# Pro Tools

## Expanded Systems Guide

### Version 5.0.1 for Macintosh and Windows NT

**digidesign**®

A division of *Avid*.

# contents

# Introduction

By adding Digidesign cards to your Pro Tools system, you can increase track count, add to the amount of possible plug-in and mixer processing, increase Sample-Cell voice capacity, and connect additional audio interfaces.

Some computers have as many as six PCI slots and may provide enough slots for your Pro Tools system. Other computers have as few as three slots and therefore may require an expansion chassis.

## Adding Cards to Your System

### Expanding a Pro Tools 24 MIX System

You can add any of the following Digidesign cards to expand a Pro Tools 24 MIX or MIXplus system:

◆ MIX Core, expands DSP mixer resources, and provides up to 16 channels of I/O

◆ MIX Farm, expands plug-in and DSP mixer resources, and provides up to 16 channels of I/O

◆ MIX I/O, provides up to 16 channels of I/O

◆ d24, expands DSP mixer resources, and provides up to 16 channels of I/O

◆ DSP Farm, expands plug-in and DSP mixer resources, and provides up to eight channels of I/O

Whether installing in a computer or an expansion chassis, the basic order of card installation is the same. Cards should always be grouped according to type, and each type should be installed in the following order:

1 MIX Core card, primary

2 MIX Core cards, additional

3 MIX Farm cards

4 d24 cards

5 MIX I/O cards

6 DSP Farm cards

7 SampleCell cards

✳ TDM cards should always be installed next to one another, in adjacent slots.

## Expanding a Pro Tools 24 System

You can add the following Digidesign cards to expand a Pro Tools 24 system:

- d24, expands DSP mixer resources, and provides up to 16 channels of I/O
- DSP Farm, expands plug-in and DSP mixer resources, and provides up to eight channels of I/O

Whether installing in a computer or an expansion chassis, the basic order of card installation is the same. Cards should always be grouped according to type, and each type should be installed in the following order:

**1** d24 card, primary

**2** d24 cards, additional

**3** DSP Farm cards

**4** SampleCell cards

✻ TDM cards should always be installed next to one another, in adjacent slots.

## Cards and Slot Order

To ensure maximum track counts and trouble-free operations, it is important that PCI cards are installed in the appropriate slot locations, whether in the computer or in an expansion chassis (if one is being used).

The remaining chapters in this guide have many examples that specify how PCI cards should be installed. The subtleties of these configurations may vary depending on your particular computer or expansion chassis.

## PCI Slots, Bus Masters, and Bridges

### (Macintosh Only)

The Power Macintosh 9500 and 9600 have six PCI slots. These slots are grouped in banks of three, with each being controlled by a PCI *Bridge Chip*. The first three slots are in one group and the next three slots are in another.

A *bus master* card is a PCI card that controls the data transfer to and from the Bridge Chip that controls its group. The Digidesign MIX Core and d24 cards are bus masters.

Other cards that act as bus masters include:

- Expansion chassis host cards
- SCSI host bus adapters (HBA)
- Most video capture cards (including AVoption and AVoption XL)

When configuring a Pro Tools system with a Power Macintosh 9500 or 9600 (without an expansion chassis), make sure to install Pro Tools Core cards on a separate PCI bridge from other bus master cards.

When using an expansion chassis with a 9500 or 9600, install the chassis host card on a separate bridge from other bus master cards (such as SCSI HBAs and video capture cards).

Consult the manufacturer of your third-party PCI cards to determine if they operate as bus masters.

# Connecting Audio Interfaces

Use the I/O cable included with each Digidesign audio interface to connect to your Digidesign audio cards. The primary audio interface, which functions as the clock master for other interfaces in the system, must be connected to the first Core card.

You can purchase an optional 16-channel peripheral cable adapter (y-cable) to connect up to two 8-channel audio interfaces to each MIX Core, MIX Farm, MIX I/O, or d24 card. When connecting a peripheral cable adapter to your Core card, make sure the primary audio interface is connected to the y-cable's "A" connector.

▲ Since DSP Farm cards support only 8 channels of I/O, you cannot use a y-cable adapter with these cards.

## Recommended Ordering of Interfaces

If your setup includes different types of audio Interfaces, install them in the following order to ensure best possible clock and synchronization to your system:

**1** 888/24 I/O: Install as the primary audio interface, it provides the highest fidelity clock source for your system.

**2** 882/20 I/O, 1622 I/O: Use as "secondary" interfaces.

**3** ADAT Bridge I/O: Should not be used as the primary audio interface in expanded systems, with the exception of certain setups that present unique clock and sync requirements. Refer to the *ADAT Bridge I/O User's Guide* for details.

# Using Expansion Chassis

Expansion chassis consist of a chassis, providing additional PCI slots for your Digidesign cards; a host card, installed in your computer; a controller card, installed in the chassis; and an expansion chassis cable that connects the host card to the controller card.

✳ Some newer expansion chassis have a built-in controller card that does not need to be installed.

▲ 6-foot expansion chassis cables are not supported.

13-slot expansion chassis support up to ten Digidesign cards. 7-slot chassis support up to six cards.

## Digidesign TDM Ribbon Cables

When using an expansion chassis, you will need to purchase a Digidesign TDM ribbon cable to connect the TDM cards in the chassis. TDM cables are available with 3, 5, 8, and 10 nodes. Contact your Digidesign dealer or local Digidesign office to order the appropriate TDM cable.

## Powering Up Expansion Chassis

Make sure to have the expansion chassis cable connected to both the expansion chassis and the computer before powering up. If the cable becomes disconnected from the computer while the system is powered on, shut down power to both the expansion chassis and the computer before reconnecting.

When powering up, turn on the expansion chassis before the computer, and turn it off before powering down the computer. Do not leave the chassis powered on when the computer has been powered off.

▲ Before you connect your expansion chassis, or install cards in it, make sure to turn off both the chassis and your computer.

▲ When using an expansion chassis with a Pro Tools 24 MIX system, the chassis must have a 3.3 volt power supply.

## About This Guide

The remaining chapters in this guide document the following:

◆ *Chapter 2: Expanded Pro Tools Systems*, covers installation of expanded Pro Tools systems that do no use an expansion chassis.

◆ *Chapter 3: Magma 6-Slot Expansion Chassis*, covers installation of Magma model PCI-6DR.

◆ *Chapter 4: Magma 7-Slot Expansion Chassis*, covers installation of Magma models PCI-7-RX-300V and PXB-7-RMD.

◆ *Chapter 5: Magma 13-Slot Expansion Chassis*, covers installation of Magma models PCI-13R and PCI-13-RX-400V, as well as the Pro Tools Expansion Chassis.

◆ *Chapter 6: SBS 7-Slot Expansion Chassis*, covers installation of SBS models DD007-R, DD22-1, and 2101-00-002.

◆ *Chapter 7: SBS 13-Slot Expansion Chassis*, covers installation of SBS models DD23-1, 240-2-2, and 240-2-201.

### AVoption and AVoption XL

For information on installing AVoption and AVoption XL cards with expansion chassis, refer to the *AVoption & AVoption XL Guide* for details.

### For Additional Compatibility Information

For a complete and current list of supported configurations of computers and expansion chassis, visit the Digidesign Web site at:

www.digidesign.com/compat/main.html

## chapter 2

# Expanded Pro Tools Systems

This chapter documents configuration of expanded Pro Tools systems with computers that have four or more PCI slots (without an expansion chassis).

## Pro Tools 24 MIX Expanded Systems

### (Without an Expansion Chassis)

With Pro Tools 24 MIX and MIXplus, it is possible to install as many as four Pro Tools cards in a computer with six slots. These can include the MIX Core card, one or more MIX Farm cards, as well as MIX I/O cards, Pro Tools 24 cards, and SampleCell cards.

For maximum track count, a Digidesign-qualified SCSI HBA is required with these configurations.

