

Congratulations on purchasing your CD-Tower from Academy Computer Services, Inc. This system takes up a small amount of space, but replaces millions of pages of text. Gigabytes of information are less than a second away. Your new tower system features:

- ◆ High Speed CD-ROM drives for fast data access.
- ◆ CD-ROM drives fully compatible with all major standards including ISO 9660, High Sierra, MPCIII, and Photo CD.
- ◆ SCSI CD-ROM drives for compatibility with all major computer platforms.
- ◆ Tower enclosures with ample power for all drives and 3 (6 in the 14 bay) cooling fans for long drive life.
- ◆ Adaptec interfaces—the industry standard—with DOS, Windows and Windows 95 drivers included as well as drivers available for most operating systems.



WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 and used 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.

This manual explains how to install your new CD-Tower. You will need to:

1. Unpack and check the shipment
2. Create a Startup disk
3. Change the hardware settings on your computer
4. Install and test the Adaptec card
5. Connect the data cable, terminator and power cord
6. Install software drivers

The following sections describe each of these tasks:

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Unpacking Your Tower

Carefully unpack your shipping box:



WARNING : Tower units weigh as much as 62 pounds and should be lifted by two individuals. Observe the practice of bending the knees, not the back. Be certain both people have a firm grasp on the unit itself, not just the plastic wrap or other packing materials. Such materials will slide over the component and could cause the unit to drop. Dropping the tower will result in equipment damage and possible personal injury.

Check to see that the shipment is complete.

Four and Seven Bay	Fourteen Bay
Large box: CD-Tower Adaptec Box: Adaptec AHA 1542CP card 3½" Adaptec EZ-SCSI Rev.4.00b Software Disk Registration Card Installation Guide for Bus Master ISA-to-SCSI Host Adapter with SCSISelect™ Accessory Bag: Black Power Cord Gray Half-pitch to Centronics SCSI Cable Centronics Male Terminator Plug	Large box: CD-Tower Accessory Box: 2 Adaptec AHA 1542CP cards 3½" Adaptec EZ-SCSI Rev.4.00b Software Disk 2 Registration Cards 2 Installation Guide for Bus Master ISA-to-SCSI Host Adapter with SCSISelect™ 2 Black Power Cords 2 Gray Half-pitch to Centronics SCSI Cables 2 Centronics Male Terminator Plugs

Figure 1, Package Contents

Place your tower on a sturdy, flat surface. Academy recommends placement off the floor away from possible dust contamination. If your package is incomplete or irregular in any way, please contact Academy without delay at **800-385-6442**.

System Prerequisites

You will need the following hardware:

- ◆ DOS or Windows PC with
- ◆ one ISA or EISA expansion slot (two for the 14 bay)
- ◆ Two or more Megabytes of RAM
- ◆ Two or more Megabytes of space on your hard drive
- ◆ Phillips head screwdriver
- ◆ 3½" Floppy Diskette

Creating Startup Disk

Before you attach the Academy CD Tower to your computer, make a Startup Disk first. That way, you can always restore your computer's original configuration. For this procedure you will need a blank 3½" floppy.

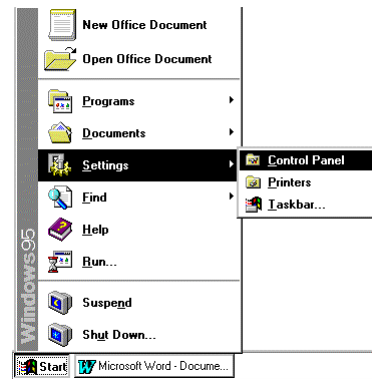


Figure 2, Accessing Control Panel

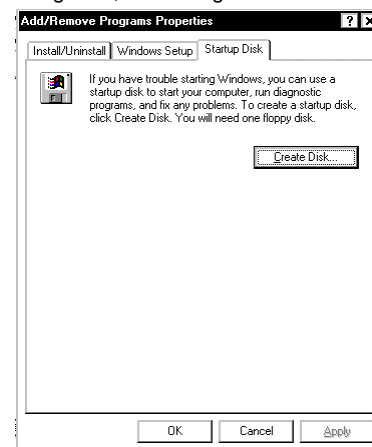


Figure 3, Creating Startup Disk

Making a Startup Disk in Windows 3.1, Windows for Workgroups or DOS

1. Exit Windows
2. Type **CD**
3. Insert floppy in drive
4. Type **FORMAT A: /S**
5. Once the floppy has completed transferring the system :
`COPY C:AUTOEXEC.BAT A:<RET>`
`COPY C:CONFIG.SYS A:<RET>`
`COPY C:\WINDOWS\WIN.INI A:<RET>`
`COPY C:\WINDOWS\SYSTEM.INI A:<RET>`
6. If SYSTEM.INI is not located in the WINDOWS directory, as is the case with earlier versions of Windows, you will see this error message:

File not found - SYSTEM.INI
0 file(s) copied

In this case you will need to locate the SYSTEM.INI, usually in the C:\WINDOWS\SYSTEM subdirectory and copy it from there to the floppy.

Making a Startup Disk in Windows 95

1. Click on Start
2. Select Settings, then Control Panel (see Figure 2)
3. Select Add/Remove Programs, then Startup Disk (see Figure 3). Follow the directions on the screen

Making an Emergency Repair Disk in WindowsNT 3.51 and 4.0

1. Click on Start.
2. Select Run.
3. Type **rdisk**. Follow the directions on the screen.

Operation of the Adaptec Card

The Adaptec card uses certain resources of your computer system in its operation. These are the Input/Output Range which is the location of the card in the system's memory, BIOS address, which is the address of the card's Basic Input/Output Software, IRQ which is the Interrupt Request channel and DMA, which is the Direct Memory Access channel. A depth understanding of these terms is unnecessary to install the card. All that is necessary is the practical knowledge of how and when to change the values on the Adaptec card, which is explained below.

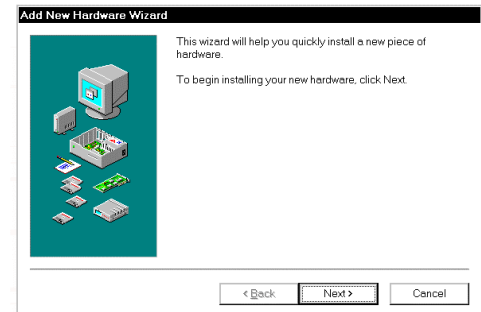


Figure 4. Add New Hardware Wizard

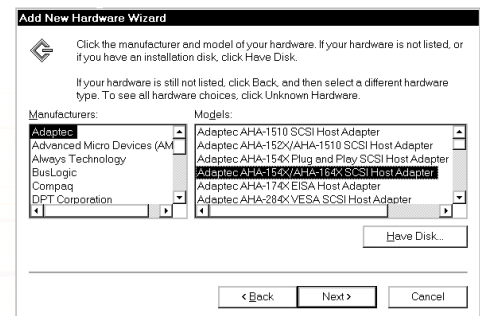


Figure 5. Select AHA-154X Card

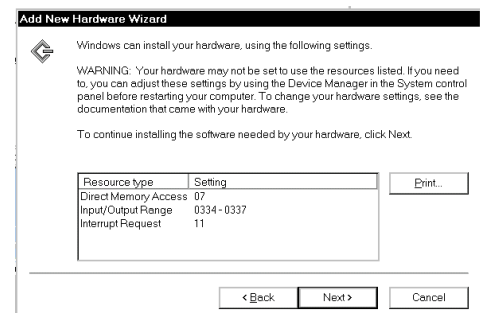


Figure 6: Sample of Card Settings. Your settings will differ.

