

Upgrading to Pro Tools 6.4.1

Version 6.4.1 for Pro Tools|24 MIX Systems on Windows

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chapter 1

Introduction

This guide documents how to upgrade to Pro Tools 6.4.1 for Pro Tools|24 MIX systems on Windows.

System Requirements

Pro Tools TDM 6.4.1 can be used with a Pro Tools|24 MIX system on a Digidesign-qualified computer running a Digidesign-qualified version of Windows XP. For complete system requirements visit the Digidesign Web site (www.Digidesign.com/compato).

Compatibility Information

Digidesign can only assure compatibility and provide support for hardware and software it has tested and approved.

For a list of Digidesign-qualified computers, operating systems, hard drives, and third-party devices, refer to the latest compatibility information on the Digidesign Web site (www.digidesign.com/compato).

chapter 2

Installing Pro Tools 6.4.1 on Windows

This chapter explains how to install and configure Pro Tools 6.4.1 for Pro Tools|24 MIX systems on a Digidesign-qualified Windows computer.

For complete system requirements and compatibility information, visit the Digidesign Web site (www.Digidesign.com/compto).

Windows System Settings

Configure your Windows system settings, as follows:

Required Settings These instructions must be followed before installing Pro Tools.

Recommended Configuration These instructions should be followed to optimize your system's capabilities, or to let older computers run Pro Tools.

⚠ *If problems occur after configuring all required and suggested settings, see Appendix A, "Windows System Optimizations" for information on troubleshooting and configuring advanced settings.*

Required Settings

To ensure optimum performance with Pro Tools, configure the following Control Panel settings for your version of Windows XP.

Disable Hyper-Threading

For Pentium IV computers with Hyper-Threading, disable Hyper-Threading in the BIOS.

Enable DMA

Enabling your computer's DMA (Direct Memory Access) frees up CPU bandwidth so your computer can do other Pro Tools tasks.

In most cases the DMA option will already be set correctly, as Windows XP detects and activates DMA mode by default.

Enable DMA for any IDE hard drives:

- 1 Choose Start > Control Panel.
- 2 Launch System.
- 3 Click the Hardware tab.
- 4 Under Device Manager, choose Device Manager.
- 5 In the Device Manager window, double-click IDE ATA/ATAPI controllers, then double-click the Primary IDE Channel for your IDE hard drive.
- 6 Click the Advanced Settings tab.
- 7 For each device, set the Transfer Mode to "DMA if available," and click OK.

In most cases, this will already be set correctly as Windows XP will detect and activate DMA mode by default.

- 8 Repeat steps 5–7 for any additional IDE Channels.

- 9 Close the Computer Management window.

Disable Virus Protection Software

Avoid running virus protection software while using Pro Tools, since it adversely affects system performance (as do all background processes). If you are using virus protection software, you must turn it off or remove it and restart your computer.

Disable System Standby and Power Management

When using Pro Tools, the Windows System Standby power scheme must be set to Always On. This helps prevent long record or playback passes from stopping due to system resources powering down.

To configure Windows Power Management:

- 1 Choose Start > Control Panel.
- 2 Launch Power Options.
- 3 Click the Power Schemes tab.
- 4 From the Power Schemes pop-up menu, select Always On.
- 5 Click OK.

This sets System Standby, System Hibernate, and "Turn off hard disks" to Never.

Disable ClearType Font Smoothing


When using Pro Tools, the Effects "Clear Type" setting must be disabled.

To disable ClearType font smoothing:

- 1 Choose Start > Control Panel.
- 2 Launch Display.
- 3 Click the Appearance tab.

- 4 Click Effects.
- 5 Deselect “Use the following methods to smooth edges of screen fonts.”
- 6 Click OK to save your settings and close the Effects dialog.
- 7 Click OK.