Before installing any of the following hardware, turn off your computer and any peripherals. Leave your computer's power cable plugged in so the computer is grounded.

Do not remove cards from their antistatic bags until you have discharged static electricity by touching a grounded object (such as the power supply of your computer).

**Install the Digidesign cards:**

**1** Install the primary MIX Core card (clock master with primary audio interface) in your computer:

- Macintosh: Install the Core card in the lowest numbered slot.
- Windows NT: Install the Core card in slot 1 (adjacent to the AGP/slot 0).

To locate the lowest numbered slot, refer to your computer's documentation.

**2** Install the remaining Digidesign cards in successive slots in the following order:

- MIX Core cards (additional)
- MIX Farm cards
- d24 cards
- MIX I/O card
- DSP Farm cards
- SampleCell cards
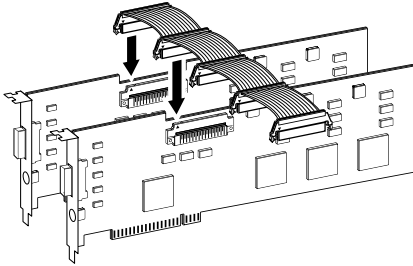
**3** If using a SCSI HBA, install it in the highest numbered remaining slot.

For 9500/9600 computers, the SCSI HBA should reside before the video card.

❊ See "Example 1, Expanded System" on page 7 and "Example 2, Expanded System" on page 7.

## Connect all TDM-equipped cards with a TDM ribbon cable:

**1** Connect the first node of the TDM ribbon cable to the first Digidesign card. Make sure the TDM cable is facing the right direction—align the white triangle on the cable plug with the triangle on the card.



*Attaching a TDM ribbon cable*

**2** Push down gently but firmly until the node is fully connected to the card. When the plug is properly seated, the two tabs on the side of the cable's TDM connector click shut. To detach the ribbon cable, squeeze the tabs on the TDM connector inward.

**3** Attach the remaining nodes on the TDM cable to subsequent cards. Make sure that the last node on the cable is connected to the last card in your system. Unused nodes, if any, should reside toward the middle of the cable.

## Connect the Digidesign audio interfaces:

**1** Connect the primary audio interface to the primary MIX Core card with the provided interface cable. The primary audio interface functions as the clock master.

**2** Connect additional audio interfaces to subsequent Digidesign audio cards.

You can use Digidesign's 16-channel peripheral cable adapter (optional) to connect two audio interfaces to a MIX Core, MIX I/O, d24, or Mix Farm card.
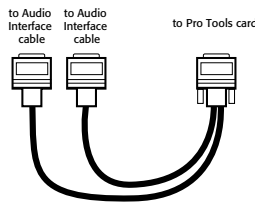


*16-channel peripheral cable adapter*

✳ See "Example 1, Expanded System" on page 7 and "Example 2, Expanded System" on page 7.

**3** If using multiple audio interfaces, connect the Slave Clock Out of the primary interface to the Slave Clock In of the second interface with the provided BNC cable.
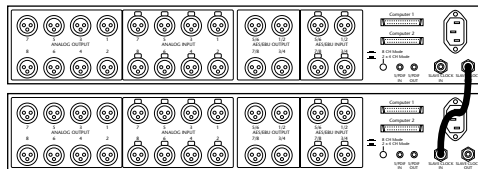


*Connecting multiple audio interfaces*

**4** Connect the Slave Clock Out of the second interface to the Slave Clock In of the next audio interface (and so forth).

## Example 1, Expanded System

*Pro Tools 24 MIX System*

*Power Macintosh 9500/9600*

*Cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Slot 0 | MIX Core (Interface #1 and #2) |
| Slot 1 | MIX Farm (Interface #3 and #4) |
| Slot 2 | MIX I/O (Interface #5 and #6) |
| Slot 3 | DSP Farm (Interface #7) |
| Slot 4 | SCSI host bus adapter |
| Slot 5 | VIdeo card |

## Example 2, Expanded System

*Pro Tools 24 MIX System*

*IBM Intellistation MPro, Model 6889*

*Cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Slot 0 | Display card (AGP slot) |
| Slot 1 | MIX Core (Interface #1 and #2) |
| Slot 2 | MIX Farm (Interface #3 and #4) |
| Slot 3 | d24 card (Interface #5 and #6) |
| Slot 4 | DSP Farm (Interface #7) |
| Slot 5 | SCSI host bus adapter |

# Pro Tools 24 Expanded Systems

### (Without an Expansion Chassis)

With Pro Tools 24, it is possible to install as many as four Pro Tools cards in a computer with six slots. These can include two d24 cards, as well as DSP Farms and SampleCell cards.

For maximum track count, a Digidesign-qualified SCSI HBA is required with these configurations.

Before installing any of the following hardware, turn off your computer and any peripherals. Leave your computer's power cable plugged in so the computer is grounded.

Do not remove cards from their antistatic bags until you have discharged static electricity by touching a grounded object (such as the power supply of your computer).

### Install the Digidesign cards:

**1** Install the primary d24 card (clock master with primary audio interface) in your computer:

- Macintosh: Install the Core card in the lowest numbered slot.
- Windows NT: Install the Core card in slot 1 (adjacent to the AGP/slot 0).

To locate the lowest numbered slot, refer to your computer's documentation.

**2** Install the remaining cards in successive slots in the following order:

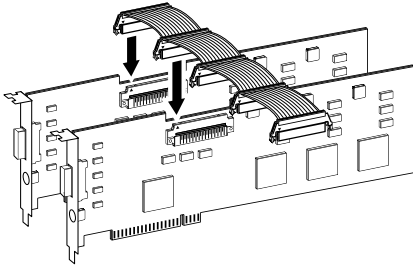- d24 cards (additional)
- DSP Farm cards
- SampleCell cards

**3** If using a SCSI HBA, install it in the highest numbered remaining slot.

For 9500/9600 computers, the SCSI HBA should reside before the video card.

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✻ See "Example 3, Expanded System" on page 9 and "Example 4, Expanded System" on page 9.

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### Connect all TDM-equipped cards with a TDM ribbon cable:

**1** Connect the first node of the TDM ribbon cable to the first Digidesign card. Make sure the TDM cable is facing the right direction—align the white triangle on the cable plug with the triangle on the card.



*Attaching a TDM ribbon cable*

**2** Push down gently but firmly until the node is fully connected to the card. When the plug is properly seated, the two tabs on the side of the cable's TDM connector click shut. To detach the ribbon cable, squeeze the tabs on the TDM connector inward.

**3** Attach the remaining nodes on the TDM cable to subsequent cards. Make sure that the last node on the cable is connected to the last card in your system. Unused nodes, if any, should reside toward the middle of the cable.

### Connect the Digidesign audio interfaces:

**1** Connect the primary audio interface to the primary d24 card with the provided interface cable. The primary audio interface functions as the clock master.

**2** Connect additional audio interfaces to subsequent Digidesign audio cards.

You can use Digidesign's 16-channel peripheral cable adapter (optional) to connect two audio interfaces to each d24 card.
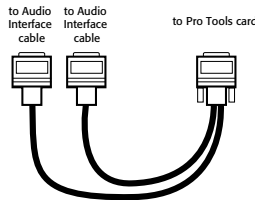


*16-channel peripheral cable adapter*

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✻ See "Example 3, Expanded System" on page 9 and "Example 4, Expanded System" on page 9.

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**3** If using multiple audio interfaces, connect the Slave Clock Out of the primary interface to the Slave Clock In of the second interface with the provided BNC cable.
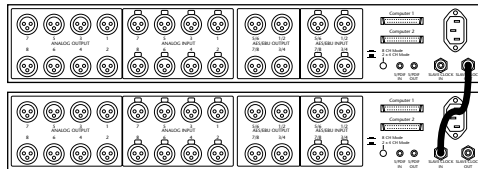


*Connecting multiple audio interfaces*

**4** Connect the Slave Clock Out of the second interface to the Slave Clock In of the next audio interface (and so forth).

