Avid® MediaDock™ Ultra320

Setup and User's Guide

make manage move | media™ Avid®

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Using This Guide

This guide contains information about installing and using the Avid® MediaDock™ Ultra320 enclosure, drive shuttles, and related software. The MediaDock Ultra320 is available in both a rack-mount version and a tower version. Most of the configurations within this guide show the MediaDock Ultra320 chassis in a rack-mount version. Difference between the two versions are documented as appropriate.

Who Should Use This Guide

This guide is designed for anyone who is installing or troubleshooting a MediaDock Ultra320 enclosure and MediaDock Ultra320 shuttles.

About This Guide

This guide describes how to install, configure, and troubleshoot the MediaDock Ultra320. The information in this guide is organized as follows:

- Chapter 1, "Overview," describes the system requirements and features of the MediaDock Ultra320. It also provides an overview of the components of the MediaDock Ultra320.
- Chapter 2, "Preparing the MediaDock Ultra320 for Installation," describes how to prepare the MediaDock Ultra320 for installation.
- Chapter 3, "Configuring the MediaDock Ultra320," describes the supported configurations and how to connect the MediaDock Ultra320 to match those configurations.

- Chapter 4, “Replacing Shuttle Packs,” describes the day-to-day functions that a user performs.
- Chapter 5, “Preparing Your Drives,” describes how to format your drives on Windows® and Macintosh® operating systems. This chapter also includes information about how to move MediaDock Ultra320 shuttles from one system to another. See this chapter for information on available diagnostic utilities.
- Chapter 6, “Troubleshooting,” describes how to resolve basic problems that might occur during the installation and operation of the MediaDock Ultra320.
- Appendix A, “MediaDock Ultra320 Specifications,” lists the dimensions, electrical requirements, environmental requirements, and power specifications for the MediaDock Ultra320.
- Appendix B, “Rack Mounting the MediaDock Ultra320 Enclosure,” provides the information you need to mount the MediaDock Ultra320 in a rack.
- Appendix C, “Converting the MediaDock Ultra320 Rack Enclosure into a Tower Configuration,” provides the information you need to convert the MediaDock Ultra320 enclosure to a tower configuration.
- Appendix D, “Regulatory and Safety Notices,” describes the regulatory and safety notices that apply to the MediaDock Ultra320.
- Finally, a detailed Index helps you quickly locate specific topics.

Symbols and Conventions

Unless noted otherwise, the material in this document applies to the Windows NT, Windows 2000, Windows XP, Mac OS® 9, and Mac OS X operating systems. When the text applies to a specific operating system, it is marked as follows:

- (Windows) or (Windows only) means the information applies to the Windows NT, Windows 2000, and Windows XP operating system.
- (Macintosh) or (Macintosh only) means the information applies to the Mac OS 9 and Mac OS X operating system.

The majority of screen shots in this document were captured on the appropriate operating systems. Where differences exist, both Windows and Macintosh screen shots are shown.

Avid documentation uses the following symbols and conventions:

Symbol or Convention	Meaning or Action
	A note provides important related information, reminders, recommendations, and strong suggestions.
	A caution means that a specific action you take could cause harm to your computer or cause you to lose data.
	A warning describes an action that could cause you physical harm. Follow the guidelines in this document or on the unit itself when handling electrical equipment.
>	This symbol indicates menu commands (and subcommands) in the order you select them. For example, File > Import means to open the File menu and then select the Import command.
▶	This symbol indicates a single-step procedure. Multiple arrows in a list indicate that you perform one of the actions listed.
⌘	This symbol represents the Apple® or Command key. Press and hold the Command key and another key to perform a keyboard shortcut.
Margin tips	In the margin, you will find tips that help you perform tasks more easily and efficiently.
Italic font	Italic font is used to emphasize certain words and to indicate variables.
`Courier Bold font`	Courier Bold font identifies text that you type.

Symbol or Convention	Meaning or Action
Click	Quickly press and release the left mouse button (Windows) or the mouse button (Macintosh).
Double-click	Click the left mouse button (Windows) or the mouse button (Macintosh) twice rapidly.
Right-click	Quickly press and release the right mouse button (Windows only).
Drag	Press and hold the left mouse button (Windows) or the mouse button (Macintosh) while you move the mouse.
Ctrl+*key* ⌘+*key*	Press and hold the first key while you press the second key.

If You Need Help

If you are having trouble using the MediaDock Ultra320:

1. Retry the action, carefully following the instructions given for that task in this guide. It is especially important to check each step of your workflow.
2. Check the release notes supplied with your Avid application for the latest information that might have become available *after* the hardcopy documentation was printed.
3. Check the documentation that came with your Avid application or your hardware for maintenance or hardware-related issues.
4. Visit the online Knowledge Center at www.avid.com/support. Online services are available 24 hours per day, 7 days per week. Search this online Knowledge Center to find answers, to view error messages, to access troubleshooting tips, to download updates, and to read/join online message-board discussions.
5. For Technical Support, please call 800-800-AVID (800-800-2843).

   For Broadcast On-Air Sites and Call Letter Stations, call 800-NEWSDNG (800-639-7364).

Related Information

The following documents provides useful information when using the Avid MediaDock Ultra320 and the MediaDock Ultra320 shuttles:

- *Storage Manager Setup and User's Guide*

  This guide provides step-by-step instructions for diagnosing drive problems, spinning down drive shuttles, as well as other storage related functions.

- *AVIDdrive Utility 2 User's Guide*

  This guide provides step-by-step instructions for partitioning, erasing, identifying, and testing drives. This utility also creates and removes striped sets, as well as other storage related functions.

- *ATTO ExpressStripe RAID for Macintosh OS X Installation and Operation Manual*

  This guide provides step-by-step instructions for creating partitions and striped sets on Mac OS X systems, as well as other storage related functions.

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Chapter 1

Overview

This chapter provides an overview of the Avid MediaDock Ultra320 SCSI storage subsystem.

The chapter contains the following sections:

Introduction

The Avid MediaDock Ultra320 provides a high-throughput, high-capacity storage environment for video and audio editing, graphics and image processing, and broadcast applications.

The MediaDock Ultra320 communicates with the Avid editing system through a small computer system interface (SCSI) bus. The bus is the pathway for moving information from one part of the system to another.

When you use the Macintosh operating system, the AVIDdrive™ Utility 2 software (Mac® OS 9), ATTO™ ExpressStripe software (Mac OS X), and the Storage Manager software, you can safely exchange Avid MediaDock Ultra320 shuttle packs within your Avid editing system.

For information on using AVIDdrive Utility 2, see the AVIDdrive Utility 2 User's Guide *and the release notes.*

Some operating systems require you to restart the Avid editing system *before* the operating system can see a MediaDock Ultra320 shuttle that has been removed and replaced. Other operating systems use an utility to remove and replace MediaDock Ultra320 shuttle packs without turning off the system. For details on removing and installing MediaDock Ultra320 shuttles from the MediaDock Ultra320 enclosure, see Chapter 4. The Avid Disk Mounter utility allows you to move striped sets of drives from Windows NT systems to other Windows systems, see "Transferring Disk Drives or Stripe Sets from a Windows NT System to a Windows 2000 or Windows XP System" on page 82.

Features

The MediaDock Ultra320 ships as a 19-inch rack-mountable chassis; a tower option is available. The MediaDock Ultra320 contains:

- Twelve slots that support:
  - Low-Voltage Differential (LVD) Ultra technology
  - Wide bus data transfers over a 16-bit bus up to 320 megabytes per second (MB/s) (depending on the host bus adapter)
  - One MediaDock Ultra320 shuttle per slot containing a single 1.0-inch-high hard disk in a 3.5-inch form factor
- A configurable SCSI bus that allows:
  - A single bus with 12 slots
  - Dual buses with six slots each
- Intelligent MediaDock Ultra320 shuttle insertion sensing
- An LED status panel to monitor MediaDock Ultra320 functions
- Dual power supplies
- Temperature sensor and audible alarm
- Three variable-speed fans in each power supply, fan speed is regulated by the temperature sensors

- Robust MediaDock Ultra320 shuttles with a lever for inserting or removing the shuttle from the MediaDock Ultra320
- Internal, automatic single-bus and dual-bus termination

System Requirements

To use a MediaDock Ultra320, you need the following hardware and software:

- One of the following hardware platforms and operating software releases:
  - A supported Power Macintosh® system running Mac OS 9.0 or later
  - A supported personal computer (PC) that runs the Windows NT operating system (with Service Pack 3 or later)
  - A supported PC that runs the Windows 2000 operating system (with Service Pack 2 or later)
  - A supported PC that runs the Windows XP operating system (with Service Pack 1 or later)
- An Avid software application that supports SCSI LVD
- The following utilities and exercisers:
  - AVIDdrive Utility (ADU) 2 Version 2.2 or later for Mac OS 9.0
  - ATTO ExpressStripe Version 1.2 or later for Mac OS X
  - Storage Manager Version 1.3 or later
  - StorEx for the Macintosh operating system Version 1.5 or later for Mac OS 9.0
  - DiskWarrior™ for the Macintosh operating system
  - Avid Disk Mounter for the Windows NT operating system
- A SCSI LVD/Ultra320 connection to the Avid editing system
- An approved Ultra320 cable
- One or more MediaDock Ultra320 shuttles

SCSI Bus Architecture

The MediaDock Ultra320 can operate in a single-bus or dual-bus configuration, depending on how the bus configuration module is set. The MediaDock Ultra320 is factory configured for a single-bus configuration.

The MediaDock Ultra320 cannot be daisy-chained with other SCSI devices or to a second MediaDock Ultra320.

System Components

The following sections explain the MediaDock Ultra320 system components:

- Status Panel
- MediaDock Ultra320 Slots
- MediaDock Ultra320 Connectors
- MediaDock Ultra320 Shuttles
- Power Supply/Cooling Modules (Power and cooling functions are together in one module)
- Audible Alarm

Status Panel

The status panel, shown in Figure 1, provides the following indicators:

- Power — Power LED
- MediaDock Ultra320 faults — Fault LED
- SCSI bus configuration (single- or dual-bus) — Configuration LED

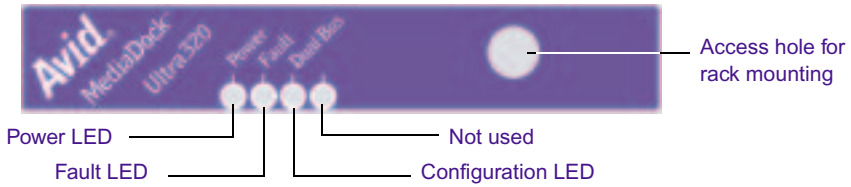


Figure 1 Status Panel

For more information about the status panel, see "Understanding the Status Panel" on page 56. Additional LEDs are located on the rear of the enclosure; see "Rear Panel LEDs" on page 44.

MediaDock Ultra320 Slots

The MediaDock Ultra320 has 12 slots for MediaDock Ultra320 shuttles (see Figure 2). If you are using the MediaDock Ultra320 in a single-bus configuration, all 12 slots are on SCSI bus A. If you are using the MediaDock Ultra320 in a dual-bus configuration, the top six slots are on SCSI bus A and the bottom six slots are on SCSI bus B. Figure 3 identifies the SCSI bus A and B connectors on the rear of the MediaDock Ultra320 enclosure.

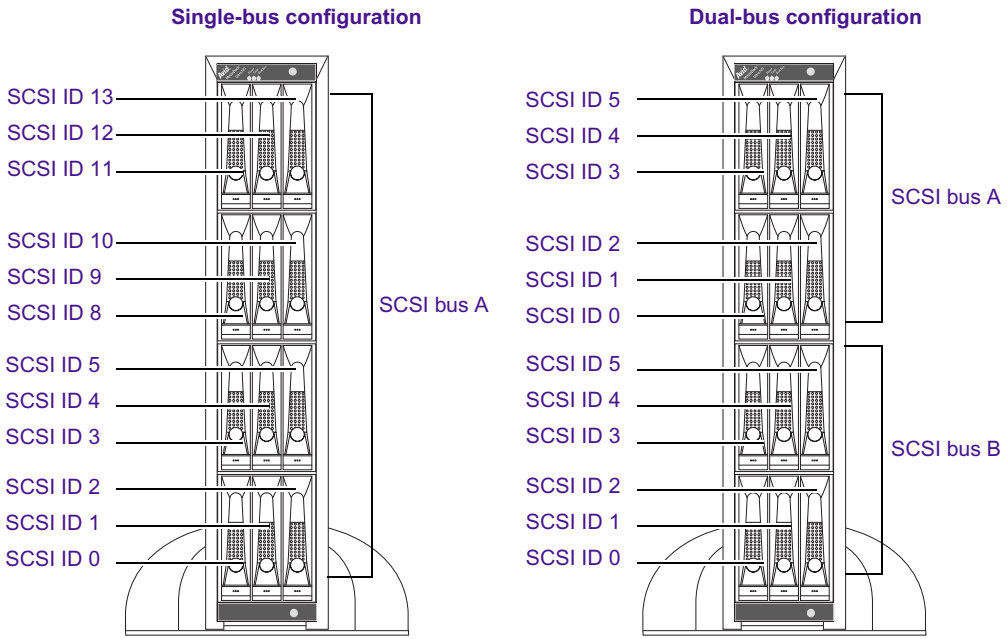


Figure 2 Slot Allocation

MediaDock Ultra320 Connectors

You connect the MediaDock Ultra320 to the SCSI bus using 68-pin very high-density cable interconnect (VHDCI) SCSI bus connectors (see Figure 3). You can use either SCSI port when in a single SCSI port configuration. The MediaDock Ultra320 automatically terminates the SCSI bus whether you are using a single- or a dual-bus configuration.

In a dual-bus configuration, one SCSI connector is used for each bus. Separate SCSI controllers or SCSI channels must be used for each MediaDock Ultra320 SCSI bus.

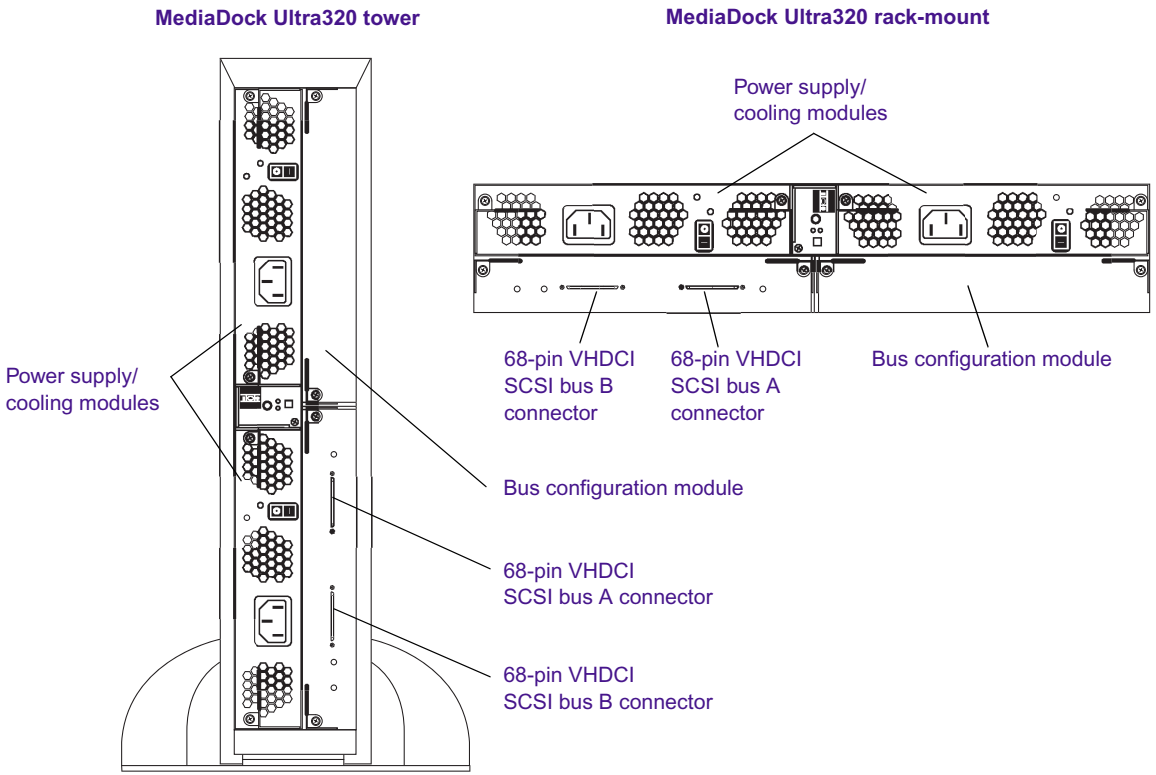


Figure 3 Component Locations

MediaDock Ultra320 Shuttles

The MediaDock Ultra320 uses only MediaDock Ultra320 shuttles. Each MediaDock Ultra320 shuttle contains three LEDs that provide information about the MediaDock Ultra320 shuttle's activity (see Figure 4). Table 1 describes the function of each LED.

The three MediaDock Ultra320 shuttle LEDs are located on the backplane. There are three light tubes built into the MediaDock Ultra320 shuttle that carry the light from the backplane to the front of the MediaDock Ultra320 shuttle.

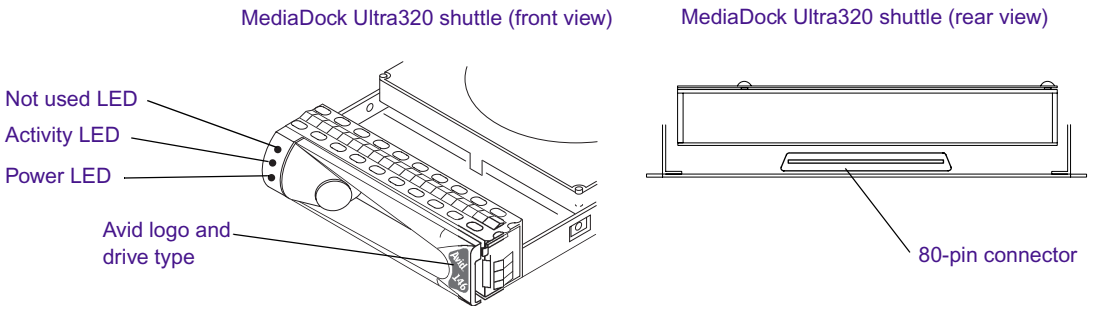


Figure 4 MediaDock Ultra320 Shuttles

The MediaDock Ultra320 shuttles have SCA-2 80-pin connectors. Earlier models of MediaDock Shuttle™ packs do not fit in the MediaDock Ultra320 chassis.