Completing Windows System Settings

 *When finished updating required Windows system settings, power down your computer.*

Recommended Configuration


Pro Tools can be affected by other software and hardware drivers installed on your computer. For best possible performance, it is recommended (but not required) that you:

- Avoid running other Windows programs at the same time as Pro Tools.
- Turn off any software utilities that run in the background, such as Windows Messenger, calendars, and disk maintenance programs.
- Turn off any nonessential USB devices while using Pro Tools.
- If your video display card supports it, enable Bus Mastering in the manufacturer’s Control Panel.
- Disable any networking cards (other than any 1394 “FireWire” cards).


Installing Pro Tools TDM Software

To install Pro Tools software for TDM systems:

- 1 Start Windows, logging in with Administrator privileges. For details on Administrator privileges, refer to your Windows documentation.
- 2 Make sure you have configured all the required Windows system settings for your system, and rebooted your computer. See “Windows System Settings” on page 3 for more information.
- 3 Wait for the Found New Hardware Wizard dialog to appear and leave it open.
- 4 Insert the Pro Tools Installer CD-ROM for Windows in your CD-ROM drive. Locate and open the Pro Tools Installer folder, and double-click the Setup icon.
- 5 Click Next to begin installation.
- 6 Select the install location. For maximum reliability, install Pro Tools on your startup drive. Click Next.
- 7 Select available install options as needed.
- 8 Click Next to install the selected options.


 *A demo version of MacOpener is included on the Pro Tools Installer CD-ROM, and requires a separate installation process. Installing MacOpener is required only if you need to use HFS or HFS+ formatted hard drives. See “Installing MacOpener” on page 7 for more information.*

9 Select your work environment. This loads an initial set of Pro Tools Preferences that include some of the more popular settings for post production, audio, or audio with MIDI.

 *Preference settings can be customized at any time in Pro Tools. See the Pro Tools Reference Guide for more information about Preferences.*

10 Select whether to install the Surround Mixer plug-in. This plug-in is required for mixing, mastering, and monitoring in surround.

- Select “Yes – Monitor in Pro Tools Film Format” if your monitoring is configured for Film Format surround.
- Select “Yes – Monitor in ProControl (DTS Format)” if you are using a ProControl dedicated controller.
- Select “No – Stereo mixing only” if your monitoring is configured for Stereo.

 *The Surround Mixer can be installed at any time in Pro Tools. For instructions, see the Pro Tools Reference Guide.*

11 After making a selection, click Next.

Wait for the installer to finish installing all software components, drivers, and PACE System files before proceeding to the next step.

12 Click Quit when prompted to install QuickTime. If required, you can install QuickTime later (see “Installing QuickTime” on page 6).

13 When installation is complete, click Finish to restart your computer.

Installing QuickTime

(Optional)

QuickTime 6.5 or later is required for Pro Tools if you plan to include movie files in your sessions. QuickTime is available as a free download from the Apple Web site (www.apple.com).

Optional Software on the Pro Tools Installer CD-ROM

Your Pro Tools Installer CD-ROM includes several software options.


Digidesign ASIO Driver 6.4.1

Digidesign ASIO Driver 6.4.1 is a single-client, multichannel sound driver that allows ASIO-compatible programs to record and play back through Digidesign hardware.

ASIO Driver 6.4.1 is automatically installed when you install Pro Tools 6.4.1.

Stand-Alone ASIO Driver Installer

Digidesign ASIO Driver 6.4.1 can be installed on Digidesign-qualified Windows XP systems with Pro Tools 6.4.1 (for example, if the ASIO Driver was uninstalled), or it can be installed as a stand-alone driver on systems that do not have any version of Pro Tools installed.

 *For detailed information on installing and using the Digidesign ASIO Driver, see Appendix B, “Digidesign ASIO Driver (Windows Only).”*


Digidesign WaveDriver 6.4.1

Digidesign WaveDriver 6.4.1 is a single-client, multichannel sound driver that allows WaveDriver compatible programs to play back through Digidesign hardware.

