

# Upgrading to Pro Tools 6.1

**Version 6.1 for TDM or LE Systems  
on Windows XP and Mac OS X**

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**digidesign**

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# contents

<b>Chapter 1. Installing Pro Tools 6.1 on Windows</b> . . . . .	1
<b>Windows System Settings</b> . . . . .	1
Required Settings . . . . .	1
Recommended Configuration . . . . .	3
<b>Installing Pro Tools LE</b> . . . . .	3
<b>Installing Pro Tools TDM Software</b> . . . . .	4
<b>Installing Optional Software for Pro Tools LE and Pro Tools TDM</b> . . . . .	5
Installing the Digidesign ASIO Driver . . . . .	5
Installing the Demo Session . . . . .	5
Installing MacOpener . . . . .	5
<b>Launching Pro Tools</b> . . . . .	6
<b>Configuring Pro Tools</b> . . . . .	6
<b>Removing Pro Tools on Windows XP</b> . . . . .	7
<b>Chapter 2. Installing Pro Tools 6.1 on Macintosh</b> . . . . .	9
<b>Apple System Settings for Mac OS X</b> . . . . .	9
<b>Installing Pro Tools LE</b> . . . . .	10
<b>Installing Pro Tools TDM</b> . . . . .	10
<b>Removing Pro Tools on Mac OS X</b> . . . . .	11
<b>Installing Optional Software for Pro Tools LE and Pro Tools TDM</b> . . . . .	11
Installing the Demo Session . . . . .	11
<b>Launching Pro Tools</b> . . . . .	12
<b>Configuring Pro Tools</b> . . . . .	12

- Appendix A. Windows System Optimizations** ..... 13
  - Troubleshooting ..... 13
  - Advanced Settings ..... 13
  
- Appendix B. Digidesign ASIO Driver (Windows Only)** ..... 15
  - Introduction ..... 15
  - Compatible Software ..... 15
  - Installing the ASIO Driver ..... 15
  - Changing ASIO Driver Settings ..... 16
    - ASIO Driver Control Panel ..... 16
  
- Appendix C. Configuring AMS** ..... 19

## chapter 1

# Installing Pro Tools 6.1 on Windows

This chapter explains how to install and configure Pro Tools 6.1 for LE and TDM on a Digidesign-qualified Windows computer.

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

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## Windows System Settings

Configure your Window system settings, as follows:

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

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

**▲** *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 LE, 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 Right-click My Computer and choose Manage.
- 2 In Classic view, choose Start > Control Panel > System > Hardware.

– or –

In Category view, choose Start > Control panel > Performance and Maintenance > System > Hardware.

- 3 Under System Tools, choose Device Manager.
- 4 In the Device Manager window, double-click IDE ATA/ATAPI controllers, then double-click the Primary IDE Channel for your IDE hard drive.
- 5 Click the Advanced Settings tab.

**6** 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.

**7** Repeat steps 4–6 for any additional IDE Channels.

**8** 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** In Classic View, double-click the Power Options Control Panel, then click the Power Schemes tab.

– or –

In Category view, click Performance and Maintenance, then click Power Options, then click the Power Scheme tab.

**3** From the Power Schemes pop-up menu, select Always On.

**4** 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** In Classic view, double-click Display.

– or –

In Category view, click Appearance and Themes, then click 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 LE can also 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 LE.
- 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" card that you might use to connect an external drive to your system).

 For information on disabling networking cards, see "Disabling Network Cards" on page 13.

---

## Installing Pro Tools LE

### Digi 002, Digi 001, Mbox, and Audiomedia III

#### To install Pro Tools LE on Windows:


- 1 Make sure you have configured all the required Windows system settings, and rebooted your computer. See "Windows System Settings" on page 1 for more information.
- 2 Start up Windows, logging in with Administrator privileges. If you do not have Administrator privileges or do not know how to set them up, see your Windows User's Guide.

- 3 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.

- 4 When the installer opens, click Next to proceed.

- 5 Select available install options as needed:

- 6 Click Next to install the selected option. Files are installed to the Digidesign folder inside the Program Files folder.

 *If you get a warning dialog about the driver not passing Windows Logo testing, click Continue Anyway.*

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

- 8 Click Quit when prompted to install QuickTime (you will install QuickTime later).

- 9 Reboot your computer.

## Installing QuickTime


### (Optional)

QuickTime 5 or later is required for Pro Tools LE if you plan to include movie files in your sessions. Installing the latest version of QuickTime for Windows is highly recommended (available from [www.apple.com](http://www.apple.com)). Be sure to install the "Recommended" install of QuickTime or Pro Tools will not handle QuickTime video correctly.

#### To install QuickTime:

- 1 Locate the QuickTime Installer on your Pro Tools LE Installer CD-ROM (located in the Additional Files folder). Follow the on-screen instructions to complete the QuickTime installation process.