Determining Correct Hardware Settings

Windows 95

You determine the correct hardware settings under Windows 95 by using the Add New Hardware Wizard. Use the steps below to determine the correct card settings for your computer:

1. Double Click on My Computer
2. Double Click on Control Panel
3. Double Click on Add New Hardware
4. Click on Next. (Figure 4)
5. When asked, "Do you want Windows to search for your

new hardware?" Click NO then Next

6. Select SCSI Controllers then Next
7. Select Adaptec AHA-154X/AHA-164X SCSI Host Adapter, not the Plug and Play version above it. (Figure 5)
8. Write down the recommended configuration for the card (Figure 6). If instead of hardware settings the message "You are using other hardware that conflicts with the hardware you are trying to install." (Figure 7) appears, go to the section titled Reallocating System Resources.
9. Click on Cancel.
10. Shut down Windows 95
11. Disconnect power from the computer.

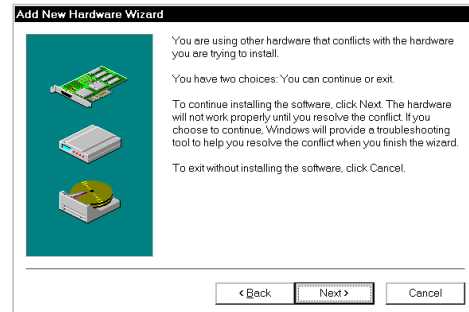


Figure 7: System Troubleshooting Needed

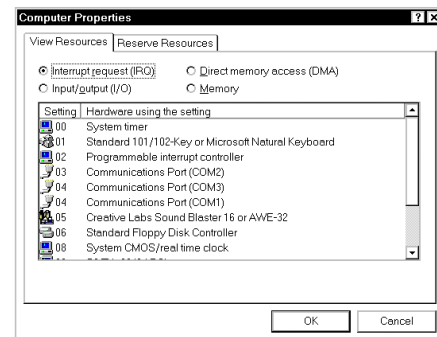


Figure 8, View Resources

Reallocating System Resources in Windows95

In a home entertainment computer, it may be necessary to rearrange or delete system options in order to make room for the tower. To reallocate system resources, use the following procedure from the starting screen:

1. Double Click on My Computer.
2. Double Click on System.
3. Select Device Manager.
4. With Computer highlighted, select View Devices by Connection, (Figure 9).
5. Select Properties
6. See if all possible IRQs for the AHA-1542CP are occupied: 9,10,11,12,14, and 15. If the Add New Hardware wizard resulted in the screen found in Figure 7, there are probably no IRQs free that the card can use. If there are free IRQs, the conflict lies in DMA or Input/Output Range. Whatever resource is fully utilized, that is the one that must be changed.
7. Escape back to Device Manager, this time highlight a peripheral that occupies a resource that could be used by the AHA-1542CP card. Figure 10 uses the sound card as an example.

Click Off the Use Automatic Settings box, highlight the setting you wish to change, click Change Setting and scroll through the choices, making note of alternatives that do not conflict with other devices. Often, devices with a higher (9 or greater) IRQ will work with a lower one (9 or less). There may be a lower one free, or occupied by an unused peripheral that can be deleted without losing functionality (e.g. unused

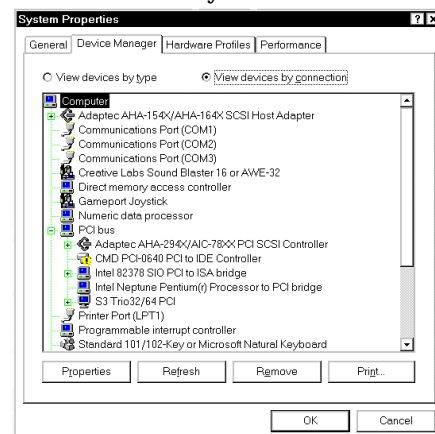


Figure 9, View Devices by Connection

external serial port). If after extensive exploring and reshuffling of resources fails at freeing up resources for the AHA-1542CP card, there are further alternatives:

- 7.1. Transfer the AHA-1542CP to another computer that has fewer options.
 - 7.2. Try another card (at greater expense) such as the 2940 PCI card.
8. Once a usable IRQ or other problem resource is freed up, reboot the computer and retry the Determining Correct Settings Under Windows 95 procedure. If this second try results in a screen like figure 6, proceed to Installing the Adaptec Card.

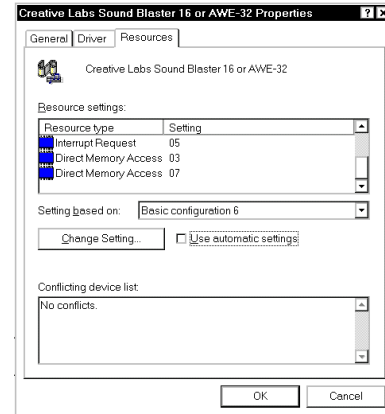


Figure 10, Sound Card Resources

Non-Windows 95 Operating Systems

In most cases, no changes of switch or firmware settings are necessary. The default settings of Input/Output Range of 330, BIOS address of DC000h, IRQ 11, and DMA 5 work with most basic computers. If your computer is basic, not multimedia, proceed to the section titled Installing the Adaptec card.

Multimedia Computer Settings

These settings, however, will not work with multimedia computers. Sound cards often conflict with SCSI cards. Sound Blaster™ cards utilize DMA 5 and I/O port 330. This fix is often successful: Plug and Play OFF by pressing dip switch 1 toward the card, Input/Output Range 334 by pressing dip switch 2 toward the card, leaving the IRQ at 11 and changing the DMA to 6 via the SCSI *select* utility described later.

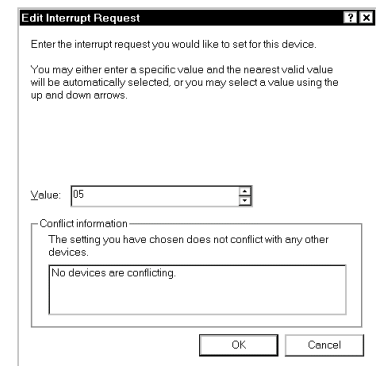


Figure 11, Changing Sound Card IRQ

WindowsNT 4.x Server

To determine the correct hardware settings look at current resource settings to eliminate any possible conflicts.

1. Click on Start.
2. Select the Programs menu, then the Administrative Tools menu.
3. Select WindowsNT Diagnostics. Choose the Resources tab. Click on the Devices button at the bottom of the window.
4. Highlight a device from the offered list and click the Properties button. Write down the system resources (I/O, IRQ, DMA) for every device in the system. Use this list to insure that there are no conflicts with the Adaptec 1542 card settings. Shut down the computer and install the Adaptec 1542 card.

Determining Alternative Settings In Non-Windows 95 Environments

If neither default nor multimedia settings work, several methods help reduce the guesswork of arriving at the correct setting:

1. Study the documentation on the computer and cards already installed. Many cards have installation utilities that can tell you the current settings of the card. For example, `C:\SB16\WINAPPL\CTCONFIG.SYS` will invoke the Sound Blaster configuration utility under Windows 3.1 if present.
2. Utilize diagnostic software like the Microsoft Diagnostic Program (MSD.EXE). MSD.EXE is available under DOS 6.22 as well as Windows 3.1 and 3.11. To start type `C:\DOS\MSD.EXE` at the `C:\>` prompt. MSD will provide a starting point toward determining the correct settings, but cannot detect most cards that were added to the system after the initial design process. Third party technician-level software could be necessary.
3. Removing all non-essential cards and from the system, configuring the AHA-1542 and then adding the cards back one by one. When a conflict occurs, change the settings of the last card added.
4. Trial and Error: trying different settings of the AHA-1542 card and rebooting. Be sure to document settings already tried.