WaveDriver 6.4.1 is automatically installed when you install Pro Tools 6.4.1.

Stand-Alone WaveDriver Installer

Digidesign WaveDriver 6.4.1 can be installed on Digidesign-qualified Windows XP systems with Pro Tools 6.4.1 (for example, if the WaveDriver was uninstalled), or it can be installed as a stand-alone driver on systems that do not have any version of Pro Tools installed.

 For detailed information on installing and using the Digidesign WaveDriver, see Appendix C, “Digidesign WaveDriver (Windows Only).”

Installing the Demo Session


The Pro Tools Installer CD includes a demo session that you can use to verify that your system is working.

To install the demo sessions:


- 1 Insert the Pro Tools Installer CD in your CD-ROM drive.
- 2 From your CD-ROM drive, choose Additional Files\Pro Tools Demo Session Installer.
- 3 Double-click Setup.exe.
- 4 Set the install location to your audio drive and click Install.
- 5 When installation is complete, click OK.


Installing MacOpener

MacOpener 6.0.5 and higher lets you mount HFS/HFS+ drives on a Windows-based Pro Tools system, as a Transfer drive.

 *The MacDrive utility can be used instead of MacOpener. Refer to the MacDrive Web site (www.macdrive.com).*

To share Pro Tools sessions between Macintosh and Windows systems, select the “Enforce Mac/PC Compatibility” option when creating the session, or when saving a session copy to a Windows audio drive formatted using NTFS or FAT32.

 *Avoid using MacOpener on HFS-formatted drives. It is recommended that you use MacOpener on NTFS or FAT32 drives instead. To move material from HFS-formatted drives to NTFS or FAT32 drives, use the Save Session Copy In command in Pro Tools.*

 *While SDII files can be exported or converted on import, they cannot be used within Pro Tools sessions on Windows.*

To install and configure the MacOpener demo included with Pro Tools:


- 1 Insert the Pro Tools Installer CD into your CD-ROM drive.
- 2 Locate and double-click the MacOpener installer file in the MacOpener Demo folder located at D (CD-ROM drive):\Additional Files\MacOpener Demo Installer. Follow the on-screen instructions to install MacOpener. After installation is complete, restart your computer.
- 3 Choose Start > Programs > MacOpener > MacOpener Driver Preferences.


4 Verify that the MacOpener Driver is enabled. Under Driver Settings, select “Enable Mac-opener Driver.”

5 Under Extension Mapping, select “Do not add the PC extension to the Mac file name.”

6 Click OK to quit the MacOpener Driver Preferences.

7 Choose Start > Programs > MacOpener > Mac Lic.exe. When installation is complete, close the installer.

 *All formatting and maintenance of HFS/HFS+ drives should be carried out when the drive is connected to a Macintosh.*

 *For more information about MacOpener and its performance limitations, see the Pro Tools Reference Guide.*

Checking Your Pro Tools System

Before you launch Pro Tools, start your system and run the DigiTest diagnostic application to ensure that all TDM cards in the system are recognized, installed in the proper order, and have valid cable connections.

 *Refer to the Getting Started Guide with MIX Guide for details on starting up your system and running DigiTest.*

Launching Pro Tools

When launching Pro Tools the first time, you are prompted to enter an authorization code to validate your software.

To validate Pro Tools software:

1 Double-click the Pro Tools application, located in the Pro Tools folder inside the Digi-design folder.

2 Enter the authorization code in the dialog, making sure to observe any spaces, then click Validate.

- If you are upgrading from Pro Tools 6.x, you can use your 6.x authorization code.
- If you are upgrading from Pro Tools 5.x, an authorization code is included with the purchase confirmation that is emailed to you.

Your authorization code is located on the inside cover of this guide.

Configuring Pro Tools

You can adjust the performance of your system by changing certain Pro Tools *system settings* that affect its capacity for processing, playback, and recording.