**2** When installation is complete, click Finish to restart your computer. See “Installing Optional Software for Pro Tools LE and Pro Tools TDM” on page 5.

 *If your computer does not startup after installing QuickTime, use Add/Remove Programs to remove Pro Tools LE and QuickTime, then repeat the installation process for Pro Tools LE 6.1.*

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## Installing Pro Tools TDM Software

### Pro Tools|HD, Pro Tools|24 MIX, and Pro Tools|24


#### 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 1 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 5 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** Click Next.

**11** Select whether to install the Surround Mixer plug-in (Pro Tools|HD and Pro Tools|24 MIX systems only). 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.

 *If you choose to not install the Surround mixers at this time, know that you can do so at any time in the future to enable multi-channel surround mixing features.*

**12** 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.



**13** If QuickTime is not already installed, you will be prompted to install the Recommended QuickTime installer option (see “Installing QuickTime” on page 3). Follow the on-screen instructions to complete the QuickTime installation process.

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


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## Installing Optional Software for Pro Tools LE and Pro Tools TDM

Your Pro Tools Installer CD-ROM includes several software options (as available for your system).

### Installing the Digidesign ASIO Driver

The Digidesign ASIO (Audio Sound Input Output) Driver is a multichannel, multimedia sound driver that allows third-party audio applications to record and play back through channels 1–2 of Pro Tools. The Digidesign ASIO Driver is *not* required to use Pro Tools.

 *Do not install the ASIO driver if using the Digidesign WaveDriver. Check the Digidesign Web site ([www.digidesign.com](http://www.digidesign.com)) for the latest drivers for Pro Tools LE hardware, as well as current known issues.*

 *For detailed information on installing, using, and removing the Digidesign ASIO Driver, see Appendix B, “Digidesign ASIO Driver (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. Double-click Setup.exe, located in D (CD-ROM drive):\Additional Files\Pro Tools LE Demo Session Installer.
- 2** Set the install location to your audio drive and click Install.
- 3** When installation is complete, click OK.


## Installing MacOpener

### (Optional)

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


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 NTFS or FAT32 instead). Use the Save Session Copy In command in Pro Tools to copy the session material to a Windows audio drive formatted using NTFS or FAT32.*

 *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 MacOpener 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.*

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

Your authorization code is located on the inside cover of this *Upgrading to Pro Tools 6.1 Guide*.

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## 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.

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

**Pro Tools TDM** 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.

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## 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 6.1 from your computer:

- 1 Choose Start > Control Panel.
- 2 In Classic view, double-click the Add or Remove Programs icon.

– or –

In Category view, click Administrative Tools, then click Add or Remove Programs.

- 3 From the Currently Installed Programs list, select Digidesign Pro Tools LE, or Digidesign Pro Tools TDM, as appropriate.
- 4 Click the Change/Remove button.
- 5 Select Remove, and then click Next.
- 6 Click OK to remove Pro Tools.



## chapter 2

# Installing Pro Tools 6.1 on Macintosh

This chapter explains how to install and configure Pro Tools 6.1 LE and TDM on a Digidesign-qualified Macintosh computer.

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

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### Apple System Settings for Mac OS X

To ensure optimum performance and compatibility, configure the following settings for Mac OS X before you install Pro Tools software.

**⚠** *Do not use the Mac OS X automatic Software Update feature, as it may upgrade your system to a version of Mac OS that has not yet been qualified for Pro Tools. For details on qualified versions of Mac OS, refer to the latest compatibility information on the Digidesign Web site ([www.digidesign.com](http://www.digidesign.com)).*

#### To configure Mac OS X for Pro Tools:

- 1 Turn on your computer.
- 2 Make sure you are logged into an administrator account where you want to install Pro Tools. For details on Administrator privileges in Mac OS X, refer to your Apple OS X documentation.
- 3 Choose System Preferences from the Apple Menu and click Energy Saver.
- 4 Click the Sleep tab and turn off the Energy Saver feature by setting the sleep feature to Never.
- 5 Return to the System Preferences and click Software Update.
- 6 Deselect “Automatically check for updates when you have a network connection.”
- 7 Close the Software Update dialog box.

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## Installing Pro Tools LE

Digi 002, Digi 001, Mbox, and Audiomedia III

### To install Pro Tools LE on Mac OS X:

- 1 Make sure you are logged in as an Administrator for the account where you want to install Pro Tools. For details on Administrator privileges in Mac OS X, refer to your Apple OS X documentation.
- 2 Insert the Pro Tools LE 6.1 Installer CD-ROM in your CD-ROM drive. Double-click “Install Pro Tools LE.”
  - or –
  - If you downloaded the Pro Tools 6.1 Update from our Web site, follow the instructions provided with it to expand and launch the installer.
- 3 Enter your Administrator password and click OK to authenticate the installation.
- 4 In the installer window, select the version of Pro Tools LE for your system.
- 5 Make sure the Install Location is on your Startup hard drive.
- 6 Click Install.
- 7 When installation is complete, click Restart.

