

# Windows Audio Drivers Guide

Version 7.3



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PN 9329-56003-00 REV A 1/07

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# Part I: Windows Audio Drivers




## chapter 1


# Introduction

The Digidesign ASIO Driver and WaveDriver Windows System Audio Driver let you use your Digidesign hardware interface with third-party applications that support the ASIO Driver or WaveDriver MME (Multimedia Extension).

The following Pro Tools system interfaces are supported:


- Pro Tools|HD
- Digi 002
- Digi 002 Rack
- Mbox 2
- Mbox 2 Mini
- Mbox

 For Mbox 2 Pro systems, refer to Part 2.

 For specifications and configuration information specific to each driver, see Chapter 2, “Digidesign ASIO Driver” and Chapter 3, “WaveDriver Windows System Audio Driver.”

## Installation

The Digidesign ASIO Driver and WaveDriver for your Digidesign hardware are automatically installed when you install Pro Tools.

 For complete instructions on installing Pro Tools, see the Getting Started Guide for your Pro Tools system.

## Standalone Digidesign Windows Audio Drivers

Digidesign Windows Audio Drivers can be installed on Windows systems that do not have Pro Tools installed. Use the standalone version of the Digidesign Windows Audio Drivers installer (Digidesign Audio Drivers Setup.exe), which is available on the Pro Tools Installer disc.

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## **System Requirements**

This version of the Digidesign ASIO Driver and WaveDriver can be used on Digidesign-qualified Pro Tools systems running on a Digidesign-qualified version of Windows XP.

For complete system requirements, visit the Digidesign website ([www.digidesign.com](http://www.digidesign.com)).

### **Compatibility Information**

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

For a list of Digidesign hardware systems, Digidesign-qualified computers, operating systems, and devices, and Digidesign-qualified third-party ASIO-compatible or WaveDriver-compatible programs, refer to the Digidesign website ([www.digidesign.com](http://www.digidesign.com)).



# Digidesign ASIO Driver

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## Digidesign ASIO Driver Capabilities

The Digidesign ASIO Driver is a single-client, multichannel sound driver that allows third-party audio programs that support the ASIO Driver standard to record and play back through Digidesign-qualified Pro Tools audio interfaces.

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

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

- Up to 8 channels of I/O with Pro Tools|HD systems
- Up to 18 channels of I/O with Digi 002 and Digi 002 Rack
- Up to 4 channels of input and 2 channels of output Mbox 2
- Up to 2 channels of I/O with Mbox 2 Mini or Mbox



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

## Limitations of the Digidesign ASIO Driver

- ◆ The ASIO Driver cannot be used with multiple applications at the same time. 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.

## ASIO Driver Control Panel

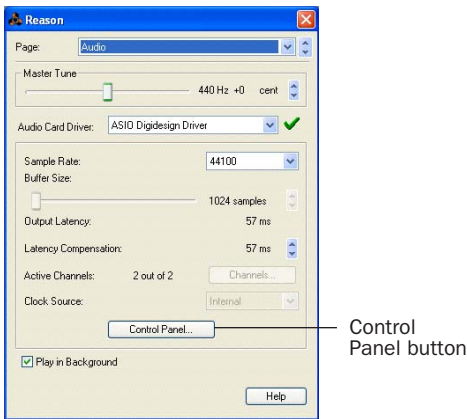
Configuring ASIO Driver settings can be done using the Digidesign ASIO Control Panel, which is accessed within some third-party ASIO-compatible client applications.

### Accessing the Digidesign ASIO Driver Control Panel

To access the Digidesign ASIO Driver Control Panel from a third-party application:

- Refer to your program's documentation.

For example, with Propellerhead Reason, click the Control Panel button.



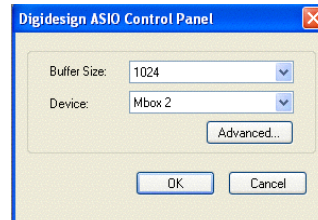
Setup Example, using Propellerhead Reason

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.)

### Using the ASIO Driver Control Panel

From the ASIO Driver Control Panel, you can change the Buffer Size setting or access the Hardware Setup dialog for your Digidesign hardware.



Digidesign ASIO Control Panel

## Buffer Size

You may select from the following buffer sizes (depending on your Digidesign hardware):

- 128 samples
  - 256 samples
  - 512 samples
  - 1024 samples
  - 2048 samples
- ◆ Small buffers have the advantage of low latency in the record monitor path. (Latency is the time delay between a signal entering the audio inputs and leaving the outputs during recording.)
- ◆ Larger buffers have the advantage of making the Digidesign ASIO Driver more immune to audio dropouts during playback and recording.