In most cases, the default settings for your system provide optimum performance, but you may want to adjust them to accommodate large or processing-intensive Pro Tools sessions.

Refer to the *Getting Started Guide* that came with your system for instructions on configuring the Number of Voices, Hardware Buffer Size, CPU Usage Limit, the DAE Playback Buffer Size, System Memory Allocation, and other Pro Tools settings.

Removing Pro Tools on Windows XP


If you need to remove Pro Tools from your computer, use the Add or Remove Programs command.

To remove Pro Tools from your computer:

- 1 Choose Start > Control Panel.
- 2 Launch Add or Remove Programs.
- 3 From the Currently Installed Programs list, select Digidesign Pro Tools TDM.
- 4 Click the Change/Remove button.
- 5 Follow the onscreen instructions to remove Pro Tools.

Windows System Optimizations

When installing Pro Tools on Windows XP, there are many system variables that affect performance. If you have followed all the Windows configuration instructions in Chapter 2, “Installing Pro Tools 6.4.1 on Windows” and are still experiencing problems, try the following troubleshooting suggestions.

 *Norton Ghost is highly recommended, as it lets you save your system in a working state and easily revert to that state should you accidentally disable anything that your computer needs.*

Troubleshooting

Blue Screen at Startup

If, after installing Pro Tools and QuickTime, your computer crashes with a blue screen, do the following:

- Use Add/Remove Programs to uninstall Pro Tools.
- Use Add/Remove Programs to uninstall QuickTime.
- Repeat the installation instructions in Chapter 2, “Installing Pro Tools 6.4.1 on Windows.”

Advanced Settings

The following system optimizations may help Pro Tools perform better on some systems. It is recommended that you only try these optimizations if necessary, as they may disable or adversely affect the functionality of other programs on your system.

Disabling Network Cards

If applicable, disable any networking cards (other than a 1394 “FireWire” card that you might use to connect an external drive to your system).

To disable a network card:

- 1 Right-click My Computer and choose Manage.
- 2 Under System Tools, select Device Manager.
- 3 In the Device Manager window, double-click Network adapters, then double-click the Network Adapter card you want to disable.
- 4 Under the General tab, choose “Do not use this device (disable)” from the Device Usage pop-up menu, and click OK.
- 5 Close the Computer Management window.

Processor Scheduling

To Adjust Processor Scheduling Performance:

- 1 Choose Start > Control Panel.
- 2 Launch System.
- 3 Click the Advanced tab.
- 4 Under the Performance section, click the Settings button.
- 5 Select the Advanced tab.
- 6 Under the Processor scheduling section, select the “Adjust for best performance of background services” option.
- 7 Under the Memory Usage section, select the System cache option.
- 8 Click OK twice. You will need to restart your computer for the changes to take effect.

Startup Items

The fewer items in use by your computer, the more resources are available for Pro Tools. Some startup applications may be consuming unnecessary CPU resources, and should be turned off.

Be very careful when disabling startup items, including (but not limited to) the following:

- Portable media serial number (required for applications that utilize a copy protection key)
- Plug and play
- Event log
- Cryptographic services
- DHCP Client, TCP/IP Net BIOS, and other networking-related items (unless the computer has no network or internet connection, in which case these items can be disabled)



Norton Ghost is highly recommended, as it lets you save your system in a working state and easily revert to that state should you accidentally disable anything that your computer needs.

To Disable System Startup Items:


- 1 From the Start menu, choose Run.
- 2 Type “msconfig” and click OK. the System Configuration Utility opens.
- 3 Under the General tab, chose Selective Startup.
- 4 Deselect Load Startup Items and click OK.
- 5 Click Restart to restart the computer.
- 6 After restarting your computer, a System Configuration message dialog is displayed. Check to see if Pro Tools performance has increased before you deselect the “don't show this message again” option. If performance has not changed, run “msconfig” and return your computer Selective Startup back to Normal Startup. Alternatively, try disabling start up items and non-essential processes individually.


appendix b

Digidesign ASIO Driver (Windows Only)

Introduction

The Digidesign ASIO Driver is a multichannel, multimedia sound driver that allows third-party audio programs that support the ASIO standard to record and play back through Digidesign hardware.