Instructions for inserting the drive-filler, see the "Installing a MediaDock Ultra320 Shuttle" on page 48.

As drive size and drive speed improve, different MediaDock Ultra320 shuttles will be available for use in the MediaDock Ultra320. Contact your local Avid Reseller or call the Avid Sales and Product information line at 800-949-2843 for the available MediaDock Ultra320 shuttles.

Table 1 MediaDock Ultra320 Shuttle LED Functions

LED	Color	Function
Not used	—	This LED is has no function.
Activity	Green	This LED is On when the drive is active.
Power	Green	This LED is On when power is applied to the drive.

MediaDock Ultra320 Drive-Filler

Any slot that does not contain a MediaDock Ultra320 shuttle *must* contain a drive-filler (see Figure 5). A drive-filler looks like a MediaDock Ultra320 shuttle from the front, but the Avid logo and drive type locations are blank and there is no LED function. Unlike the MediaDock Ultra320 shuttles, the drive-filler is all black, it does not have a purple button like the like the MediaDock Ultra320 shuttles.

The drive-filler is installed and removed using the same process as the MediaDock Ultra320 shuttle. Instructions for inserting the drive-filler, see the “Installing a MediaDock Ultra320 Shuttle” on page 48.

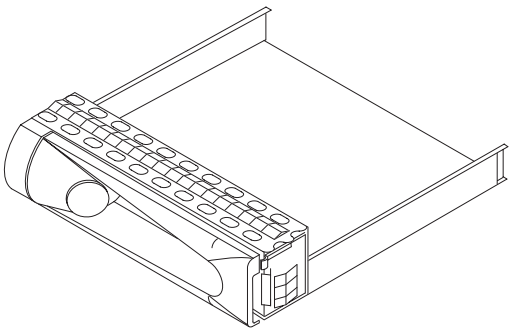


Figure 5 Drive-Filler

Power Supply/Cooling Modules

Each MediaDock Ultra320 is capable of supporting two power supplies. Although one power supply is sufficient to operate the system, a second, power supply provides automatic power backup if the first power supply fails. Two power supplies ensure continuous data retrieval.

Having two power supplies allows you to remove a faulty power supply and replace it with a new power supply while the MediaDock Ultra320 is operating (without impacting operation).

Figure 6 shows the power-supply locations in the rack-mount version of the MediaDock Ultra320. To remove a power supply, see "Removing and Installing Power Supply/Cooling Modules" on page 37.

The power supply has two LEDs. The green LED is On when power is on and within specifications. The amber LED is On when a power-supply fault is detected (the green LED is Off).

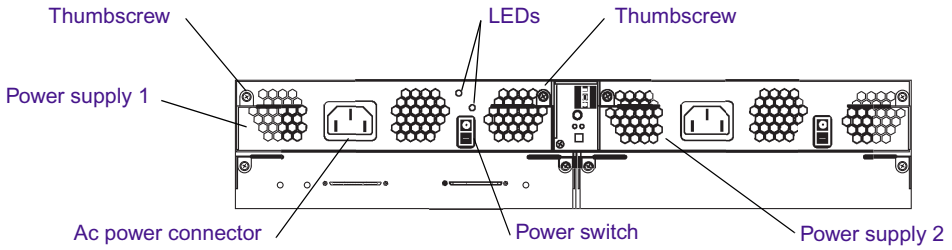


Figure 6 Power Supply Location

Each power supply includes three enclosed fans. Figure 7 shows the location of the fan vents in the power supplies.

If a temperature failure is detected, the Fault LED will light amber. A temperature failure could be an indication that a fan has failed. You must replace the power supply that includes the failed fan. To remove a power supply, see “Removing and Installing Power Supply/Cooling Modules” on page 37.

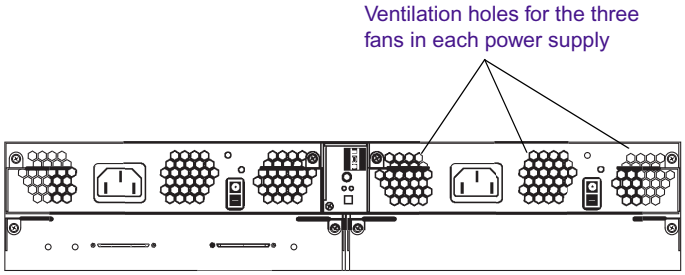


Figure 7 Fan Location

Audible Alarm

The MediaDock Ultra320 sounds an alarm when any one of the following conditions occurs:

- A fan fails.
- A power supply fails.
- The internally monitored temperature threshold is exceeded.
- A drive fault is detected.

When the alarm sounds, there is a mute button on the back of the MediaDock Ultra320 used to turn the alarm off. The location of the Alarm Mute button is shown with the “Rear Panel LEDs” on page 44.

Chapter 2

Preparing the MediaDock Ultra320 for Installation

The following sections describe how to configure the MediaDock Ultra320 enclosure for a single or dual SCSI bus. Also included are instructions for removing and installing the power supply/cooling modules.

This chapter contains the following sections:

Preparing for Installation

Before you begin to install the MediaDock Ultra320, do the following:

- Decide where you are going to place the MediaDock Ultra320.
- Unpack the MediaDock Ultra320 and each MediaDock Ultra320 shuttle or drive-filler.
- Use a grounding wrist strap (if available) to change the bus configuration and to remove or install a power supply/cooling module.
- Locate a grounded, surge-protected ac outlet.

- Have a Phillips screwdriver available for configuring the SCSI bus and for removing or installing the power supply, the tower kit, or the rack kit.
  - If you plan on using a dual-bus configuration, see "Configuring the SCSI Bus Configuration Module" on page 34.
  - If you are removing or installing a power supply, see "Removing and Installing Power Supply/Cooling Modules" on page 37.
  - For information about installing a MediaDock Ultra320 in a rack-mount configuration, see Appendix B.
  - For information about installing a MediaDock Ultra320 in a tower configuration, see Appendix C.

After you have finished preparing the MediaDock Ultra320 enclosure and set it up as either a tower or rack-mount configuration, see "Installing a MediaDock Ultra320 Shuttle" on page 48.

Selecting a Location for the MediaDock Ultra320

Before you install the MediaDock Ultra320, find a location that meets the following criteria:

- The MediaDock Ultra320 has a minimum of 4 in (10 cm) of clearance from any objects behind the MediaDock Ultra320.
- The location of the MediaDock Ultra320 in relation to the Avid editing system depends on the length of the SCSI LVD cable between the host and the MediaDock Ultra320.
- The MediaDock Ultra320 is placed in a well-ventilated area to prevent overheating.
- For a tower configuration, position the MediaDock Ultra320 on a sturdy, level surface or on the floor.
- For a rack-mount configuration, position the MediaDock Ultra320 in a rack with at least 12 in (30 cm) of clearance behind it for adequate airflow. For more information, see "Installing the MediaDock Ultra320 in a Rack" on page 101.

Checking the MediaDock Ultra320 Hardware

As you unpack the boxes, retain *all* cartons and packing materials in case you need to store or ship the system or MediaDock Ultra320 shuttles in the future.

Unpack the MediaDock Ultra320 and check the contents of the packages to ensure that all parts were shipped. The packages should contain:

- The Avid MediaDock Ultra320 chassis that includes:
  - A bus configuration module
  - Two power supply/cooling modules
  - Drive-fillers
  - SES/bus ID switch module
- Two ac power cord
- The *Avid MediaDock Ultra320 Setup and User's Guide* (this document)
- A tower or rack-mount kit (depending on what you ordered)
- MediaDock Ultra320 shuttles (depending on how many you ordered). A storage utilities CD-ROM is included with the shuttles. For information about the utilities, see "Diagnostic Utilities" on page 85.

Using the Grounding Wrist Strap

During the installation and normal use of the MediaDock Ultra320, you will perform actions that could cause damage to portions of the MediaDock Ultra320 if proper care is not taken. This section explains how to properly ground yourself by using a grounding wrist strap.

To use the grounding wrist strap:

1. Make sure the MediaDock Ultra320 chassis is turned Off.
2. Put the grounding wrist strap on your wrist.

3. Attach the grounding clip to any one of the metal thumbscrews on the rear of the MediaDock Ultra320 chassis (see Figure 8).

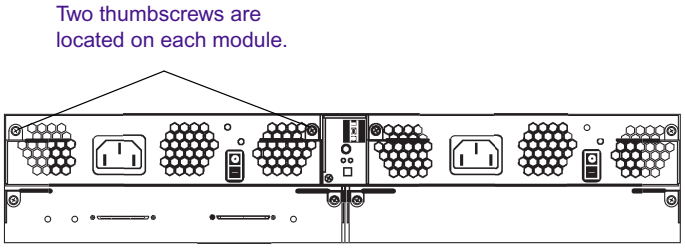


Figure 8 Connecting the Grounding Wrist Strap

Configuring the SCSI Bus Configuration Module

The MediaDock Ultra320 ships configured as a single SCSI bus. If you plan to work in a single-bus configuration, you do not need to perform the procedure in this section. To determine if dual-bus configuration works best for you, see "Determining the SCSI Bus Configuration" on page 40.

The location of the SCSI bus configuration module is shown in Figure 9. To change the MediaDock Ultra320 into a dual-bus configuration, relocate a circuit board inside the module.

Before you continue the installation of the MediaDock Ultra320 system, configure the SCSI bus.

The following procedure assumes that you are configuring the SCSI bus module before you install the MediaDock Ultra320 and that no power is applied.

To configure the SCSI bus configuration module:

1. Using a Phillips screwdriver, loosen the two thumbscrews attached to the SCSI bus configuration module (see Figure 9).
2. Push the cam levers down to eject the module and pull it out of the enclosure (see Figure 9).

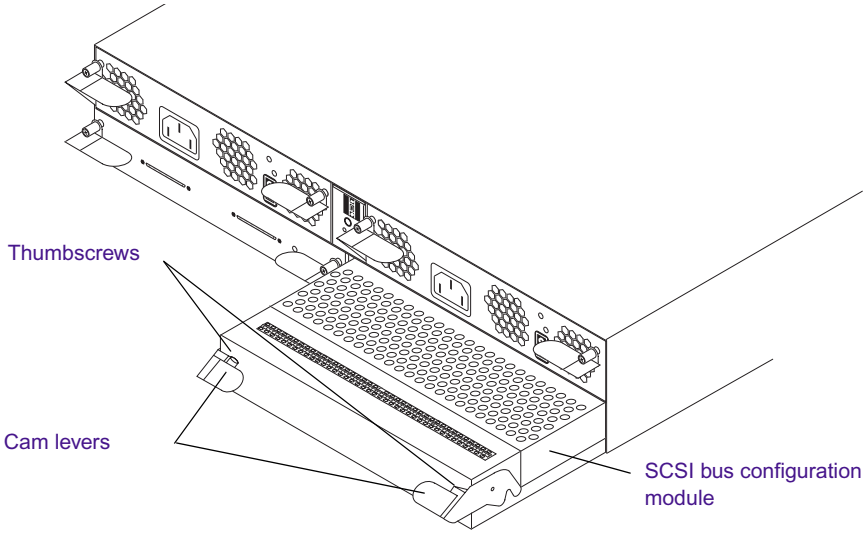


Figure 9 Removing the SCSI Bus Configuration Module

3. Remove the configuration module cover screws (see Figure 10).

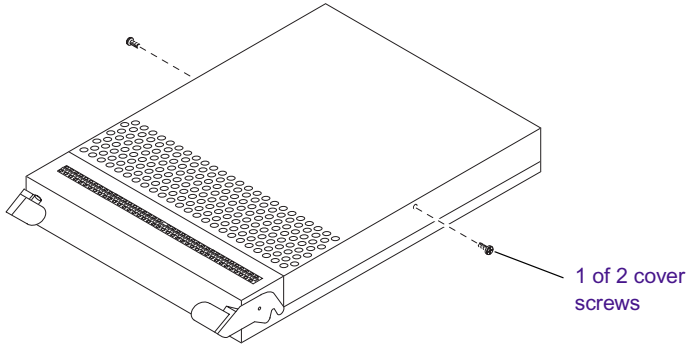


Figure 10 SCSI Bus Configuration Module Cover Screws

4. Lift the configuration module cover off the module.
5. Remove the configuration module board screws (see Figure 11).

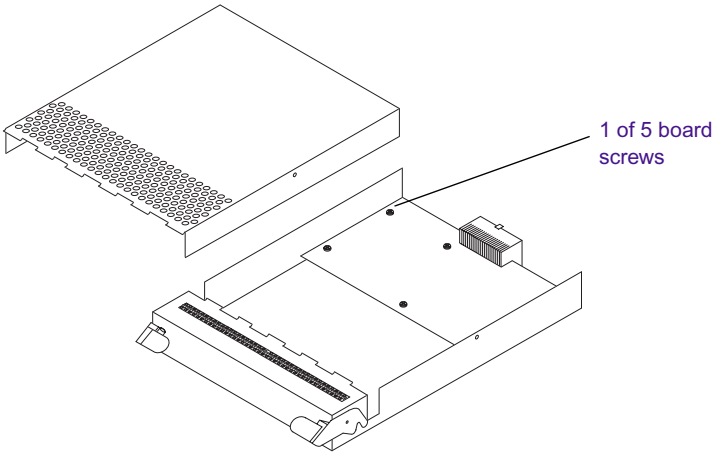


Figure 11 Configuration Module Board Screws

6. Lift the configuration module board off the front set of stand-offs.
7. Replace the configuration module board on the back set of stand-offs, and secure the board with the board screws.

   Only 4 screws are used to used to secure the board in the dual bus configuration. You will have one screw left over. Screw the extra screw into one of the unused standoffs so not to lose it.
8. Replace the configuration module cover, and secure the cover screws.
9. Slowly insert the SCSI bus configuration module completely into the MediaDock Ultra320 enclosure. Lift the two cam levers to draw the module into enclosure.

Do not slam or force the module into the enclosure, or damage might result.

10. Once in the enclosure and with the cam levers lifted, firmly press the SCSI bus configuration module into the enclosure.
11. Using a Phillips screwdriver, tighten the two thumbscrews to secure the SCSI bus configuration module in the enclosure.

Removing and Installing Power Supply/Cooling Modules

The MediaDock Ultra320 ships with two power supplies installed in the enclosure. If one of the two power supplies should fail, you can remove and replace the failing power supply while the remaining power supply provides power to the MediaDock Ultra320. When both power supplies are operating they share the power requirements, thus minimizing the stress on an individual power supply.

Use the following procedure for removing and installing either power supply.

To install or remove a power supply module:

1. Using a Phillips screwdriver, loosen the two thumbscrews attached to the power supply/cooling module (see Figure 12).
2. Push the cam levers down to eject the module and pull it out of the enclosure.

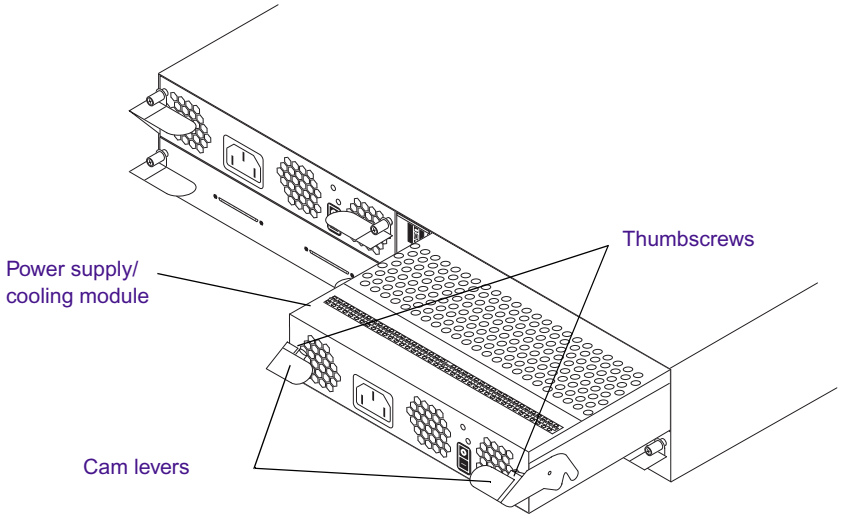


Figure 12 Removing the Power Supply/Cooling Module

3. Slowly insert the new power supply/cooling module completely into the MediaDock Ultra320 enclosure. Lift the two cam levers to draw the module into enclosure.

Do not slam or force the module into the enclosure, or damage might result.

4. Once in the enclosure and with the cam levers lifted, firmly press the power supply/cooling module into the enclosure.
5. Using a Phillips screwdriver, tighten the two thumbscrews to secure the power supply/cooling module in the enclosure.

To attach the power cord and turn the power-supply power switch on, see "Connecting the MediaDock Ultra320 Power Cord" on page 50.

Chapter 3

Configuring the MediaDock Ultra320

You can connect the MediaDock Ultra320 in different configurations to suit your system needs. This chapter describes the supported configurations and how to connect the MediaDock Ultra320 to match those configurations.

This chapter contains the following sections:

Determining the SCSI Bus Configuration

You must determine if you want the MediaDock Ultra320 to run as a single-bus or dual-bus configuration. Familiarize yourself with the MediaDock Ultra320 parts, determine how you will configure the MediaDock Ultra320 shuttles and any external MediaDrive enclosures, and plan your installation. Consider the following:

- How many drives do you need to support?

  A single-bus configuration supports up to 12 MediaDock Ultra320 shuttles per SCSI bus.

  A dual-bus configuration allows up to six MediaDock Ultra320 shuttles per SCSI bus.

- Do you want the MediaDock Ultra320 enclosure to connect to two Avid editing systems?

  You must use a dual-bus configuration to connect one MediaDock Ultra320 chassis to two Avid editing systems. See “Configuring the SCSI Bus Configuration Module” on page 34.

When shipped, the bus configuration module is set for a single-bus configuration. No daisy-chained configuration is supported in either a single- or a dual-bus configuration.

Supported Configurations

Avid supports the Avid MediaDock Ultra320 in the following three configurations:

- Single-bus MediaDock Ultra320 connects the MediaDock Ultra320 enclosure to one channel of a dual-channel SCSI LVD/Ultra320 board or directly to an internal SCSI LVD/Ultra320 port when supported by your Avid editing system.

