initio®

Miles Bluenote

PCI to SCSI-2 Host Adapter
for Power Macintosh

User's Manual

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If you have questions about installing or using Initio products, check this document first. You will find answers to most of your questions here. If you need further assistance, please contact us. We offer the following support and information services:

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The following information is needed to assist in problem resolution:

- Model type
- Serial number
- Product description
- Operating system & version number (i.e. Mac OS 8.1)
- Software driver product type and version number
- Location of purchase

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Introduction

Congratulations on your purchase of Miles Bluenote, the PCI to SCSI-2 SCSI Bus Master Host Adapter for Power Macintosh and Macintosh OS compatibles. Miles Bluenote is a high-performance SCSI-2 PCI bus master host adapter which provides the interface between the SCSI bus and the PCI local bus.

Correctly installing Miles Bluenote consists of two procedures:

- Installing the Miles Bluenote host adapter
- Installing the Miles Bluenote software

Miles Bluenote will not install in computers not equipped with PCI.

Miles Bluenote supports the Peripheral Component Interconnect (PCI) local-bus expansion card standard, adopted by Apple™ for its generation of Power Macintosh with PCI computers. Many SCSI peripherals created for this standard are supported by the Miles Bluenote.

The ReadMe file on the **Miles Bluenote SmartSCSI** utility CD contains information that was not available when this manual went to press. Please review this text document before installing or using your Miles Bluenote card.

About this Manual

This manual is divided into chapters that describe the installation and use of your Miles Bluenote hardware and software. It was written under the assumption that you have basic Power Macintosh knowledge. If you have questions regarding Power Macintosh procedures, refer to the manuals you received with your Power Macintosh computer.

About PCI

PCI is a local bus standard created by Intel™ and now maintained by the Peripheral Component Interconnect-Special Interest Group (PCI-SIG). A committee of companies, the PCI-SIG maintains and enhances the PCI standard. Initio has been a PCI-SIG member since 1994. Apple and Initio support version 2.1 of the PCI standard.

The PCI is designed for multiple hardware platforms. It surpasses the performance of NuBus and can transfer data at rates of up to 132 megabytes per second (MB/s). The PCI standard has built-in extension capabilities to 64-bit (264MB/s) and supports advanced bus capabilities.

About Your PCI to SCSI-2 Host Adapter

Miles Bluenote (also referred to in this manual as the INI-9090U MAC) is an UltraSCSI host adapter for Power Macintosh and Mac OS compatibles. Installing Miles Bluenote creates an interface between PCI (the CPU bus) and the disk drive. Miles Bluenote can transfer data at 20MB/sec (as allowed by the UltraSCSI specification). The PCI portion of the card is capable of data transfer rate bursts up to 133MB/s. This means that your Power Macintosh can receive data as fast as your drives can provide it. By simply connecting Miles Bluenote to your SCSI drives, you can improve their overall performance. In addition, you can daisy-chain up to 7 SCSI devices.

Miles Bluenote has an added feature of working with operating systems such as Windows 95/98/NT, Novell NetWare, OS/2, and SCO UnixWare. If you wish to use Miles Bluenote in these environments, the appropriate drivers are included with the Miles Bluenote CD. Or you can simply go to Initio's website at http://www.initio.com and download the most current drivers.

Considerations for UltraSCSI

In order to utilize UltraSCSI you must have both a UltraSCSI card (such as Miles Bluenote) and a SCSI, SCSI-2, or UltraSCSI device. To insure optimal UltraSCSI performance, Initio recommends that you:

- Limit total cable length– including the cabling between devices and cabling inside the devices - to 1.5 meters in configurations with 5 or more Ultra devices. For more information on cabling requirements, see page 15.
- Use only the highest quality cables.

How Miles Bluenote Improves Performance

Miles Bluenote is compatible with any Power Macintosh or Mac OS compatible PCI computer and improves performance in two ways:

- by breaking the standard SCSI bottleneck
- by providing on-board intelligence

Breaking the SCSI Bottleneck

When you install Miles Bluenote, a high-speed SCSI bus is added to your computer. All Power Macintosh machines are constrained by older-generation SCSI controller chips that cannot transfer data as fast as today's high-performance SCSI drives. Miles Bluenote allows your computer to sustain data transfer rates at the full speed of the drive, eliminating the constraints and restrictions of the Power Macintosh with PCI's native, built-in SCSI buses.

Miles Bluenote's high performance allows you to bypass the native SCSI bottleneck. As a result, your SCSI drives can transfer data at their full performance limit.

On-Board Intelligence

Miles Bluenote features *bus mastering*. This frees the computer to manage other tasks and increases overall system performance. It also provides *automatic termination*. Miles Bluenote detects its position in the SCSI chain and sets its termination accordingly.

Using the Miles Bluenote Host Adapter

Once installed and configured, Miles Bluenote operates transparently. To start up from a hard drive connected to an Initio card, first make sure that the hard drive you wish to boot from has Mac OS system software installed on it. Then select it in the Startup Disk Control Panel window. Although it isn't necessary to reformat a drive to connect it to an Initio card, we recommend standardizing all your drives by installing the high-performance driver software that came with your Miles Bluenote Kit. For more information, see the documentation for the particular software that came with your Miles Bluenote kit.

Initial boot-up of your system after installing Miles will display a grey screen for approximately 30-60 seconds. Although there is no dialog indicating activity, Miles Bluenote is simply doing a SCSI bus scan. Every time you boot up your system with a Miles host adapter installed, it spends approximately 30-60 seconds scanning all SCSI devices attached to it. Just allow Miles to finish the scan and the 'happy Mac' icon will soon appear-- resuming normal activity.

System Requirements

Hardware:
- Mac OS PCI-based Computer
- Minimum 16MB RAM
- An unused PCI expansion slot
- A SCSI device

Software:
- Mac OS version 8.1 or later

Precautions to Remember

Before installing Miles Bluenote, there are several precautions you need to follow. Before beginning the installation procedure you should:

- Make sure your data is backed up
- Disconnect all accessory cables from the back of your Power Macintosh with PCI (including SCSI and monitor cables)
- Leave the AC power cord connected to the computer and to a switched, grounded outlet (with the switch turned off)
- Follow proper electrostatic discharge procedures

Electrostatic Discharge Procedures

While installing Miles Bluenote, you must follow proper electrostatic discharge procedures. Static discharge can ruin electronic equipment such as Miles Bluenote or your computer.

Damage caused by incorrect installation voids Initio's warranty.

To minimize the possibility of static discharge, follow these rules:

- Make sure the computer is OFF when performing an installation
- Leave the AC power cord connected to the computer and to a switched, grounded outlet (with the switch turned off)
- If the computer has recently been powered on, then wait ten minutes before installing the SCSI card.
- Before touching the insides of the computer, discharge any static electricity by touching the metal case of the power supply.
- Use a grounding strap to maintain a ground, or keep one hand on the power supply at all times.
- When handling Miles Bluenote, use the same precautions as above and maintain a ground when handling it outside of its protective static bag.