In some ASIO-compatible audio programs, performing various tasks will interrupt the ASIO Driver and may result in clicks and pops in audio playback or recording. Choosing medium or large buffers (such as 256, 512, or 1024) can help alleviate this problem.

Changing the Buffer Size for the Digidesign 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 the Digidesign hardware that you are using.



*For more information on the Hardware Setup dialog, refer to your Getting Started Guide or the Pro Tools Reference Guide.*



# WaveDriver Windows System Audio Driver

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## WaveDriver Capabilities

The Digidesign WaveDriver Windows System Audio Driver is a single-client, multichannel sound driver that allows third-party audio programs that support the WaveDriver MME (Multimedia Extensions) standard to play back through Digidesign-qualified Pro Tools audio interfaces.

Playback of 24- and 16-bit audio are supported at sample rates up to 48 kHz, depending on your Digidesign hardware and WaveDriver client application.

The Digidesign WaveDriver provides 2 channels of output on all systems.

The following Pro Tools system interfaces can be used with the Digidesign WaveDriver Window System Audio Driver:

- Pro Tools|HD
- Digi 002
- Digi 002 Rack
- Mbox 2
- Mbox 2 Mini
- Mbox

## WaveDriver Limitations

WaveDriver is not multi-client. Only one application at a time can use the WaveDriver. It is also recommended that you use a separate sound card for games or other general work. For third-party software synthesizers and samplers, or for any applications requiring full duplex input and output use the Digidesign ASIO Driver (refer to Chapter 2, “Digidesign ASIO Driver”).



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

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## Configuring WaveDriver for QuickTime Player

(Required for Using iTunes)

In order to let iTunes for Windows play back through Digidesign hardware, you must select the waveOut option in the QuickTime Player Audio settings.

**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 In the QuickTime Settings window, click the Audio Tab.
- 5 Select the “Safe mode (waveOut only)” option, and click Apply.
- 6 Click OK to close the QuickTime Settings window.
- 7 Exit QuickTime Player.
- 8 Re-launch iTunes.

 You may also need to add iTunes to the WaveDriver Application Access list. See “Adding Third Party Applications to the Application Access List” on page 11.

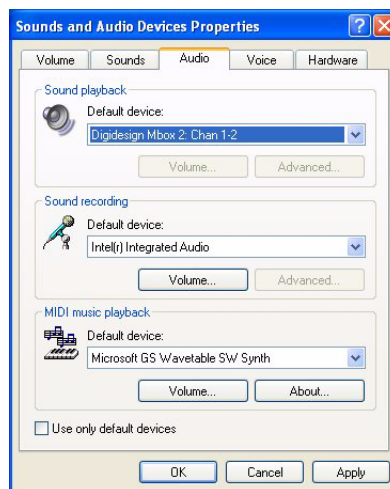
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## Configuring WaveDriver for Windows Media Player and Other Third-Party WaveDriver Programs

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 in third-party WaveDriver client applications.

**To configure WaveDriver as the Windows Sound Playback Default Device:**


- 1 Choose Start > Control Panel.
- 2 Double-click Sounds and Audio Devices.



**Sounds and Audio Devices Control Panel**

- 3 Click the Audio tab.
- 4 Select the Digidesign hardware in the Sound Playback default device lists.
- 5 Close the Control Panel.

When you run Windows Media Player, it automatically outputs to your Digidesign hardware.

 *You may also need to add your third party WaveDriver application to the WaveDriver Application Access list. See “Adding Third Party Applications to the Application Access List” on page 11.*

**To configure WaveDriver for a third party WaveDriver application:**


- In the third-party application, select the Digidesign hardware as the preference for your playback hardware. For details on setting this preference, refer to your program’s documentation.

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## **Adding Third Party Applications to the Application Access List**

The Digidesign WaveDriver uses an Application Access list to control third party application access to the Digidesign hardware. Some third party audio applications may not work with the WaveDriver unless they are included in this list.

For the latest instructions for adding and removing applications to the WaveDriver Application Access list, refer to the Digidesign website (<http://answerbase.digidesign.com/detail.cfm?DID=27424>).

 *Modifying the Digidesign WaveDriver Application Access list requires editing the Windows System Registry. Because editing the Windows Registry can result in problems if not done correctly, make sure to carefully follow the instructions for adding and removing applications.*





# **Part 2: Mbox 2 Pro Audio Drivers**




## chapter 4

# Introduction


The Digidesign® ASIO Driver and DirectSound Driver let you use your Digidesign Mbox® 2 Pro hardware interface with third-party applications that support the ASIO Driver or DirectSound Driver standard.

This chapter provides information on the Mbox 2 Pro Control Panel, which can be used to configure either Mbox 2 Pro driver.