## Example 3, Expanded System

*Pro Tools 24 System*

*Power Macintosh 9500/9600*

*Cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Slot 0 | d24 (Interface #1 and #2) |
| Slot 1 | d24 (Interface #3 and #4) |
| Slot 2 | DSP Farm (Interface #5) |
| Slot 3 | DSP Farm or SampleCell card |
| Slot 4 | SCSI host bus adapter |
| Slot 5 | VIdeo card |

## Example 4, Expanded System

*Pro Tools 24 System*

*IBM Intellistation MPro, Model 6889*

*Cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Slot 0 | Display card (AGP slot) |
| Slot 1 | d24 (Interface #1 and #2) |
| Slot 2 | d24 (Interface #3 and #4) |
| Slot 3 | DSP Farm (Interface #5) |
| Slot 4 | DSP Farm or SampleCell card |
| Slot 5 | SCSI host bus adapter |

# Magma 6-Slot Expansion Chassis

The Magma 6-Slot Expansion Chassis (model PCI-6DR), with Bridge Chip version Intel/DEC 2.1, is supported with the following systems:

**Pro Tools 24 MIX and MIXplus:**
• Power Macintosh G3 (Blue & White)
• Power Macintosh G4

**Pro Tools 24:**
• Power Macintosh G3 (Blue & White)
• Power Macintosh G4

For the latest compatibility information, visit the Digidesign Web site (www.digidesign.com).

▲ Magma model PCI-6DR requires DAE/DSI 5.0.1 or higher.

## Slot Layout for Magma 6-Slot Expansion Chassis

The Magma 6-Slot chassis has slots that are numbered sequentially (4–9), bottom-to-top.
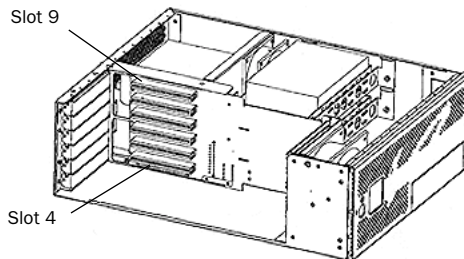


*Slot numbering for Magma 6-Slot chassis*

## Configuring the Magma 6-Slot Expansion Chassis

Before installing any of the following hardware, turn off the expansion chassis, your computer, and any peripherals. Leave your computer's power cable plugged in so the computer is grounded.

Do not remove cards from their antistatic bags until you have discharged static electricity by touching a grounded object (such as the power supply of your computer).

## Connecting the Expansion Chassis

**Install the chassis host card:**

**1** Install the Magma Host Card in the lowest numbered slot (Slot 2) in your computer.

To locate the lowest numbered slot, refer to your computer's documentation.

**2** Attach the expansion chassis cable to the host card. If necessary, refer to the Magma guide for specific instructions.

▲ Make sure you attach the chassis cable to the host card and *not* your SCSI HBA. Both cards have a 68-pin VHDCI connector.

**3** If using a SCSI HBA, install it in the highest numbered slot in your computer.

**4** Attach the other end of the expansion chassis cable to the controller card (already in the Magma 6-Slot). If necessary, refer to the Magma guide for specific instructions.

## Installing the Digidesign Cards

**Install the Digidesign audio cards:**

**1** Install the primary Core card (clock master with primary audio interface) in slot 4 of the expansion chassis.

**2** If using a Pro Tools 24 MIX system, install the remaining cards in successive chassis slots in the following order:
- MIX Core cards (additional)
- MIX Farm cards
- d24 cards
- MIX I/O card
- DSP Farm cards
- SampleCell cards
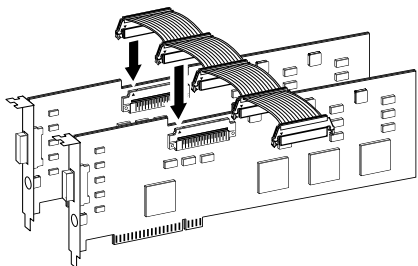
✳ See "Example 1, Magma 6-Slot" on page 14.

– or –

**3** If using a Pro Tools 24 system, install the remaining cards in successive chassis slots in the following order:
- d24 cards (additional)
- DSP Farm cards
- SampleCell cards

✳ See "Example 2, Magma 6-Slot" on page 14.

**Connect all TDM-equipped cards with a TDM ribbon cable:**

**1** Connect the first node of the TDM ribbon cable to the first Digidesign card. Make sure the TDM cable is facing the right direction—align the white triangle on the cable plug with the triangle on the card.
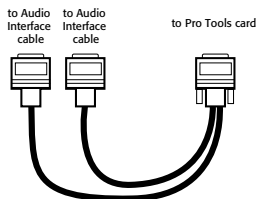


*Attaching a TDM ribbon cable*

**2** Push down gently but firmly until the node is fully connected to the card. When the plug is properly seated, the two tabs on the side of the cable's TDM connector click shut. To detach the ribbon cable, squeeze the tabs on the TDM connector inward.

**3** Attach the remaining nodes on the TDM cable to subsequent cards. Make sure that the last node on the cable is connected to the last card in your system. Unused nodes, if any, should reside toward the middle of the cable.

# Connecting Audio Interfaces

**Connect the Digidesign audio interfaces:**

**1** Connect the primary audio interface to the primary Core card with the provided interface cable. The primary audio interface functions as the clock master.

**2** Connect additional audio interfaces to subsequent Digidesign audio cards.

You can use Digidesign's 16-channel peripheral cable adapter (optional) to connect two audio interfaces to a MIX Core, MIX I/O, d24, or Mix Farm card.



*16-channel peripheral cable adapter*

✱ See "Example 1, Magma 6-Slot" on page 14 and "Example 2, Magma 6-Slot" on page 14.

**3** If using multiple audio interfaces, connect the Slave Clock Out of the primary interface to the Slave Clock In of the second interface with the provided BNC cable.
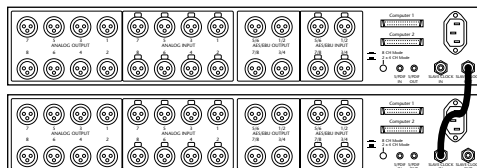


*Connecting multiple audio interfaces*

**4** Connect the Slave Clock Out of the second interface to the Slave Clock In of the next audio interface (and so forth).

## Example 1, Magma 6-Slot

*Pro Tools 24 MIX/MIXplus System*

*Power Macintosh G3 (Blue & White) or G4*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
| --- | --- |
| Slot 4 | MIX Core (Interface #1 and #2) |
| Slot 5 | MIX Farm (interface #3 and #4) |
| Slot 6 | d24 (Interface #5 and #6) |
| Slot 7 | MIX I/O (Interface #7 and #8) |
| Slot 8 | DSP Farm (Interface #9) |
| Slot 9 | DSP Farm or SampleCell card |

## Example 2, Magma 6-Slot

*Pro Tools 24 System*

*Power Macintosh G3 (Blue & White) or G4*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
| --- | --- |
| Slot 4 | d24 (Interface #1 and #2) |
| Slot 5 | d24 (Interface #3 and #4) |
| Slot 6 | DSP Farm (Interface #5) |
| Slot 7 | DSP Farm (Interface #6) |
| Slot 8 | DSP Farm (Interface #7) |
| Slot 9 | DSP Farm or SampleCell card |

# Magma 7-Slot Expansion Chassis

## Magma 7-Slot, Model PCI-7-RX-300V

The Magma 7-Slot Expansion Chassis (model PCI-7-RX-300V), with Bridge Chip version Intel/DEC 2.1, is supported with the following systems:

### Pro Tools 24 MIX and MIXplus:

- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

### Pro Tools 24:

- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

For the latest compatibility information, visit the Digidesign Web site (www.digidesign.com).