If you don't understand static discharge precautions, or if you are not well-versed in the procedures for installing delicate electronic components, contact your local dealer for installation assistance.

Product Specifications:

- PCI 2.1 compliant
- Plug & Play
- Mac OS version 8.1 or later
- 133 Mbytes per second PCI burst mode.
- Compatible with hard disks, CD-Rs, Optical, Tape, Zip/Jaz™ drives and other SCSI peripherals
- Up to 20 MByte/sec transfers over UltraSCSI bus, and 10 MB/s transfers over SCSI-2 bus
- SCSI Auto-termination
- On-board firmware supports bootable Mac OS
- SCSI Manager 4.3 compliant

Power Requirements

- 5.0 ± 0.25 V at 0.51 Amps maximum not including bus termination

Physical Dimensions

- 5.25" x 3.80" (13.34 cm x 9.96 cm)

Environmental Specifications

Operating Temperature

- 0 to 55°C (32 to 131°F)
- 10% to 90% relative humidity (non-condensing)

Storage Temperature

- -40 to 75°C (-40 to 167°F)
- 5% to 95% relative humidity (non-condensing)

2

Installing Bluenote & Connecting SCSI Devices

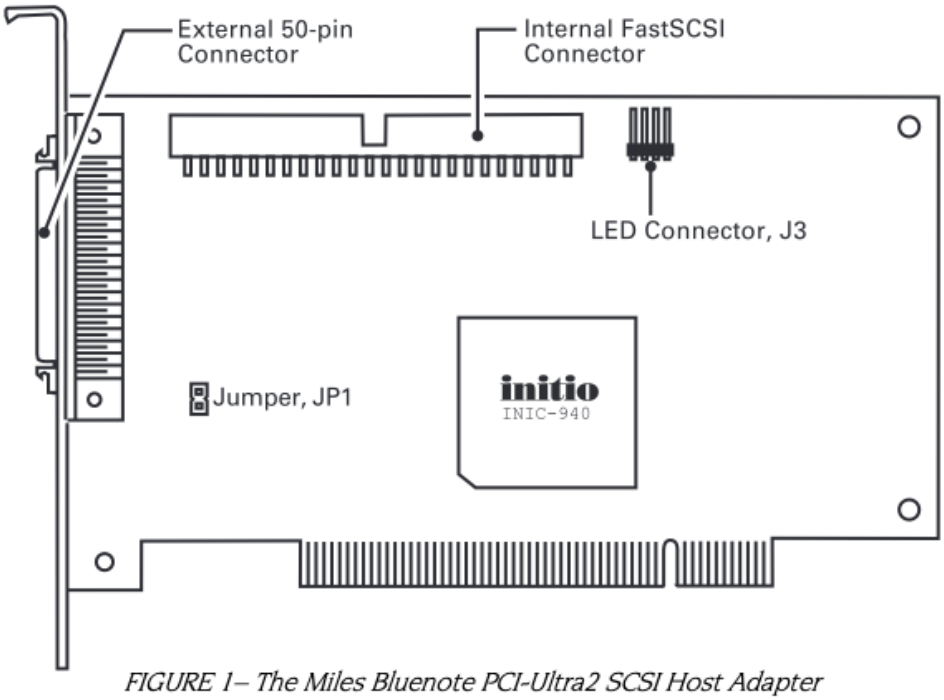


FIGURE 1– The Miles Bluenote PCI-Ultra2 SCSI Host Adapter

This chapter tells you how to do the following:

- Install Miles Bluenote in your Mac OS PCI-based system (both tower and desktop models)
- Connect internal and external SCSI devices to each Miles Bluenote card installed
- Set SCSI chain termination
- Assign SCSI IDs

Installing Miles Bluenote (G3 Tower-Models)

If your tower model differs from the one illustrated in this manual, refer to your computer user documentation for instructions on installing an expansion card (instructions for desktop models begin on page 11).

To install the Miles Bluenote in your New Power Mac G3 computer

1 Turn OFF the power to the computer and any attached devices, and disconnect all power cords.

WARNING: To avoid possible exposure to electric shock, be sure all power to your system is turned OFF.

2 Press the computer's power button. This will dissipate the charge in the power supply capacitors.

3 Open the computer's outer housing to expose it's internal components (refer to your Mac's User's Guide for help).

4 Touch the metal part of the power supply to discharge any static electricity from your clothes and body (use a wrist grounding strip if you have one).