 *For specifications and additional configuration information specific to each Mbox 2 Pro driver, see Chapter 2, “Digidesign ASIO Driver” and Chapter 6, “DirectSound Windows System Audio Driver.”*

## Installation

The Digidesign ASIO Driver and DirectSound Driver for Mbox 2 Pro are automatically installed when you install Pro Tools.

 *For complete instructions on installing Pro Tools, see the Getting Started Guide for your Pro Tools system.*

## Standalone Digidesign Windows Audio Drivers

Digidesign Windows Audio Drivers can be installed on Windows systems that do not have Pro Tools installed. Use the standalone version of the Digidesign Windows Audio Drivers installer (Digidesign Audio Drivers Setup.exe), which is available on the Pro Tools Installer disc.

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## System Requirements

This version of the Digidesign ASIO Driver and DirectSound Driver can be used on Digidesign-qualified Pro Tools systems running on a Digidesign-qualified version of Windows XP.

For complete system requirements, visit the Digidesign website ([www.digidesign.com](http://www.digidesign.com)).

### Compatibility Information


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

For a list of Digidesign hardware systems, Digidesign-qualified computers, operating systems, and devices, and Digidesign-qualified third-party ASIO-compatible or DirectSound-compatible programs, refer to the Digidesign website ([www.digidesign.com](http://www.digidesign.com)).

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## Mbox 2 Pro Driver Control Panel

Configuring ASIO Driver or DirectSound settings can be done using the Mbox 2 Control Panel, or within some third-party ASIO-compatible or DirectSound-compatible client applications.

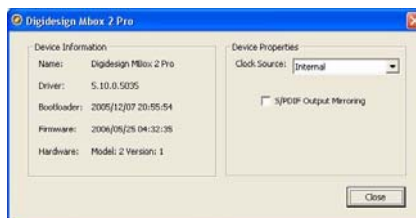
 *For additional configuration information specific to each driver, see Chapter 2, “Digidesign ASIO Driver” and Chapter 6, “DirectSound Windows System Audio Driver.”*

## Accessing the Mbox 2 Pro Control Panel

The Mbox 2 Pro Control Panel can be accessed without opening a third-party application (from the Windows Control Panel folder), or from within some third-party programs.

### To access the Mbox 2 Pro control panel without opening a third-party application:

- Choose Start > Control Panel > Digidesign Mbox 2 Pro.

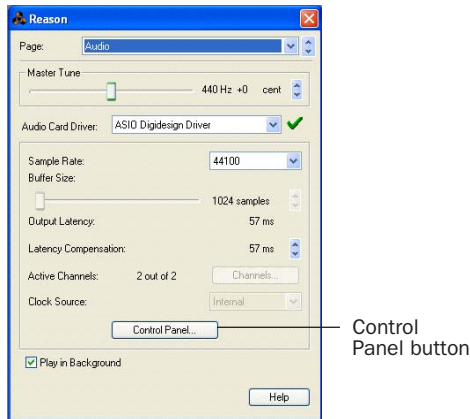


*Digidesign Mbox 2 Pro Control Panel*

To access the Mbox 2 Pro from a third-party application:

- Refer to your program's documentation.

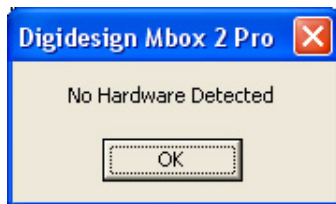
For example, with Propellerhead Reason, click the Control Panel button.



Setup Example, using Propellerhead Reason

## No Hardware Detected Dialog

If your hardware is not connected or cannot be detected, the No Hardware Detected dialog will open instead of the Mbox 2 Pro Control Panel.

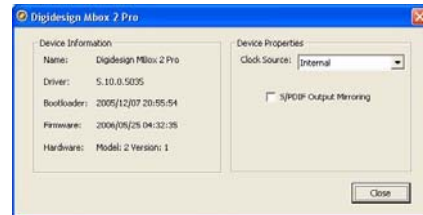


No Hardware Detected dialog

In this case, click OK, then check the FireWire (1394) connection between the computer and Mbox 2 Pro. If reconnecting the cable does not correct the problem, check that you have installed Pro Tools correctly.

## Using the Mbox 2 Pro Control Panel

Use the Mbox 2 Pro Control Panel to identify your Digidesign hardware, check firmware, view or change the Clock Source, and enable S/PDIF mirroring of analog outputs 1 and 2.



Digidesign Mbox 2 Pro Control Panel

The ASIO Driver and DirectSound Driver use the same Mbox 2 Pro Control Panel.