Here are the ways cards can be configured:

1. 6 choices of I/O port, **330***, 334, 230, 234, 130, and 134
2. 6 usable IRQ choices of 15 total: 9,10, **11***, 12, 14, 15
3. 4 usable DMA choices of 7 total: 0, **5***, 6, 7

* **defaults**

On Toward Card	1 P/P	2 Port	3 Port	4 Port	5 Flop	6 Bios	7 Bios	8 Bios
Factory	Off	Off	Off	Off	On	Off	Off	Off
Current								
1st Try (one on=pp off)	On				On			
Second Try	On				On			

Figure 12, Trial and Error Record

Installing the Adaptec ISA Card(s)

Whether you are installing one, two or more Adaptec cards (for example: a 14 bay or two seven bay towers), install one card at a time. Make sure the first card is free of conflicts before beginning the second card installation. Each card must have a unique Input/Output Range and a unique BIOS address. For example, if the first card is set to Input/Output Range 330 and BIOS address DC000h, the second card needs to be at 334 and CC000h. In other words, the first card would have switches 1 and 5 toward the card, the second card switches 1,2,5, and 8 toward the card. Earlier computers such as some 486s cannot share IRQs or DMAs among cards. In that case all resources must be unique among cards and within the rest of the system. The first card could be at IRQ 11 and DMA 5 (defaults), but the second would have to be at IRQ 10 and DMA 0, for example.

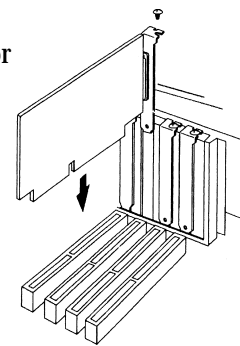


Figure 13, Inserting Card



WARNING: Before working with your computer or tower, unplug all units from their power receptacles. Failure to do so will result in personal or equipment injury. Also, to avoid static shock damage to either tower or computer, touch a bare metal portion of that system's chassis before touching any electronic component. Failure to do so could damage the equipment.

1. Turn off the monitor, and, if it is on top of the computer, set it to one side.
2. Follow your ISA (or EISA) personal computer's instruction manual to remove the system cover and expose the expansion slots and external access covers.
3. Locate a free 16-bit slot. The Adaptec card can be installed in either an ISA (black) or EISA (usually brown) slot. PCI slots (white) are not compatible with the card.
4. Remove the corresponding expansion board key for the 16-bit slot you selected. The key is a piece of sheet metal @ 3" x ½" in size that covers the opening needed by the external SCSI connector on the AHA-1542. Discard the key, but save its retention screw.
5. To avoid generating static sparks, touch a bare metal portion of the computer chassis before removing the plastic from the Adaptec card.
6. Align and insert the silver end of the ISA I/O bus connector on the bottom of the AHA-1542 into the chosen slot (Figure 13)
7. With a slimline computer chassis, the card will fit horizontally. If you have a slimline, brace your thumbs on the other side of the slot before inserting the card for leverage. Gently slide the card into the slot.
8. When the card is completely snug in the slot, replace the retainer screw.



Figure 15, Back of CD Tower

Connecting Data Cable, Terminator and Power Cord

1. Insert the SCSI Terminator plug into an unused SCSI socket on the back of the tower (Figure 15).
2. Close the wings of the connector retainers (Figure 14).
3. Attach the tower to the computer with the gray data cable. Use extreme care when attaching the external SCSI connector to the back of your computer as the pins are small, delicate and easily bent. It is best to have the back of the computer facing you in good light so that the cable is not attached crooked. Both top and bottom clips must be secure (Figure 16).
4. Connect the power cable to the tower and plug it into the power strip or outlet. Use of a surge protector is strongly recommended for long system life.
5. Turn the tower on, using the power switches. The switches are located at the lower back of 14 and 7-bay towers, and on the front of 4-bay towers.
6. Plug in the computer and monitor and turn the computer on.

Terminator



Receptacle

Figure 14, Terminator Plug Insertion

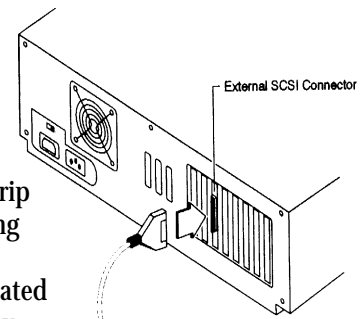


Figure 16, Carefully Connect Cable to Computer

Input/Output Range

In the upper left hand corner of the card is a block of switches (Figure 17). Switch 1 controls plug-and-play. In order to change any setting on the card, switch 1 must be turned on, which defeats plug-and-play. On is toward the card, off away. Switches 2 through 4 control Input/Output range (Figure 18). Switch 5 controls floppy, which is defeated at the factory by switching it on or toward the card. Switches 6 through 8 control BIOS address, and are normally not altered except in multiple card installations.

Important: Switch 1 must be On (toward the card) for changes to have any effect.

Input/Output Range	Switch 2	Switch 3	Switch 4
130	Off	Off	On
134	On	Off	On
230	Off	On	Off
234	On	On	Off
330 (default)	Off	Off	Off
334	On	Off	Off

Figure 18, Input/Output Range Settings

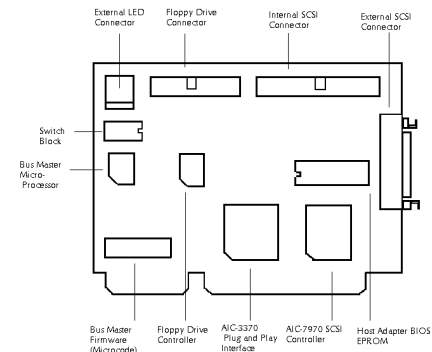


Figure 17, AHA-1542CP Card Layout

If the Input/Output range AHA-1542CP card conflicts with the Input/Output Range of other cards, the following symptoms will occur:

1. No echo of card on screen directly after memory test.
2. **Hardware Timeout Reset Error** appears on screen early in boot process
3. System freezes (becomes unresponsive) early in the boot process

If the message above appears on the screen during boot, there is no Input/Output range conflict. Keep

```
Adaptec AHA-1540CP/1542CP BIOS v1.00
(c) 1994 Adaptec, Inc. All Rights Reserved.
```

```
< < < Press <Ctrl><A> for SCSISelect(TM)Utility! > > >
```

Figure 19, Screen Echo when Card has Clear Input/Output Range

trying new settings of switches 2-4 until you see this message. Make sure to power down the computer before each attempt.