If you plan to use any MIDI devices with Pro Tools, configure your MIDI setup with the Apple Audio MIDI Setup (AMS) utility. See Appendix C, “Configuring AMS” for details.

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## Installing Pro Tools TDM

Pro Tools|HD, Pro Tools|24 MIX, and Pro Tools|24

### To install Pro Tools TDM on Mac OS X:

- 1 Make sure you are logged in as an Administrator for the account where you want to install Pro Tools. For details on Administrator privileges in Mac OS X, refer to your Apple OS X documentation.
- 2 Insert the Pro Tools 6.1 Installer CD-ROM in your CD-ROM drive. Double-click “Install Pro Tools.”
  - or –
  - If you downloaded the Pro Tools 6.1 Update from our Web site, follow the instructions provided with it to expand and launch the installer.
- 3 Enter your Administrator password and click OK to authenticate the installation.
- 4 Make sure the Install Location is on your Startup hard drive.
- 5 Click Install.
- 6 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.*

**7** Select whether to install the Surround Mixer plug-in (Pro Tools|HD and Pro Tool24 MIX systems only). This plug-in is required for mixing, mastering, and monitoring in surround:

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



*If you choose to not install the Surround mixers at this time, know that you can do so at any time in the future to enable multi-channel surround mixing features.*

**8** Click Continue.

**9** When installation is complete, click Restart.

Be sure to restart your computer before continuing.

If you plan to use any MIDI devices with Pro Tools, configure your MIDI setup with the Apple Audio MIDI Setup (AMS) utility. See Appendix C, “Configuring AMS” for details.

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## Removing Pro Tools on Mac OS X

If you need to remove Pro Tools from your computer, you can use the Installer CD-ROM or the downloaded Installer file.

**To remove Pro Tools 6.1 from your computer:**

**1** Make sure you are logged in as an Administrator for the account where Pro Tools LE is installed. For details on Administrator privileges in Mac OS X, refer to your Apple OS X documentation.

**2** Insert the Pro Tools LE 6.1 Installer CD-ROM in your CD-ROM drive. Double-click “Install Pro Tools LE.”

**3** Enter your Administrator password and click OK to authenticate the installation.

**4** In the Installer window, choose Uninstall from the pop-up menu, and click Uninstall.

**5** Click Quit to close the Installer window.

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## Installing Optional Software for Pro Tools LE and Pro Tools TDM

Your Pro Tools Installer CD-ROM includes a demo session plus several software options (as available for your system).

### Installing the Demo Session

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

**To install the demo session:**

**1** Insert the Pro Tools Installer CD in your CD-ROM drive. Locate and double-click the demo session installer icon.

**2** Select the demo session you want to install. If using Pro Tools LE, select your hardware type (Digi 002, Digi 001, Mbox, or Audiomedia III).

**3** Set the install location to your audio drive, and click Install.

**4** When installation is complete, click Quit.

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## Launching Pro Tools

When launching Pro Tools 6.1 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 Digidesign folder.

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

The authorization code is located on the inside cover of this *Upgrading to Pro Tools 6.1* guide.

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## Configuring Pro Tools

Pro Tools lets you adjust the performance of your system by changing *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.


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

**Pro Tools TDM** 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.



# 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 1, “Installing Pro Tools 6.1 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, use Add/Remove Programs to uninstall Pro Tools and QuickTime. Then, repeat the installation instructions in Chapter 1, “Installing Pro Tools 6.1 on Windows.”

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## 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 In Classic View, click System.

– or –

In Category View, click Performance and Maintenance, then click 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)

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## 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 Pro Tools hardware.



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

Full-duplex recording and playback of 24- and 16-bit audio are supported at sample rates supported by the hardware and ASIO program used.

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## Compatible Software

For a list of ASIO Driver-compatible software, see the compatibility documents available on the Digidesign Web site:

[www.digidesign.com/compato](http://www.digidesign.com/compato)

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## Installing the ASIO Driver

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

## Removing the ASIO Driver

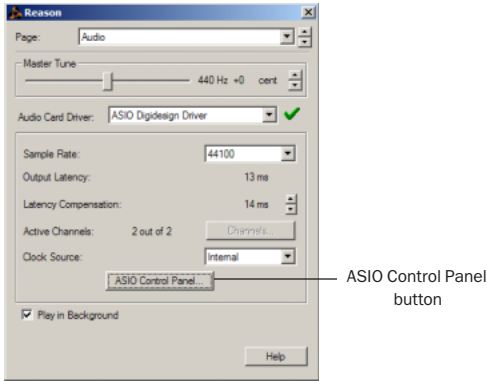
If you need to remove the ASIO Driver from your computer, complete the following steps.