5 Choose an unused PCI expansion slot and remove its port access cover.

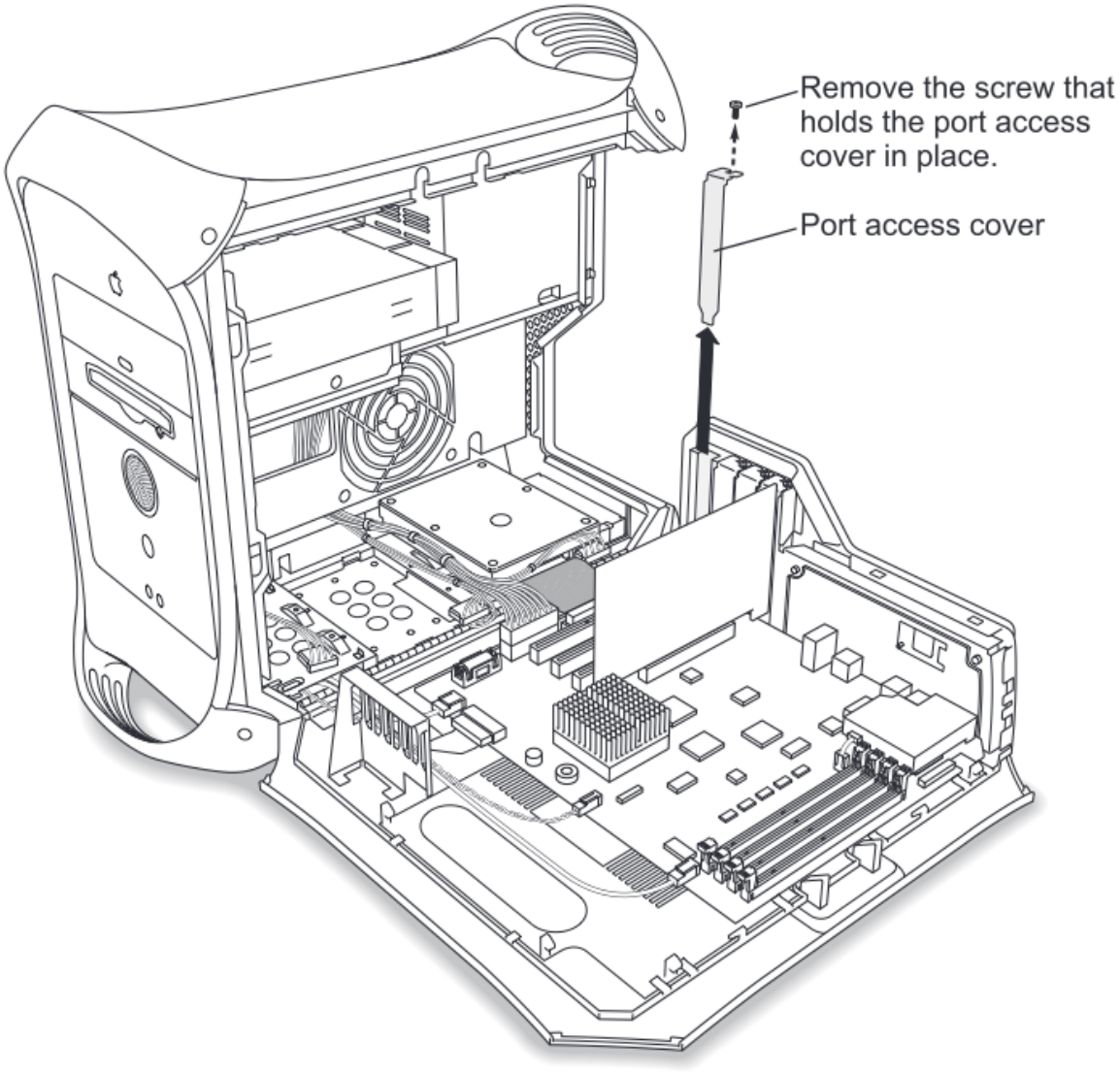


FIGURE 2 – New Power Mac G3 Tower-Model installation

6 Orient the host adapter for installation so that the external connector is facing the back of the System unit and align the card with the PCI connector on the system unit (see FIGURE 3). Holding the adapter by the mounting bracket and the card edge, match up the card edge connector with the PCI host computer socket and insert the card into the socket. Once the connector is in the PCI expansion slot socket tighten the mounting bracket screw to secure the card in place.

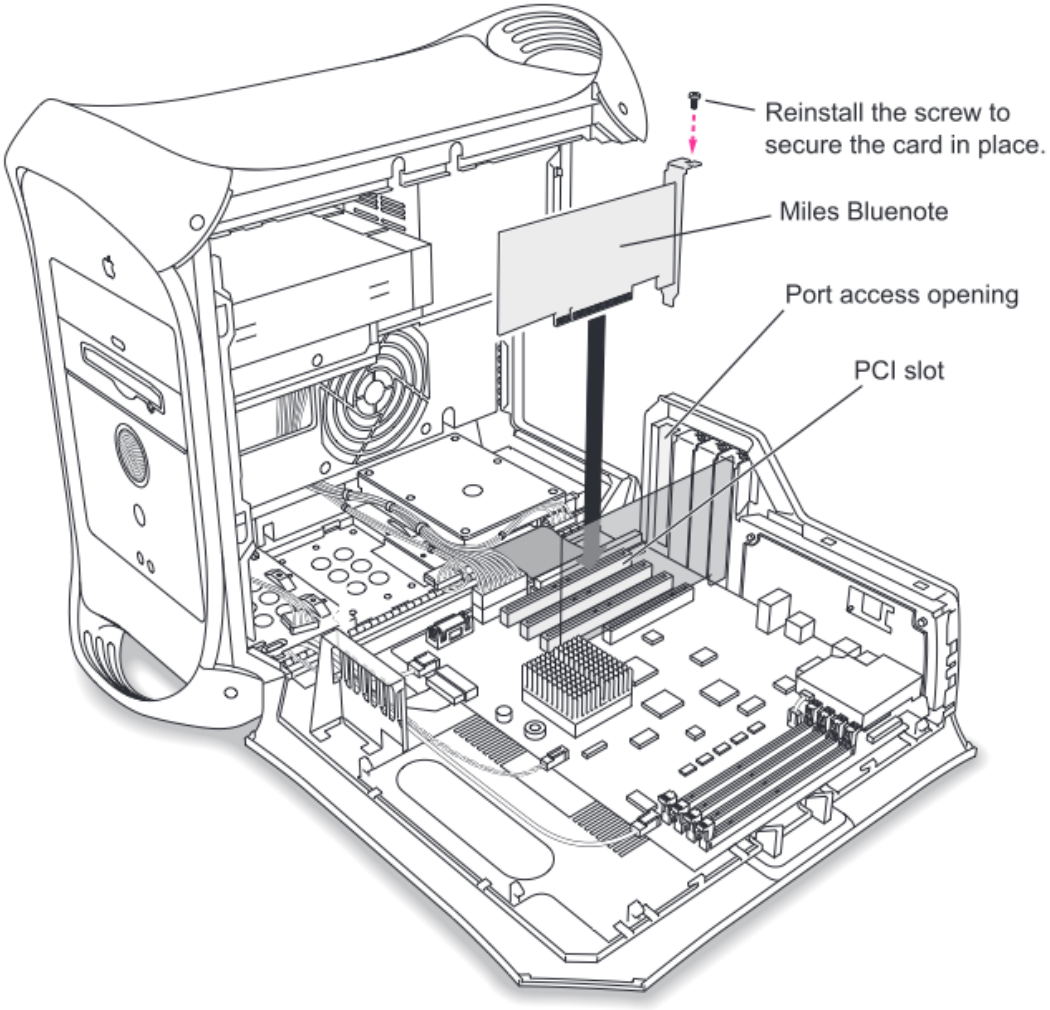


FIGURE 3 – Power Macintosh G3 card installation

7 Now turn to Connecting Device Cables on page 14.

Installing Miles Bluenote (Desktop-Models)

If your desktop-model differs from the one illustrated in this manual, refer to your computer user documentation for instructions on installing an expansion card (instructions for tower-models begin on page 8).

To install the Miles Bluenote in your desktop-model computer

1 Turn OFF the power to the computer and any attached devices, and disconnect all power cords.

WARNING: To avoid possible exposure to electric shock, be sure all power to your system is turned OFF.

2 Press the computer's power button. This will dissipate the charge in the power supply capacitors.

3 Open the computer's outer housing to expose it's internal components (refer to your Mac's User's Guide for help).

4 Touch the metal part of the power supply to discharge any static electricity from your clothes and body (use a wrist grounding strip if you have one).