I/O Port Usage

Hex Port Range	Defined Use	Other Uses	Comments
0-FF	Internal use only		Plug-in cards don't use I/O ports in this range
100-1EF	<undefined>		
170-17F	<undefined>	Secondary floppy disk controller	Only 170-177 are used
180-1EF	<undefined>	SCSI host adapters	A variety of ports can be used for SCSI
1F0-1FF	Non-SCSI hard disk		Only 1F0-1F8 are used
200-20F	Joystick port		
210-26F	<undefined>	Sound cards, SCSI host adapters	210, 220, 230, 240, 250, 260, 280 are typical for Sound Blaster and compatibles: SCSI can use any ports
270-27F	Printer port		
280-29F	<undefined>	Sound cards	
2A0-2AF	<undefined>		
2B0-2DF	Alternative EGA		
2E0-2FF	Serial port 2	Only 2F8-2FF are used	
300-30F	Prototype card	MPU-401 MIDI, SCSI host adapter	MPU-401 uses 300-301
310-31F	Prototype card	SCSI host adapter, CD-ROM interface	
320-32F	<undefined>	SCSI host adapter, CD-ROM interface	
330-33F	<undefined>	MPU-401 MIDI, SCSI host adapter	MPU-401 uses 330-331
340-34F	<undefined>	SCSI host adapter, CD-ROM interface	
350-35F	<undefined>	CD-ROM interface	
360-36F	<undefined>		
370-37F	Parallel port 1	Only 378-37F are used	
380-38F	SDLC or second bisync controller		
390-39F	Cluster adapter		
3A0-3AF	First bisync controller		
3B0-3BF	Monochrome video card and printer port	Printer port uses 3BC-3BF	
3C0-3CF	EGA video card		
3D0-3DF	CGA video card		
3E0-3EF	<undefined>		
3F0-3FF	Floppy disk controller		Floppy disk uses 3F0-3F7; serial port 1 uses 3F8-3FF
400-FFFF	EISA internal use		

Figure 20, Input/Output Range Usage in Standard Computers

BIOS Address

BIOS address conflicts are rare except when more than one AHA-1542CP card exists in a given computer system. Then each card must have a unique address. BIOS address is set via dip switches on the same Switch Block area as the Input/Output Range area. For BIOS address adjustment, use switches 6, 7, and 8 (Figure 22).

Important: Switch 1 must be On (toward the card) for changes to have any effect

BIOS Address	Switch 6	Switch 7	Switch 8
DC000h (default)	Off	Off	Off
D8000h	On	Off	Off
D4000h	Off	On	Off
D000h	On	On	Off
CC000h	On	Off	On
C8000h	On	Off	On
Disabled	On	On	On

Figure 22, BIOS Switch Settings

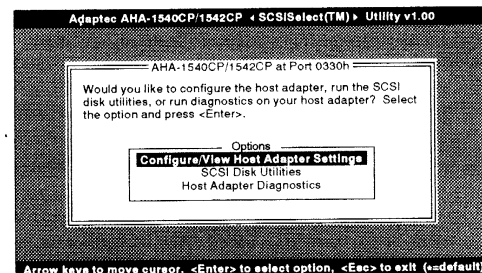


Figure 21, SCSI Select 1st Screen

Call 800-38-Logic for help

Direct Memory Access

If the message: **Press Control-A for Setup** (Figure 19) appears, but the system stops during bootup, the problem is usually a DMA conflict. Another message that indicates DMA conflict is **Unable to enable/disable shadow RAM**. Finally, a buzzing sound from one of the speakers can indicate a DMA conflict. DMA 5 is used by sound cards and is the default for the AHA-1542 card.

DMA channel is changed by entering the SCSI select utility (Figure 21). Press **Control-A** when prompted. Then press **<Enter>** twice to reach the screen where DMA channels can be changed (Figure 23). Change the DMA channel by placing the cursor at the box to the right of the DMA channel label, press **Enter**, select the desired value using the up and down arrows, and save the changes by pressing **ESC** and following the prompts. Repeat this procedure using different values for the DMA channel: 0,5 (default), 6,7 until the system appears to be functioning normally

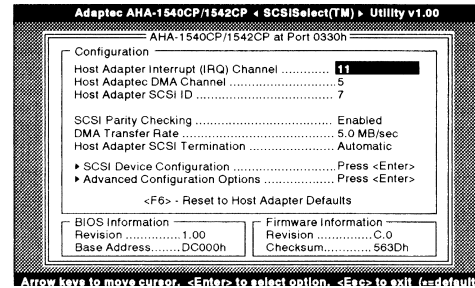


Figure 23, Press **Enter**, the select proper IRQ and DMA Value

DMA Channel Usage

DMA Channel	Defined Use	Other Uses	Comments
0	<undefined>	SCSI host adapter, sound card	8-bit DMA
1	<undefined>	Sound card	8-bit DMA
2	Disk		8-bit DMA
3	<undefined>	Sound card	8-bit DMA
4	Cascade for DMA 0-3		
5	<undefined>	SCSI host adapter, sound card	16-bit DMA
6	<undefined>	SCSI host adapter, sound card, CD-ROM	16-bit DMA
7	<undefined>	SCSI host adapter, sound card, CD-ROM	16-bit DMA

Figure 24, Direct Memory Access Channel Usage in Standard Computers

Interrupt Request, (IRQ)

If one but not all of the components of your system become inoperable after installing the AHA-1542CP, the culprit is usually an Interrupt Request. For example, the system might run smoothly except for the mouse, modem or network card. Change the IRQ to 10 or 12 by entering the SCSI select utility. The SCSI select utility is accessed by pressing **Control-A** during the system bootup. Then press Enter twice to reach the screen where IRQ channels can be changed. Possible IRQ settings are 9, 10, 11 (default), 12, 14, and 15. Follow directions on the screen to save and exit.

Interrupt Number	Defined Use	Other Uses	Comments
0	Timer		
1	Keyboard		
2	Cascade for IRQ 8-15	Sound card, MPU-401 MIDI	Devices on IRQ 2 are relocated to IRQ 9
3	Serial port 2	Sound card, CD-ROM	
4	Serial port 1		
5	Printer port 2	Sound card, serial port 3 or 4	
6	Floppy disk controller		
7	Printer port 1		
8	Clock		
9	IRQ 2	SCSI host adapter	
10	<undefined>	Sound card, SCSI host adapter, CD-ROM	
11	<undefined>	Sound card, SCSI host adapter, network card, CD-ROM	
12	<undefined>	SCSI host adapter, network card	
13	Math coprocessor		
14	IDE/ATAPI hard disk controller	SCSI host adapter	
15	ATAPI secondary controller	SCSI host adapter, network card	

Figure 25, Interrupt Usage in Standard Computers

Installing Software Drivers

If and only if all conflicts are resolved between the AHA-1542CP card and other components of the system, the software drivers can be loaded. Loading software drivers before conflict are resolved usually necessitates a lengthy software uninstall. With a conflict-free hardware configuration, software installation is generally routine. Also, make sure all connections are snug and both the tower and computer have power and are turned on before installing software drivers.

Windows 95 Driver Installation

Repeat the steps under Determining Correct Hardware Settings Under Windows 95 described previously. Continue from the screen that starts "Windows can Install your hardware using the following setting"

1. Double Click on My Computer
2. Double Click on Control Panel
3. Double Click on Add New Hardware
4. Click on Next.
5. When asked, "Do you want Windows to search for your new hardware?" Click NO then Next (Figure 4)
6. Select SCSI Controllers then Next
7. Select Adaptec AHA-154X/AHA-164X SCSI Host Adapter, not the Plug and Play version above it. (Figure 5)
8. Click Next. When prompted click Finish. (Figure 27)



Figure 26, Selecting AHA154X in Device Manager

9. Follow directions on screen
10. Shut down Windows
11. Reboot
12. Verify your installation by accessing Device Manager
 - 12.1 Double Click on My Computer.
 - 12.2 Double Click on Control Panel.
 - 12.3 Double Click on System.
 - 12.4 Select Device Manager
 - 12.5 Double Click on SCSI Controllers
 - 12.6 Make sure no ! or X appears at the left the AHA-154X line.