▲ Magma model PCI-7-RX-300V requires serial number PD01910 or higher.

## Magma 7-Slot, Model PBX-7-RMD

The Magma 7-Slot Expansion Chassis (model PXB-7-RMD), with Bridge Chip version Intel/DEC 2.0 or 2.1, is supported with the following systems:

### Pro Tools III:

- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

For the latest compatibility information, visit the Digidesign Web site (www.digidesign.com).

▲ To use Magma model PXB-7-RMD with a G3 or G4, it must have the Intel/DEC 2.1 Bridge Chip.

▲ Magma model PXB-7-RMD with a Pro Tools III system requires DAE/DSI 3.2.3 or higher.

# Slot Layout for Magma 7-Slot Expansion Chassis

The Magma 7-Slot chassis has slots that are numbered sequentially (4–10), right-to-left, from the front.
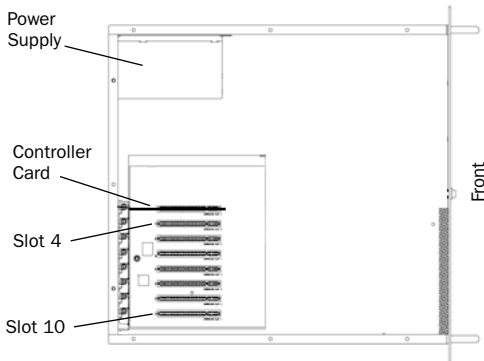


*Slot numbering for Magma 7-Slot chassis*

# Configuring the Magma 7-Slot Expansion Chassis

Before installing any of the following hardware, turn off the expansion chassis, your computer, and any peripherals. Leave your computer's power cable plugged in so the computer is grounded.

Do not remove cards from their antistatic bags until you have discharged static electricity by touching a grounded object (such as the power supply of your computer).

# Connecting the Expansion Chassis

### Install the chassis host card:

**1** Install the Magma Host Card in the lowest numbered slot in your computer.

To locate the lowest numbered slot, refer to your computer's documentation.

**2** Attach a 2- or 4-foot expansion chassis cable to the host card. If necessary, refer to the Magma guide for specific instructions.

▲ 6-foot expansion chassis cables are not supported.

**3** If using a SCSI HBA, install it in the highest numbered remaining slot in your computer.

For 9500/9600 computers, the SCSI HBA should reside before the video card.

### Install the chassis controller card:

**1** Install the Magma Controller card in the Expansion Slot of the expansion chassis (the slot nearest the power supply).

**2** Attach the other end of the expansion chassis cable to the controller card. If necessary, refer to the Magma guide for specific instructions.

# Installing the Digidesign Cards

**Install the Digidesign audio cards:**

**1** Install the primary Core or Disk I/O card (clock master with primary audio interface) in slot 4 of the expansion chassis.

**2** If using a Pro Tools 24 MIX system, install the remaining cards in successive chassis slots in the following order:

- MIX Core cards (additional)
- MIX Farm cards
- d24 cards
- MIX I/O card
- DSP Farm cards
- SampleCell cards

✳ See "Example 1, Magma 7-Slot" on page 18.

– or –

**3** If using a Pro Tools 24 system, install the remaining cards in successive chassis slots in the following order:

- d24 cards (additional)
- DSP Farm cards
- SampleCell cards
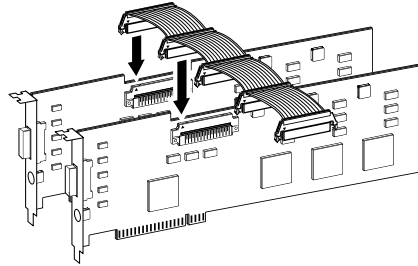
✳ See "Example 2, Magma 7-Slot" on page 19.

– or –

**4** If using a Pro Tools III system, install the remaining cards in successive chassis slots in the following order:

- Disk I/O cards (additional)
- DSP Farm cards
- SampleCell cards

✳ See "Example 3, Magma 7-Slot" on page 19.

## Connect all TDM-equipped cards with a TDM ribbon cable:

**1** Connect the first node of the TDM ribbon cable to the first Digidesign card. Make sure the TDM cable is facing the right direction—align the white triangle on the cable plug with the triangle on the card.



*Attaching a TDM ribbon cable*

**2** Push down gently but firmly until the node is fully connected to the card. When the plug is properly seated, the two tabs on the side of the cable's TDM connector click shut. To detach the ribbon cable, squeeze the tabs on the TDM connector inward.

**3** Attach the remaining nodes on the TDM cable to subsequent cards. Make sure that the last node on the cable is connected to the last card in your system. Unused nodes, if any, should reside toward the middle of the cable.
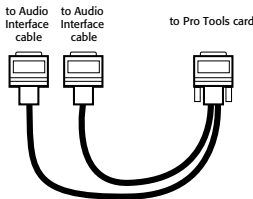
# Connecting Audio Interfaces

### Connect the Digidesign audio interfaces:

**1** Connect the primary audio interface to the primary Core card with the provided interface cable. The primary audio interface functions as the clock master.

**2** Connect additional audio interfaces to subsequent Digidesign audio cards.

You can use Digidesign's 16-channel peripheral cable adapter (optional) to connect two audio interfaces to a MIX Core, MIX I/O, d24, or Mix Farm card.



*16-channel peripheral cable adapter*

❊ See "Example 1, Magma 7-Slot" on page 18 and "Example 2, Magma 7-Slot" on page 19.

**3** If using multiple audio interfaces, connect the Slave Clock Out of the primary interface to the Slave Clock In of the second interface with the provided BNC cable.
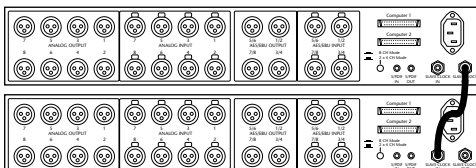


*Connecting multiple audio interfaces*

**4** Connect the Slave Clock Out of the second interface to the Slave Clock In of the next audio interface (and so forth).

## Example 1, Magma 7-Slot

### (Model PCI-7-RX-300V)

*Pro Tools 24 MIX/MIXplus System*

*Power Macintosh G3, G4, or 9500/9600*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Exp. Slot | Chassis Controller Card |
| Slot 4 | MIX Core (Interface #1 and #2) |
| Slot 5 | MIX Farm (interface #3 and #4) |
| Slot 6 | d24 (Interface #5 and #6) |
| Slot 7 | MIX I/O (Interface #7 and #8) |
| Slot 8 | DSP Farm (Interface #9) |
| Slot 9 | DSP Farm or SampleCell card |
| Slot 10 | DSP Farm or SampleCell card |

## Example 2, Magma 7-Slot

**(Model PCI-7-RX-300V)**

*Pro Tools 24 System*

*Power Macintosh G3, G4, or 9500/9600*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Exp. Slot | Chassis Controller Card |
| Slot 4 | d24 (Interface #1 and #2) |
| Slot 5 | d24 (Interface #3 and #4) |
| Slot 6 | DSP Farm (Interface #5) |
| Slot 7 | DSP Farm (Interface #6) |
| Slot 8 | DSP Farm (Interface #7) |
| Slot 9 | DSP Farm or SampleCell card |
| Slot 10 | DSP Farm or SampleCell card |

## Example 3, Magma 7-Slot

**(Model PXB-7-RMD)**

*Pro Tools III System*

*Power Macintosh G3, G4, or 9500/9600*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Exp. Slot | Chassis Controller Card |
| Slot 4 | Disk I/O (Interface #1) |
| Slot 5 | Disk I/O (Interface #2) |
| Slot 6 | DSP Farm (Interface #3) |
| Slot 7 | DSP Farm (Interface #4) |
| Slot 8 | DSP Farm (Interface #5) |
| Slot 9 | DSP Farm or SampleCell card |
| Slot 10 | DSP Farm or SampleCell card |

▲ To use Magma model PXB-7-RMD with a G3 or G4, it must have the Intel/DEC 2.1 Bridge Chip.