5 Choose an unused PCI expansion slot and remove its port access cover.

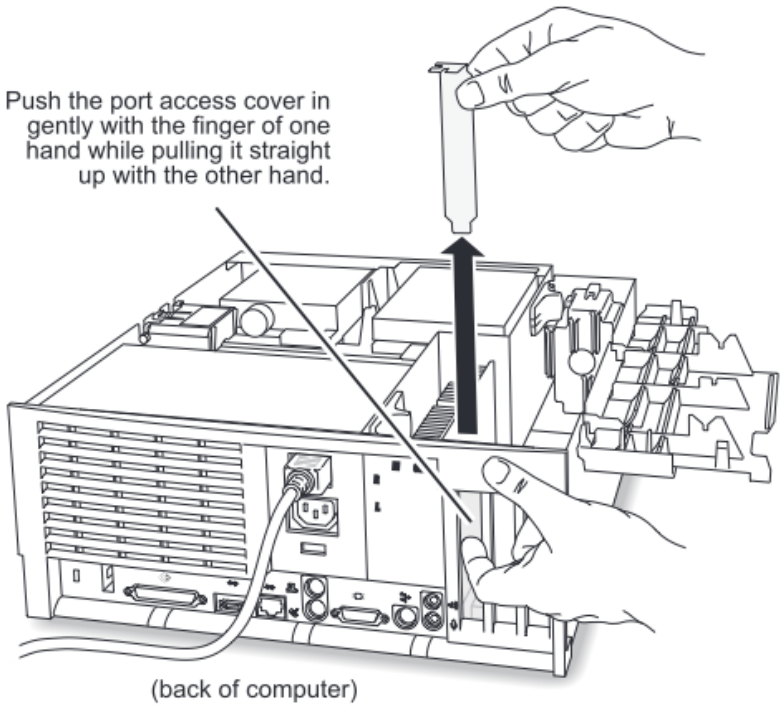


FIGURE 4 – Desktop-Model installation

6 Orient the host adapter for installation so that the external connector is facing the back of the System unit and align the card with the PCI connector on the system unit (see FIGURE 5). Holding the adapter by the mounting bracket and the card edge, match up the card edge connector with the PCI host computer socket and insert the card into the socket. Once the connector is in the PCI expansion slot socket tighten the mounting bracket screw to secure the card in place.

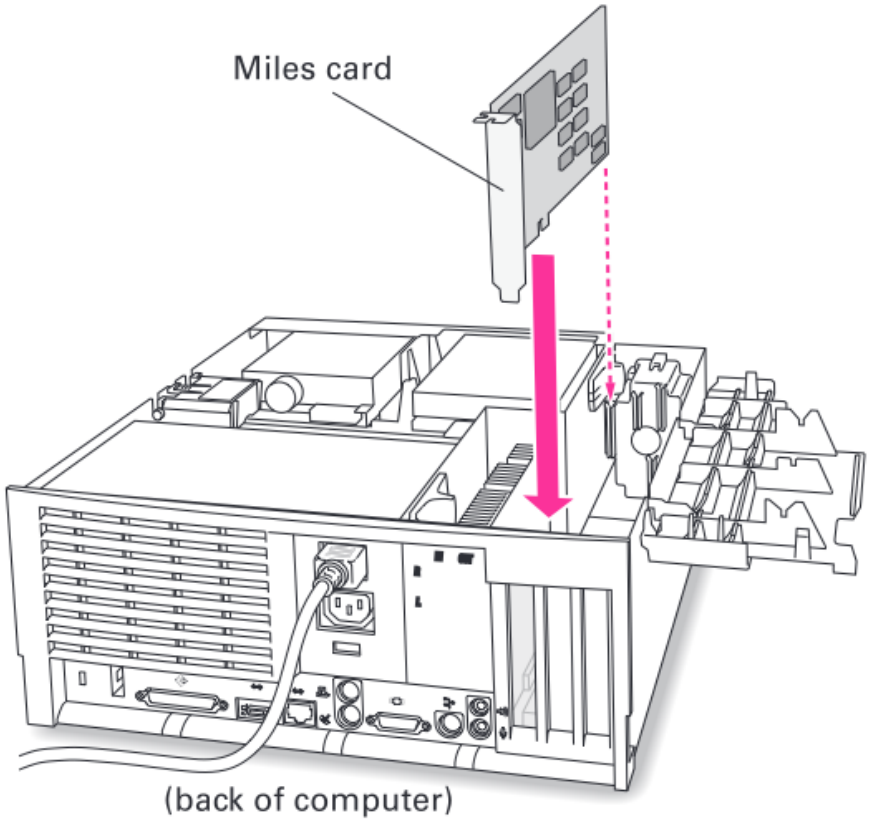


FIGURE 5 – Desktop-Model card installation

7 Continue with the next section, Connecting Device Cables.

Connecting Device Cables

The internal cable permits connection of multiple internal devices. SCSI devices that are connected to the internal connector are installed inside the host computer enclosure. The external connector is accesible through the D-shell connector at the back of the host system and is designed to connect devices outside the host system enclosure.

The following table has connector details of the Miles Bluenote:

Product	Internal Connector	External Connector	Maximum SCSI Devices allowed
Miles Bluenote	One 50-pin	One 50-pin H/D	7

Standard Density Internal.....

50-pin High Density External.....

Optional DB25-pin Connector....

FIGURE 6 – Connector Details

Miles Bluenote is designed for ease of use. In most cases, you simply connect your SCSI devices and begin using them.

If you decide to use both internal and external connectors, we recommend using FastSCSI speeds of 10MB/sec or less . Attempting to operate the host adapter in UltraSCSI speeds (20MB/sec) when both external and internal connectors are utilized may result in unreliable operation.

Installation of Internal SCSI cables

Installation of an internal SCSI cable must be performed before replacing the system covers. Internal ribbon cables are made with multiple connectors attached and used to daisy chain the host adapter with up to four devices. It is important that the cable be installed correctly for proper operation. Align the internal cable into the host adapter and the other cable connectors in a similar fashion into the other SCSI device connectors as described in the appropriate manufacturers instructions.

A total of 7 SCSI peripherals can be connected to the Miles Bluenote. One internal 50-pin SCSI cable is included. This cable is used to connect internal target devices.

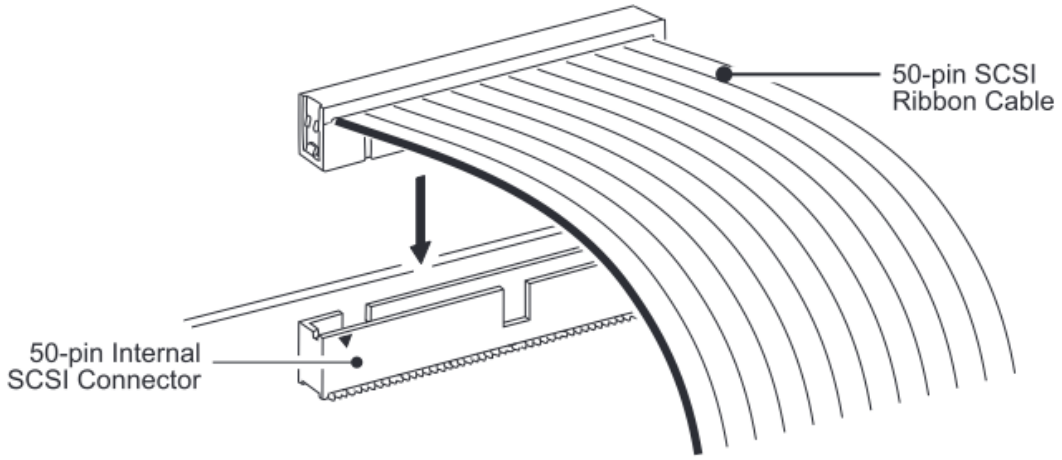


FIGURE 7 – Connecting the 50-pin internal flat ribbon cable

Installation of External SCSI cables

Installation of external SCSI cables can be performed after the cover has been closed. The cable is limited in accordance with the table shown below in FIGURE 8. The external cable can be daisy chained to include up to 7 with the host adapter in combination with internal devices. The external cable is designed to be inserted only one way, requiring termination at the end peripheral device on the bus as illustrated in FIGURE 9.