- Dual-bus MediaDock Ultra320 connected to a dual-channel LVD/Ultra320 SCSI board installed in one Avid editing system or to a dual channel LVD/Ultra320 SCSI connection on the system board. One bus on the MediaDock Ultra320 is connected to one channel on the Avid editing system, and the other MediaDock Ultra320 bus is connected to the second channel on the Avid editing system.
- Dual-bus MediaDock Ultra320 connected to two Avid editing systems. One bus on the MediaDock Ultra320 is connected to one Avid editing system, and the other MediaDock Ultra320 bus is connected a second Avid editing system.

The MediaDock Ultra320 does not support daisy-chaining.

SCSI Bus IDs

SCSI bus IDs are assigned in two areas:

- Boards that attach the MediaDock Ultra320 to the SCSI bus
- MediaDock Ultra320 shuttles installed in the enclosure.

The SCSI LVD/Ultra320 board in your Avid editing system is always assigned SCSI ID 7. There are two SCSI IDs reserved for the MediaDock Ultra320 enclosure: SCSI ID 14 and SCSI ID 15.

When you place a MediaDock Ultra320 shuttle in the MediaDock Ultra320, it is automatically given the SCSI ID assigned to the slot (see Figure 13 and Figure 14).

- In a single-bus configuration, the slots are assigned numerically from left to right in a rack configuration or the bottom to the top in a tower configuration as: SCSI bus A, SCSI IDs 0, 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, and 13.
- In a dual-bus configuration, the slots are assigned numerically from left to right in a rack configuration or the bottom to the top in a tower configuration as: SCSI bus A, SCSI IDs 0, 1, 2, 3, 4, and 5; and SCSI bus B, SCSI IDs 0, 1, 2, 3, 4, and 5.

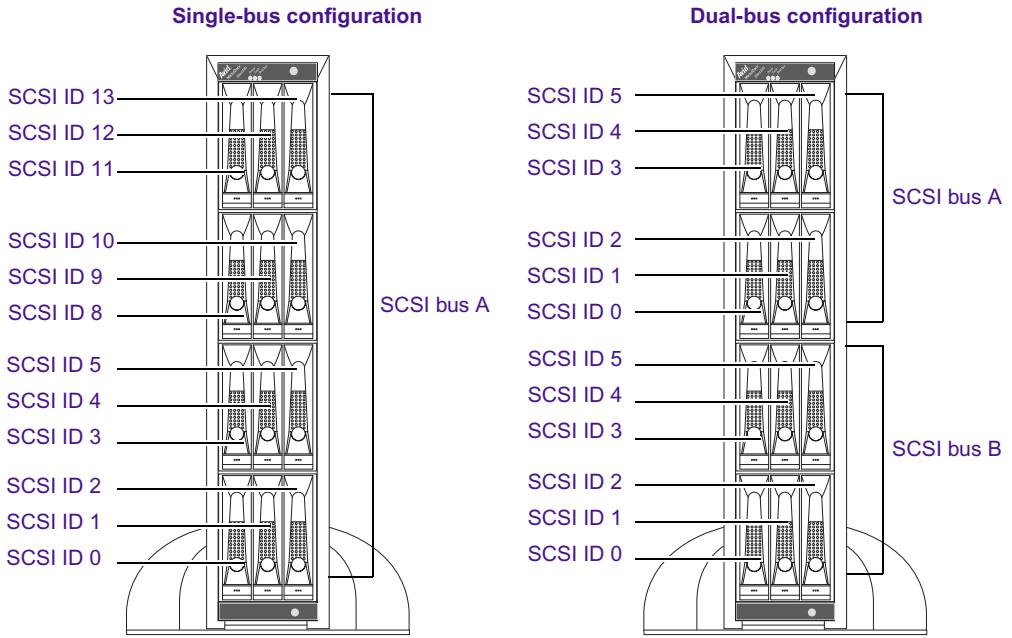


Figure 13 MediaDock Ultra320 SCSI IDs

In the rack-mount version of the MediaDock Ultra320, the status panel is on the right side of the rack as shown in Figure 14.

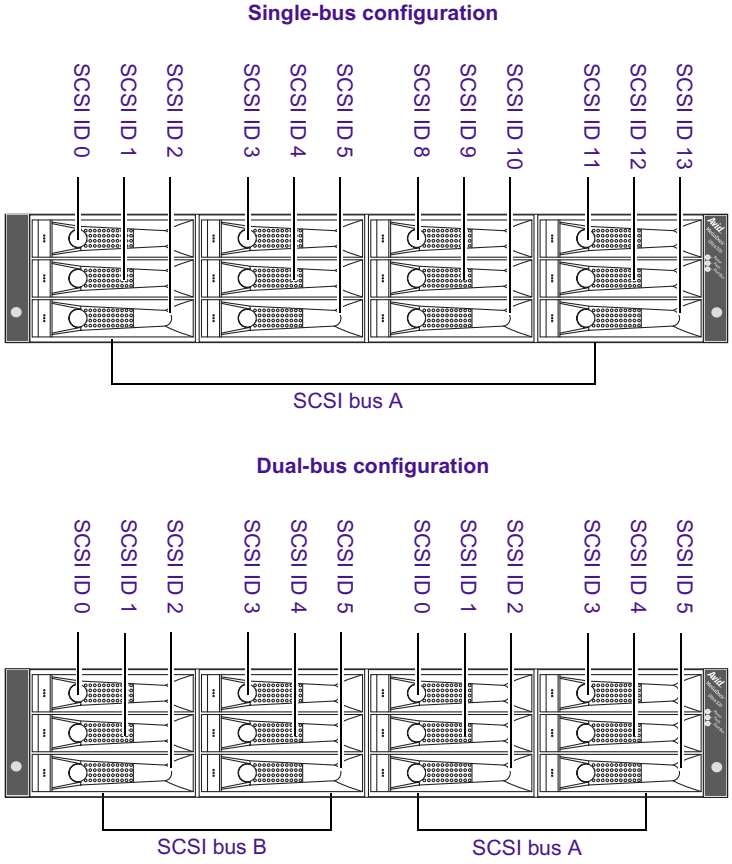


Figure 14 Rack-Mount Position

Rear Panel LEDs

The rear panel contains LEDs and an Alarm Mute button. To stop the audible signal caused by a fault in the system, press the Alarm Mute button. Figure 15 shows the rear panel LEDs.

Pressing the Alarm Mute button does not clear the actual fault.

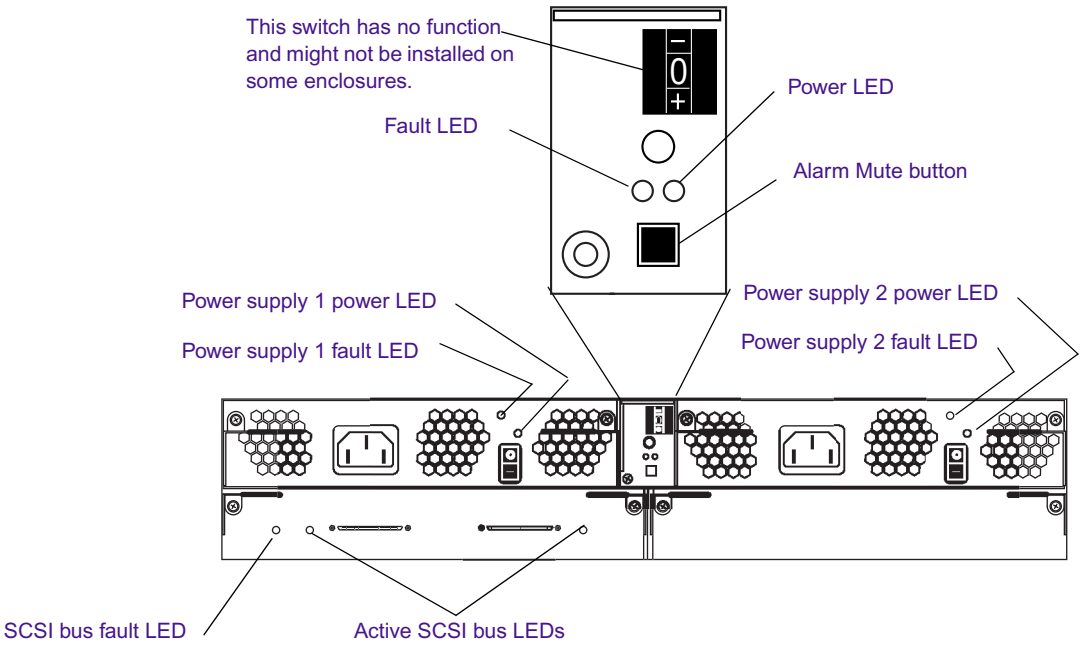


Figure 15 Rear Panel LEDs and Alarm Mute Button

Termination and Cables for the MediaDock Ultra320

This section describes the cables available through Avid for your MediaDock Ultra320. The MediaDock Ultra320 is self-terminated for both single- and dual-bus configurations and does not need to be terminated externally.

Use only Avid Ultra320-compatible cables with your MediaDock Ultra320. Each cable is specifically designed for systems that run real-time applications on an Ultra320 SCSI bus. The cable lengths and electrical properties are designed to ensure data integrity on the SCSI bus.

Avid supplies two cable configurations, at three different lengths 4.95 ft (1.5 M), 9.9 ft (3 M), and 16.5 ft (5 M). These cables are identified with a blue sleeve on the cable. The connector configurations include:

- A high density 68-pin connector on one end of the cable and other end has a 68-pin very high-density cable interconnect (VHDCI) connector.
- A 68-pin VHDCI connector on both ends.

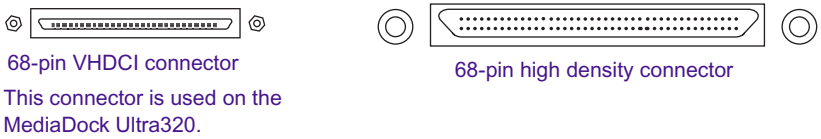


Figure 16 SCSI Connector Configurations

Connecting the MediaDock Ultra320

The following sections explain how to connect the MediaDock Ultra320 enclosure to one or two Avid editing systems. For supported configurations, see “Supported Configurations” on page 40. All configurations show the MediaDock Ultra320 chassis in a rack-mount version.

Single-Bus Configuration

The single-bus configuration allows the 12 slots in the MediaDock Ultra320 to be connected to one host or one SCSI channel.

To connect a single-bus configuration to your Avid editing system:

1. Shut down your Avid editing system.
2. Locate the SCSI Ultra320 cable.
3. Connect the one end of the SCSI cable to your Avid editing system.
   - If connecting to an add-in SCSI board, this will be a VHDCI connector.

Figure 17 68-pin VHDCI Connector

   - If connecting to the system board SCSI, this will be a high density 68-pin connector.

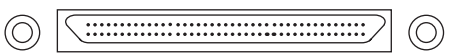


Figure 18 68-pin High Density Connector

   - If you are using a dual-port Ultra320 SCSI board (see Figure 19), connect SCSI LVD cable to the channel 1 connector.

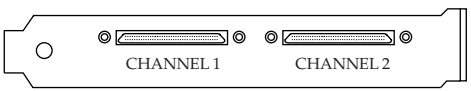


Figure 19 SCSI LVD Board Connectors

4. Connect the other end of the Ultra320 SCSI cable to either VHDCI SCSI connector on the rear of MediaDock Ultra320 (see Figure 20).

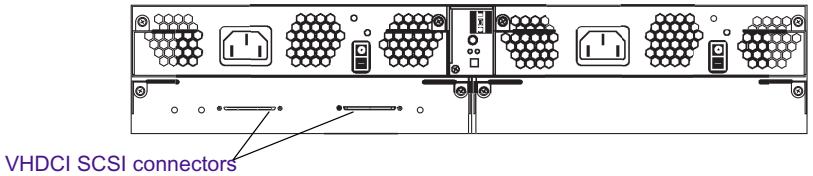


Figure 20 Connecting a SCSI Cable in a Single-Bus Configuration

5. Secure both ends of the cable by tightening the thumbscrews that are part of the connector.

Dual-Bus Configuration

The dual-bus configuration provides two 6-slot single buses in one MediaDock Ultra320 (see Figure 13). Both SCSI buses can be connected to one dual-SCSI-channel host, or each SCSI bus can be connected to separate hosts.

To connect a dual-bus configuration to one or two Avid editing systems:

1. Shut down your Avid editing system.
2. Locate two Ultra320 SCSI cables.
3. Connect the one end of one Ultra320 SCSI cable to your first Avid editing system. See Figure 17, Figure 18, and Figure 19.
   - If connecting to an add-in SCSI board, this will be a VHDCI connector.
   - If connecting to the system board SCSI, this will be a high density 68-pin connector.
   - If you are using a dual-port Ultra320 SCSI board, connect a Ultra320 SCSI cable to the channel 1 connector.

4. Connect the one end of the second Ultra320 SCSI cable to your second Avid editing system. See Figure 17, Figure 18, and Figure 19
   - If connecting to an add-in SCSI board, this will be a VHDCI connector.
   - If connecting to the system board SCSI, this will be a high density 68-pin connector.
   - If you are using a dual-port SCSI LVD board, connect the second Ultra320 SCSI cable to the channel 2 connector.
5. Connect the other ends of both Ultra320 SCSI cables to either VHDCI SCSI port connection on the rear of the MediaDock Ultra320 (see Figure 21).

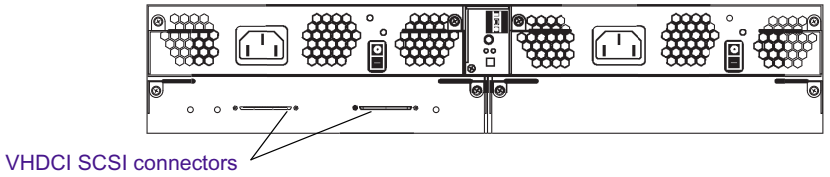


Figure 21 Connecting a SCSI Cable in a Dual-Bus Configuration

6. Secure both ends of both cables by tightening the thumbscrews that are part of the connector.

Installing a MediaDock Ultra320 Shuttle

This section explains how to install the MediaDock Ultra320 shuttles and fillers in the MediaDock Ultra320 enclosure.

Each MediaDock Ultra320 shuttle has a purple button on the front, while the drive-fillers have a black button. Pushing the button releases the shuttle handle. The black handle is then pulled outward. A lever on the inside of the handle pushes the shuttle or drive-filler, out of the MediaDock Ultra320 (see Figure 22). When you close the handle with the MediaDock Ultra320 shuttle partially in the MediaDock Ultra320, the lever catches the side of the enclosure and gently connects the MediaDock Ultra320 shuttle to the MediaDock Ultra320 backplane.

You must completely install or completely remove *one* MediaDock Ultra320 shuttle at a time. If you attempt to remove a second adjacent MediaDock Ultra320 shuttle when the first MediaDock Ultra320 shuttle handle is open, the shuttles will hit and could damage either shuttle.

Drive-fillers are inserted and removed the same way as drive shuttles. The difference is the drive-fillers are shorter, have a black button, and do not include a drive.

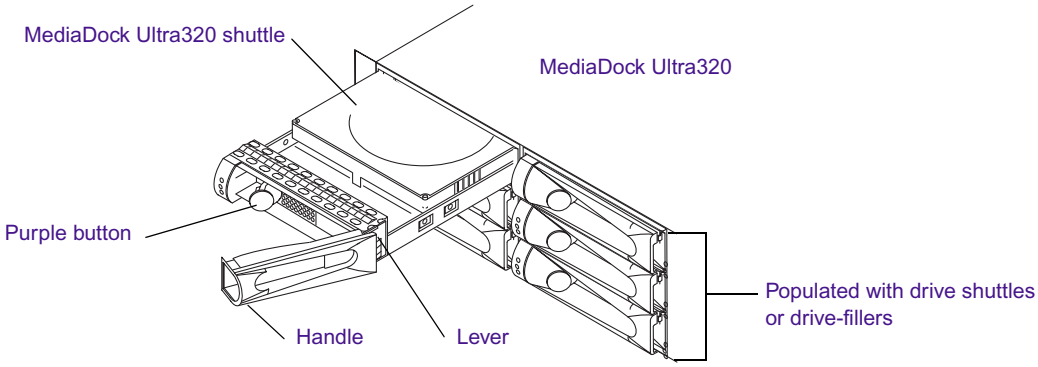


Figure 22 Installing a MediaDock Ultra320 shuttle or Drive-Filler

To ensure proper cooling you must use a drive-filler in any slot that does not contain a MediaDock Ultra320 shuttle. Do not operate the MediaDock Ultra320 with an open slot.

To install a MediaDock Ultra320 shuttle or drive-filler:

1. Carefully align the MediaDock Ultra320 shuttle or drive-filler in front of an empty slot.
2. Pull the handle outward to the open position.
3. Insert the MediaDock Ultra320 shuttle or drive-filler into the slot, and gently push until you feel a slight resistance and the lever contacts the inside of the MediaDock Ultra320.

4. Gently but firmly close the handle.

If the MediaDock Ultra320 chassis is powered up and you insert a MediaDock Ultra320 shuttle or drive-filler, the shuttle will spin up as soon as it is fully latched into the MediaDock Ultra320 chassis.

Connecting the MediaDock Ultra320 Power Cord

This section describes how to connect the power cord to the MediaDock Ultra320. To connect power to the MediaDock Ultra320, connect the power supplies to ac outlets.

1. Attach one end of the power cord to power supply 1.
2. Plug the other end of the power cord into a surge-protected outlet (see Figure 23).
3. Repeat step 1 and step 2 for power supply 2.

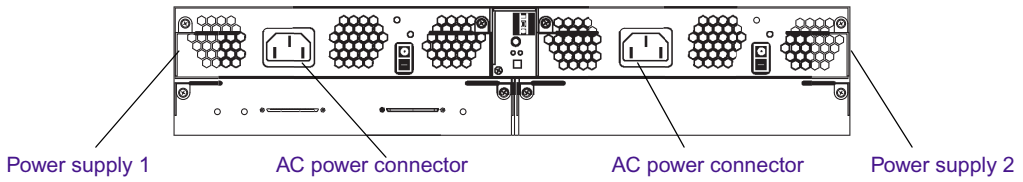


Figure 23 Connecting the MediaDock Ultra320 Power Cord

After you have plugged the power supplies into the ac outlets, turn on power supply 1 and then power supply 2.

After you turn on the MediaDock Ultra320, you can turn on your Avid editing system.