- ⚠ Changing the Clock Source in the Mbox 2 Pro Control Panel will not dynamically update the setting in the Pro Tools Hardware Setup or Session Setup window if it is open. The Pro Tools Hardware Setup and Session Setup window will update when you close and reopen them.

## Device Information Section

This area shows the hardware (Mbox 2 Pro) detected by the Control Panel, the firmware version of your Mbox 2 Pro, and other information.


## Device Properties Section

### Clock Source

This pop-up menu lets you choose the clock source for Mbox 2 Pro:

**Internal** Use this setting for normal playback of audio, or if you are recording audio through the analog inputs.

**S/PDIF** Use this setting if you are recording audio through the S/PDIF input.

 *S/PDIF input is only available when S/PDIF is the Clock Source.*

**Word Clock** Use this setting to clock Pro Tools to a Word clock source connected to the Mbox 2 Pro Word Clock In port.

### S/PDIF Output Mirroring

Check this box to set the S/PDIF output channels to always mirror analog outputs 1 and 2.


## chapter 5


# Digidesign ASIO Driver

The Digidesign ASIO Driver is a single-client, multichannel sound driver that allows third-party audio programs that support the ASIO Driver standard to record and play back through the Mbox 2 Pro audio interfaces.

Full-duplex playback and recording of 24- and 16-bit audio are supported at sample rates up to 96 kHz, depending on your ASIO client application.

The Digidesign ASIO Driver provides up to six channels of input and eight channels of output with Mbox 2 Pro systems.


 *The ASIO Driver is not multi-client. Only one application at a time can use the ASIO Driver. To use Mbox 2 Pro with other applications at the same time, use the Digidesign DirectSound Windows system audio driver for additional applications. See Chapter 6, “DirectSound Windows System Audio Driver.”*


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

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## Configuring ASIO Driver Settings

Configuring ASIO Driver settings can be done using the Mbox 2 Control Panel, or within most third-party ASIO-compatible client applications.

 *For information on the Mbox 2 Pro Control Panel, see “Mbox 2 Pro Driver Control Panel” on page 16.*

 *For more information on configuring your program, refer to its documentation.*





# DirectSound Windows System Audio Driver

The DirectSound Windows System Audio Driver is a multi-client, multichannel sound driver that allows third-party audio programs that support the DirectSound standard to play back and record through Mbox 2 Pro.

Playback and recording of 24- and 16-bit audio are supported at sample rates up to 96 kHz, depending on your DirectSound client application.

The DirectSound Driver provides up to six channels of input and eight channels of output with Mbox 2 Pro systems.



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

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## Configuring DirectSound Driver Settings

Configuring DirectSound settings can be done using the Mbox 2 Pro Control Panel, or within most third-party DirectSound-compatible client applications.



*For information on the Mbox 2 Pro Control Panel, see “Mbox 2 Pro Driver Control Panel” on page 16.*

Some third-party applications require additional configuration step (such as iTunes). See “Configuring DirectSound Driver for QuickTime Player (Required for Using iTunes)” on page 21 and “Configuring DirectSound Driver for Windows Media Player and Other Third-Party DirectSound Driver Programs” on page 22.



*For more information on configuring your program, refer to its documentation.*

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## Configuring DirectSound Driver for QuickTime Player (Required for Using iTunes)

In order to let iTunes for Windows play back through Digidesign hardware, you must select the waveOut option in the QuickTime Player Audio settings.

**To configure DirectSound Driver as the iTunes default device:**

- 1 Close all DirectSound Driver third-party applications (including iTunes).
- 2 Choose Start > Programs > QuickTime > QuickTime Player.
- 3 In QuickTime Player, choose Edit > Preferences > QuickTime Preferences.
- 4 In the QuickTime Preferences window, click the Audio Tab.

- 5 Select the “Safe mode (waveOut only)” option, and click Apply.
- 6 Click OK to close the QuickTime Settings window.
- 7 Exit QuickTime Player.
- 8 Re-launch iTunes.

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## Configuring DirectSound Driver for Windows Media Player and Other Third-Party DirectSound Driver Programs

The DirectSound Driver 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 in third-party DirectSound Driver client applications.

### To configure DirectSound Driver as the Windows Sound Playback Default Device:

- 1 Choose Start > Control Panel.

- 2 Double-click Sounds and Audio Devices.



*Sounds and Audio Devices Control Panel*

- 3 Click the Audio tab.
- 4 Select the Digidesign hardware in the Sound Playback default device lists.
- 5 Close the Control Panel.

When you run Windows Media Player, it automatically outputs to your Digidesign hardware.

### To configure DirectSound Driver for a third-party DirectSound Driver application:

- In the third-party application, select the Digidesign hardware as the preference for your playback hardware. For details on setting this preference, refer to your program’s documentation.



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