Type of Device	Cable Length (Internal & External)
Up to 7 SCSI-2 devices	6 Meters
Up to 4 Ultra devices	3 Meters
5 or more Ultra devices	1.5 Meters

FIGURE 8 – Maximum Cable Lengths

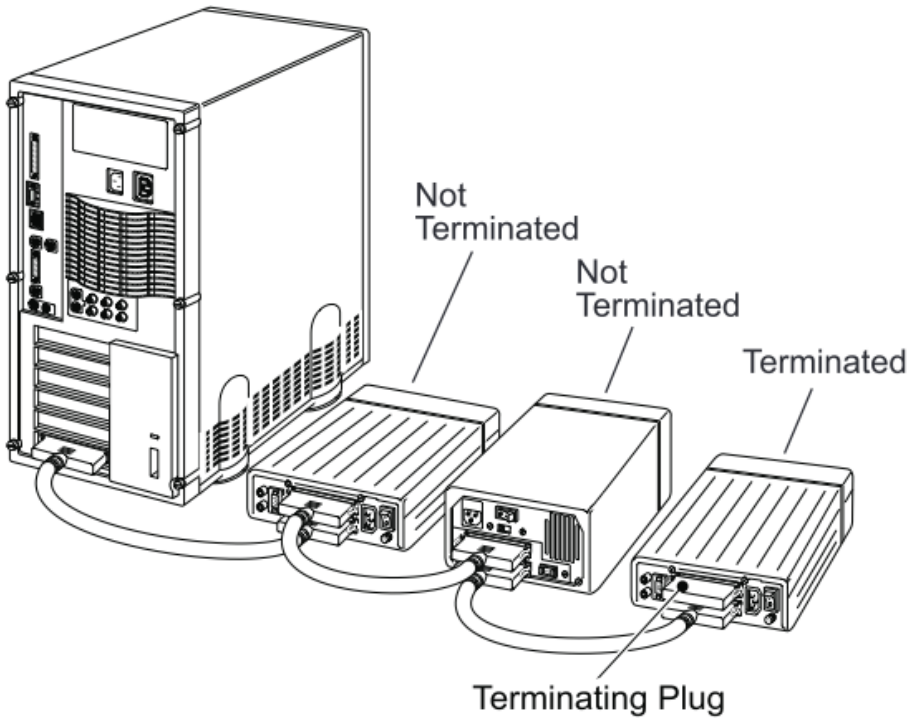


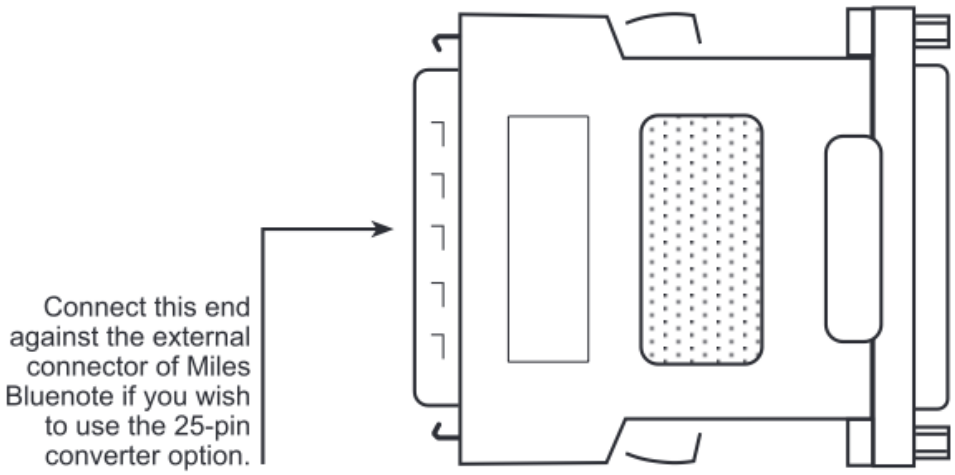
FIGURE 9 – Connecting external cabling through daisy-chaining

To increase the reliability of the cabling being used with the host adapter, it is recommended that the following guidelines be observed:

- SCSI-1 – Cabling up to 6 meters (20 feet)
- UltraSCSI – Four devices, up to 3 meters (10 feet)
- UltraSCSI – Eight devices, up to 1.5 meters (5 feet)
- Impedance of the cable should be 90 (±8 ohms)
- Use high quality shielded connectors for external devices.

Using the 50-pin to 25-pin Connector Converter

External SCSI-2 devices such as Iomega® Zip™ drives can be connected to Miles Bluenote via a 50-pin to 25-pin connector converter (if included). It is highly recommended that you operate devices at SCSI-2 speeds or lower (10 MB/sec) when using the 50-pin to 25-pin connector converter. In addition, Auto-termination logic may not work properly when the converter is in use; therefore, the correct termination must be set manually through SmartSCSI Utility (Chapter 3).



50-pin to 25-pin connector converter

It is highly recommended that you operate devices at SCSI-2 speeds or lower (10 MB/sec) when using the 50-pin to 25-pin connector converter. In addition, Auto-termination logic may not work properly when the converter is in use; therefore, the correct termination must be set manually through SmartSCSI Utility.