Canceling the Windows 2000 or Windows XP Found New Hardware Wizard

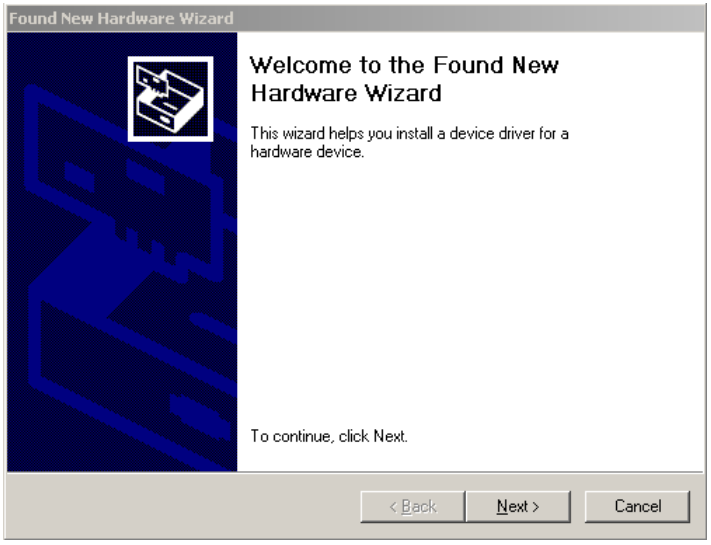
When you turn on your Windows 2000 or Windows XP Avid editing system for the first time, the operating system detects the MediaDock Ultra320 and displays the Found New Hardware Wizard. You need to disable the Hardware Wizard for this device. Once disabled, the MediaDock Ultra320 enclosure will not cause the Found New Hardware Wizard to open each time you start the Avid editing system.

Disable Windows 2000 Hardware Wizard

To disable the Hardware Wizard on Windows 2000 Operating Systems:

1. Turn on the MediaDock Ultra320 enclosure.
2. Turn on the Avid editing system.

   The Found New Hardware Wizard window opens.



3. Click Next.

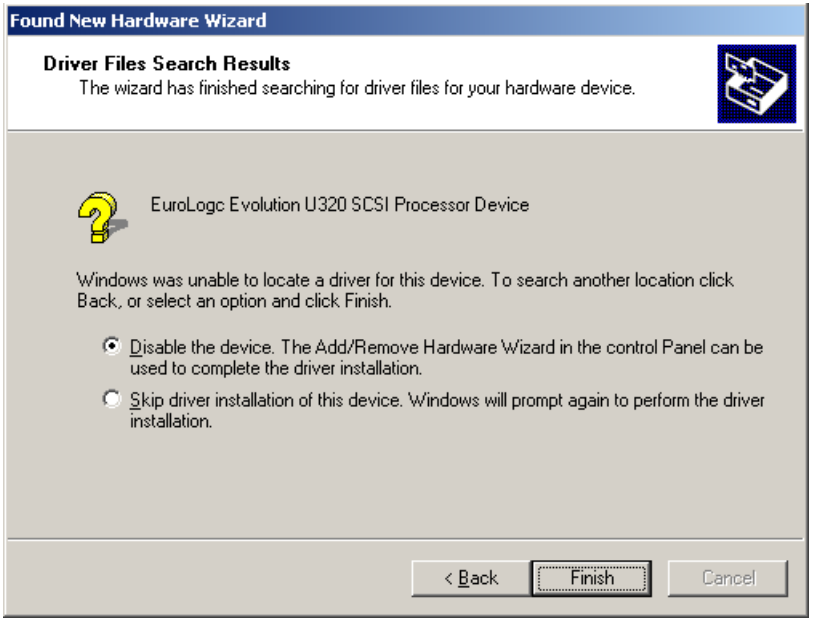
   The Install Hardware Device Drivers window opens.

4. Select “Search for a suitable driver for my device” and click Next.

   The Locate Drive Files window opens.

5. Deselect all the “Optional search locations” check boxes and click Next.

   The Drive File Search Results window opens.



6. Select “Disable the device” and click Finish.

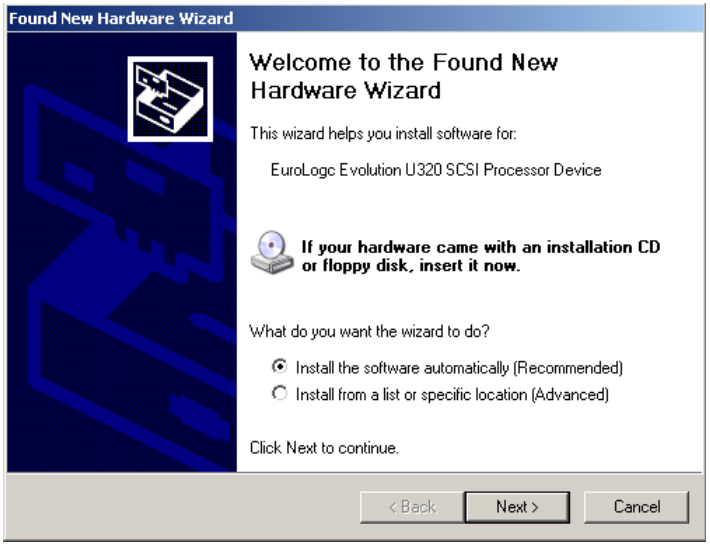
The MediaDock Ultra320 enclosure will not cause the Windows 2000 Found New Hardware Wizard to open each time you start the Avid editing system.

Disable Windows XP Hardware Wizard

To disable the Hardware Wizard on Windows XP Operating Systems:

1. Turn on the MediaDock Ultra320 enclosure.
2. Turn on the Avid editing system.

   The Found New Hardware Wizard window opens.

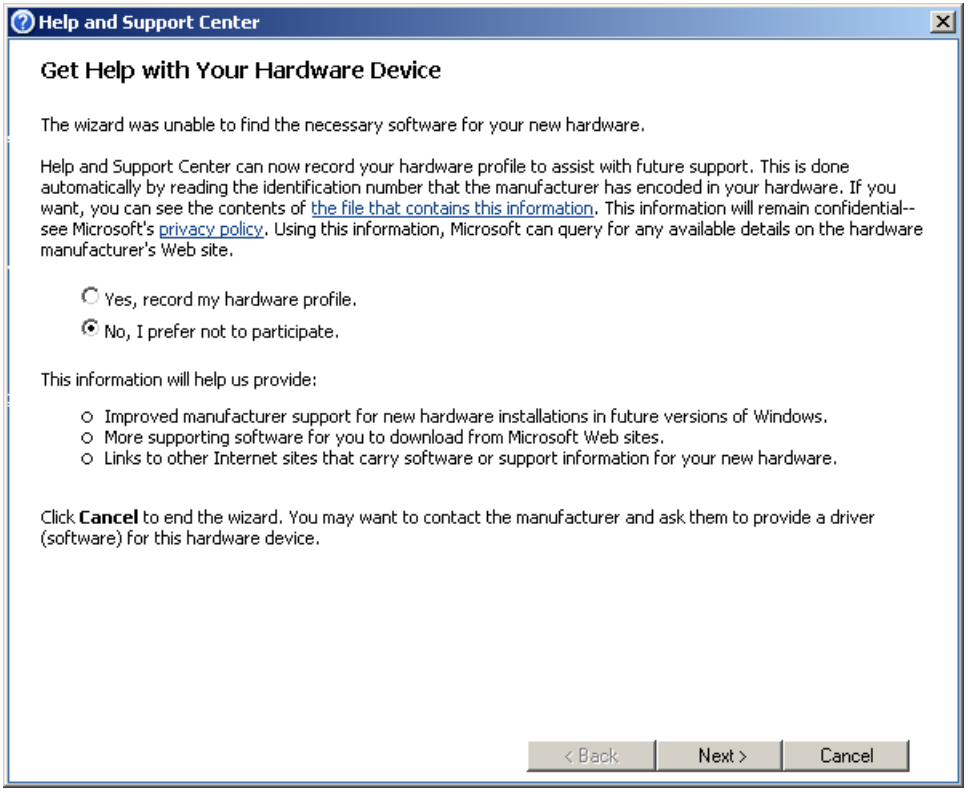


3. Select “Install the software automatically” and click Next.

   The Cannot Install this Hardware window opens.

4. Select “Don’t prompt me again to install this software” and click Finish.

   The Get Help with Your Hardware Device window opens.



5. Select No, and click Next.

   A second Get Help with Your Hardware Device window opens.

6. Click Finish.

The MediaDock Ultra320 enclosure will not cause the Windows XP Found New Hardware Wizard to open each time you start the Avid editing system.

Chapter 4

Replacing Shuttle Packs

The following sections explains the front status panel LEDs and how to a replace MediaDock Ultra320 shuttles for each of the supported operating system. You can also remove and replace a power supply while the system is running; see “Removing and Installing Power Supply/Cooling Modules” on page 37.

This chapter contains the following sections:

Understanding the Status Panel

Before you use the MediaDock Ultra320, you should understand the status panel and how to use it (see Figure 24). The status panel includes three status LEDs.

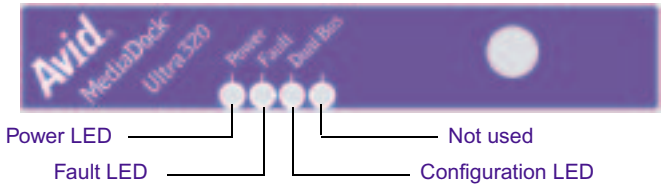


Figure 24 Status Panel

The status LEDs allow you to monitor the MediaDock Ultra320 while it is operating. See Table 2 for the functions of the LEDs.

Table 2 Status Panel Functions

Status Panel Icon	Function
Power	This LED is On when power is applied to the MediaDock Ultra320. This LED is Off when no power is applied to the MediaDock Ultra320.
Fault	This LED is On when a system malfunction has occurred. The malfunction could be with the temperature, the power supply, or a drive fault.
Dual Bus	This LED is On when the MediaDock Ultra320 is in dual-bus mode. The LED is Off when the MediaDock Ultra320 is in single-bus mode.

Replacing a MediaDock Ultra320 Shuttle on a Mac OS 9 System

When a MediaDock Ultra320 is attached to a Mac OS 9 system, you can replace a MediaDock Ultra320 shuttle while the MediaDock Ultra320 is running. For Mac OS X systems, see “Replacing a MediaDock Ultra320 Shuttle on a Mac OS X System” on page 60.

Before you change any MediaDock Ultra320 shuttle on a Mac OS 9 system, use the AVIDdrive Utility 2 (ADU2) software to unmount and spin down the MediaDock Ultra320 shuttle from the desktop.

When you have three or four MediaDock Ultra320 shuttles in the MediaDock Ultra320, each with several partitions mounted on the desktop, it can be difficult to associate the partitions to a specific MediaDock Ultra320 shuttle and its location in the MediaDock Ultra320. Before you replace a MediaDock Ultra320 shuttle, use the identify feature in the ADU2 software (Mac OS 9) or Storage Manager software to match partitions to a specific MediaDock Ultra320 shuttle in the MediaDock Ultra320.

To replace a MediaDock Ultra320 shuttle on Mac OS 9:

1. Double-click the ADU2 icon. The ADU2 window opens, showing the state of the application when it was used last (see Figure 25).

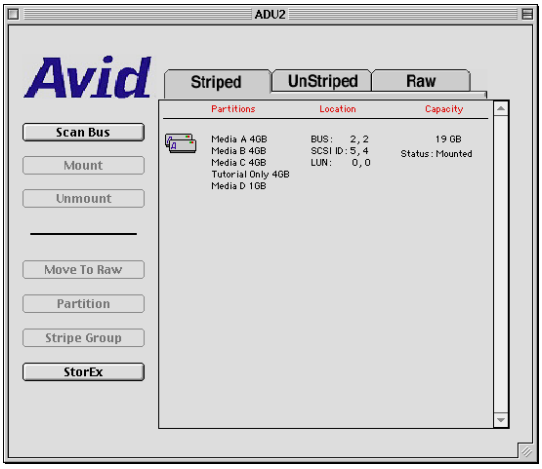


Figure 25 ADU2 Window

2. To find the drive partition names, click the Striped and UnStriped tabs at the top of the window (see Figure 25). The window changes to display the name of each partition on the drive as shown on the desktop.
3. When you find the drive you want to replace, click the Drive icon to select the drive and all its partitions.
4. Select Option > Identify. The Identify window opens (see Figure 26).

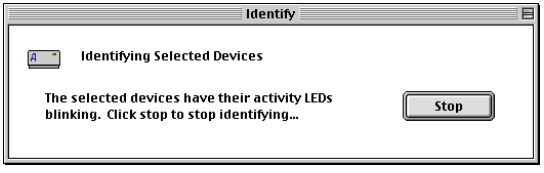


Figure 26 Identify Window

5. Look for the flashing activity light on the front of the MediaDock Ultra320 shuttles. The shuttle or shuttles with the flashing lights are the ones you need to remove. Note the location of the shuttles.
6. In the Identify window, click Stop to end the Identify process.
7. Click Unmount in the ADU2 window (see Figure 27). All the partitions on the unstriped drive group or the striped group are removed from the desktop. The Status message in the Capacity column changes from Mounted to Unmounted.

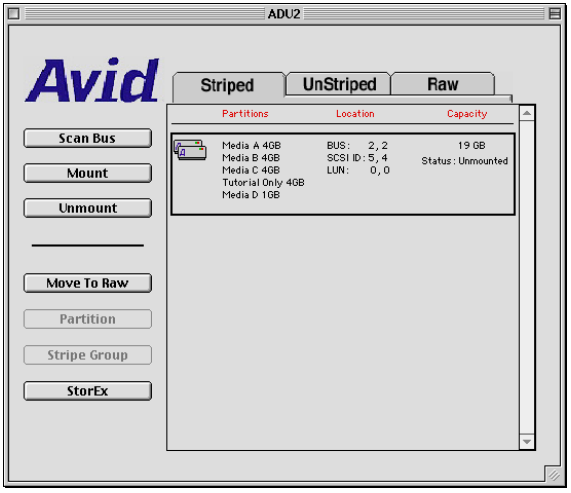


Figure 27 ADU2 Window - (Unmount)

8. Remove the MediaDock Ultra320 shuttle.
9. Insert the new MediaDock Ultra320 shuttle as explained in “Installing a MediaDock Ultra320 Shuttle” on page 48.
10. Allow the MediaDock Ultra320 shuttle to spin up. This typically takes less than 1 minute.
11. Click Scan Bus in the ADU2 window. The utility scans the SCSI buses and redisplays the ADU2 window showing the new striped and unstriped MediaDock Ultra320 shuttles.
12. Click the new MediaDock Ultra320 shuttle icon.
13. Click Mount in the ADU2 window, and quit the AVIDdrive Utility 2 application.

Replacing a MediaDock Ultra320 Shuttle on a Mac OS X System

When a MediaDock Ultra320 is attached to a Mac OS X system, you must turn off the Mac OS X system to replace a MediaDock Ultra320 shuttle in the MediaDock Ultra320.

When you have three or four MediaDock Ultra320 shuttles in the MediaDock Ultra320, each with several partitions mounted on the desktop, it can be difficult to associate the partitions to a specific MediaDock Ultra320 shuttle and its location in the MediaDock Ultra320. Before you replace a MediaDock Ultra320 shuttle, use the identify feature in the Storage Manager software to match partitions to a specific MediaDock Ultra320 shuttles in the MediaDock Ultra320.

To replace a MediaDock Ultra320 shuttle on Mac OS X:

1. Make sure you have quit all user applications.
2. Shut down the Mac OS X system as you normally would. (You do not need to turn off the MediaDock Ultra320.)
3. Remove the MediaDock Ultra320 shuttle and place the shuttle in a cool, clean, static-free environment.
4. Insert the new MediaDock Ultra320 shuttle as explained in “Installing a MediaDock Ultra320 Shuttle” on page 48.
5. Allow the MediaDock Ultra320 shuttle to spin up. This typically takes less than 1 minute. (If you have turned off the MediaDock Ultra320, turn on the MediaDock Ultra320.)
6. Reboot the Avid editing system. The new MediaDock Ultra320 shuttle can be seen and used by the Mac OS X system.

Replacing a MediaDock Ultra320 Shuttle on a Windows NT System

The Windows NT operating system might not always detect or use a replacement MediaDock Ultra320 shuttle when the MediaDock Ultra320 is connected to a Windows NT system. The replacement of a MediaDock Ultra320 shuttle can also be affected by the type of workgroup environment being used at your site.

To make sure the operating system can see the replacement MediaDock Ultra320 shuttle in the system:

1. Make sure you have quit all user applications.
2. Shut down the Windows NT system as you normally would. (You do not need to turn off the MediaDock Ultra320.)
3. Remove the MediaDock Ultra320 shuttle and place the shuttle in a cool, clean, static-free environment.
4. Insert the new MediaDock Ultra320 shuttle as explained in “Installing a MediaDock Ultra320 Shuttle” on page 48.
5. Allow the MediaDock Ultra320 shuttle to spin up. This typically takes less than 1 minute. (If you have turned off the MediaDock Ultra320, turn on the MediaDock Ultra320.)
6. Reboot the Avid editing system. The new MediaDock Ultra320 shuttle can be seen and used by the Windows NT system.

Replacing a MediaDock Ultra320 Shuttle on a Windows 2000 or Windows XP System

The Windows 2000 and Windows XP operating systems support MediaDock Ultra320 shuttle replacement without rebooting the Windows operating system. The following sections describe how to move a drive from one Windows system to another without first shutting down either computer.

MediaDock Ultra320 shuttles can always be removed and installed when the MediaDock Ultra320 is turned off. When the MediaDock Ultra320 and Avid editing system are turned on again, the added or removed shuttles will be detected by the operating system.

Removing Shuttles While the System is Turned On

To remove shuttles from a Windows system:

1. Right-click on My Computer and select Manage.
2. Click Device Manager.
3. Click the Disk drives + (plus) sign to expand the list of drives currently attached to the system.