 *The ASIO Driver is not multi-client. Only one application at a time can use the ASIO Driver. Be sure to disable the Windows system sounds. It is also recommended that you use a separate sound card for games or other general work.*

 *Check the Digidesign Web site (www.digidesign.com) for the latest third-party drivers for Pro Tools hardware, as well as current known issues.*

Full-duplex playback of 24- and 16-bit audio are supported at sample rates up to 96 kHz, depending on the Digidesign hardware and ASIO Driver program used.

The Digidesign ASIO Driver will provide up to 18 channels of input and output, depending on your Pro Tools hardware:

- Up to 16 channels of input and output with Pro Tools|24 MIX
- Up to 8 channels of input and output with Pro Tools|HD
- Up to 18 channels of input and output with Digi 002 and Digi 002 Rack
- Up to 2 channels of input and output with Mbox

Compatible Software

For a list of ASIO Driver-compatible software, see the compatibility documents available on the Digidesign Web site (www.digidesign.com/compto).

Installing the ASIO Driver

The ASIO Driver is installed by default when you install Pro Tools.

Removing the ASIO Driver

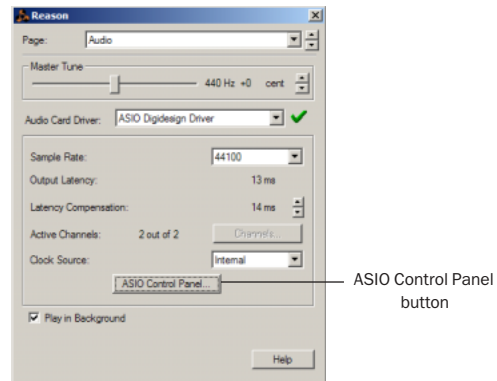
If you need to remove the ASIO Driver from your computer, complete the following steps.

To remove the ASIO Driver:

- 1 Choose Start > Control Panel.
- 2 Double-click the Add or Remove Programs icon.
- 3 From the Currently installed programs list, select Digidesign Pro Tools.
- 4 Click the Change/Remove button.
- 5 Modify your installation by unchecking the Digidesign ASIO Driver option only.

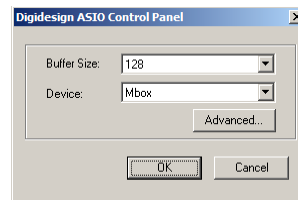
Changing ASIO Driver Settings

Changing ASIO Driver settings is done in your third party ASIO program. Refer to the documentation that came with your software program. For example, with Propellerhead Reason, click on the ASIO Control Panel button (shown below).



Setup Example, using Propellerhead Reason

ASIO Driver Control Panel



Digidesign ASIO Control Panel

The Digidesign ASIO Driver Control Panel cannot be accessed under the following circumstances:

- When Pro Tools is running.
- When playing or recording in an audio program that does not support the ASIO Driver.
- When using a third-party audio program that has an option to keep the ASIO Driver “open” even when you are not playing or recording. (You must close the audio program before you can open the ASIO Driver Control Panel.)

Buffer Size Control

When you play a file from a client audio program, the client program divides the file into buffers and sends each of these to the ASIO Driver. The ASIO Driver copies the client program’s buffers to your Digidesign hardware’s own buffers in a double-buffering scheme. The Buffer Size control in this dialog allows you to set the size of each of the two buffers the ASIO Driver uses on Digidesign hardware. You may select from the following buffer sizes:

- 128 samples
- 256 samples
- 512 samples
- 1024 samples
- 2048 samples

Small buffers have the advantage of low latency in the record monitor path. Larger buffers have the advantage of making the ASIO Driver more immune to audio dropouts during playback and recording.