SCSI Bus Preparation

Peripheral devices attached to the SCSI bus can either be an internal or external device. Each peripheral has a specific device ID, commonly referred to as a "SCSI ID." The SCSI ID determines priority when two or more devices are trying to use the SCSI bus at the same time. No two devices can have the same ID; the device ID uniquely defines the device to the SCSI bus. Miles Bluenote is preset to SCSI ID 7 and should not be changed. This gives it the highest priority on the SCSI bus. Please refer to your peripheral documentation to determine switch or jumper settings for SCSI ID's. Here are some general guidelines for SCSI IDs:

- SCSI ID numbers don't have to be sequential, as long as Miles Bluenote and each peripheral has a different number. For example, you can have an internal SCSI peripheral with ID 0, and an external SCSI periphera1 with ID 6. Gaps in the sequence of numbers don't matter.
- For internal SCSI peripherals, the SCSI ID usually is set by configuring a jumper on the peripheral.
- For external SCSI peripherals, the SCSI ID usually is set with a switch on the back of the peripheral.
- SCSI ID 7 has the highest priority on the SCSI bus. The priority of the remaining IDs, in descending order, is 6 to 0.
- Most internal SCSI hard disk drives come from the factory preset for SCSI ID 0.
- If you have 8-bit SCSI peripherals, they must use SCSI IDs 0, 1, 2, 3, 4, 5, or 6. SCSI ID 0 is recommended for the first SCSI hard disk drive.
- Through Miles Bluenote SmartSCSI, you can use the utility to view the SCSI configuration details for each SCSI ID on the bus.

About Termination

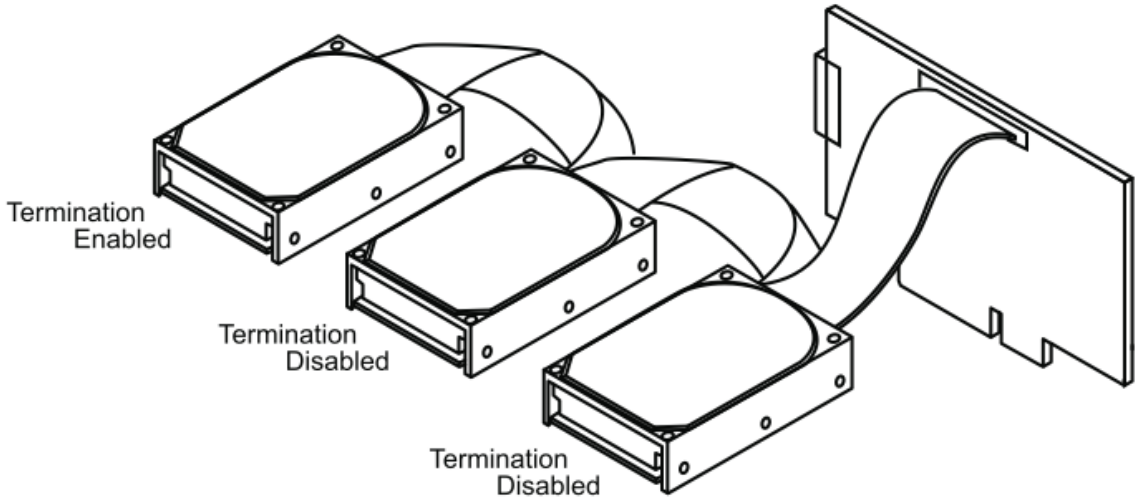
SCSI bus terminators connect to SCSI devices and cables to make data transfers more reliable. SCSI guidelines require terminators on the first and last SCSI devices of each SCSI bus.

Host adapter termination is automatically controlled by the Initio firmware and is enabled by default. Miles Bluenote detects the presence of cables on any of its two connectors and adjusts its internal termination accordingly. Miles Bluenote is also backward compatible. Even though it is itself a UltraSCSI device, it can be connected to any SCSI device that conforms to one of the SCSI standards (SCSI or SCSI-2).

External SCSI-2 devices such as tape backup, CD-ROM, CD-R or Zip drives can be connected to Miles via the 50-pin to DB25-pin connector converter.

When connecting multiple internal SCSI devices, only the last SCSI device on the chain needs to be terminated. Refer to the peripheral manufacturer's user manual for proper device termination.

If you connect three external SCSI devices, the device closest to Miles Bluenote is *not* at the end of the bus. Miles is at one end and the farthest device is at the other.



Each of the internal and external devices connected to a SCSI bus need to have a unique SCSI ID. Miles Bluenote supports up to 7 SCSI peripherals. SCSI peripherals can use SCSI IDs from 0 to 6. Miles defaults to using ID 7 but can be changed to use a different ID through the SmartSCSI utility.

The actual number of SCSI peripherals that can be connected to Miles is dependent on two factors: the total length of the SCSI cables used, and the SCSI type of connected peripherals. Refer to the table on page 16 for details.

Miles Bluenote's SCSI termination can be set to auto-termination or programmable mode via the Miles Bluenote SmartSCSI setup utility. This feature allows the operator to switch the auto-termination On or Off. If auto-termination is switched Off, the operator can manually program termination for the host adapter. There are several ways to manually control terminating the host adapter on the SCSI bus. The following is a sampling:

SCENARIO	INTERNAL CONNECTOR	EXTERNAL CONNECTOR	Termination
	50-pin* narrow SCSI Device(s)		
1			ON
2	X		ON
3		X	ON
4	X	X	OFF

FIGURE 13 – Possible Termination Options Settings

Multiple Initiators (using jumper JP1)

Under some circumstances multiple initiators can be used on a single SCSI bus. The bus is configured to have more than one host adapter inserted into at least two distinctly different computer systems sharing peripheral devices. In these situations, it is possible to have one of the two computer systems turned off. The Miles Bluenote has a jumper (JP1) that can be set to enable the board termination regardless of its software setting. In multi-initiator applications, the SCSI termination must be provided by the cabling. The host adapter is shipped without the jumper installed and need not be changed in most cases.

3

Software Utility Setup

Introducing the Miles Bluenote SmartSCSI Utility

Miles ships with software stored on a CD included in the initial packaging. This Initio CD contains the **Miles Bluenote SmartSCSI** utility and ReadMe files. The ReadMe text file contains important product information.

Review the ReadMe file before installing any software. The ReadMe file contains information about the software that became available after this manual was printed.

The **Miles Bluenote SmartSCSI** utility is used to modify the SCSI characteristics of connected devices and the host adapter. The Miles Bluenote SmartSCSI utility can also be used to update the firmware code on the Miles Bluenote card. To make the update possible, a firmware file called "bluenote.sim" needs to be present in the same folder where the Miles Bluenote SmartSCSI resides (firmware file updates are distributed via the Initio website on a need basis). The firmware version of the Miles Bluenote card is displayed in the Miles Bluenote SmartSCSI configuration panel.

NOTE: Type of software bundled with Miles Bluenote varies depending on kit type.

FWB® Hard Disk Toolkit•PE can be used to partition and format a newly added hard disk connected to Miles Bluenote. Follow the FWB Hard Disk Toolkit User's Manual for instructions on how to prepare a new hard disk drive.

Installing the Miles Bluenote SmartSCSI Software

The Initio Miles Bluenote CD contains a folder called "Bluenote SmartSCSI v1.04" that includes all the software files needed for Miles. Two files are included: Miles Bluenote SmartSCSI and a ReadMe text file. Installation of the files is basic:

1. Insert the Miles Bluenote CD into your CD-ROM drive.
2. Double click the icon of the CD you just inserted.
3. With your mouse, drag and drop the "Bluenote SmartSCSI v1.04" folder onto an area of your hard drive.
4. The folder should have successfully been copied over to your hard drive.