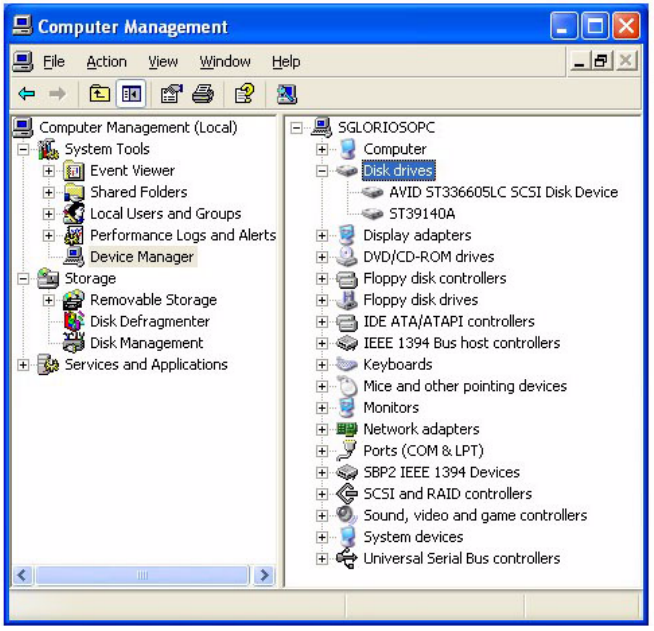


Figure 28 Device Manager Disk Drive List

4. Right-click on the drive you want to remove and select Uninstall.

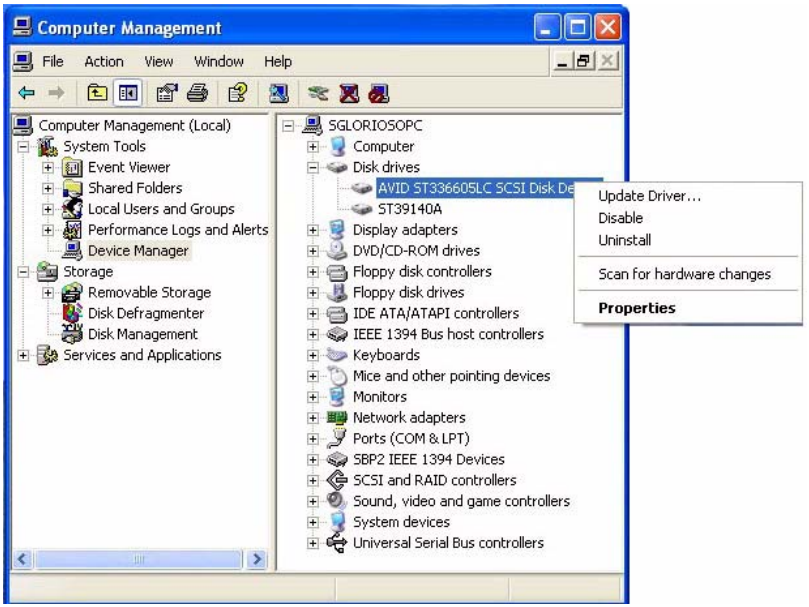


Figure 29 Uninstall

5. Click OK in the Confirm Device Removal dialog box.

Figure 30 Confirm Device Removal

6. Drive list will update and the drive will no longer be listed.

7. Unlatch the handle on the MediaDock shuttle so that the drive begins to spin down. Wait for the drive to finish spinning down (approximately 10-15 seconds).
8. Remove the MediaDock shuttle completely from the MediaDock enclosure.

Adding Shuttles while the System is Turned On

To add shuttles from a Windows system:

1. Carefully insert the new MediaDock Ultra320 shuttle as explained in "Installing a MediaDock Ultra320 Shuttle" on page 48.
2. Close the handle so that the drive seats completely and begins to spin up.
3. Wait 10-15 seconds for the drive to finish spinning up.
4. Right-click on My Computer and select Manage.
5. Select Disk Management from the Storage section.

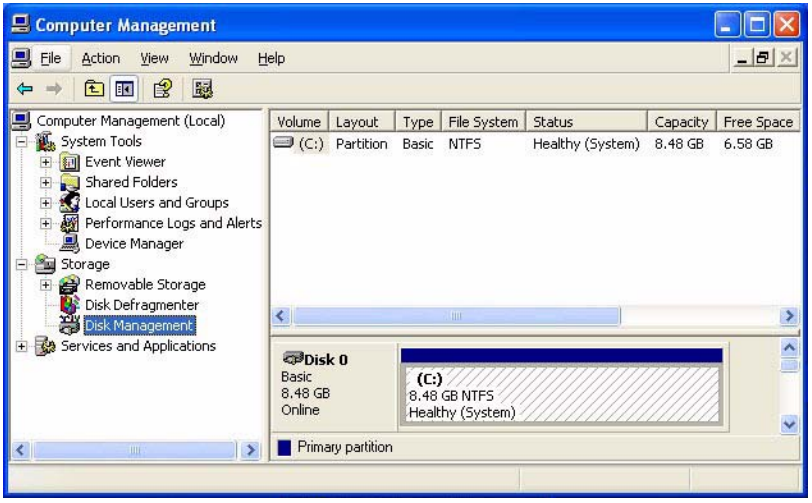


Figure 31 Disk Management

6. Select Action > Rescan Disks.

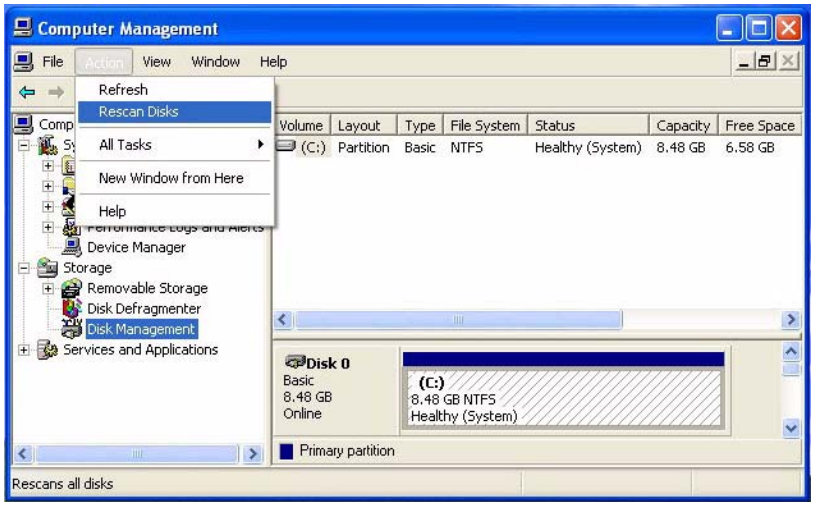


Figure 32 Rescan Disk

After the disk rescan is complete, you will see the new drive listed as Foreign at the bottom of the window.

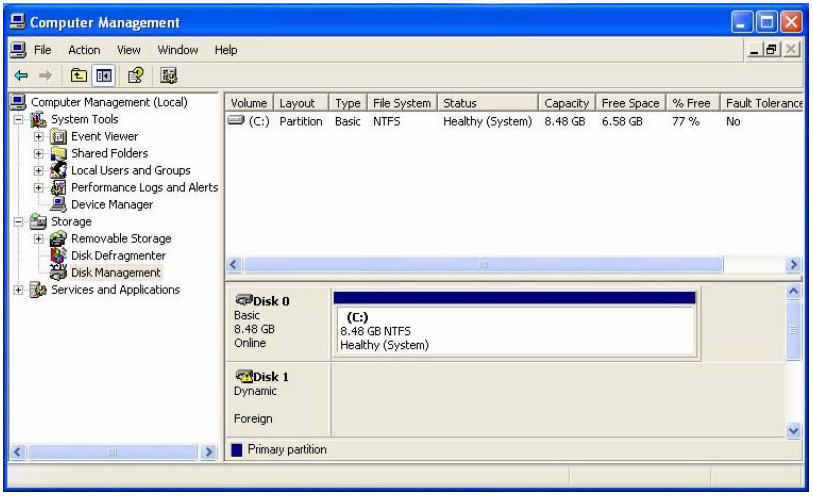


Figure 33 Foreign Disk

7. (Option) If the new drive does not appear, select Device Manager.
8. (Option) Select Disk drives from the left pane and select Action > Scan for hardware changes.

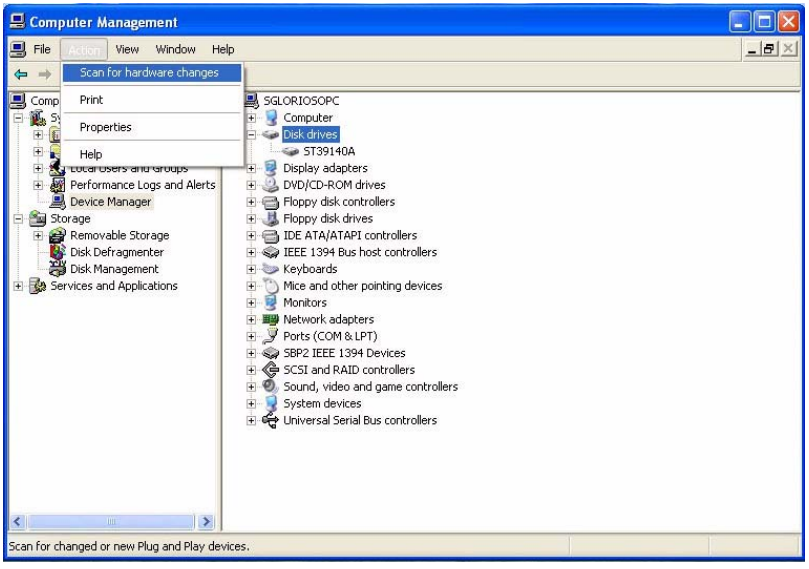


Figure 34 Scan for Hardware Changes

The new drive should appear in the Device Manager and in Disk Management lists.

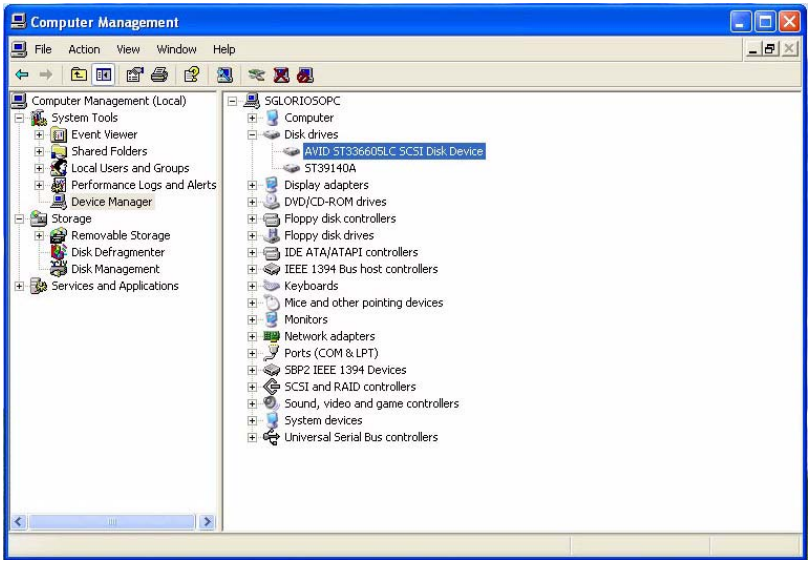


Figure 35 New Disk Listed

9. Select Disk Management from the Storage section.
10. In the left pane, right-click on the Foreign disk and select Import Foreign Disks.

For information on importing foreign disks or mounting drives such as a MediaDock Ultra320 shuttle, see your Windows operating system documentation or Disk Management Help.

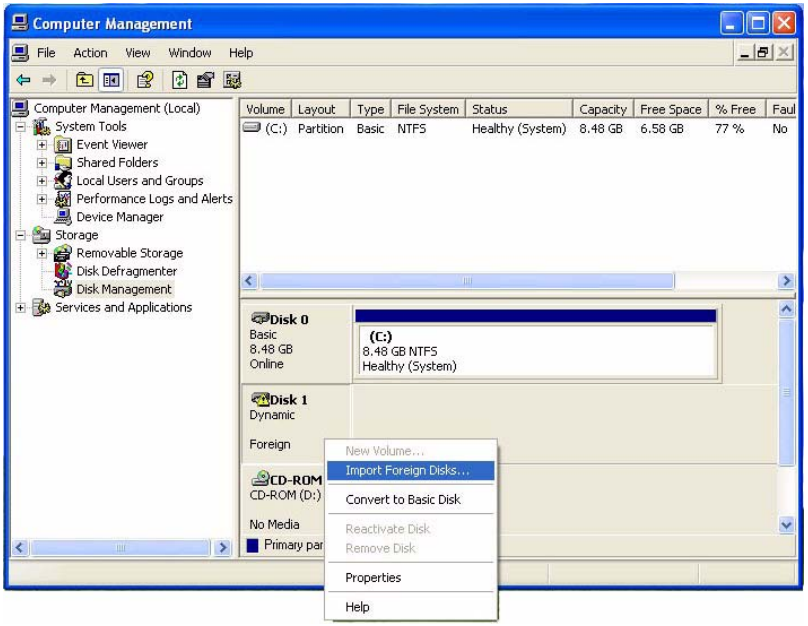


Figure 36 Foreign Disk Pop-up Menu

11. At the Import Foreign Disks dialog, check the disk group box and click OK.

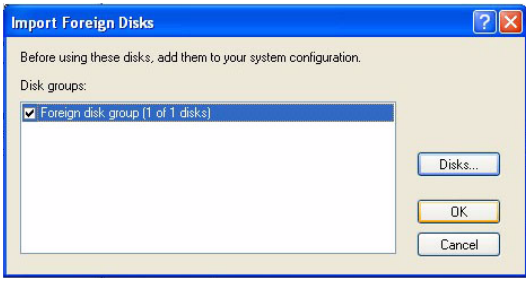


Figure 37 Import Foreign Disk

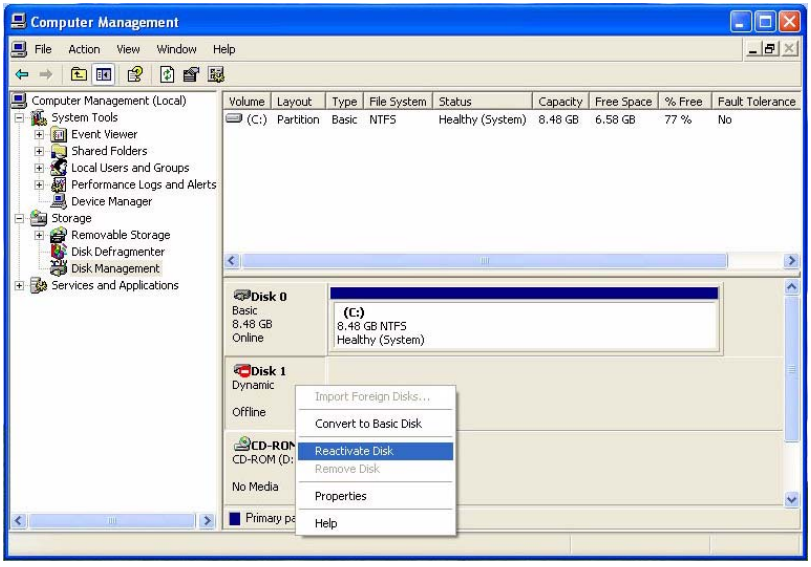
The new drive will appear in the Disk Management list with its name and letter and be ready for use.

Exceptions

The following sections describe possible exceptions you might experience.

Offline

It is possible the new drive might appear in the Disk Management as Offline. If this happens, right-click on the drive and select Reactivate Disk. The drive will appear ready for use.



New Systems

If you move a drive from an existing system to a system that has never had a dynamic disk drive attached to it, the system will take on the dynamic drive group information from the first system. A problem occurs when you bring the drive back to the original system and the original system contains other dynamic drives. The original system might see the shuttle as Offline, which you then Reactivate, see “Offline” on page 69.

If the drive does not appear all, Microsoft recommends attaching this drive to a third system, where it will show up as Foreign. Import it as a foreign drive into the third system. Then, bring it back to the first system and import it as foreign, see “Adding Shuttles while the System is Turned On” on page 64. The drive will appear ready for use.

To avoid this scenario, Avid recommends that you attached an unused drive to a system that has never had a dynamic drive, and initialize the drive as a ready to use dynamic drive.

This make the system dynamic drive friendly and prepares it for use with other dynamic drives. This only needs to be done once.

Chapter 5

Preparing Your Drives

Your MediaDock Ultra320 shuttles need to be partitioned and formatted before you can use them. *Partitioning* allows you to divide a drive into more than one section if needed, and *formatting* places a file system on each partition.

When using the MediaDock Ultra320 shuttles on a Windows operating system, use the Disk Administrator application provided by the operating system to format and stripe the MediaDock Ultra320 shuttle. For mounting and unmounting striped sets on a Windows NT operating system, use the Avid Disk Mounter utility. The Windows 2000 and Windows XP operating systems do not need to use this utility.

For complete and up-to-date instructions on using the features available in the Windows operating system, see your Microsoft® operating system documentation.

To format the MediaDock Ultra320 shuttle on a Macintosh system, see "Managing MediaDock Ultra320 Shuttles on Mac OS 9 Systems" on page 72 or "Managing MediaDock Ultra320 Shuttles on Mac OS X Systems" on page 76. When using the MediaDock Ultra320 shuttles on a Macintosh operating system, use the ADU2 software (Mac OS 9) or ATTO ExpressStripe (Mac OS X) to format and stripe the MediaDock Ultra320 shuttle.

This chapter contains the following sections:

Managing MediaDock Ultra320 Shuttles on Mac OS 9 Systems

If you are using a Mac OS 9 operating system, install the latest version of the ADU2 software. The ADU2 software that came with your MediaDock Ultra320 shuttle might not be the latest version. (See the Avid Knowledge Center for any updates.) The ADU2 software is the utility that Avid provides for formatting and striping MediaDock Ultra320 shuttles on Mac OS 9 systems. For installation instructions and procedures, see the *AVIDdrive Utility 2 User's Guide*.

MediaDock Ultra320 shuttles are compatible with the following Avid utilities:

- AVIDdrive Utility Release 2.2 and later
- Avid StorEx Release 1.5 and later
- AVIDdrive Utility Extension Release 2.2 and later

To keep your MediaDock Ultra320 shuttles in peak operating condition in a Mac OS 9 system, perform maintenance operations and checks on a regular basis, including:

- Checking MediaDock Ultra320 Shuttles
- Using Disk First Aid to Repair MediaDock Ultra320 Shuttles
- Erasing MediaDock Ultra320 Shuttles

Checking MediaDock Ultra320 Shuttles

Many drive problems are not hardware related but are problems with the file system written on the drive. The file system consists of data structures that hold critical information about the files stored on your drive. All these data structures allow your drive to be recognized as a Macintosh volume.

File system errors tend to grow over time. You should fix then *as soon as possible* after discovery. File system errors are generally caused by system crashes, improper system shutdowns, and power failures. They should not be interpreted as a precursor to a mechanical drive failure.