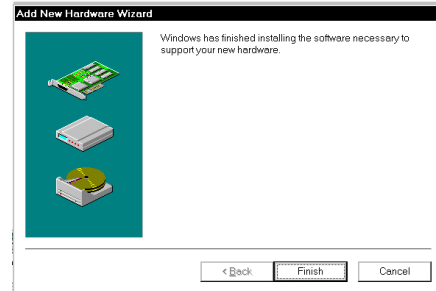


Figure 27, Software Installation Complete

WindowsNT 3.5x Server Driver Installation

Additional drivers are needed to access the CD-ROM drives across the network. Contact Academy Computer Services for complete details.

13. Click on the Start menu. Select the Programs menu.
- 13 Select the WindowsNT Setup icon.
- 14 Select the Options menu.
- 15 Select Add/Remove SCSI Adapters. Click on the Add button.
- 16 It will default to *Other*. Use the scroll arrows to locate the Adaptec AHA 154x/164x Host Adapter (not the Plug-and-Play version). Highlight the adapter and click the OK button at the bottom of the window.
- 17 Click on Continue to return to the WindowsNT Setup menu.
- 18 Return to the Start menu.
- 19 Select Control Panel, then click on the Device icon, and locate the Adaptec 154x/164x Host adapter driver. Configure the device startup by setting *Scsi4dm* startup value to *system*. This activates the driver at system time, NOT boot time.



Figure 28, Scroll Window until System Can Be Selected

Note: Setting the driver to activate at boot time is necessary only if an adapter is going to control a bootable hard drive. If you choose to have the 154X driver activate at boot time you could cause your system to hang!

- 20 Exit Windows NT and restart your system.

WindowsNT 4.x Server Driver Installation

1. Double-click on My Computer. Double-click on Control Panel.
2. Double-click on the SCSI Adapters icon.
3. Select the Drivers tab.
4. Click on the Add button. NT will create a list of drivers from which to choose. Select Adaptec from the Manufacturer list. Select the AHA 154x/164x Host Adapter. Do not choose the Plug-and-Play version of this driver. Click the OK button.

Note: If the driver already resides on the hard drive a message window will open to tell you this, and offer the option of acquiring the driver from the original NT CD-ROM or via the network. Select the option that best suits your needs and follow the instructions on the screen.

5. After NT completes the driver installation you must reboot your system.

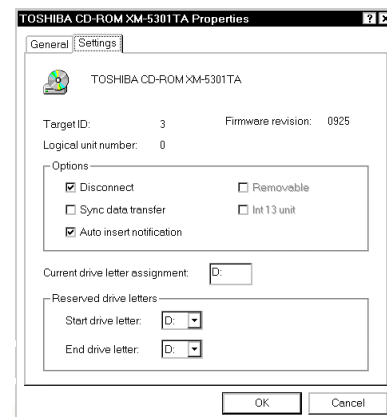


Figure 29, Assigning Drive Letters

Drive Letter Assignment

Altering Drive Letter Order In Windows 95

Sometimes Windows 95 automatically places the internal CD drive at the end of the alphabet after the CD tower. To restore it to the first CD drive letter use the following procedure:

1. Click on Start
2. Select Settings, then Control Panel
3. Select System, sometimes scrolling to the bottom of the Window helps (Figure 28)
4. Select Device Manager
5. Select the first CD-ROM drive
6. Enter the Start drive letter desired, and the same under the End drive letter.
7. Repeat this procedure for the CD tower, making sure no letters are duplicated. In the case of a 7 bay tower with one internal CD, the following is often the case.

Alteration Table for 7 Bay Under Win 95	Current Letter Assignment	Desired Letter Assignment
Internal	K:	D:
(Top) Tower Drive 0	D:	E:
Tower Drive 1	E:	F:
Tower Drive 2	F:	G:
Tower Drive 3	G:	H:
Tower Drive 4	H:	I:
Tower Drive 5	I:	J:
Tower Drive 6	J:	K:

Figure 30, Altering Drive Letters to Make Internal Drive First

Drive Letter Assignment In WindowsNT 3.51

The Disk Administrator may be used to assign new letter to existing drives.

1. Click on Start.
2. Select the Program menu, then the Administrative Tools menu.
3. Select Disk Administrator.
4. Choose Tools, and then Drive Letter. This will create a list of devices to which you may assign drive letters. You cannot remove drive letters, or share CD-ROMs under a single letter.
5. Select a device, and then the letter to be assigned to that device.
6. Click OK to confirm the change.

Drive letter assignments are static. After this procedure is followed the new assignments will be retained during any future system boot.

Drive Letter Assignment In Windows NT 4.0

After the tower has been installed, the internal CD-ROM drive may be automatically assigned to the next available drive letter *after* the tower. To restore it to the first CD drive letter use the following procedure:

1. Click on Start.
2. Select the Programs menu, then the Administrative Tools menu.
3. Select Disk Administrator.

Note: WindowsNT only assigns unused drive letters, so if the letter you want to use for assignment is not available, you must "free up" the desired letter before it can be reassigned to another drive. Drive letter assignment is fixed in NT. Drive letters will not be reassigned during your next boot up, so these letter choices will remain fixed until, or unless, you reassign them.

4. To free up a used drive letter:
 - A. Highlight the desired drive or volume.
 - B. Click on Tools. Choose Assign Drive Letter. The current drive letter assignment appears. Switch the assignment by clicking on the current letter and choose an unused/unneeded letter from the pop up menu or select the Do not Assign a drive letter button.

- C. The message "This new drive assignment will happen immediately. Do you wish to continue?" appears. Click on Yes. If you are using the Volume display screen, and have chosen to remove a drive letter assignment, the volume will disappear from the display. Do not be alarmed. The unassigned drive can be seen, and accessed, via the Disk Configuration display screen.
5. Select the first CD-ROM drive. Click Tools.
6. Select the Assign Drive Letter button. Click on the current letter assignment. Select the new assignment from the pop up menu displayed. The message "This new drive assignment will happen immediately. Do you wish to continue?" appears. Click on Yes
7. Follow the same procedure to reassign any other CD-ROM drives as needed.

If there are more than 24 drives in WindowsNT 4.0

Using Disk Administrator it is possible to "off-line" drives, and free up drive letters. In this way rarely used CDs may stay mounted in the drives, but not consume limited network resources. Disk Administrator may also be used to combine multiple hard drives or partitions under one drive letter, thereby increasing the number of letters available for CD-ROM drives.

Dos, Windows 3.1 and Windows for Workgroups Driver Installation

When you turn on the computer, you will see a setup message where *<brand>* and *<model>* designations below are replaced by the brand and model of the CD-ROM drives in your tower.

Adaptec AHA-1540CP/1542CP BIOS V.1.02

(c) 1995 Adaptec, Inc. All Rights Reserved.

◀◀◀ Press <CTRL><A> for SCSISelect(TM) Utility! ▶▶▶

```
SCSI ID #0 - <brand>          CD-ROM <model>
SCSI ID #1 - <brand>          CD-ROM <model>
SCSI ID #2 - <brand>          CD-ROM <model>
SCSI ID #3 - <brand>          CD-ROM <model>
SCSI ID #4 - <brand>          CD-ROM <model>
SCSI ID #5 - <brand>          CD-ROM <model>
SCSI ID #6 - <brand>          CD-ROM <model>
```

Figure 31, Setup Message for the Seven Bay Tower, the 14 bay will show this twice

Adaptec AHA-1540CP/1542CP BIOS V.1.02

(c) 1995 Adaptec, Inc. All Rights Reserved.