Users who have a previous version of SmartSCSI installed on their hard drive will need to install the current version of the software (Miles Bluenote SmartSCSI) in order to use Miles Bluenote.

Initial boot-up of your system after installing Miles will display a grey screen for approximately 30-60 seconds. Although there is no dialog indicating activity, Miles Bluenote is simply doing a SCSI bus scan. Every time you boot up your system with a Miles host adapter installed, it spends approximately 30-60 seconds scanning all SCSI devices attached to it. Just allow Miles to finish the scan and the 'happy Mac' icon will soon appear-- resuming normal activity.

Running & Understanding the SmartSCSI Interface

Once you have copied the Miles Bluenote SmartSCSI folder onto your computer's hard drive, double click the SmartSCSI icon. This opens the Miles Bluenote SmartSCSI Configuration Panel. The panel provides two pull-down menu options: 'PCI Access' and 'Setup'.

PCI Access:
Three functions are available here: **Scan PCI Bus, Close PCI Access, and Quit.** At start-up, SmartSCSI *automatically* performs the **Scan PCI Bus** function and locates all available Miles Bluenote cards in the system (**Scan PCI Bus** will therefore be shaded out). Once the Miles Bluenote card(s) are found, the "Setup" pull-down menu can be used to select a Miles Bluenote card for configuration. **Close PCI Access** is used to reset the PCI bus scan and clear the entries in the "Setup" pull-down menu. **Scan PCI Bus** is used to search for Miles Bluenote cards and is only accessible following execution of the **Close PCI Access** command. **Quit** exits the Miles Bluenote SmartSCSI utility.

Setup:
Setup lists the Miles Bluenote cards that were found during the last PCI bus scan. A Miles Bluenote card can be selected from the list of available cards. If only one Miles Bluenote card is installed in the system, the first option **1st Card Configuration** is available and the remaining two (**2nd Card Configuration** and **3rd Card Configuration**) are shaded out. Once a Miles Bluenote card is selected, the SmartSCSI Configuration Panel is launched. The **Miles Bluenote SmartSCSI** Configuration Panel modifies the settings of only the card that was selected from the "Setup" pull-down menu.

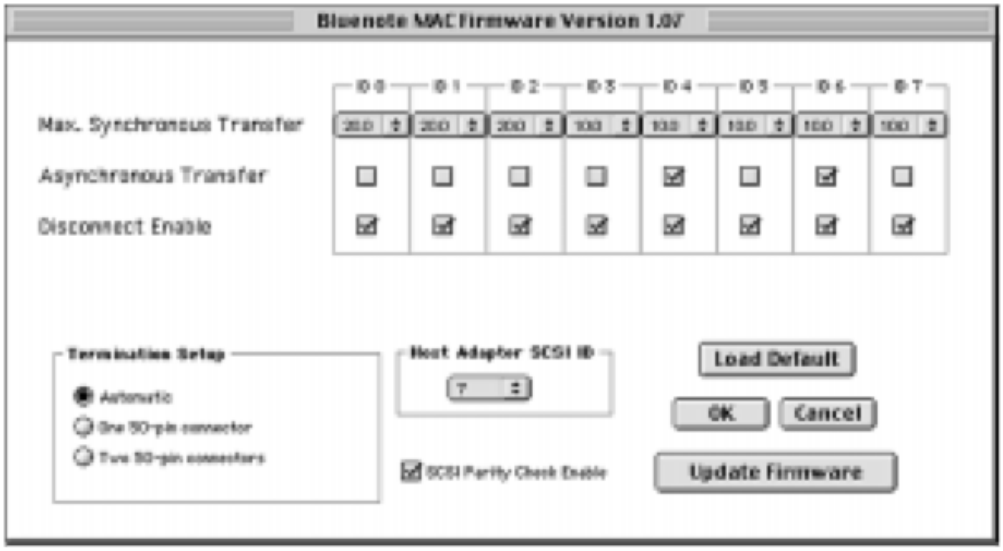


FIGURE 15 – Miles Bluenote SmartSCSI utility panel

The Miles Bluenote SmartSCSI Configuration Panel configures the SCSI settings for all SCSI peripherals on SCSI IDs 0 through 7. Configuration options will next be discussed.

Maximum Synchronous Transfer Rate. This option determines the maximum speed at which data is moved between the Initio BlueNote card and SCSI devices. The BlueNote host adapter is capable of transferring data at up to 20 Megabytes per second in UltraSCSI mode. The negotiated speed between the BlueNote card and any SCSI ID can be set to 20.0, 13.3, 10.0, 8.0, 6.6, 5.7 or 5.0 Mbytes/sec. The default setting is 10 MB/sec for all SCSI IDs. SCSI devices will negotiate lower speeds if they don't support transfer at the higher default settings.

Asynchronous Transfer. Use this option to set the asynchronous data transfer mode. The default setting for this option is *NO check*. Certain older CD-ROMs, CD-Recordables, and tape drives prefer asynchronous mode and can cause your system to hang or read errors when transferring data in synchronous mode. In such cases, the asynchronous mode should be set to *checked*. Asynchronous transfer mode is limited to a maximum of 5 MB/sec.

Disconnect Enable. This option determines whether Miles Bluenote allows a specific SCSI device to share the SCSI bus with other devices. The Miles Bluenote uses this option to allow a device to temporarily disconnect from the SCSI bus (referred to as disconnect/reconnect). This allows the host adapter to perform other functions on the bus while the device is temporarily disconnected. The device and the host adapter can then reconnect when the bus is needed. The default setting for this option is *checked* to enable disconnect for all SCSI IDs.

Host Adapter SCSI ID. Used to change Miles' SCSI ID on the SCSI bus. Miles Bluenote provides 8 ID's per channel with 0-7 available (7 having the highest priority). Miles Bluenote defaults to SCSI ID 7. There should be no need to change it.

SCSI Parity Check Enable. Select this option to enable or disable parity checking on the SCSI bus by the host adapter. The default setting for this option is ON (c*hecked)*. NOTE: If this option is ON, be certain that SCSI peripherals on the Miles Bluenote card also has this option turned ON. Most SCSI devices on the market have SCSI Parity set to ON.

Load Default. Clicking on this button defaults Miles Bluenote to the following configurations, preset by Initio:

SCSI Device Setup For All Device IDs	
Synchronous Transfer	YES
Synchronous Transfer Rate	10
Enable Disconnect	YES
Miles Host Adapter Setup:	
Host Adapter SCSI Bus ID	7
SCSI Terminators	AUTOMATIC
SCSI Parity Check On	YES

Update Firmware. Clicking on this button allows the Miles Bluenote SmartSCSI utility to search and update the Initio firmware which should be residing in the Miles Bluenote SmartSCSI folder. Updates to Miles, which are stored in flash ROM, are distributed electronically. In most cases, updated firmware is not required; please update only when you encounter incompatibilities between the host adapter and your SCSI peripheral.