Media Composer Release 8.1 and Later

If you are using Media Composer® Release 8.1 and later, use the DiskWarrior application to maintain the file system and its data structures. Avid recommends periodic use of this utility on any MediaDock Ultra320 shuttle and other standalone drives, as well as your editing system's internal drive, to ensure a healthy file system. Avid ships the DiskWarrior application *and* a CD-ROM that contains a .pdf manual that explains how to use DiskWarrior. DiskWarrior is not explained in this guide. The Disk First Aid™ utility, supplied by Apple, can be used for directory problems on Media Composer Release 8.1 systems and later.

Avid does not support the use of Norton Disk Doctor® on any Macintosh system running Media Composer Release 8.0 and later.

Using Disk First Aid to Repair MediaDock Ultra320 Shuttles

Disk First Aid is a drive directory structure repair tool supplied by Apple with each system. This tool can find and repair many basic directory structure problems to help keep your drives functioning correctly. You should use Disk First Aid when your system is reporting drive errors or when files on the drive can't be opened and used by Avid application software.

Run Disk First Aid regularly as a proactive method of avoiding drive problems.

You'll find a copy of Disk First Aid in one of the following locations:

- The Utilities folder on the Avid (or system) drive
- The system software CD-ROM that came with your system
- The Avid software CD-ROM that came with your system (You will need to install the Avid software to install a copy of Disk First Aid.)

To repair a MediaDock Ultra320 shuttle:

1. Open the Utilities folder on the Macintosh HD.
2. Double-click the Disk First Aid icon to start the application. The Disk First Aid window opens (see Figure 38). This window contains all the necessary controls for you to run Disk First Aid.

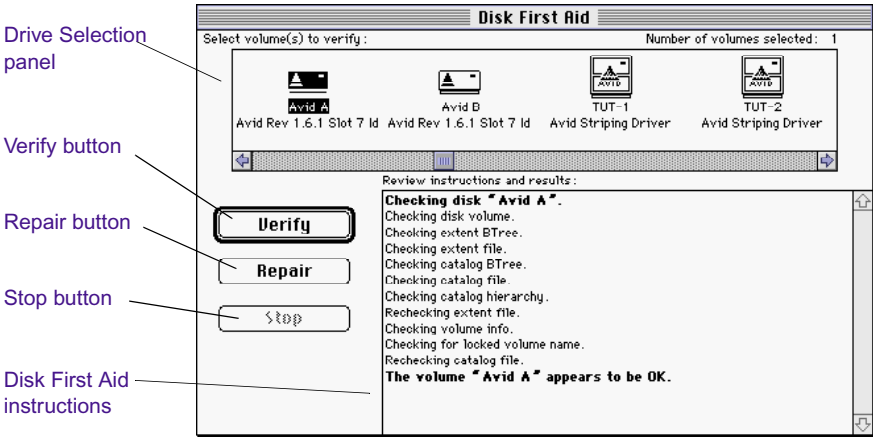


Figure 38 Disk First Aid Main Window Functions

3. Select the drive you want to verify and repair by clicking the Drive icon in the Drive Selection panel. A message box opens if you are checking a drive with open files or a shared drive (see Figure 39). You can only verify these drives while they are in use. Click OK to close the message box.

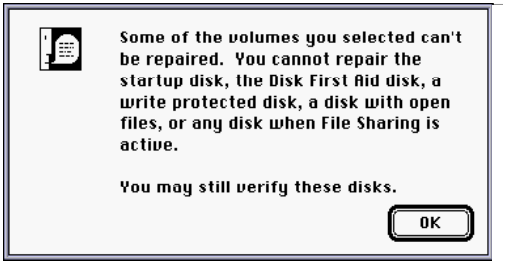


Figure 39 Disk First Aid Message Box

4. Verify and repair the selected drive by clicking Repair. Disk First Aid scans the directory structures, reports any problems, repairs the selected drive (if possible) and reports the results (see Figure 40).

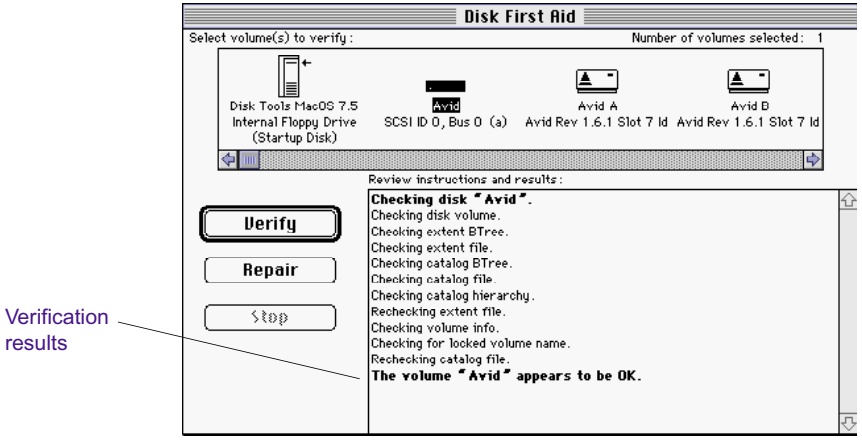


Figure 40 Disk First Aid Verification Results

If Disk First Aid reports that the selected drive cannot be verified or repaired, follow the steps in "If Drive Status Can't Be Verified" on page 76.

5. When you are finished, select File > Quit.

If Drive Status Can't Be Verified

If Disk First Aid is unable to verify or repair a MediaDock Ultra320 shuttle, copy all media files and other data files (if possible) to another MediaDock Ultra320 shuttle.

If you are still experiencing problems or are not able to repair the MediaDock Ultra320 shuttle, contact Avid Customer Support for additional assistance.

Erasing MediaDock Ultra320 Shuttles

Occasionally, you might want to erase the drives on your Avid editing system to remove all the data that is on them. Erasing re-creates the partition map and directory structure, improving overall drive performance. When you are between projects or when the media files and other data on the drives are no longer needed, that is the best time to erase drives.

Erasing a MediaDock Ultra320 shuttle destroys all the data on the shuttle. Before you erase the shuttle, back up all the critical data on the shuttle to tape or another shuttle.

For more information on erasing drives, see the *AVIDdrive Utility 2 User's Guide*.

Managing MediaDock Ultra320 Shuttles on Mac OS X Systems

If you are using a Mac OS X operating system, install the latest version of the ATTO ExpressStripe software. The ATTO ExpressStripe software comes with the MediaDock Ultra320 shuttle or with your Avid editing application. The ATTO ExpressStripe software is the utility that Avid provides for formatting and striping MediaDock Ultra320 shuttles on Mac OS X systems. For installation instructions and procedures, see the

ATTO ExpressStripe RAID for Macintosh OS X Installation and Operation Manual. This online PDF file is included with the ATTO ExpressStripe software.

The ATTO ExpressStripe software is also included with Avid editing systems that run on Mac OS X.

MediaDock Ultra320 shuttles are compatible with ATTO ExpressStripe Version 1.2 and later.

Managing MediaDock Ultra320 Shuttles on a Windows 2000 or Windows XP System

The Windows 2000 and Windows XP operating systems allow you to create multiple partitions or logical drive assignments as a way to manage projects and files. You can configure your drive as one large partition or multiple partitions varying in size. Each partition is assigned a drive letter.

The Windows 2000 and Windows XP operating systems define two types of disk drives:

- *Basic* disk drives allow disks to be divided into partitions. This type of drive normally is used for standalone disk drives in Windows 2000 and Windows XP operating systems.
- *Dynamic* disk drives allow disks to be divided into volumes. Disk drives must be dynamic if you want to stripe, mirror, or use disk drives in the RAID style. Avid supports the use of dynamic disk drives when you need to create a striped volume on your Windows 2000 and Windows XP systems.

To use your MediaDock Ultra320 shuttles on a Windows 2000 or Windows XP system, you need to format and partition them properly. After you do this, keep your MediaDock Ultra320 shuttles in peak operating condition by performing maintenance operations and checks on a regular basis. For more information, see “Diagnostic Utilities” on page 85.

The Windows 2000 and Windows XP operating systems contain a disk-checking feature in the Properties section of each drive. For information about how to use this feature, see the Windows documentation.

Supported Windows File Systems

The Windows 2000 and Windows XP operating systems support three types of file systems:

- Two types of File Allocation Table (FAT): FAT 16 and FAT 32. FAT 16 is used primarily when backward compatibility is needed on operating systems such as MS-DOS® or other Windows versions. The new FAT 32 file system is no longer limited to a 2-GB partition size. Avid does not support the FAT 16 file system for media.
- New Technology File System (NTFS). NTFS affords the user security, compression, and other file-recovery features. Drives employing NTFS support partitions of any size.

Avid recommends NTFS when you partition your disk drives.

One of your internal disk drives (normally designated drive C) has a partition that contains the operating system. This drive might be labeled System or Boot. You should not reformat this partition unless you need to rebuild your system disk drive.

If you have striped sets connected to an Ultra320 SCSI board in your Windows NT system, you *must* transfer the striped sets using the disk configuration floppy disk and import the information to the Windows 2000 or Windows XP system. See:

- “Replacing a MediaDock Ultra320 Shuttle on a Windows 2000 or Windows XP System” on page 61.
- “Transferring Disk Drives or Stripe Sets from a Windows NT System to a Windows 2000 or Windows XP System” on page 82.

Creating Primary Partitions and Formatting Drives with a Windows 2000 or Windows XP Operating System

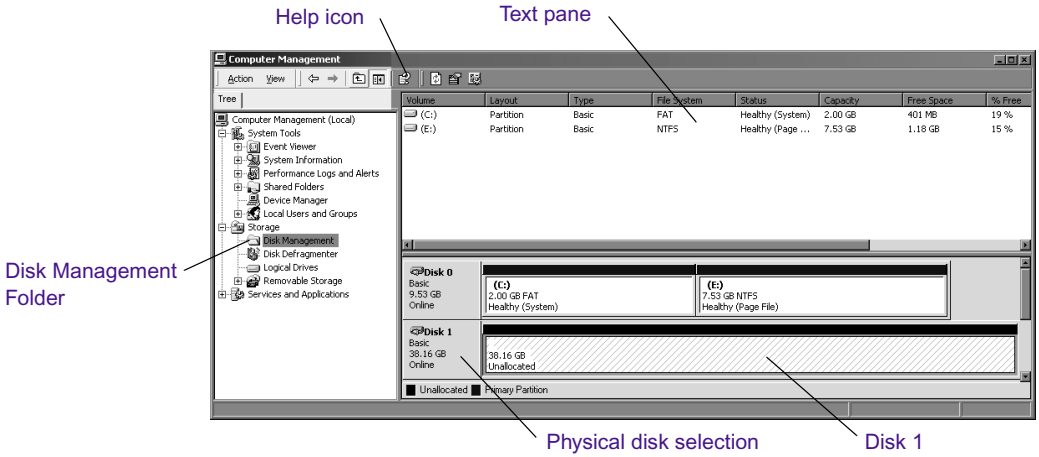
If you need to partition, format, or perform any action on the disks, click the disk (partition or unallocated disk) in the Computer Management window; the white section of the disk changes to stripes, showing that the section has been selected.

You might not have the same partitions and disk configuration shown in the following procedure. However, examples in the procedure will help you understand the Computer Management window in the Windows 2000 and Windows XP operating systems.

To create a primary partition and format a drive:

1. Start your system, and log in to an account with administrative privileges.
2. Right-click the My Computer icon, and select Manage.

   The Computer Management window opens.



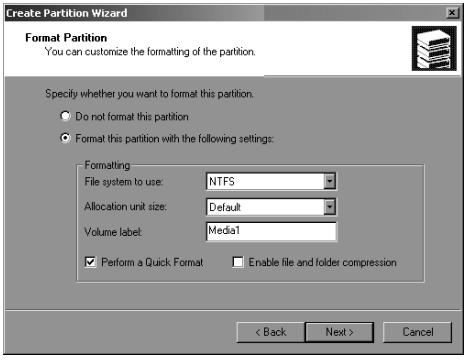
3. Click the Disk Management folder.

For more information on the Computer Management window, click the Help icon in the toolbar of the Computer Management window.

4. Designate the disk as a Basic disk before you partition it, unless you are going to stripe it with another drive. To designate a disk as Basic:
   a. Place the pointer over the physical disk selection.
   b. Right-click, and select Basic Disk.
5. Place the pointer over Disk 1, right-click, and select "Create partition."

   The Create Partition Wizard opens and explains the function of the wizard.
6. Click Next.

   The wizard leads you through partitioning and formatting of the selected unallocated section of your disk.
   a. In the Select Partition Type window, select Primary, and click Next.
   b. In the Partition Size window, select Maximum to make the complete unallocated space a partition, and click Next. To make a smaller partition, divide the maximum number by the number of partitions you want to make, for a maximum of four partitions per disk. You need to run the wizard for each partition.
   c. In the Assign Drive Letter window, assign the partition an unused drive letter or use the letter automatically selected by the wizard.
   d. In the Format Partition window, select "Format this partition with the following settings."



   e. In the "File system to use" list, select NTFS.
   f. In the Allocation unit size list, select Default.

g. In the “Volume label text box,” type a label that easily identifies the volume.

h. Select Perform a Quick Format.

7. Click Next.

   The Completing the Create Partition Wizard opens and provides a list of your selections.

8. Verify your selections and click Finish. (This might take 1 minute to complete.)

9. Repeat this procedure to partition and format any unallocated disk sections.

Creating a Disk Configuration Floppy Disk from a Windows NT System

The following instructions explain how to create the disk configuration floppy disk from a Windows NT system.

To create a disk configuration floppy disk from a Windows NT system:

1. Acquire a blank, formatted floppy disk.
2. Click the Start button and select > Programs > Administrative Tools, and then select Disk Administrator.

   The Disk Administrator window opens.

3. Place the formatted floppy disk in the floppy disk drive.
4. Select Partition > Configuration > Save.

   The Insert Disk dialog box opens.

5. Click OK.

   The stripe set disk configuration is placed on the floppy disk so you can transfer it to a Windows 2000 or Windows XP system.

6. Write down the following information about the drive that contains the Windows NT operating system (for use later):
   - Disk number — for example, 0
   - Drive letter — for example, C
   - Partition size — for example, 2047 MB
7. Close the Disk Administrator window.

Transferring Disk Drives or Stripe Sets from a Windows NT System to a Windows 2000 or Windows XP System

The following list provides an overview of this section on how to transfer MediaDock Ultra320 shuttles from an existing Windows NT system to a Windows 2000 system using the disk configuration floppy disk. The sections that follow the bulleted list provide step-by-step procedures.

- Create a disk configuration floppy disk if you have not already done so, as described in "Creating a Disk Configuration Floppy Disk from a Windows NT System" on page 81.
- Make sure both systems are properly shut down and you move the disk drives to the Windows 2000 or Windows XP system.
- Make sure you have installed the latest drivers for the disk controller board on the Windows 2000 or Windows XP system before you move drives or stripe sets.
- Determine the drive numbering (SCSI IDs) of the disk drives on the Windows NT system and maintain the same SCSI IDs on the Windows 2000 and Windows XP systems. You might need to change the SCSI IDs of existing drives on the Windows 2000 and Windows XP systems.
- Make sure there are no SCSI ID conflicts.
- Make sure the termination is set properly after you move the drives or stripe sets.
- Have all disk drives properly connected and turned on prior to turning on the Windows 2000 and Windows XP systems.

Importing the Disk Configuration into a Windows 2000 or Windows XP System

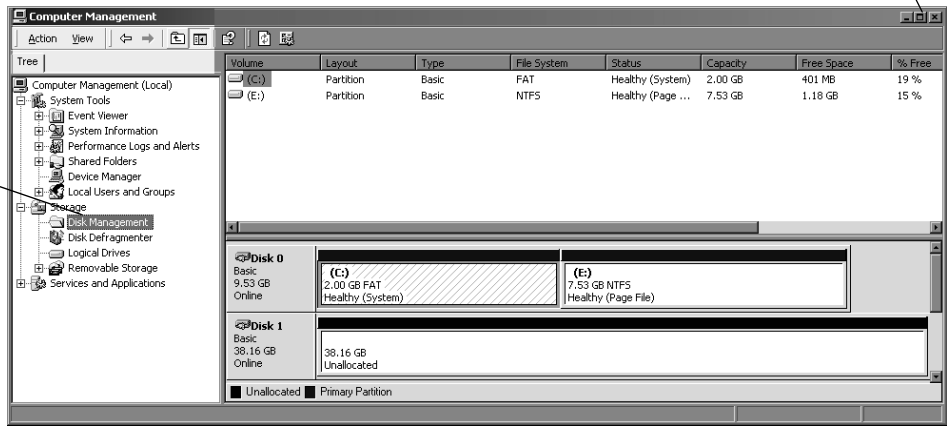
This section explains how to import the disk configuration from the Windows NT system into the Windows 2000 and Windows XP systems. Insert the Ultra320 shuttles in your MediaDock Ultra320 enclosure, and perform the following procedure.

To import the disk configuration:

1. Start your Windows 2000 or Windows XP system, and log in to an account with administrative privileges.
2. Right-click the My Computer icon, and select Manage.

   The Computer Management window opens.

Maximize button



Disk Management folder

3. Click the Disk Management folder. If the size of the window is small, you might want to click the Maximize button in the upper right corner of the window.
4. Insert the disk configuration floppy disk into the floppy drive.
5. Select Action > Restore Basic Disk Configuration.

   The Restore Disk Configuration dialog box opens.

For more information, see "Creating a Disk Configuration Floppy Disk from a Windows NT System" on page 81.

6. Select the disk number that is associated with the floppy drive, and then click Yes.
7. A Confirm dialog box opens, stating that a reboot is required after the operation.
8. Click Yes.
9. Remove the floppy disk prior to rebooting the system.

For more disk drive information, see "Managing MediaDock Ultra320 Shuttles on a Windows 2000 or Windows XP System" on page 77.

Striping

You can stripe multiple MediaDock Ultra320 shuttles on one SCSI bus channel or across two SCSI bus channels.

On Windows 2000 and Windows XP systems, you can move striped drives from one Avid editing system to another by using the Disk Management tool. For information about the striping process, see the setup guide for your Avid editing system, your Windows documentation, or Disk Management Help.

When using a Mac OS 9, use the ADU2 to create and manage striped drives. For more information, see the ADU2 documentation. When using Mac OS X, use ATTO ExpressStripe. For more information, see Create a RAID 0 Volume in the ATTO ExpressStripe documentation.