In some third-party audio programs, performing various tasks such as maximizing or minimizing windows will interrupt the ASIO Driver and create glitches in the audio. Choosing medium or large buffers (such as 256–1024) can help alleviate this problem.

Changing the Buffer Size for the ASIO Driver does not affect the H/W Buffer Size settings in the Pro Tools Playback Engine dialog.

Device

The Device Type will always be set to your installed Pro Tools hardware.

Advanced Button

The Advanced button opens the Hardware Setup dialog for your Digidesign system.

Digidesign WaveDriver (Windows Only)

Introduction

The Digidesign WaveDriver is a multichannel, multimedia sound driver that allows third-party audio programs that support the WaveDriver standard to play back through Digidesign hardware.



Check the Digidesign Web site (www.digidesign.com) for the latest third-party drivers for Pro Tools hardware, as well as current known issues.



The WaveDriver is not multi-client. Only one application at a time can use the WaveDriver. Be sure to disable the Windows system sounds. It is also recommended that you use a separate sound card for games or other general work. For third-party soft-synthesizer and samplers, use the Digidesign ASIO Driver (refer to the ASIO Driver Usage Guide).

Playback of 24- and 16-bit audio is supported at sample rates supported by the hardware and WaveDriver program used.

The Digidesign WaveDriver will provide up to 18 channels of output, depending on your Pro Tools hardware:

- Up to 16 channels of input and output with Pro Tools|24 MIX
- Up to 8 channels of output with Pro Tools|HD
- Up to 18 channels of output with Digi 002 and Digi 002 Rack
- Up to 2 channels of output with Mbox

Compatible Software

For a list of WaveDriver-compatible software, see the compatibility documents available on the Digidesign Web site (www.digidesign.com/compto).

Installing the WaveDriver

The WaveDriver is installed by default when you install Pro Tools.

Removing the WaveDriver

If you need to remove the WaveDriver from your computer, complete the following steps.

To remove the WaveDriver:

- 1 Choose Start > Control Panel.
- 2 Launch the Add or Remove Programs icon.
- 3 From the Currently installed programs list, select Digidesign WaveDriver.
- 4 Click the Change/Remove button.
- 5 Click OK to remove the WaveDriver.

Configuring WaveDriver for QuickTime Player (Required for Using iTunes)

In order to let Digidesign hardware play back through iTunes for Windows, you must configure WaveDriver in the waveOut option of the QuickTime Player SoundOut settings to waveOut.

To configure WaveDriver as the iTunes default device:

- 1 Close all WaveDriver third-party applications (including iTunes).
- 2 Choose Start > Programs > QuickTime > QuickTime Player.
- 3 In QuickTime Player, choose Edit > Preferences > QuickTime Preferences.
- 4 From the pop-up menu, choose Sound Out.

5 From the Choose a device for playback pop-up menu, select the waveOut option (and the name of your Digidesign device, if any).

6 Close QuickTime Player.

7 Re-launch iTunes.

Configuring WaveDriver for Windows Media Player and Other Third-Party WaveDriver Programs

WaveDriver is configured in the Sounds and Audio Devices Control Panel (for programs that use the Windows Sound Playback Default Device, such as Windows Media Player), or as a preference for third-party WaveDriver programs (such as Sound Forge).

To configure WaveDriver as the Windows Sound Playback Default Device (for example, for Windows Media Player):

- 1 Open the Sounds and Audio Devices Control Panel.
- 2 Click the Audio tab.
- 3 Select the Digidesign audio interface in the Sound Playback default device lists.
- 4 Close the Control Panel. When you run Windows Media Player, it automatically output to your Digidesign hardware.

To configure WaveDriver for a third party WaveDriver application:

- In the third-party program, select the Digidesign audio interface as the preference for your playback hardware. Refer to your program's documentation.