◀◀◀ Press <CTRL><A> for SCSISelect(TM) Utility! ▶▶▶

```
SCSI ID #3 - <brand>          CD-ROM <model>
SCSI ID #4 - <brand>          CD-ROM <model>
SCSI ID #5 - <brand>          CD-ROM <model>
SCSI ID #6 - <brand>          CD-ROM <model>
```

Waiting for SCSI ID #0

Figure 32, Setup message for the four bay tower

The "Waiting for SCSI ID #0" message may display for 2-3 minutes, but requires no response.

Installing EZ-SCSI Software

EZ-SCSI software enables your PC to communicate with the CD-ROM tower. EZ-SCSI loads the following files onto your system:

To install the EZ-SCSI software, follow these steps:

Wait for the "Waiting for SCSI ID #0" message to disappear, and the system startup messages end with the DOS prompt (for example, **C:\>** or **C:\WINDOWS>**).

Place the 3 ½" floppy disk in your floppy drive.

At the DOS prompt, type the letter of your floppy drive and hit <Return>, as follows:

C:\WINDOWS> A:

Type the install command followed by <Return>, for example:

A:\> install

AFDISK	HL_	4,183	03-14-94	3:31a
ASPI2DOS	SY_	14,111	03-14-94	3:31a
ASPI4DOS	SY_	9,953	01-24-94	3:30a
ASPI7DOS	SY_	24,870	03-14-94	1:31a
ASPI8DOS	SY_	21,309	03-14-94	1:00a
ASPIBUF	SY_	2,996	01-24-94	1:00a
ASPICD	SY_	13,125	01-24-94	3:10a
ASPIDISK	SY_	8,137	03-14-94	3:31a
ASPIEDOS	SY_	7,999	01-24-94	1:30a
EXPAND	EXE	15,285	03-23-92	3:10a
EZSCSI	CW!	13,799	03-14-94	3:01a
EZSCSI	EX!	147,078	03-14-94	3:01a
EZSCSI	HL!	2,360	03-14-94	3:01a
EZSCSI	INF	225	03-21-94	3:01a
INSTALL	BAT	1,117	03-21-94	3:01a
README	TX_	5,366	03-21-94	3:01a
README	TXT	12,563	03-21-94	3:01a
SCSIFMT	CW_	11,203	03-14-94	1:31a
SCSIFMT	EX_	141,035	03-14-94	1:31a
SCSIFMT	HL_	2,375	03-14-94	1:31a
VASPID	38_	2,780	01-24-94	1:10a
WINASPI	DL_	2,897	09-04-92	1:00a

This begins the menu-driven EZ-SCSI program. You can press <F1> from any menu for on-line help.

Here is the first screen that appears:

Press <Enter> to continue

Figure 33, EZ-SCSI File Expansion

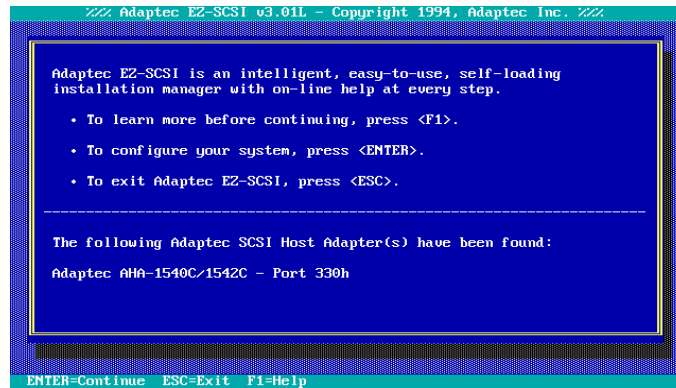


Figure 34, EZ-SCSI Introductory Screen

Verify that all devices physically present also appear on this screen. In the example above, SCSI ID #6 can be made visible by scrolling the window. If one or more devices are not detected, exit the program and recheck all wiring. If no devices are detected, make sure the I/O Port address for your adapter card is unique (not shared by any other device).

If the information above is correct, press <ENTER> to continue.

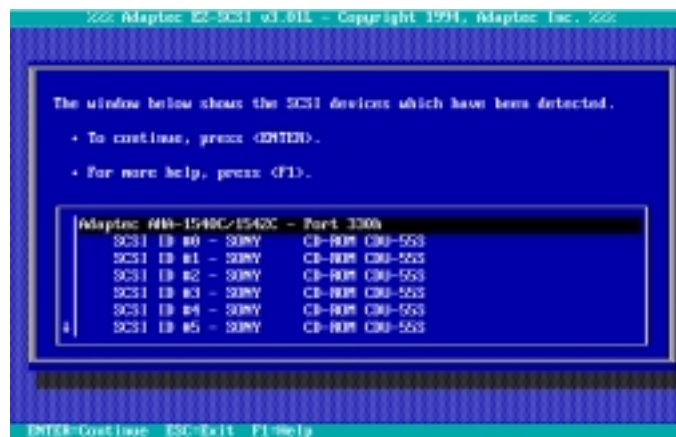


Figure 35, EZ-SCSI Devices

Normally, you should accept this default setting.

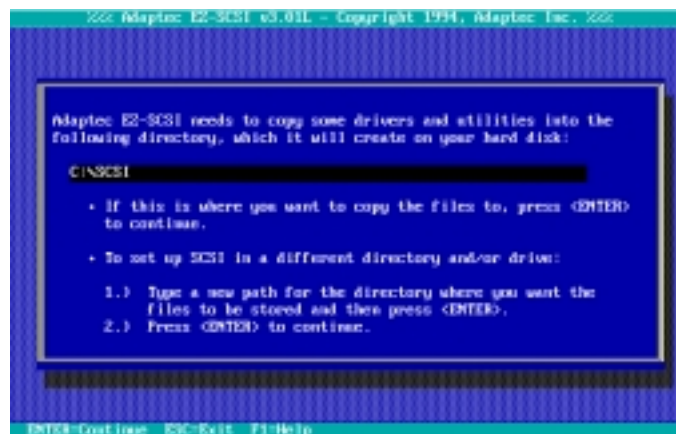


Figure 36, EZ-SCSI Directory Default

This screen will progress through the expansion/copying sequence.

```
Microsoft (R) File Expansion Utility Version 2.00
Copyright (C) Microsoft Corp 1990-1992. All rights reserved.

Expanding afdisk.cu_ to c:\ncc\afdisk.cuw.
afdisk.cu_ : 12783 bytes expanded to 24036 bytes, 95% increase.
Expanding afdisk.ex_ to c:\ncc\afdisk.exe.
```

Figure 37, EZ-SCSI Expansion/Copying Sequence

Usually, EZ-SCSI will select the correct drive letter. However, if your system has a gap in its drive letter sequence (i.e., you have a floppy drive A:, a hard drive C: and a network drive F:), this letter should be changed. Select a starting drive letter that has seven letters free above it. For example, starting letter H: will result in adding CD-ROM drives H: through N: in a 7 Bay installation.

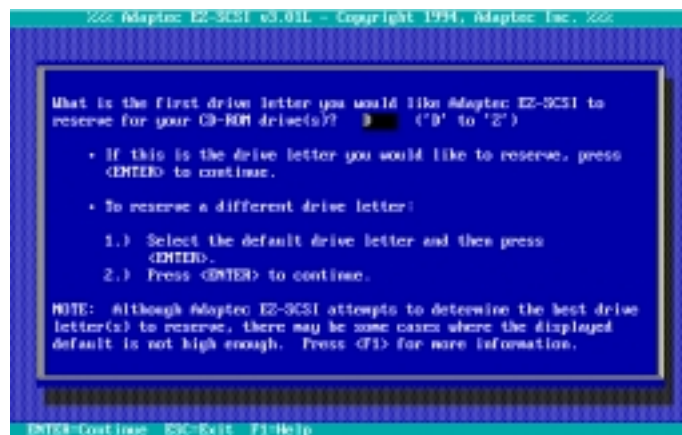


Figure 38, EZ-SCSI Starting Drive Letter Selection

This is the associated help screen to the drive letter assignment screen.