The following sections contain procedures for using the Windows Disk Management tool to manage striped MediaDock Ultra320 shuttles:

- "Creating Primary Partitions and Formatting Drives with a Windows 2000 or Windows XP Operating System" on page 79
- "Creating a Disk Configuration Floppy Disk from a Windows NT System" on page 81
- "Transferring Disk Drives or Stripe Sets from a Windows NT System to a Windows 2000 or Windows XP System" on page 82
- "Importing the Disk Configuration into a Windows 2000 or Windows XP System" on page 83

Avid provides drive-striping information when configurations are tested and when drives and software are released. This information refers to the number of drives that need to be striped to achieve a specific resolution.

To view the latest performance information:

1. Go to www.avid.com.
2. Click support.
3. Click online support.
4. Click Documentation under the Avid Knowledge Center heading.
5. Click Login.

If you are not already a registered user of the Knowledge Center, click Register and follow the on-screen registration instructions to register now. Registered users can access more information.

6. Click the Drive Striping Tables link or, alternatively, type **`Drive Striping Tables`** in the Search field at the top of the Web page, select Documentation, and click Go.

   Links to the latest drive-striping information are posted here.

Diagnostic Utilities

Avid provides a hard-drive exerciser in the Utilities folder where your Avid editing application has been installed on your system. Avid diagnostic utilities can also be found on the Avid Knowledge Center. Use the hard-drive exerciser program to test for SCSI subsystem failures, recoverable data errors, nonrecoverable data errors. Depending on your release, the Utilities folder will contain Avid StorEx or Storage Manager.

Before you run a diagnostic program, unmount the MediaDock Ultra320 shuttles.

Avid provides the following utilities for these operating systems. Always check the release notes that ship with your Avid software release to see if there have been any updates that relate to the MediaDock Ultra320 enclosure.

Windows NT Systems

If you are using the MediaDock Ultra320 enclosure on a Windows NT system, there are *two* major software utilities available:

- Avid Disk Mounter is an Avid utility that allows you to move striped drives easily from one Avid Windows NT system to a second Avid Windows NT system. For more information about Avid Disk Mounter, see the *Avid MediaDrive Utilities User's Guide*.
- Avid StorEx is a general-purpose, hard-drive exerciser program. For more information about Avid StorEx, see the setup guide that ships with your system.

  There is also a disk-checking feature in the Properties section of each drive. For information about how to use this feature, see the Microsoft Windows NT documentation.

Windows 2000 and Windows XP Systems

If you are using the MediaDock Ultra320 enclosure on a Windows 2000 or Windows XP system, one of the following hard-drive exerciser programs is in the Utilities folder on your Avid editing system:

- StorEx — See the setup guide that ships with Avid editing systems running Windows operating systems.
- Storage Manager — Use the Help linked to the application.

  Avid provides the latest version of Storage Manager on the Avid Knowledge Center. If you do not have Storage Manager or want to check for a newer version, the utility is available for downloading on the Knowledge Center

Avid editing applications install the Storage Manager software with application.

There is also a disk-checking feature in the Properties section of each drive. For information about how to use this feature, see the Microsoft Windows 2000 documentation.

Macintosh Systems

If you are using the MediaDock Ultra320 enclosure on a Macintosh system, use the following software utilities as appropriate:

- AVIDdrive Utility 2 (Mac OS 9) or ATTO ExpressStripe (Mac OS X) allows you to:
  - Identify drives (use Storage Manager for Mac OS X)
  - Select and create partitions
  - Create striped groups
  - Erase partitions
- One of the following hard-drive exerciser programs is in the Utilities folder on your Avid editing system:
  - StorEx — See the *Avid StorEx User's Guide* that ships with Avid editing systems running the Macintosh operating system.
  - Storage Manager (Mac OS X) — Use the online Help linked to the application.
- DiskWarrior specializes in eliminating directory errors by allowing you to rebuild your disk directory using data recovered from the original directory. By doing this, you can recover files and folders that you thought were lost. Your disk must be a Mac OS Standard (HFS) or Mac OS Extended (HFS Plus) disk.

Chapter 6

Troubleshooting

Occasionally, you might have problems with your MediaDock Ultra320 that you can repair on your own. The following sections describe problems that might occur when you use your MediaDock Ultra320 with either a Macintosh operating system or Windows operating system, and solutions to these problems.

Whenever a hardware fault occurs, an audible alarm sounds. You can use the fault LED indicators to point to the problem locations.

Avid Editing System Can't Access the MediaDock Ultra320 Shuttles

If your Avid editing system does not access the MediaDock Ultra320 shuttles, do the following:

- Look for lit fault LEDs on the front of the MediaDock Ultra320 shuttles.
- Verify that the SCSI cable you are using is properly fastened on both ends.
- Check the cable for bent pins.
- Check for possible SCSI bus connection problem. Remove and reinstall the dual-bus module, see "Configuring the SCSI Bus Configuration Module" on page 34.
- On Windows 2000 and Windows XP systems, see "Adding Shuttles while the System is Turned On" on page 64

For SCSI ID slot location for a single-bus configuration and a dual-bus configuration, see "MediaDock Ultra320 Slots" on page 24.

Avid Editing System Recognizes Only Some Slots in the MediaDock Ultra320 Enclosure

If your Avid editing system recognizes only some slots in the MediaDock Ultra320, you might have a SCSI bus connection problem. Make certain each shuttle is properly seated inside its slot. The SCSI IDs are hardwired and cannot be changed. For SCSI ID slot location for a single-bus configuration and a dual-bus configuration, see "MediaDock Ultra320 Slots" on page 24.

The Power Supply/Cooling Module LED Is Amber and the MediaDock Ultra320 Alarm Is Sounding

Verify that the cooling fans are working. If a fan has failed, remove the power supply/cooling module containing the failed fan and replace the module as explained in “Removing and Installing Power Supply/Cooling Modules” on page 37.

Check that the ambient room temperature does not exceed safe operation limits. If it does, shut down the system and cool the room before you turn on the MediaDock Ultra320 again. For the proper temperature specifications, see Appendix A.

The fault LED and alarm also indicates a variety of power supply failures; for example, if a voltage is not within its tolerance. Any fan or power supply failure requires that the power supply/cooling module be replaced.

Avid Editing System Hangs When a MediaDock Ultra320 Shuttle Is Removed

If your Avid editing system hangs when you remove a MediaDock Ultra320 shuttle, follow the appropriate procedure for your operating system.

- See “Replacing a MediaDock Ultra320 Shuttle on a Mac OS 9 System” on page 57.
- See “Replacing a MediaDock Ultra320 Shuttle on a Mac OS X System” on page 60.
- See “Replacing a MediaDock Ultra320 Shuttle on a Windows NT System” on page 61.
- See “Replacing a MediaDock Ultra320 Shuttle on a Windows 2000 or Windows XP System” on page 61.

Avid Editing System Doesn’t Recognize the Newly Installed MediaDock Ultra320 Shuttles

If your Avid editing system does not recognize any newly installed MediaDock Ultra320 shuttles, use AVIDdrive Utility 2 (Mac OS 9) or ExpressStripe (Mac OS X) or Storage Manager on Windows systems to scan the bus and mount the newly installed MediaDock Ultra320 shuttles.

- See “Replacing a MediaDock Ultra320 Shuttle on a Mac OS 9 System” on page 57.
- See “Replacing a MediaDock Ultra320 Shuttle on a Windows NT System” on page 61.
- See “Replacing a MediaDock Ultra320 Shuttle on a Windows 2000 or Windows XP System” on page 61.

Appendix A

MediaDock Ultra320 Specifications

The following sections provide the dimensions and weight, and the environmental, electrical, and power cord specifications for the MediaDock Ultra320 system.

Dimensions and Weight

Table 3 and Table 4 show the dimensions and weight for the Avid MediaDock Ultra320 tower and Avid MediaDock Ultra320 rack-mount enclosures.

Table 3 Dimensions

Dimension	Tower	Rack-mount
Width	10.5 in (267 mm)[a]	17.6 in (447 mm)
Height	21.5 in (546 mm)[a]	3.5 in (89 mm)
Depth	21.5 in (546 mm)	20.3 in (515 mm)

a. This includes the base.

Table 4 Weight

Configuration	Weight
Tower	76 lb 9 oz (34.7 kg)[a]
Rack-mount	62 lb 9 oz (28.3 kg)[a]

a. This is the maximum weight of the enclosure with 12 drives and 2 power supplies.

Environmental Specifications

Table 5 shows the environmental specifications for the Avid MediaDock Ultra320 and shuttles.

Table 5 Environmental Specifications

Environment	MediaDock Ultra320 and Shuttles
Ambient room temperature (Maximum)	104°F (40°C)
Operating humidity	5% to 90% noncondensing
Storage temperature	–40°F to 158°F (–40°C to 70°C)
Storage humidity	5% to 95% noncondensing

Electrical Specifications

Table 6 shows the electrical specifications for the Avid MediaDock Ultra320.

The specifications listed in Table 5 are the maximum and minimum tolerances and not the normal values used under typical operating conditions.

Table 6 Electrical Specifications

Topic	Specification
Voltage	90 V ac to 264 V ac
Frequency	50 Hz to 60 Hz
Current	6 a to 2.5 a
Watts	420 W @ 120 V ac[a]

a. This is the maximum (peak) wattage with 12 drives and 2 power supplies.

Power Cord Specifications

Select the power cord according to the country destination; it must comply with local safety requirements. Use the guidelines in the following sections if you need to replace the original power cord.

CEE-22 Power Cord Requirements

The female receptacle of the cord set, shown in Figure 41, must comply with CEE-22 requirements.

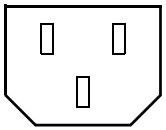


Figure 41 Receptacle (CEE-22)

United States and Canada Power Cord Requirements

In the United States and Canada, the male plug is a NEMA 5-15P style and is UL listed and CSA certified. Figure 42 shows the plug. SVT cord can be used with desktop or stackable units; all other equipment requires SJT cord. Only SJT-type cord sets can be used for units that rest on the floor.

Select the cord set according to the current rating of your unit. For the selection criteria for power cords in the United States and Canada, see Table 7.

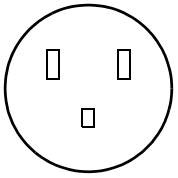


Figure 42 NEMA 5-15P Style Plug

Table 7 United States and Canada Power Cord Requirements

Cord Type	Size of Conductors in Cord	Maximum Current Rating of Unit
SJT	16 AWG[a]	12 A
SVT	18 AWG	10 A
SVT	17 AWG	12 A

a. AWG = American wire gauge.

European Countries Power Cord Requirements

In Europe, use only an H05VV-F, <HAR>, VDE, PVC, 3 x 1.00 mm^2 power cord. Für den Gebrauch in Deutschland muß ein Netzkabel des Typs H05VV-F, <HAR>, PVC, Größe, 3 x 1.00 mm^2 verwendet werden. For the selection criteria for European power cords, see Table 8.

Table 8 European Power Cord Requirements

Cord Type	Size of Conductors in Cord	Maximum Current Rating of Unit
SJT	3 x 1.00 mm^2	10 A
SVT	NA[a]	NA

a. NA = Not applicable.

Appendix B

Rack Mounting the MediaDock Ultra320 Enclosure

This appendix provides the information you need to rack mount the MediaDock Ultra320 in either a National Electrical Manufacturers Association (NEMA) or Electronics Industries Association (EIA) rack. Avid recommends that you mount your MediaDock Ultra320 in a rack before you install any MediaDock Ultra320 shuttles. When the shuttles are installed, the MediaDock Ultra320 is very heavy and awkward to work with.

This appendix contains the following sections:

Equipment Environmental and Safety Guidelines

When you install the MediaDock Ultra320 in a rack, you must take the following precautions:

- **Elevated Operating Ambient Temperature** — When the MediaDock Ultra320 is installed in a closed or multiunit rack assembly, the operating ambient temperature of the rack environment might be greater than the room ambient temperature. Therefore, consider installing the equipment compatible with the manufacturer's maximum ambient temperature of 104°F (40°C).
- **Reduced Airflow** — Do not compromise the amount of airflow required for safe operation of the equipment.
- **Mechanical Loading** — Avoid a hazardous condition due to an uneven mechanical loading.
- **Circuit Overloading** — Consider connecting the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Use appropriate equipment nameplate ratings.
- **Reliable Earthing** — Maintain reliable earthing of rack-mount equipment. Give particular attention to supply connections other than direct connections to the branch circuit (for example, the use of power strips).

Checking the Contents of the Rack-Mount Kit

Unpack the rack-mount kit, and check the contents; the kit should contain:

- Six sections of rails (see Figure 43)
  - Two MediaDock Ultra320 rails
  - Four extender rails (two short and two long)
- Assorted screws and other mounting hardware

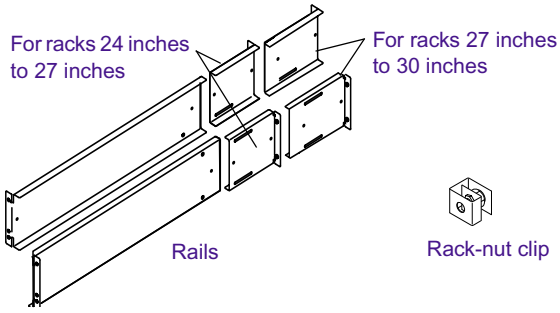


Figure 43 Rack-Mount Kit Contents

Installing the MediaDock Ultra320 in a Rack

The MediaDock Ultra320 is designed for 19-inch (483-mm) rack enclosures and requires two EIA rack units (2U), or 3 ½ inches (76.2 mm) of rack space. The MediaDock Ultra320 provides rack nuts for those rack enclosures that do not have threaded holes. Rack-nut clips position the rack nuts at the holes of the rack and are used to secure the rack components in place.

To ensure the stability of the rack enclosure, start from the bottom when you install the rack components in the rack enclosure.

Installing the Support Rails

The rack-mount MediaDock Ultra320 can be installed in either an NEMA or EIA rack.

To install the MediaDock Ultra320 rack-mount rails:

1. Determine the rack depth (24 inches to 27 inches or 27 inches to 30 inches).
2. Locate the correct set of support rails in the rail kit that allow you to create two rails 24 inches to 27 inches or two rails 27 inches to 30 inches. Figure 43 shows the rails.
3. Make two complete support rails by connecting the rails using four pan-head screws as shown in Figure 44.

   Tighten the adjustment screws just enough so you can adjust the rails to the proper rack size.

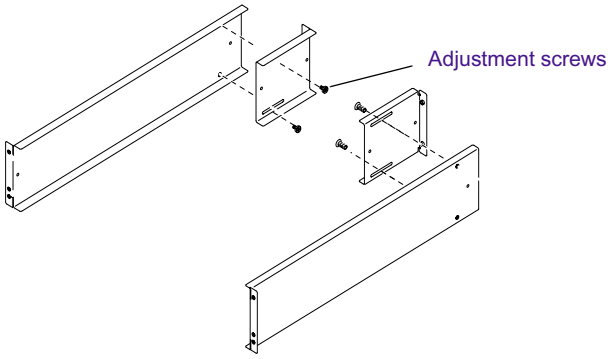


Figure 44 Connecting Rails

Attaching the Rack Nuts to the Rack

Install the rack nuts where the MediaDock Ultra320 front panel will secure to the rack enclosure.

To attach the rack nuts to the rack enclosure:

1. Select the lowest position in the rack where you can mount the MediaDock Ultra320. Position the support rails so the bottom of each rail is at the baseline of a U-alignment position (see Figure 45).

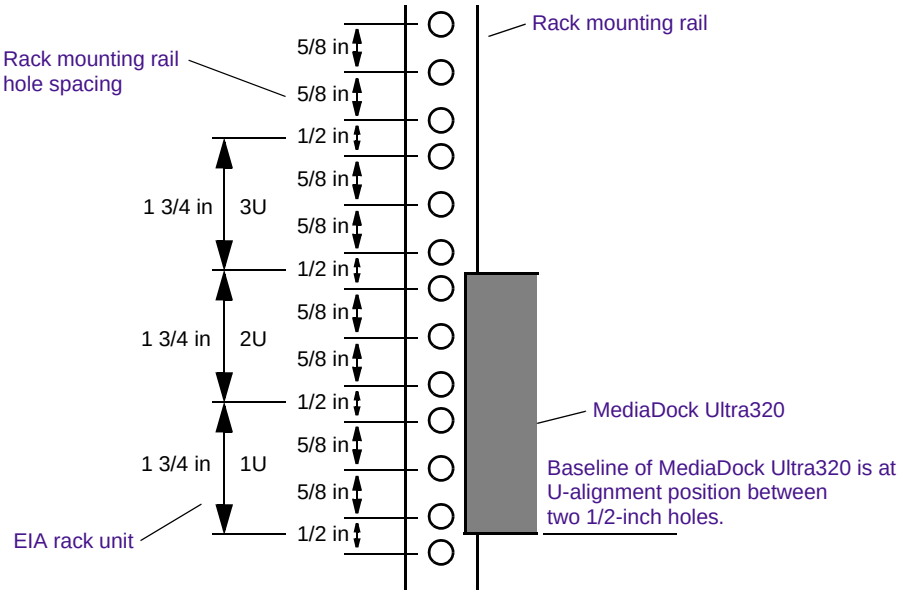


Figure 45 Positioning the MediaDock Ultra320

2. From the inside of the enclosure rail, slide the rack-nut clip over the hole you want to use (see Figure 46). If your rack enclosure has threaded holes, continue with step 4.
3. Attach a rack-nut clip for each front and rear hole in the support rails. Each support rail needs 3 rack-nut clips for the front mounting rail and 2 rack-nut clips for the rear mounting rail.

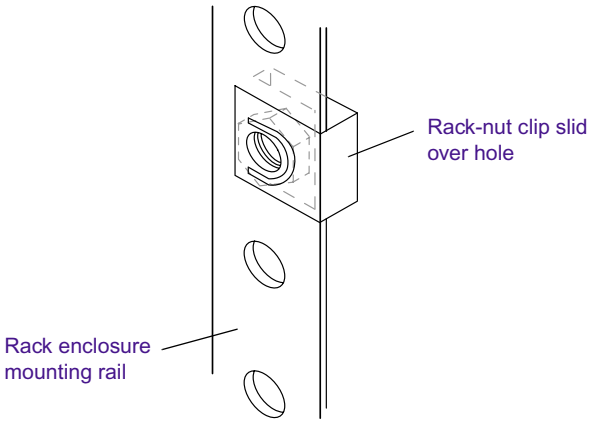


Figure 46 Attaching Rack Nuts onto the Rack Enclosure

4. Place one support rail over the front mounting rail. The rail ends should be outside the mounting rails.
5. Locate two pan-head screws in the rail kit.