Periodically Initio will distribute new versions of the firmware files. Check the Initio website (www.initio.com) for the latest updates in the firmware. The firmware file, "bluenote.sim", needs to be present in the same folder as the Miles Bluenote SmartSCSI utility.

Termination Setup. This option allows the user to set SCSI termination on the Miles Bluenote card. Four possible combinations of termination are provided:

- **Automatic** (Recommended): Use this setting to let Miles Bluenote detect the number of cables connected to its two SCSI connectors. Certain external SCSI peripherals also provide automatic termination features which may conflict with Miles' automatic detection circuitry. In such cases, select one of the three options below.
- **One 50-pin connector:** Use this setting to manually enable the host adapter termination.
- **Two 50-pin connnectors:** Use this setting to manually disable the host adapter termination.

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Troubleshooting

Problem: External SCSI peripherals are not visible or cause system hang during heavy data transfer.

Solution: This is usually caused by improper termination or cable length violation. Check this Installation Guide for Cabling and Termination setting requirements. Make sure your external and internal SCSI buses are terminated using ACTIVE TERMINATION. If your bus is terminated using drive built-in termination, check your drive documentation for termination type being used.

Problem: On boot-up, not all the peripherals are scanned and recognized.

Solution: Verify that each of the SCSI devices on the bus has its own distinct SCSI ID number and all peripherals are receiving power. Refer to your peripheral manual for information regarding changing SCSI ID's. Verify the SCSI Termination is set correctly. Make sure the last peripheral on the SCSI bus has termination. See the peripheral manual for proper termination information. After the above steps are executed, if you are still not recognizing all attached peripherals, configure the host adapter to operate in an Asynchronous Transfer mode by changing its setting under the SCSI Devices Setup section of the SmartSCSI Setup Utility.

Problem: Booting up my system for the first time with Miles Bluenote displays nothing but a blank gray screen. What's going on?

Solution: Although there is no dialog indicating activity, Miles Bluenote is simply doing a SCSI bus scan. Every time you boot up your system with a Miles host adapter installed, it spends approximately 30-60 seconds scanning all SCSI devices attached to it. Just allow Miles to finish the scan and the 'happy Mac' icon will soon appear.

Problem: I've followed the instructions concerning termination settings on my Miles card, but I'm still having problems. What else can you tell me?

Solution: A SCSI bus should have two and only two termination points (resistance used to maintain impedance and reduce 'reflection' of the signal). These may be located on either the external or internal bus cables, or on the Initio adapter depending on your system configuration. If you have just internal, or just external devices on your SCSI bus, then the Initio adapter termination should be set to ON or AUTO. If your system includes both internal and external devices, set the Initio termination to OFF or AUTO. This is checked/set by entering the Miles Bluenote SmartSCSI setup utility. If the termination on Miles Bluenote is not set properly, the system may fail to boot. Disconnect all SCSI cables from the card, start the system, then set termination on Miles using SmartSCSI. If you have any external devices, the last one should be terminated, which is accomplished either by a small switch on the device or by placement of a terminator (a small block with a SCSI connector on one side) on the dangling connector. If you have any internal devices, it is highly recommended that one of these be connected to the very end connector to reduce reflection from the wiretips. Only one internal device should have its termination set. Termination is either a jumper or a resister block.

If are still having problems, or if your computer hangs or cannot find the SCSI devices,

- Check the cable length and integrity
- Be sure SCSI termination is set correctly
- After a hang, turn OFF your computer and any devices connected to it, and then turn the system ON again to reset the SCSI chain.

Initio Corporation warrants to the original purchaser that this product shall be free from defects in material and workmanship for a period of 5 years from the date of purchase. Should this product, in the judgment of Initio Corporation, prove to be defective, Initio Corporation will at its option repair or replace the product once it has been returned to Initio Corporation free of charge. Any replaced parts or products become the property of Initio Corporation. You may obtain warranty service by first getting authorization from Initio Corporation then returning this product with proof of delivery date, shipping charges prepaid, to Initio Corporation. This warranty does not apply to the software component of the product nor to any product which has been subjected to misuse, accident, abuse or use in a manner inconsistent with normal host adapter operations. The original purchaser must be registered with Initio Corporation (by mailing the Product Registration Card) to qualify for warranty coverage. This remedy is your exclusive remedy for breach of this warranty.

INITIO DISCLAIMS ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. INITIO SHALL BE LIMITED TO THE WARRANTY PERIOD SPECIFIED ABOVE. ALL OTHER WARRANTIES ARE EXCLUDED. INITIO'S TOTAL LIABILITY HEREUNDER SHALL NOT EXCEED THE PRICE PAID FOR THE PRODUCT PURCHASED. IN NO EVENT SHALL INITIO BE LIABLE FOR ANY INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGE ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE PRODUCT, EVEN IF INITIO HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

FCC Compliance Statement

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, and (2) this device must accept any interference received, including interference that may cause undesired operations.

Class B Equipment
Information to User

This equipment has been tested and found to comply with the limits for a CLASS B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions contained in this manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that of the receiver.
- Consult the dealer or a experienced audio television technician.

Note: Connecting this device to peripheral devices that do not comply with CLASS B requirements or using an unshielded peripheral data cable could also result in harmful interference to radio or television reception.

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

To ensure the use of this product doesn't contribute to interference, it is necessary to use shielded I/O Cables.

Reprinted from the Code of Federal Regulations #47, part 15.193, 1993. Washington DC: Office of the Federal Register, National Archives and Records Administration, U.S. Government Printing Office.

Declaration of the Manufacturer/Importer

We hereby certify that Miles Bluenote PCI to SCSI-2 Bus Master Host Adapters, in compliance with the requirements of BMPT Vfg 243/1991, is RFI suppressed. The normal operation of some equipment (e.g., signal generators) may be subject to specific restrictions. Please observe the notices in the user's manual.

The marketing and sale of the equipment was reported to the Federal Office for Telecommunication Permits (BZT). The right to retest this equipment to verify compliance with the regulation was given to the ZZF.

EN 55 INI-9090U Mac Declaration of Conformance

This is to certify that Miles Bluenote PCI– SCSI-2 Bus Master Host Adapters are shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC, Article 4a. Conformity is declared by the application of EN 55 9090U:1987 Class B (CISPR 22:1985/BS 6527:1988).

EN50081-1 GENERIC EMISSIONS STANDARD
EN50082-1 GENERIC IMMUNITY STANDARD

1. IEC 801-2 :1984(1000-4-2:1995);
2. IEC 801-3 :1984(1000-4-3:1995);
3. IEC 801-4 :1988(1000-4-4:1995).

Production Notes

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