# Magma 13-Slot Expansion Chassis

## Magma 13-Slot, Model PCI-13R

The Magma 13-Slot Expansion Chassis (model PCI-13R), with Bridge Chip version Intel/DEC 2.1, is supported with the following systems:

**Pro Tools 24 MIX and MIXplus:**
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

**Pro Tools 24:**
- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)

For the latest compatibility information, visit the Digidesign Web site (www.digidesign.com).

▲ Magma model PCI-13R requires DAE/DSI 5.0.1 or higher.

## Magma 13-Slot, Model PCI-13-RX-400V

The Magma 13-Slot Expansion Chassis (model PCI-13-RX-400V), with Bridge Chip version Intel/DEC 2.1, is supported with the following systems:

**Pro Tools 24 MIX and MIXplus:**
- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

**Pro Tools 24:**
- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

For the latest compatibility information, visit the Digidesign Web site (www.digidesign.com).

▲ Magma model PCI-13-RX-400V requires serial number PE01732 or higher.

## Pro Tools Expansion Chassis

There are two versions of the Pro Tools Expansions Chassis:

◆ Pro Tools Expansion Chassis with serial numbers NB055300B1 or lower are identical to the Magma model PCI-13-RX-400V. For compatibility and configuration details, refer to the information that pertains to that model.

◆ Pro Tools Expansion Chassis with serial numbers NB06000C1 or higher are identical to the Magma model PCI-13R. For compatibility and configuration details, refer to the information that pertains to that model.

For the latest compatibility information, visit the Digidesign Web site (www.digidesign.com).
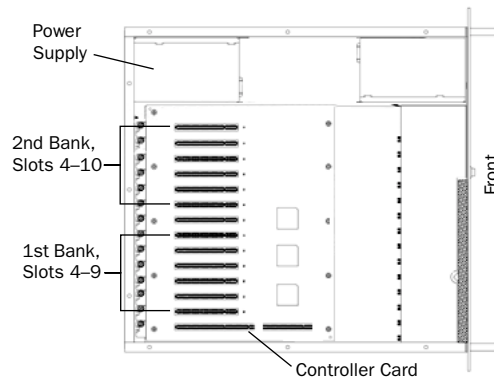
## Slot Layout for Magma 13-Slot Expansion Chassis

Magma model PCI-13-RX-400V has slots that are numbered sequentially (4–16), left-to-right, from the front.
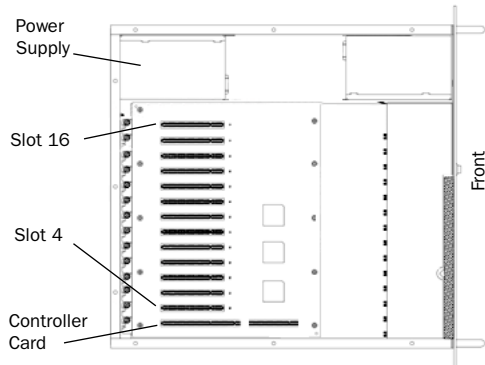


*Slot numbering for Magma model PCI-13-RX-400V*

Magma model PCI-13R has slots that are numbered sequentially, left-to-right from the front, in two banks (4–9 and 4–10).



*Slot numbering for Magma model PCI-13R*

# Configuring the Magma 13-Slot Expansion Chassis

Before installing any of the following hardware, turn off the expansion chassis, your computer, and any peripherals. Leave your computer's power cable plugged in so the computer is grounded.

Do not remove cards from their antistatic bags until you have discharged static electricity by touching a grounded object (such as the power supply of your computer).

## Connecting the Expansion Chassis

### Install the chassis host card:

**1** Install the Magma Host Card in the lowest numbered slot in your computer.

To locate the lowest numbered slot, refer to your computer's documentation.

**2** Attach the expansion chassis cable to the host card. If necessary, refer to the Magma guide for specific instructions.

▲ If using Magma model PCI-13R, make sure you attach the chassis cable to the host card and *not* your SCSI HBA. Both cards have a 68-pin VHDCI connector.

▲ 6-foot expansion chassis cables are not supported.

**3** If using a SCSI HBA, install it in the highest numbered remaining slot in your computer.

For 9500/9600 computers, the SCSI HBA should reside before the video card.

### Install the chassis controller card:

**1** Install the Magma Controller card in the Expansion Slot of the expansion chassis (the slot furthest from the power supply).

**2** Attach the other end of the expansion chassis cable to the controller card. If necessary, refer to the Magma guide for specific instructions.

## Installing the Digidesign Cards

### Install the Digidesign audio cards:

**1** Install the primary Core card (clock master with primary audio interface) in slot 4 of the expansion chassis.

**2** If using a Pro Tools 24 MIX system, install the remaining cards in successive chassis slots in the following order:
- MIX Core cards (additional)
- MIX Farm cards
- d24 cards
- MIX I/O card
- DSP Farm cards
- SampleCell cards

✱ See "Example 1, Magma 13-Slot" on page 25.
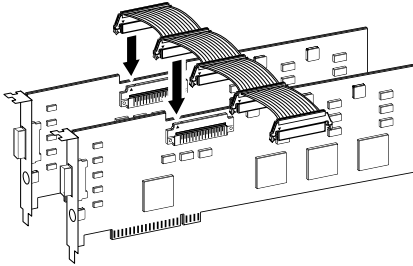
– or –

**3** If using a Pro Tools 24 system, install the remaining cards in successive chassis slots in the following order:
- d24 cards (additional)
- DSP Farm cards
- SampleCell cards

✱ See "Example 2, Magma 13-Slot" on page 25.

**Connect all TDM-equipped cards with a TDM ribbon cable:**

**1** Connect the first node of the TDM ribbon cable to the first Digidesign card. Make sure the TDM cable is facing the right direction—align the white triangle on the cable plug with the triangle on the card.



*Attaching a TDM ribbon cable*

**2** Push down gently but firmly until the node is fully connected to the card. When the plug is properly seated, the two tabs on the side of the cable's TDM connector click shut. To detach the ribbon cable, squeeze the tabs on the TDM connector inward.

**3** Attach the remaining nodes on the TDM cable to subsequent cards. Make sure that the last node on the cable is connected to the last card in your system. Unused nodes, if any, should reside toward the middle of the cable.
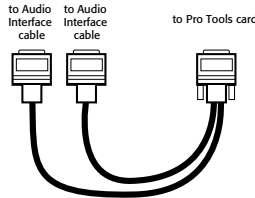
# Connecting Audio Interfaces

### Connect the Digidesign audio interfaces:

**1** Connect the primary audio interface to the primary Core card with the provided interface cable. The primary audio interface functions as the clock master.

**2** Connect additional audio interfaces to subsequent Digidesign audio cards.

You can use Digidesign's 16-channel peripheral cable adapter (optional) to connect two audio interfaces to a MIX Core, MIX I/O, d24, or Mix Farm card.



*16-channel peripheral cable adapter*

❊ See "Example 1, Magma 13-Slot" on page 25 and "Example 2, Magma 13-Slot" on page 25.

**3** If using multiple audio interfaces, connect the Slave Clock Out of the primary interface to the Slave Clock In of the second interface with the provided BNC cable.
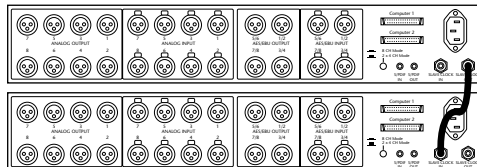


*Connecting multiple audio interfaces*

**4** Connect the Slave Clock Out of the second interface to the Slave Clock In of the next audio interface (and so forth).