### 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 your version of Pro Tools.
- 4 Click the Change/Remove button.
- 5 Modify your installation by unchecking the Digidesign ASIO Driver option only.

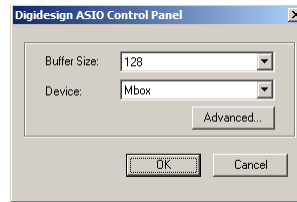
## Changing ASIO Driver Settings

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.



## appendix c

# Configuring AMS

Pro Tools 6.1 recognizes the ports on your MIDI interface as generic ports. With Mac OS X, you use Apple's Audio MIDI Setup (AMS) utility to identify external MIDI devices connected to your MIDI interface and configure your MIDI studio for use with Pro Tools.

### To configure your MIDI studio in AMS:

1 Launch Audio MIDI Setup (located in Applications/Utilities).

– or –

In Pro Tools, choose Setups > Edit MIDI Studio Setup.

2 Click the MIDI Devices tab. AMS scans your system for connected MIDI interfaces. If your MIDI interface is properly connected, it appears in the window with each of its ports numbered.

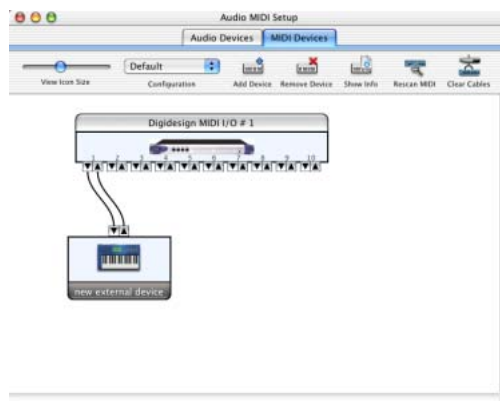


Audio MIDI Setup (MIDI Devices tab)

3 For any MIDI devices connected to the MIDI interface, click Add Device. A new external device icon with the default MIDI keyboard image will appear.


4 Drag the new device icon to a convenient location within the window.

5 Connect the MIDI device to the MIDI interface by clicking the arrow for the appropriate output port of the device and dragging a connection or “cable” to the input arrow of the corresponding port of the MIDI interface.



Making MIDI input and output connections

6 Click the arrow for the appropriate input port of the device and drag a cable to the output arrow of the corresponding port of the MIDI interface.

 To remove a connection, select the cable and press Delete. To delete all connections, click Clear Cables.

7 Repeat steps 3–6 for each MIDI device in your MIDI setup.

### To configure an external MIDI device:

1 Select the external device icon and click Show Info (or double-click the new device icon).




External Device Icon

2 Select a manufacturer and model for the new device from the corresponding pop-up menus. (If the Manufacturer and Model pop-up menus do not provide a name for your particular device, you can type a name.)

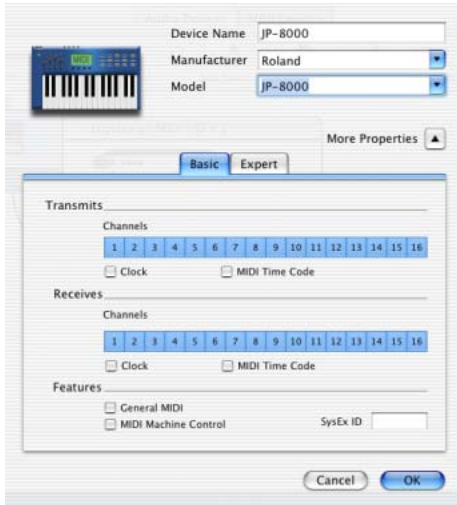


Naming a new MIDI device

 AMS refers to one or more files with the suffix “.middev” in the directory Root/Library/Audio/MIDI Devices for Manufacturer and Model names. Pro Tools installs two such files that contain information for many commercially available MIDI devices, “Legacy Devices.middev” and “Digidesign Devices.middev.” If the Manufacturer or Model names for any of your external MIDI devices are not available in the AMS Manufacturer and Model pop-up menus, you can add them by editing any of the current .middev files in any text editor (such as TextEdit).



**3** Click the More Properties arrow to expand the dialog, then enable the appropriate MIDI channels (1–16) for the Transmits and Receives options. (These determine which channels the device will use to send and receive MIDI.)




**Enabling MIDI channels**

**4** Click the device image. The window expands to show images for various MIDI devices (such as keyboards, modules, interfaces, and mixers). Select an icon for your device.



**Selecting a device icon**

 To use your own custom icons, you can place TIFF image files in /Library/Audio/MIDI Devices/Generic/Images, and they will appear as choices in the AMS device window.

**5** Click OK.

The device names you enter appear as MIDI input and output choices in Pro Tools.