

Adobe® Customer Support

Win32s Errors in Photoshop Troubleshooting Guide

Issue

When running Photoshop 4.0, Windows returns a Win32s error.

Symptoms

One of the following Win32s error occurs:

“Improper installation Win32s requires W32s.386 in order to run. Reinstall Win32s Application Execution Error: One of the library files needed to run this application is damaged. Please reinstall this application.”

“Photoshp.exe Unhandled Exception detected code [0xC0000005]. Application will be terminated.”

“Win32sxxxx An error has occurred in this application.”

“Application Error Photoshp.exe caused a GPF in Win32s16.DLL at 0001:7ccd”

“Unexpected DOS Error -21”

“Unexpected DOS Error 21”

Solutions

Do one or more of the following:

- A. Ensure your hard disk contains a Win32s directory. When installing, Photoshop 4.0 creates a WIN32S directory in the Windows\System directory. When the Win32s directory does not exist, then remove and reinstall Photoshop.
- B. Recreate Photoshop’s preferences files:
 1. Quit Photoshop.
 2. Delete the Photos40.psp and Ccolorsd files, which are located in the Prefs directory in the Photoshop directory.

NOTE: Custom preference settings will be lost.

- C. Ensure you have at least 12 MB of memory (RAM).
- D. Ensure there is sufficient free disk space on the hard disk targeted as Photoshop’s scratch disk. To process an image, Photoshop requires at least 3-5 times the size of the image

available on the Photoshop scratch disk and in memory (RAM).

- E. Ensure there is at least 20 MB of free disk space on the hard disk where Windows is installed.
- F. Ensure there's adequate free space on the hard disk for temporary files (i.e., at least 10-20 MB free on the disk to which the temporary files are written) by doing one or more of the following:
 - A. Exit to MS-DOS, then from each connected drive's root directory, delete all files with the *.tmp extension.
 - B. Delete other files on the volume specified in the "Set Temp=" line in the Autoexec.bat file.
 - C. Edit the "Set Temp=" line in the Autoexec.bat file to specify a directory on a non-compressed disk that has sufficient free disk space.
- G. Remove then reinstall Photoshop and its Win32s components:
 - 1. Move all personal files out of the Photoshop directory and its subdirectories.
 - 2. Delete the Photoshop directory and the subdirectories it contains.
 - 3. Delete the Windows\System\Win32s directory and the files it contains.
 - 4. In MS-DOS, delete, move, or rename the following files located in the Windows\System directory:

Winmm16.dll
Win32s16.dll
Win32s.ini
W32sys.dll
 - 5. Reinstall Photoshop.
- H. Use a video driver that is compatible with Win32s, Win32-based applications, and 256 or more colors. To determine whether your video driver is compatible with Win32s, change to another video driver that is compatible (e.g., Windows Super VGA video driver), refer to the video driver's documentation, or contact the video driver's manufacturer.

NOTE: Make a backup copy of the System.ini file, located in the Windows directory, before changing your video driver. If you are unable to reinstall your original video driver or want to revert to the original driver, you can copy the original System.ini file back into the Windows directory.

- I. Use a mouse driver that is compatible with Win32s. To determine if your mouse driver is compatible with Win32s, refer to its documentation or contact the manufacturer.
- J. Use the MS-DOS memory manager Himem.sys, rather than a third-party memory manager (e.g., QEMM). To temporarily load Himem.sys instead of a third-party memory

manager, create a bootable floppy disk containing startup files (i.e., Autoexec.bat, Config.sys) that reference Himem.sys, instead of the third-party memory manager.

- K. Ensure nothing is loading in Windows by disabling (i.e., remarking out) the “load=” and “run=” lines in the Win.ini file:
1. Make a backup copy of the Win.ini file located in the Windows directory.
 2. Open the Win.ini file in a text editor that can save in text-only format (e.g., Notepad).
 3. In the [windows] section, insert a semicolon at the beginning of the “load=” and “run=” lines. For example:

```
;load=  
;run=
```

4. Save the Win.ini file in text-only format, then restart Windows.
- L. Specify an uncompressed disk (i.e., a disk that is not compressed by a disk compression utility) for Photoshop’s scratch disk and the Windows swap file (i.e., virtual memory).
- M. Recreate and resize the Windows swap file (i.e., virtual memory):
1. Open the Windows Control Panel, located in the Main group of Program Manager.
 2. Double-click the 386 Enhanced icon.
 3. In the 386 Enhanced dialog box, select Virtual Memory, then click Change.
 4. In the Virtual Memory dialog box, select NONE from the Type pop-up menu in the New Settings section, click OK, then restart Windows.
 5. Repeat steps 1-3 to reset the Windows swap file.
 6. In the Virtual Memory dialog box, choose Permanent from the Type pop-up menu in the New Settings section, and change the size of the swap file in the New Size text box to a value that equals or approximates the amount of your computer’s installed RAM. When you only have the minimum amount of RAM required to run Photoshop, specify a swap file size of at least 24 MB.
 7. Click OK, then restart Windows.
- N. Ensure there is only one copy of each of the Windows system files (i.e., Win.com, System.ini, and Win.ini) installed on your computer. When multiple copies exist, rename the duplicate Win.com, System.ini, and Win.ini system files (e.g., rename the Win.ini file “Win.old”).
- O. Reduce the size of your system’s Win.ini file to 32K or less by removing unneeded entries, sections, or font lines (e.g., TrueType fonts listed in the [fonts] section, PostScript fonts listed in the [PostScript,LPTx] section).
- P. Set Win32s to load last by editing the System.ini file:
1. Make a backup copy of the System.ini file located in the Windows directory.
 2. Open the original System.ini file in a text editor that can save in text-only format (e.g., Notepad).
 3. In the [386Enh] section, move the following line to the end of the [386Enh] section:

```
device=C:\WINDOWS\SYSTEM\WIN32S\W32S.386
```