## Example 1, Magma 13-Slot

*Pro Tools 24 MIX/MIXplus System*

*Power Macintosh G3, G4, or 9500/9600*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|---|---|
| Exp. Slot | Chassis Controller Card |
| Slot 4 | MIX Core (Interface #1 and #2) |
| Slot 5 | MIX Farm (interface #3 and #4) |
| Slot 6 | d24 (Interface #5 and #6) |
| Slot 7 | MIX I/O (Interface #7 and #8) |
| Slot 8 | DSP Farm (Interface #9) |
| Slot 9 | DSP Farm or SampleCell card |
| Slot 10 | DSP Farm or SampleCell card |
| Slot 11 | DSP Farm or SampleCell card |
| Slot 12 | DSP Farm or SampleCell card |
| Slot 13 | DSP Farm or SampleCell card |
| Slot 14 | Available for non-bus master card |
| Slot 15 | Available for non-bus master card |
| Slot 16 | Available for non-bus master card |

▲ Beige G3 and 9500/9600 only supported with Magma model PCI-13-RX-400V (serial number PE01732 or higher).

## Example 2, Magma 13-Slot

*Pro Tools 24 System*

*Power Macintosh G3, G4, or 9500/9600*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|---|---|
| Exp. Slot | Chassis Controller Card |
| Slot 4 | d24 (Interface #1 and #2) |
| Slot 5 | d24 (Interface #3 and #4) |
| Slot 6 | DSP Farm (Interface #5) |
| Slot 7 | DSP Farm (Interface #6) |
| Slot 8 | DSP Farm (Interface #7) |
| Slot 9 | DSP Farm (Interface #8) |
| Slot 10 | DSP Farm (Interface #9) |
| Slot 11 | DSP Farm or SampleCell card |
| Slot 12 | DSP Farm or SampleCell card |
| Slot 13 | DSP Farm or SampleCell card |
| Slot 14 | Available for non-bus master card |
| Slot 15 | Available for non-bus master card |
| Slot 16 | Available for non-bus master card |

▲ Beige G3 and 9500/9600 only supported with Magma model PCI-13-RX-400V (serial number PE01732 or higher).

# chapter 6

# SBS 7-Slot Expansion Chassis

SBS Technologies was previously called "Bit 3." Though all of the expansion chassis in this chapter are referred to as SBS models., some may have been initially released as Bit 3 models.

### SBS 7-Slot, Model DD007-R

The SBS 7-Slot Expansion Chassis (model DD007-R), with Bridge Chip version Intel/DEC 2.1, is supported with the following systems:

**Pro Tools 24 MIX and MIXplus:**
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

**Pro Tools 24:**
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

For the latest compatibility information, visit the Digidesign Web site (www.digidesign.com).

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▲ SBS model DD007-R requires DAE/DSI 5.0.1 or higher.

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### SBS 7-Slot, Model DD22-1

The SBS 7-Slot Expansion Chassis (model DD22-1), with Bridge Chip version IBM 2.1, is supported with the following systems:

**Pro Tools 24 MIX/MIXplus:**
- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

**Pro Tools 24:**
- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

For the latest compatibility information, visit the Digidesign Web site (www.digidesign.com).

### SBS 7-Slot, Model 2101-00-2

The SBS 7-Slot Expansion Chassis (model 2101-00-2), with Bridge Chip version IBM 2.0 or 2.1, is supported with the following systems:

**Pro Tools 24 MIX/MIXplus:**
- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

**Pro Tools 24:**
- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

**Pro Tools III:**
- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4

For the latest compatibility information, visit the Digidesign Web site (www.digidesign.com).

▲ SBS model 2101-00-2 with a Pro Tools III system requires DAE/DSI 3.2.3 or higher.

▲ To use SBS model 2101-00-2 with a G3 or G4, it must have the IBM 2.1 Bridge Chip.

# Slot Layout for SBS 7-Slot Expansion Chassis

SBS 7-Slot chassis have slots that are numbered sequentially (1–7), left-to-right, from the front.
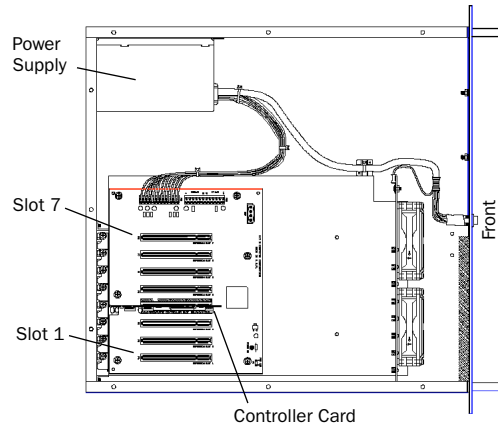


*Slot numbering for SBS models DD22-1 and 2101-00-2*

SBS models DD22-1 and 2101-002 have a Backplane Controller Slot between slots 3 and 4.

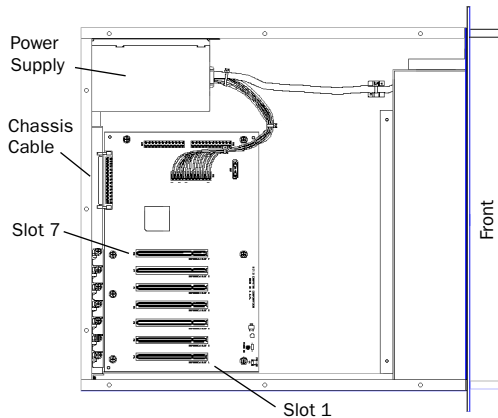SBS model DD007-R does not have a Backplane Controller slot. It instead has a built-in chassis controller with a connector on the back of the expansion chassis.



*Slot numbering for SBS model DD007-R*

# Configuring the SBS 7-Slot Expansion Chassis

Before installing any of the following hardware, turn off the expansion chassis, your computer, and any peripherals. Leave your computer's power cable plugged in so the computer is grounded.

Do not remove cards from their antistatic bags until you have discharged static electricity by touching a grounded object (such as the power supply of your computer).

# Connecting the Expansion Chassis

### Install the chassis host card:

**1** Install the SBS Host Card in the lowest numbered slot in your computer.

To locate the lowest numbered slot, refer to your computer's documentation.

**2** Attach a 2- or 4-foot expansion chassis cable to the host card. If necessary, refer to the SBS guide for specific instructions.

▲ 6-foot expansion chassis cables are not supported.

**3** If using a SCSI HBA, install it in the highest numbered remaining slot in your computer.

For 9500/9600 computers, the SCSI HBA reside before the video card.

### Install the chassis controller card:

**1** Install the SBS Controller card in the Backplane Controller Slot of the expansion chassis (between slots 3 and 4).

If using SBS model DD007-R, skip this step.

**2** Attach the other end of the expansion chassis cable to the controller card. If necessary, refer to the SBS guide for specific instructions.

If using SBS model DD007-R, attach the chassis cable to the connector on the back of the expansion chassis.

## Installing the Digidesign Cards

▲ If using SBS model 2101-00-2 with Bridge Chip version IBM 2.0, don't use the card order in the following procedure. Instead see "Example 4, SBS 7-Slot" on page 33 and "Example 5, SBS 7-Slot" on page 33.

**Install the Digidesign audio cards:**

**1** Install the primary Core or Disk I/O card (clock master with primary audio interface) in slot 1 of the expansion chassis.

**2** If using a Pro Tools 24 MIX system, install the remaining cards in successive chassis slots in the following order:

- MIX Core cards (additional)
- MIX Farm cards
- d24 cards
- MIX I/O card
- DSP Farm cards
- SampleCell cards

✳ See "Example 1, SBS 7-Slot" on page 31.