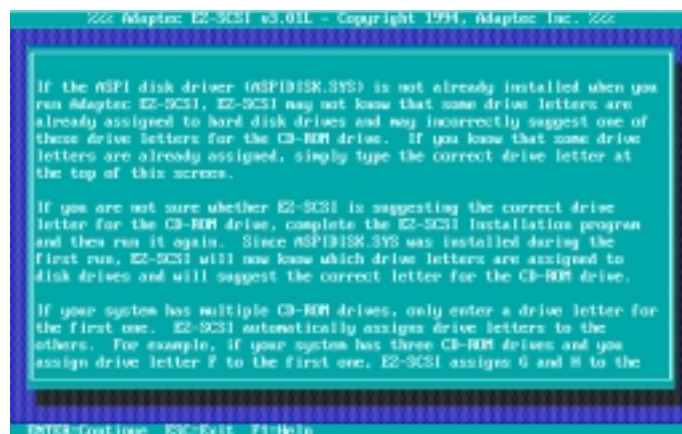


Figure 39, Drive Letter Help Screen

These modifications are generally correct. However, if you later have to restore an internal drive, you will need to edit the LASTDRIVE command to accommodate the addition. Here the new command would need to be

LASTDRIVE = Y

Press <Esc> to continue.

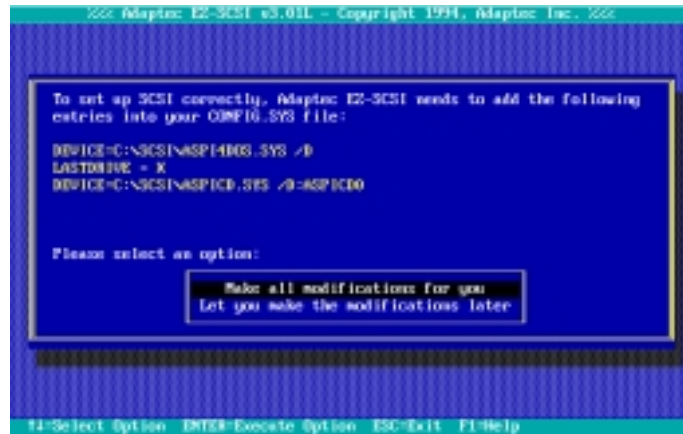


Figure 40, CONFIG.SYS Automatic Alterations

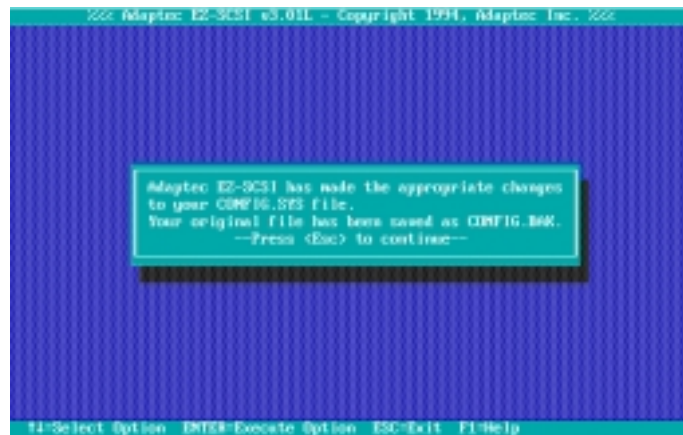


Figure 41, EZ-SCSI Confirms changes to CONFIG.SYS

In most cases, EZ-SCSI will select the correct modification for you. However, if you already have a CD-ROM drive and are adding a tower, you will need to modify this line after you exit the program. First, from your original AUTOEXEC.BAT file (now renamed autoexec.bak), copy the device name of your original CD-ROM drive. To list the contents of your autoexec.bak file type:

CD\

TYPE AUTOEXEC.BAK

The device name consists of the characters directly after /D: up to the next space. To modify your autoexec.bat type:

CD\

C:\DOS\EDIT

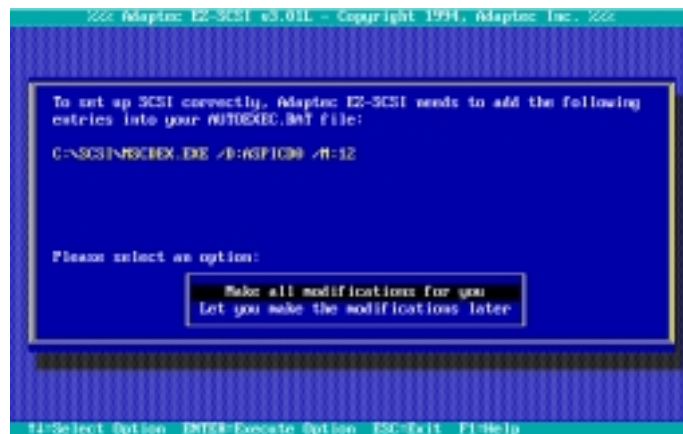


Figure 42, EZ-SCSI Default Changes to AUTOEXEC.BAT

C:\AUTOEXEC.BAT

Then modify the line that begins
C:\SCSI\MSCDEX.EXE to:

C:\SCSI\MSCDEX.EXE /D:<internal drive name> /D:ASPICD0 /M:12

Press **ALT F S** to save then **ALT F X** to exit.

This is the screen you will see if you select "Let you make the modifications later." On the previous screen.

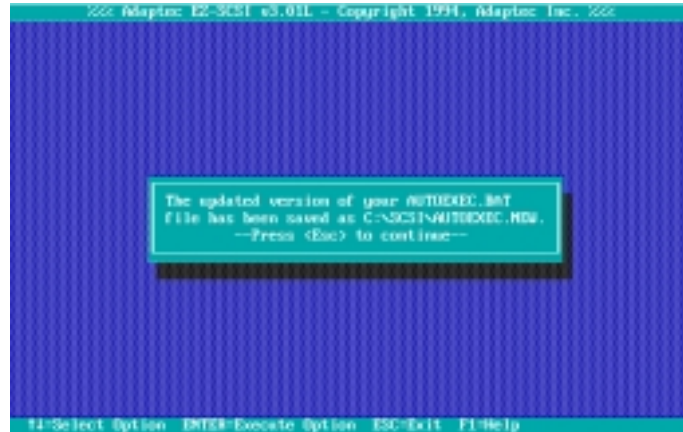


Figure 43, EZ-SCSI Confirms changes to AUTOEXEC.BAT

This completes your EZ-SCSI installation.

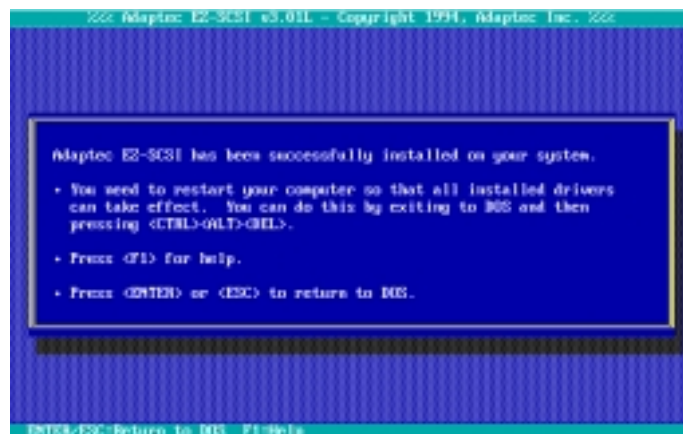


Figure 44, EZ-SCSI Finish Screen

If you edited out the **win** command during installation, here is how to reinstate Windows loading at bootup: Set default to the root directory, by entering the following command at the DOS prompt:

> CD\C:

Edit the AUTOEXEC.BAT file, using the following command:

> C:\DOS\EDIT AUTOEXEC.BAT

If you previously booted directly into Windows delete the word "rem" and any spaces before the word "win".

