lmremove -c <license file> feature [user] host [display]
```

Restarting license daemons

The lmreread utility reads the license file and enables any newly added licenses. All existing license daemons read the license file for changes in licensing information. Use the following command:

```
% lmreread -c <license.dat_file>
```

TROUBLESHOOTING

This section describes Photoshop error messages and provides general troubleshooting information.

Photoshop error messages

Error: `photoshop -command not found`

Cause: Either the Photoshop launch script is not in your PATH (because the Make Links script was not run after a Custom Installation) or the launch script you are trying to execute is actually a symbolic link to a file that does not exist.

Solution: Locate the Photoshop file that is launching the application by issuing the command `which photoshop` at the prompt, which gives you the name of the file that is executed when you issue the `photoshop` command.

Perform a long listing on the file that executes Photoshop:

```
% ls -l <file>
```

If the results indicate that <file> is actually a symbolic link to another file (<file2>), then issue:

```
% ls -l <file2>
```

Continue this process until you have a real file (not a symbolic link), or you receive the message `<file> not found`. If you receive this message and Photoshop was not installed locally, the network volume holding the Photoshop installation may be temporarily down or may have been moved to a new location, or the Photoshop distribution may have been moved or deleted so that symbolic links are pointing to an invalid location.

To resolve this problem, do one of the following:

• Rerun <installdir>/Photoshop_3.0/installscripts/makelinks.

• Reinstall the software, carefully following the instructions in this manual.

Error: `Fatal Error: Unable to find system file ':System:System'.`

Cause: You are not using the Photoshop launch script (`photoshop`) to launch Photoshop, your distribution has been corrupted, or you are trying to run the application as root and the Adobe Photoshop working directory cannot be created.

Solution: Always launch Photoshop using the supplied launch script at <installdir> /Photoshop_3.0/bin/photoshop or /usr/bin/photoshop. If you suspect your distribution has been corrupted, reinstall the software. Instead of running Photoshop as root, log in to a user account and launch the application.

Error: `photoshop: Permission denied`

Cause: One or more files have their permissions set incorrectly.

Solution: Examine the permissions on the `photoshop` launch script to make sure you have proper execute privileges for <installdir>/Photoshop_3.0/bin/photoshop.

Error: `Could not save as (...file name...) because the file is locked. Use the "Get Info" command in a file dialog to unlock the file."`

Cause: The document is locked. This may result from transferring a locked file from the Macintosh.

Solution: To unlock the file, select Copy Files from the Info menu, select the file, and click the Get Info button. Click the Locked check box to deselect it.

Error: `Disk is full`
or
`Scratch Disk is full`

Cause: Photoshop does not have access to enough disk space to complete your request.

Solution: Make sure that your scratch disk is on a volume with free disk space equal to three to five times the size of all the files with which you are simultaneously working. See "Adobe Photoshop and Memory Use" on page 37 for more information.

FLEXlm license errors
Error: `Error in getting license data file. cannot find license file.`

Cause: Photoshop could not find the license file.

Solution: Make sure that the location specified in the <installdir>/Photoshop_3.0/custom/LM_LICENSE_FILE matches the actual location of the license.dat file.

Error: `Error in getting license data file. no such feature exists.`

Cause: The FEATURE/INCREMENT line for Adobe Photoshop does not exist in the license file.

Solution: Verify that you have typed the information into your license data file correctly.

Error: `feature has expired`

Cause: The FEATURE/INCREMENT line for Adobe Photoshop in the license file contains an expired password.

Solution: Verify that your system clock has the correct date and time and that you have typed the information into your license.dat file correctly.

Error: `Encryption code in license file is inconsistent.`

Cause: The license string was not entered properly.

Solution: Verify the license string in the license.dat file.

Error: `Cannot connect to license server`

Cause: The license server may not be running or the systems clocks are not set correctly for the different machines.

Solution: Verify that the license daemons are running by issuing the following command on your license server machine:

```
% /usr/bin/ps -ef | grep ADBED | grep -v grep
```

Additionally, verify that the machine requesting the licenses and the license server machine have their dates set properly by issuing the `date` command in a UNIX shell window. The system clocks need to be within 15 minutes of each other.

See "Setting Up Your Software License" on page 21 for more information on FLEXlm license errors.

Error: `Licensed number of users already reached.`

Cause: All of your licenses are currently in use and no additional licenses are available.

Solution: You can use the following FLEXlm utility to determine who is currently using your licenses:

```
% lmstat -a -c <licensefile>
```

It is technically possible, if the system has exited and been restarted, for the daemons to behave as though a license is still in use even though the process is no longer active.

You can use `lmremove` to take away licenses from current users ,or you can reboot your license server machine to restart the license daemons. If you simply have too many users and too few licenses, you may need to purchase additional licenses. See "Monitoring Licensing Status" on page 50.

Error: `License server does not support this feature.`

Cause: Either the license has been entered incorrectly or you are running an older version (such as FLEXlm 2.4) of the licensing software.

Solution: Verify the license string in the license.dat file. Also, verify that S50flexlm and the DAEMON line in license.dat file are pointing to version 4.0 (or later) of FLEXlm.

General troubleshooting

This section describes some problems that may occur and suggestions for solving them.

Problem: Space on the hard disk appears to be lost. A system error occurred and now it appears that a large segment of the hard disk is missing or in use.

Cause: The scratch file may be corrupted.

Solution: To restore the lost space on your hard disk, throw away any temporary files in the <workingdir>/.system/System/TemporaryItems directory.

Problem: No printing output.

Cause: There may be insufficient space in your spool directory to print the file.

Solution: Make sure you have at least two times the size of the file you want to print in your spool directory. Contact your system administrator or consult your system documenta-tion for more information.

Problem: If you run the Photoshop launch script and no windows appear, take these steps to troubleshoot the problem:

1 Verify that your DISPLAY environment variable is instructing X Windows to display Photoshop on the correct display.

2 Verify that the product has been installed correctly by following all of the instructions in this manual.

3 Verify that you are trying to launch the product according to the instructions in this manual.

4 Determine your Photoshop working directory by checking to see if there is a value for the environment variable PHOTOSHOP_ROOT. If the environment variable has a value, then your working directory is $PHOTOSHOP_ROOT; otherwise, your working directory is the default location of $HOME/AdobePhotoshop3.

5 If the file <workingdir>/.photoshop_version exists, remove it and attempt to relaunch Photoshop. When this file is removed, Photoshop reestablishes some of the symbolic links found in the working directory the next time it starts up.

6 If Photoshop still does not launch, move the contents of your working directory to another location so that the working directory is completely empty. In particular, make sure that .photoshop_version does not exist in the working directory. Then, try to launch Photoshop. If it launches successfully after these changes, you may need to return items from your old working directory into your new working directory (such as plug-ins you might have installed into your old working directory and files you have saved to this directory).

7 Check permissions on all files both within the Photoshop distribution (<installdir> /Photoshop_3.0) and within your working directory. You should have read/write/execute privilege for your working directory, read/execute privilege for the Photoshop program itself (<installdir>/Photoshop_3.0/lib/AdobePhotoshop3.0), and read privilege on all other files.

PreInstallation Checklist

Installation Directories

Installation Root Directory
Default: /usr/adobe

Your root directory

Launch Script Directory
Default: /usr/bin

Your launch script directory

License Administrative Programs Directory
Default: /usr/local/flexlm/v4.0/sgi_u5

Your license programs directory

License Data File Location
Default: /usr/local/flexlm/licenses/license.dat

Your license data file location

License Server Machine

License Type
☐ node-locked
☐ floating

Supplemental Type 1 Fonts Location
Default: $HOME/psres : /usr/psres

Your additional fonts locations (separated by colons)