– or –

**3** If using a Pro Tools 24 system, install the remaining cards in successive chassis slots in the following order:

- d24 cards (additional)
- DSP Farm cards
- SampleCell cards
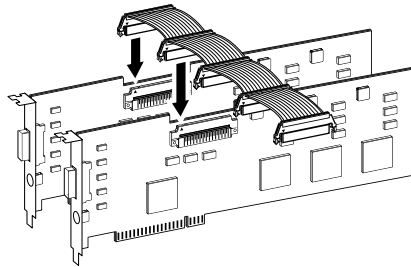
✳ See "Example 2, SBS 7-Slot" on page 32.

– or –

**4** If using a Pro Tools III system, install the remaining cards in successive chassis slots in the following order:

- Disk I/O cards (additional)
- DSP Farm cards
- SampleCell cards

✳ See "Example 3, SBS 7-Slot" on page 32.

**Connect all TDM-equipped cards with a TDM ribbon cable:**

**1** Connect the first node of the TDM ribbon cable to the first Digidesign card. Make sure the TDM cable is facing the right direction—align the white triangle on the cable plug with the triangle on the card.



*Attaching a TDM ribbon cable*

**2** Push down gently but firmly until the node is fully connected to the card. When the plug is properly seated, the two tabs on the side of the cable's TDM connector click shut. To detach the ribbon cable, squeeze the tabs on the TDM connector inward.
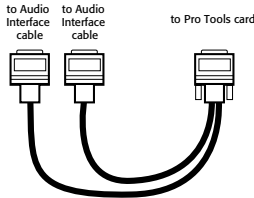
**3** Attach the remaining nodes on the TDM cable to subsequent cards. Make sure that the last node on the cable is connected to the last card in your system. Unused nodes, if any, should reside toward the middle of the cable.

# Connecting Audio Interfaces

## Connect the Digidesign audio interfaces:

**1** Connect the primary audio interface to the primary Core card with the provided interface cable. The primary audio interface functions as the clock master.

**2** Connect additional audio interfaces to subsequent Digidesign audio cards.

You can use Digidesign's 16-channel peripheral cable adapter (optional) to connect two audio interfaces to a MIX Core, MIX I/O, d24, or Mix Farm card.



*16-channel peripheral cable adapter*

---

✳ See "Example 1, SBS 7-Slot" on page 31 and "Example 2, SBS 7-Slot" on page 32.

---

**3** If using multiple audio interfaces, connect the Slave Clock Out of the primary interface to the Slave Clock In of the second interface with the provided BNC cable.
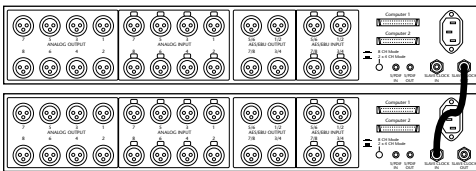


*Connecting multiple audio interfaces*

**4** Connect the Slave Clock Out of the second interface to the Slave Clock In of the next audio interface (and so forth).

## Example 1, SBS 7-Slot

*Pro Tools 24 MIX/MIXplus System*

*Power Macintosh G3, G4, or 9500/9600*

Chassis cards with multiple audio interfaces:

| Slot | Card |
|------|------|
| Slot 1 | MIX Core (Interface #1 and #2) |
| Slot 2 | MIX Farm (interface #3 and #4) |
| Slot 3 | d24 (Interface #5 and #6) |
| Backplane Controller Slot | Chassis Controller Card |
| Slot 4 | MIX I/O (Interface #7 and #8) |
| Slot 5 | DSP Farm (Interface #9) |
| Slot 6 | DSP Farm or SampleCell card |
| Slot 7 | DSP Farm or SampleCell card |

---

✳ SBS model DD007-R does not have a Backplane Controller slot.

---

▲ The Beige G3 and 9500/9600 are not compatible with SBS model DD007-R.

---

▲ To use SBS model 2101-00-2 with a G3 or G4, it must have the IBM 2.1 Bridge Chip.

---

## Example 2, SBS 7-Slot

*Pro Tools 24 System*

*Power Macintosh G3, G4, or 9500/9600*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Slot 1 | d24 (Interface #1 and #2) |
| Slot 2 | d24 (Interface #3 and #4) |
| Slot 3 | DSP Farm (Interface #5) |
| Backplane Controller Slot | Chassis Controller Card |
| Slot 4 | DSP Farm (Interface #6) |
| Slot 5 | DSP Farm (Interface #7) |
| Slot 6 | DSP Farm or SampleCell card |
| Slot 7 | DSP Farm or SampleCell card |

✳ SBS model DD007-R does not have a Back-plane Controller slot.

▲ The Beige G3 and 9500/9600 are not compatible with SBS model DD007-R.

▲ To use SBS model 2101-00-2 with a G3 or G4, it must have the IBM 2.1 Bridge Chip.

## Example 3, SBS 7-Slot

## (Model 2101-00-2, IBM 2.1 Bridge Chip)

*Pro Tools III System*

*Power Macintosh G3, G4, or 9500/9600*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Slot 1 | Disk I/O (Interface #1) |
| Slot 2 | DSP Farm (Interface #2) |
| Slot 3 | DSP Farm (Interface #3) |
| Backplane Controller Slot | Chassis Controller Card |
| Slot 4 | DSP Farm (Interface #4) |
| Slot 5 | DSP Farm (Interface #5) |
| Slot 6 | DSP Farm or SampleCell card |
| Slot 7 | DSP Farm or SampleCell card |

▲ To use SBS model 2101-00-2 with a G3 or G4, it must have the IBM 2.1 Bridge Chip.

## Example 4, SBS 7-Slot

### (Model 2101-00-2, IBM 2.0 Bridge Chip)

*Pro Tools 24 System*

*Power Macintosh G3 (Beige) or 9500/9600*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Slot 1 | DSP Farm (Interface #3) |
| Slot 2 | DSP Farm (Interface #4) |
| Slot 3 | DSP Farm (Interface #5) |
| Backplane Controller Slot | Chassis Controller Card |
| Slot 4 | DSP Farm (Interface #6) |
| Slot 5 | DSP Farm or SampleCell card |
| Slot 6 | DSP Farm or SampleCell card |
| Slot 7 | d24 (Interface #1 and #2)) |

✱ If using two d24 cards, install the primary card (clock master with primary audio interface) in slot 6, followed by the second d24 in slot 7.

## Example 5, SBS 7-Slot

### (Model 2101-00-2, IBM 2.0 Bridge Chip)

*Pro Tools III System*

*Power Macintosh G3 (Beige) or 9500/9600*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Slot 1 | DSP Farm (Interface #2) |
| Slot 2 | DSP Farm (Interface #3) |
| Slot 3 | DSP Farm (Interface #4) |
| Backplane Controller Slot | Chassis Controller Card |
| Slot 4 | DSP Farm (Interface #5) |
| Slot 5 | DSP Farm or SampleCell card |
| Slot 6 | DSP Farm or SampleCell card |
| Slot 7 | Disk I/O (Interface #1) |

✱ If using two Disk I/O cards, install the primary card (clock master with primary audio interface) in slot 6, followed by the second Disk I/O in slot 7.

## chapter 7

# SBS 13-Slot Expansion Chassis

The SBS 13-Slot Expansion Chassis (models DD23, 240-2-2, and 240-2-201), with Bridge Chip version Intel/DEC 2.1, are compatible with the following systems:

**Pro Tools 24 MIX and MIXplus:**
- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4
- Windows NT, IBM Intellistation MPro

**Pro Tools 24:**
- Power Macintosh 9500/9600
- Power Macintosh G3 (Beige)
- Power Macintosh G3 (Blue & White)
- Power Macintosh G4
- Windows NT, IBM Intellistation MPro
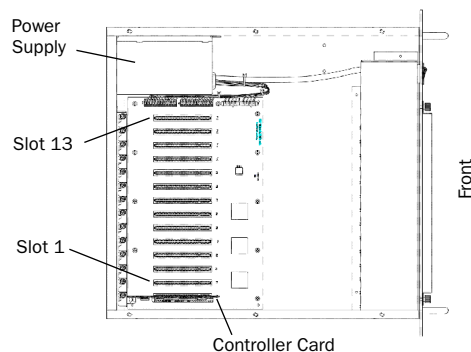
For the latest compatibility information, visit the Digidesign Web site (www.digidesign.com).