4. Save the System.ini file in text-only format, then restart Windows.
- Q. Reduce the amount of memory (RAM) reserved for Photoshop:
1. Choose File > Preferences > Memory & Image Cache.
 2. In the Physical Memory Usage section of the Memory Preferences dialog box, change the Used By Photoshop value to 75%, then click OK.
 3. Restart Photoshop.
- R. Optimize all partitions on your hard disk using the SCANDISK and DEFRAG commands, included with MS-DOS 6.2x and later, or a disk optimization utility (e.g., Norton Utilities).
- S. Create a bootable floppy disk containing the Autoexec.bat and Config.sys files containing only the information necessary to launch Windows and Photoshop. When the Win32s error does not reoccur while running Photoshop after booting from the bootable floppy disk, do one or more of the following:
- A. Determine which line or lines in the Autoexec.bat or Config.sys file is loading software at MS-DOS that is conflicting and causing the Win32s error in Photoshop. To isolate the conflicting line or lines, add each removed line back into the Autoexec.bat or Config.sys file on the bootable floppy disk one at a time, reboot the computer, then attempt to recreate the error in Photoshop. If the Win32s error reappears, the line most recently added is most likely the cause of the conflict. Because more than one line in the Autoexec.bat and Config.sys files may cause a conflict, reboot after adding each additional line to determine all conflicting lines.
 - B. Reduce the number of devices listed in the Autoexec.bat and Config.sys files that are loading in Windows or MS-DOS to increase the amount of memory available to Windows and Photoshop to ensure Windows and Photoshop have sufficient memory to run.
- T. Install an updated version of Win32s (e.g., 1.30 or later), available from Microsoft and included with many Win32s applications.
- U. When running Photoshop in Windows for Workgroups 3.11, disable (i.e., remark out) the “device=c:\windows\ifshlp.sys” line in the Config.sys file:
1. Make a backup copy of the Config.sys file, located in the root directory on your hard disk.
 2. Open the original Config.sys file in a text editor that can save in text-only format (e.g., Windows Write, Notepad).
 3. Disable the “device=c:\windows\ifshlp.sys” line by adding the word “rem” followed by a space at the beginning of the line. For example:

```
rem device=c:\windows\ifshlp.sys
```

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4. Save the Config.sys file in text-only format, then restart Windows.
 - V. Save backup copies of your System.ini and Win.ini files onto a volume other than your startup volume, then reinstall Windows.

OR: Install a second copy of Windows in a new directory to determine if the original copy of Windows is causing the error. For instructions, see Additional Information.

NOTE: After reinstalling Windows, you may need to reinstall your Windows applications. For instructions on deleting and reinstalling Windows, refer to the Windows User Guide or contact Microsoft.

Additional Information

Win32s components enable 32-bit applications (e.g., Photoshop 4.0, Adobe PageMaker 6.0) to run in 16-bit operating systems (e.g., Windows 3.1x, Windows for Workgroups). When the system encounters a conflict or error when running Win32s, the system returns a Win32s error.

When running Win32s-based applications in Win32s, incompatible software (e.g., video driver, mouse driver), conflicting software (e.g., duplicate system files), insufficient memory, or damaged software cause system errors (e.g., Win32s Error) to occur.

The maximum valid size for Windows initialization (*.ini) files (e.g., Win.ini file) is 64K. Applications running in Windows may be unable to read *.ini files when they exceed 32K. When the size of the Win.ini file exceeds 32K or 64K, Windows or applications running in Windows behave unpredictably (e.g., system configuration changes are not implemented, fonts are missing, printer information is missing, application's default information is not saved).

The "Set Temp=" line in your Autoexec.bat file specifies the directory containing your temporary files.

Video drivers using the S3 chip may not be compatible with Win32s-based applications. Contact your video card manufacturer for updated video drivers which are compatible with Win32s.

To install a second copy of Windows in a new directory to determine if the original copy of Windows is causing the error:

1. Create a new directory (e.g., named "Testwin"), then install Windows into the new directory. For instructions on installing Windows, refer to the Microsoft Windows User's Guide.
2. Start Windows from the Testwin directory by exiting to MS-DOS, navigating to the Testwin directory by typing "cd testwin" at the MS-DOS prompt, then typing "win" to launch the new installation of Windows.

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3. Install Photoshop.
 4. Reboot the computer, then start Windows from the Testwin directory. Windows uses the system files located in the newly created directory (e.g., "Testwin") instead of the Windows directory.
 5. Before launching Photoshop, rename the Win.com, System.ini, and Win.ini files located in the Windows directory and its subdirectories (e.g., rename these files "Wincom.old," "System.old," and "Winini.old") to ensure Windows does not use system files located in the original Windows directory and its subdirectories.
 6. Attempt to recreate the Win32s error while running Photoshop by performing the same actions that previously caused the error. When the Win32s errors do not reoccur when running Photoshop in the installed copy of Windows, delete your previously installed Windows system files.