6. Loosely attach the front of the support rail to the front mounting rail with the two pan-head screws in the top and the bottom holes (see Figure 47).

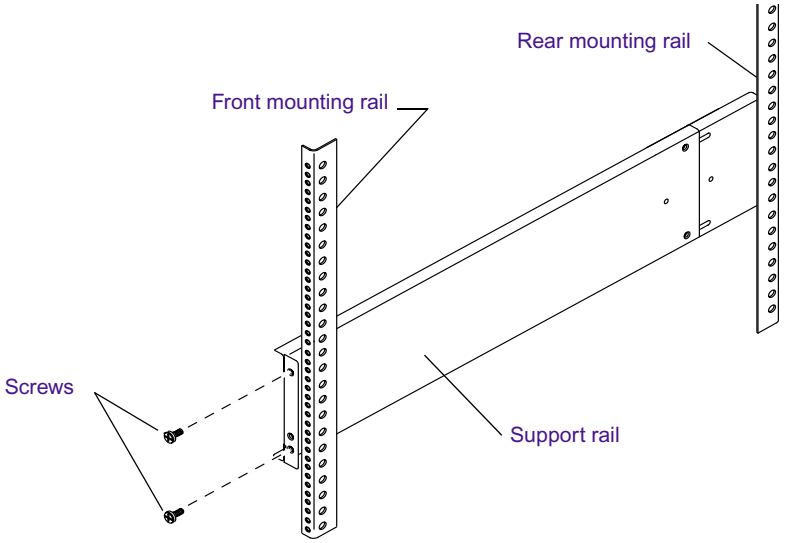


Figure 47 Attaching the MediaDock Ultra320 Rails to the Front Mounting Rails

7. Locate two pan-head screws in the rail kit.
8. Loosely attach the rear of the support rail to the rear mounting rail with the two pan-head screws in the top and the bottom holes (see Figure 48).

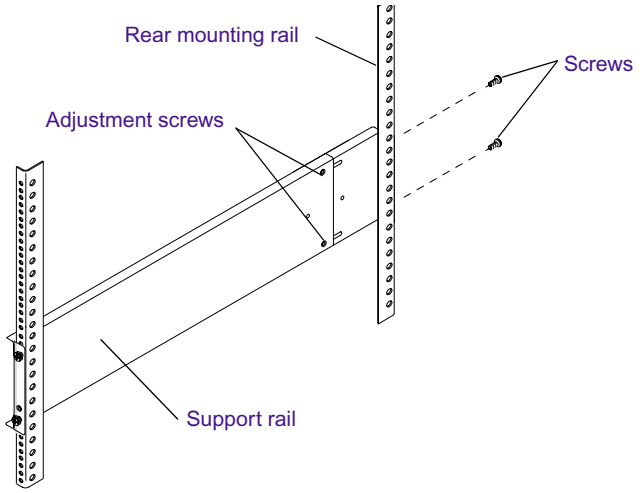


Figure 48 Attaching the MediaDock Ultra320 Rails to the Rack Back Mounting Rails

9. Tighten the screws for each MediaDock Ultra320 support rail at the front mounting rail and the rear mounting rail.
10. Tighten the adjustment screws of the support rail.
11. Repeat steps 4 through 10 for the second support rail.

Securing the MediaDock Ultra320 in a Rack

The MediaDock Ultra320 is secured in the support rails and rack with two rackmount screws. If your rack has threaded holes, you might have your own rack screws. If your rack does not have threaded holes, install the rack nuts included with the MediaDock Ultra320 (see “Attaching the Rack Nuts to the Rack” on page 103).

Make sure you have installed the rack-mount MediaDock Ultra320 support rails (see “Installing the Support Rails” on page 102).

You should have someone helping you to lift the MediaDock Ultra320 enclosure:

To secure the MediaDock Ultra320 into the rack.

1. From the front of the rack, position the MediaDock Ultra320 in the set of support rails (see Figure 49). Slide the MediaDock Ultra320 in until the MediaDock Ultra320 is flush against the front mounting rails.

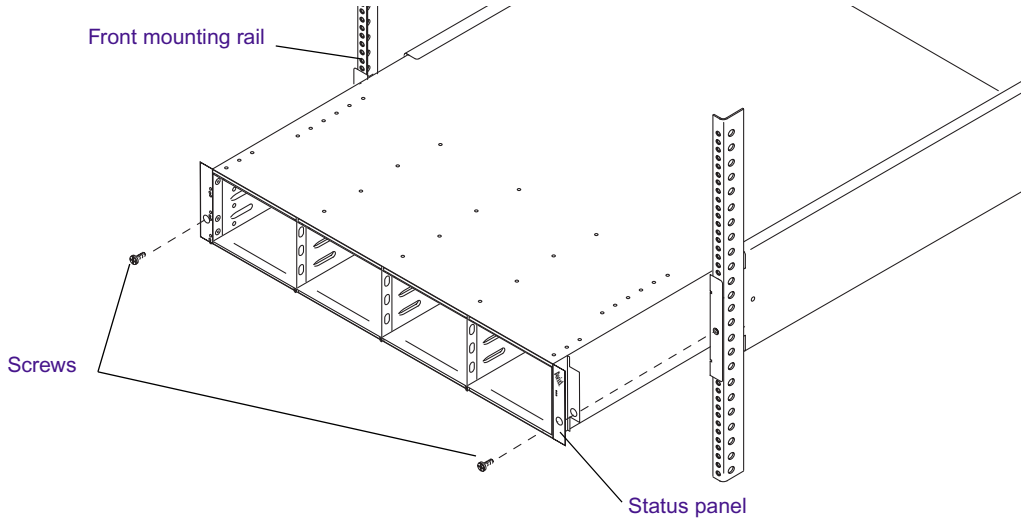


Figure 49 Installing a MediaDock Ultra320

2. Align the holes in the MediaDock Ultra320 with the holes in the front mounting rail. From the front of the rack enclosure, insert the screws through the MediaDock Ultra320 and front mounting rail, and tighten.

Appendix C

Converting the MediaDock Ultra320 Rack Enclosure into a Tower Configuration

This appendix provides the information you need to install the MediaDock Ultra320 into the tower enclosure. Avid recommends that you install the MediaDock Ultra320 in the tower shell before you install any MediaDock Ultra320 shuttles. When the shuttles are installed, the MediaDock Ultra320 is very heavy and awkward to work with.

This appendix contains the following sections:

Checking the Contents of the Tower Kit

Unpack the tower kit, which ships in one piece. The two floor stands are mounted to the base of the enclosure. The front bezel of the tower is attached to the front but is temporarily removed to insert the MediaDock Ultra320. Figure 50 shows how it is separated. Top and bottom MediaDock Ultra320 labels are also included.

Installing the MediaDock Ultra320 Tower Kit

You will need a Phillips screwdriver to remove and replace the front bezel of the tower. When the The MediaDock Ultra320 is placed in the tower enclosure, these front bezel screws secured the MediaDock Ultra320 in the tower.

You should have someone help you lift the MediaDock Ultra320 enclosure.

To secure the MediaDock Ultra320 into the tower.

1. Remove the four front bezel screws (see Figure 50).

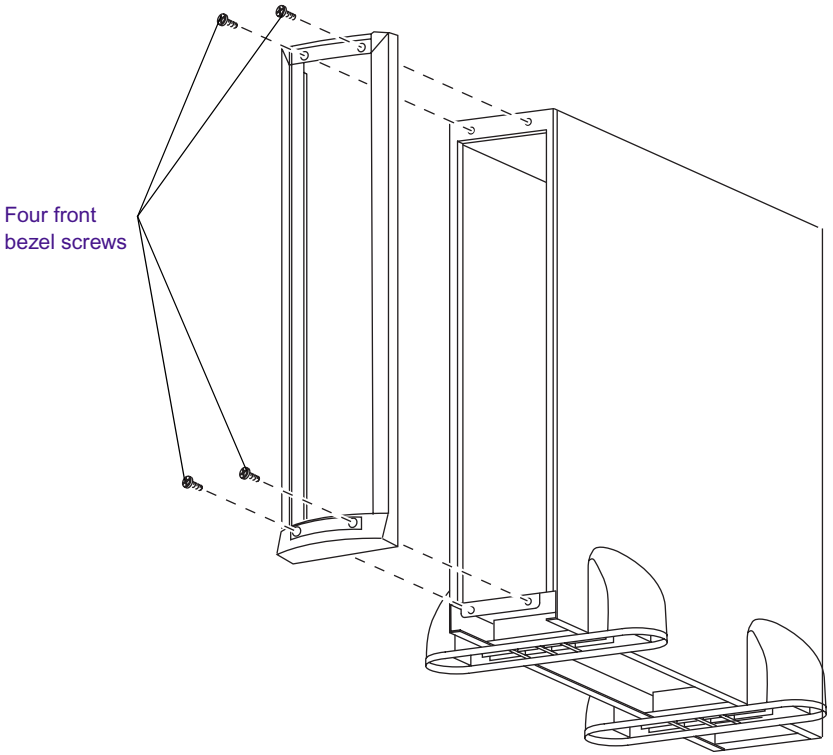


Figure 50 Tower Bezel Screws

2. Remove the plastic status panel from the MediaDock Ultra320 by pushing the two plastic tabs on the back side of the panel through the metal chassis.

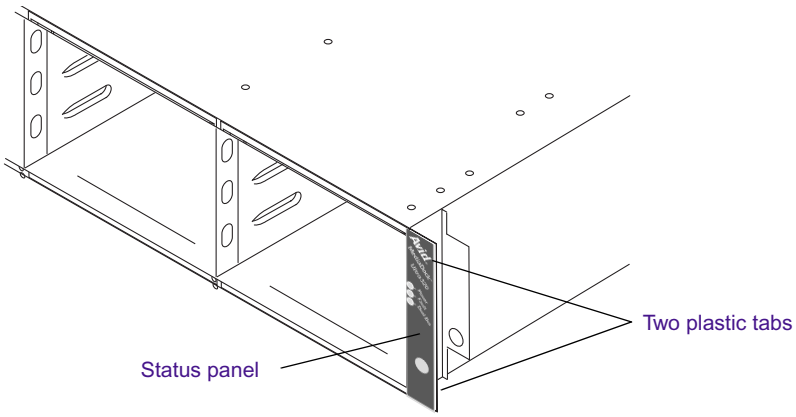


Figure 51 Status Panel Tabs

3. Repeat step 2 to remove the plastic panel on the other side of the MediaDock Ultra320 enclosure.

4. From the front of the tower, position the MediaDock Ultra320 into the tower so the that status LEDs are on the top (see Figure 52). Slide the MediaDock Ultra320 into the tower shell until it is flush against the front of the enclosure.

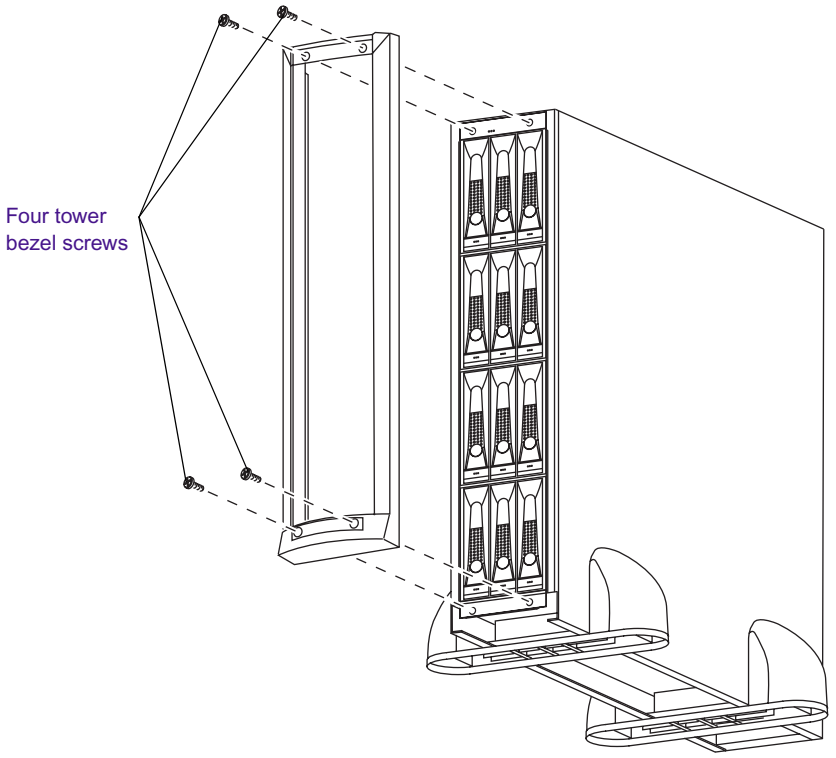


Figure 52 Replacing the Tower Bezel and Securing the MediaDock Ultra320

5. Insert the screws through the front bezel of the MediaDock Ultra320 into the holes in the tower shell, and tighten.

Attaching the MediaDock Ultra320 Labels to the Front Bezel

Attach the MediaDock Ultra320 labels included with the tower kit, to the top and bottom of the front bezel.

To attach the labels:

1. Locate the MediaDock Ultra320 labels included in the kit.
2. Remove the backing from the adhesive label that has the Avid logo.
3. Carefully adhere the label to the top of the front bezel so that the Avid logo is to the left, and the LEDs in the front bezel protruded through the holes in the label.

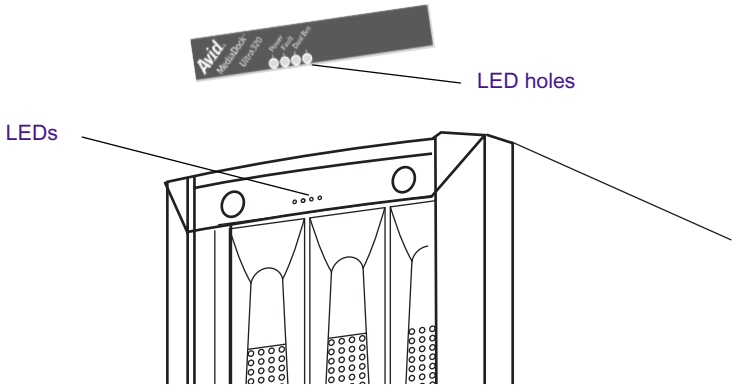


Figure 53 Tower Kit Labels

4. Remove the backing from the other adhesive label. The other label is a blank label.
5. Carefully adhere the second label to the bottom of front bezel so that the bottom front bezel screws are covered.

Appendix D

Regulatory and Safety Notices

FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canadian ICES-003

This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Notice

CE

Declaration of Conformity (According to ISO/IEC Guide 22 and EN 45014)

Application of Council Directives:	73/23/EEC, 89/336/EEC.
Standards to which Conformity is Declared:	EN60950:1999 Third Edition CISPR 22:1997 / EN55022:1994 + A1:1995 + A2:1997 Class A EN55024:1998/EN61000 — 3-2, 4-2, 4-3, 4-4, 4-5, 4-6, 4-8, 4-11
Manufacturer's Name:	Avid Technology, Inc. 1925 Andover Street Tewksbury, MA 01876, USA
European Contact:	Nearest Avid Sales and Service Office or Avid Technology International B.V. Sandyford Business Center Unit 3, Dublin 18, Ireland
Type of Equipment:	Information Technology Equipment
Application of Council Directives:	73/23/EEC, 89/336/EEC.

Product Name:	Products for the Windows NT, Windows 2000, or Windows XP Operating System: Media Composer, Film Composer, Avid Xpress, Avid Xpress DV, Avid Unity, Avid Unity MediaManager, Avid Unity TransferManager, Avid|DS, NewsCutter, NewsCutter XP, NewsCutter DV, Symphony, MediaDrive, MediaDock Ultra320, MediaRAID, MediaNetwork, MediaDock 2+, MEDIArray, MEDIArray II, MEDIArray Drive, MEDIArray II Drive, LANserver, LANserver EX, PortServer, Meridien I/O box, Avid Equinox Break-Out-Box Products for the Mac OS X Operating System: Media Composer, Film Composer, Avid Xpress, Avid Xpress DV, Avid Unity, Avid Unity MediaManager, Avid Unity TransferManager, MediaDrive, MediaDock Ultra320, MediaRAID, MediaNetwork, MediaDock 2+, MEDIArray, MEDIArray II, MEDIArray Drive, MEDIArray II Drive, LANserver, LANserver EX, PortServer, Meridien I/O box Products for the UNIX Operating System: AirPlay, VideoSPACE
Base Model Numbers:	None
Product Options:	All
Year of Manufacture:	2003

(1) Products for the Windows NT, Windows 2000, or Windows XP Operating System: products were tested in a typical Media Composer, Film Composer, Avid Xpress, Avid Xpress DV, Avid Unity, Avid Unity MediaManager, Avid Unity TransferManager, Avid|DS, NewsCutter, NewsCutter XP, NewsCutter DV, Symphony, MediaDrive, MediaDock LVD, MediaRAID, MediaNetwork, MediaDock 2+, MEDIArray, MEDIArray II, MEDIArray Drive, MEDIArray II Drive, LANserver, LANserver EX, PortServer, Meridien I/O box, or Avid Equinox Break-Out-Box configuration.

(2) Products for the Mac OS X Operating System: products were tested in a typical Media Composer, Film Composer, Avid Xpress, Avid Xpress DV, Avid Unity, Avid Unity MediaManager, Avid Unity TransferManager, MediaDrive, MediaDock Ultra320, MediaRAID, MediaNetwork, MediaDock 2+, MEDIArray, MEDIArray II, MEDIArray Drive, MEDIArray II Drive, LANserver, LANserver EX, PortServer, or Meridien I/O box configuration.

(3) Products for the UNIX Operating System: products were tested in an AirPlay or VideoSPACE configuration.

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

George R. Smith, Director of Hardware Engineering.

Australia and New Zealand EMC Regulations

N1709

John Kells, Australian Operations Manager
Avid Technology (Australia)
Unit B
5 Skyline Place
French Forest NSW 2086
Australia
Phone: 61-2-8977-4800

Taiwan EMC Regulations

Taiwan EMC Regulations BSMI Class A EMC Warning

警告使用者:
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

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