## Slot Layout for SBS 13-Slot Expansion Chassis

Most SBS 13-Slot chassis, including the newer models, have slots that are numbered sequentially, left-to-right, from the front. These chassis have serial number 198487 or higher.



*Slot numbering for newer SBS 13-Slot chassis*

Older SBS 13-Slot chassis have slots that are numbered sequentially, right-to-left, from the front. These chassis have serial numbers 198486 or lower.

To verify the slot numbering for your chassis, refer to the SBS guide.

# Configuring the SBS 13-Slot Expansion Chassis

## System Performance and Clock Skew

To ensure the maximum track count with expanded Pro Tools 24 MIX and Pro Tools 24 systems, you may need to adjust the clock skew on the chassis host card.

This is accomplished by changing a jumper switch on the host card. Locate the set of jumper pins marked "J2" on the host card. If the jumper cap spans pins 2–3, it should be moved to span pins 1–2.

## Connecting the Expansion Chassis

Before installing any of the following hardware, turn off the expansion chassis, your computer, and any peripherals. Leave your computer's power cable plugged in so the computer is grounded.

Do not remove cards from their antistatic bags until you have discharged static electricity by touching a grounded object (such as the power supply of your computer).

**Install the chassis host card:**

**1** Install the SBS Host Card in your computer.

- Macintosh: Install the chassis host card in the lowest numbered slot.
- Windows NT: Install the chassis host card in slot 1 (adjacent to the AGP/slot 0).

To locate the lowest numbered slot, refer to your computer's documentation.

**2** Attach a 2- or 4-foot expansion chassis cable to the host card. If necessary, refer to the SBS guide for specific instructions.

▲ 6-foot expansion chassis cables are not supported.

**3** If using a SCSI HBA, install it in the highest numbered remaining slot in your computer.

For 9500/9600 computers, the SCSI HBA should reside before the video card.

**Install the chassis controller card:**

**1** Install the SBS Controller card in the Backplane Controller slot of the expansion chassis.

**2** Attach the other end of the expansion chassis cable to the controller card. If necessary, refer to the SBS guide for specific instructions.

## Installing the Digidesign Cards

**Install the Digidesign audio cards:**

**1** Install the primary Core card (clock master with primary audio interface) in the appropriate slot of the expansion chassis:

- Macintosh 9500, G3/G4: Install in slot 2 (leave slot 1 empty).
- Macintosh 9600, IBM Intellistation MPro: Install in slot 4 (leave slots 1–3 empty).

**2** If using a Pro Tools 24 MIX system, install the remaining cards in successive chassis slots in the following order:

- MIX Core cards (additional)
- MIX Farm cards
- d24 cards
- MIX I/O card
- DSP Farm cards
- SampleCell cards
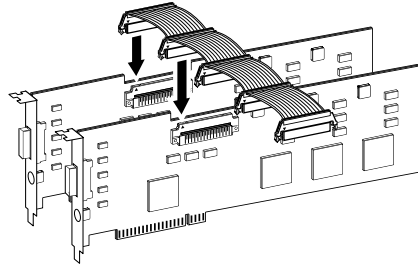
✻ See "Example 1, SBS 13-Slot" on page 38.

– or –

**3** If using a Pro Tools 24 system, install the remaining cards in successive chassis slots in the following order:

- d24 cards (additional)
- DSP Farm cards
- SampleCell cards

✻ See "Example 2, SBS 13-Slot" on page 39.

## Connect all TDM-equipped cards with a TDM ribbon cable:

**1** Connect the first node of the TDM ribbon cable to the first Digidesign card. Make sure the TDM cable is facing the right direction—align the white triangle on the cable plug with the triangle on the card.



*Attaching a TDM ribbon cable*

**2** Push down gently but firmly until the node is fully connected to the card. When the plug is properly seated, the two tabs on the side of the cable's TDM connector click shut. To detach the ribbon cable, squeeze the tabs on the TDM connector inward.

**3** Attach the remaining nodes on the TDM cable to subsequent cards. Make sure that the last node on the cable is connected to the last card in your system. Unused nodes, if any, should reside toward the middle of the cable.
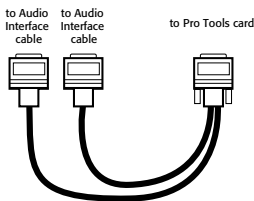
# Connecting Audio Interfaces

### Connect the Digidesign audio interfaces:

**1** Connect the primary audio interface to the primary Core card with the provided interface cable. The primary audio interface functions as the clock master.

**2** Connect additional audio interfaces to subsequent Digidesign audio cards.

You can use Digidesign's 16-channel peripheral cable adapter (optional) to connect two audio interfaces to a MIX Core, MIX I/O, d24, or Mix Farm card.



*16-channel peripheral cable adapter*

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❉ See "Example 1, SBS 13-Slot" on page 38 and "Example 2, SBS 13-Slot" on page 39.

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**3** If using multiple audio interfaces, connect the Slave Clock Out of the primary interface to the Slave Clock In of the second interface with the provided BNC cable.
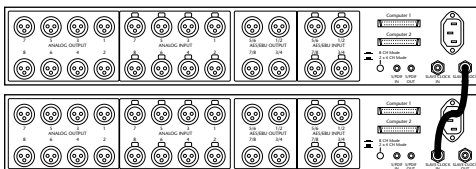


*Connecting multiple audio interfaces*

**4** Connect the Slave Clock Out of the second interface to the Slave Clock In of the next audio interface (and so forth).

## Example 1, SBS 13-Slot

*Pro Tools 24 MIX/MIXplus System*

*Power Macintosh G3, G4, or 9500*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|------|------|
| Slot 0 | Chassis Controller Card |
| Slot 1 | Empty |
| Slot 2 | MIX Core (Interface #1 and #2) |
| Slot 3 | MIX Farm (interface #3 and #4) |
| Slot 4 | d24 (Interface #5 and #6) |
| Slot 5 | MIX I/O (Interface #7 and #8) |
| Slot 6 | DSP Farm (Interface #9) |
| Slot 7 | DSP Farm or SampleCell card |
| Slot 8 | DSP Farm or SampleCell card |
| Slot 9 | DSP Farm or SampleCell card |
| Slot 10 | DSP Farm or SampleCell card |
| Slot 11 | DSP Farm or SampleCell card |
| Slot 12 | Available for non-bus master card |
| Slot 13 | Available for non-bus master card |

▲ Macintosh 9600, Windows NT: Slots 1–3 should be empty, with the MIX Core card installed in slot 4.

## Example 2, SBS 13-Slot

*Pro Tools 24 System*

*Power Macintosh G3/G4*

*Chassis cards with multiple audio interfaces:*

| Slot | Card |
|---|---|
| Slot 0 | Chassis Controller Card |
| Slot 1 | Empty |
| Slot 2 | d24 (Interface #1 and #2) |
| Slot 3 | d24 (Interface #3) |
| Slot 4 | DSP Farm (Interface #4) |
| Slot 5 | DSP Farm (Interface #5) |
| Slot 6 | DSP Farm (Interface #6) |
| Slot 7 | DSP Farm (Interface #7) |
| Slot 8 | DSP Farm (Interface #8) |
| Slot 9 | DSP Farm (Interface #9) |
| Slot 10 | DSP Farm or SampleCell card |
| Slot 11 | DSP Farm or SampleCell card |
| Slot 12 | Available for non-bus master card |
| Slot 13 | Available for non-bus master card |

▲ Macintosh 9500/9600, Windows NT:
Slots 1–3 should be empty, with the d24 card
installed in slot 4.