Save the file with **ALT F S** and exit with **ALT F X**.

Reboot by pressing **Control-Alt-Delete**.

Call 800-38-Logic for help

Novell NetWare

NetWare 4.x/IntranetWare Server

New Servers

Novell 4.x/IntranetWare automatically detects installed hardware and selects drivers during the *original* system installation on the server. The INSTALL utility displays drivers for the adapter card and will allow you to delete, modify, or select the driver and also to add additional drivers if necessary.

Existing Servers

If you are adding the Adaptec card to an existing server the installed card must have no address conflicts and volume SYS: must be mounted before the drivers can be loaded.

1. To add drivers to the STARTUP.NCF file type **LOAD INSTALL<Enter>** at the console prompt.
 - A. Select DRIVER OPTIONS from the menu.
 - B. Select CONFIGURE DISK/STORAGE DEVICE DRIVERS from the menu.
 - C. Select LOAD ADDITIONAL DRIVER from the menu.
 - D. Scroll to AHA1540.DSK , highlight the driver and <Enter>
 - E. Scroll to ASPICD.DSK, highlight the driver and <Enter>
2. To manually load drivers type at the console prompt:

LOAD AHA1540.DSK <Enter>	The Adaptec device driver.
LOAD ASPITRAN.DSK <Enter>	This ASPI transport layer protocol manages messages to/from application and is necessary when any .DSK file is loaded.
LOAD ASPICD.DSK <Enter>	The Adaptec ASPI CD-ROM driver.
LOAD NWPA.NLM <Enter>	The NetWare Peripheral Architecture driver.
LOAD CDROM.NLM <Enter>	This allows the CD-ROM disc to function as a NetWare volume. The NWPA driver must be loaded first.

NetWare 3.12 Server

Drivers may be loaded using two different methods.

1. To add drivers to the STARTUP.NCF using the INSTALL.NLM:
 - A. Type **LOAD INSTALL <Enter>** at the console prompt.
 - B. Select DISK OPTIONS from the menu. Follow the menu options to load AHA1542.DSK, ASPICD.DSK, NPA312.NLM, and CDROM.NLM.
2. To manually load drivers at the console prompt type:

LOAD AHA1542.DSK <Enter>
LOAD ASPITRAN.DSK <Enter>
LOAD ASPICD.DSK <Enter>
LOAD CDROM.NLM <Enter>

NetWare 2.2, 3.0, 3.1, and 3.11 Server

These versions of NetWare cannot access CD-ROM drives across the network without additional drivers. A third party software package or an upgrade to NetWare 3.12 or higher is needed. Contact Academy Computer Services for further details.

Mounting CD-ROMs as NetWare Volumes

Novell NetWare 3.12

- After the CDROM.NLM has been loaded there are several commands that aid CD-ROM maintenance.
 - Typing **CD DEVICE LIST** at the console prompt will list all the volume names and/or device numbers for the CD drives. If no name appears, unload and reload CDROM.NLM.
 - CD VOLUME LIST** will list all CDs currently mounted as volumes.
 - CD CHANGE [name]** will dismount a volume, and allow the media to be changed. Be sure to wait for full spin-up before mounting the new media, or the CD will not mount correctly.
- To mount the CD as a volume at the console prompt type **CD MOUNT [name]** or **CD MOUNT [device]**. It may take several minutes to mount the volume, depending on the speed of your computer.
- If further assistance is needed type **HELP MOUNT** at the console prompt.

Novell NetWare 4.x

To mount volumes using the MONITOR.NLM:

- Type **LOAD MONITOR** at the console prompt.
- Select the AVAILABLE OPTIONS menu.
- Select DISK INFORMATION.
- Select MOUNT REMOVABLE MEDIA DEVICE.

Note: In NetWare 4.x a string of error messages and beeps may be seen/heard as the CD-ROM mounts. Ignore them. According to Novell Engineering “*These warnings are cosmetic. The operating system expects to be able to write to a volume; however, in the case of a CD-ROM, it obviously can’t....[We] are working on a solution.*”

Troubleshooting

Most installations occur without trouble. When an installation does not work correctly, you can usually solve the problem yourself. Check the following items first:

- Is the tower plugged in and switched on?
- Are all cables and connectors completely plugged in, including the terminator?
- Is the card firmly seated, not at an angle? Power off before touching computer components.

Error Messages

Error messages that occur during bootup have limited direct meaning; rather they are best viewed as a code, as below:

When You See	It Usually Means
ASPI4DOS installation failed	Drives undetectable due to Input/Output Range, IRQ or DMA conflict. See pages 10 and 13
BIOS not intended to run with this card	Input/Output Range in conflict. See page 10
Hardware Timeout Reset Error	Input/Output Range in conflict See page 10
No SCSI devices found	Loose wiring, IRQ conflict See pages 9 and 13
System unresponsive after Press Control-A for setup appears	DMA or other resource conflict See Page 12
Unable to Enable/Disable Shadow Ram	DMA in conflict See Page 12

Figure 45, Error Messages

Common Problems and Solutions

Symptom	Diagnosis	Corrective Action
My tower shipment is missing some or all accessories.	Completely unpack tower. If opened upside down, 4 and 7 bay boxes have a false bottom with the accessories under the tower. The 14 bay comes in two boxes: one just for the tower, the other, smaller one for the accessories.	Pull up inner box under tower. Make sure you have all boxes for your shipment. Compare your components to the packing list (See page 4, figure 1). Call Academy Computer Services immediately so we can file a theft claim if components are still incomplete.
My tower make a loud whirring sound, like a bicycle with a playing card striking its spokes, when I turn it on.	A fan, a top one in the 7 or 14, the one underneath the tower in the four, is rubbing on its housing or the outside case.	With the 7 or 14, loosen then retighten the four screws holding the noisy fan. With the 4's bottom fan, loosen each screw a half-turn.
One of the fans has stopped working.	Excessive dust in fan, loose fan connection or fan worn out.	Check and tighten electrical connections. Use compressed air can to clean fan. If still inoperable, return for replacement.
The card doesn't fit in my computer	Computer has no free Industry Standard Architecture (ISA) slots. Computer has case out of tolerance so key is mis-aligned. Power supply must be removed to insert card (some slimline cases).	Read computer manual to make sure computer has ISA slots. If not, (e.g. notebooks, Macintosh and PS/2s) contact Academy Computer Services for a return/replacement. If ISA slots exist but are filled, remove other card, use other computer, or, if the computer has other kinds of slots free (e.g. a PCI slot in a Pentium), trade up to that kind of card by calling Academy Computer Services at 800-38-Logic. If card is difficult to put in, gently bend key to fit case. Sometimes sliding in one end at a time helps, rather than all at once, but the card must be uniformly inserted at the end of the operation. If card insertion isn't possible in a slimline case due to lack of room, remove power supply then try.
Computer Freezes and Doesn't Load Windows	Check to see where system freezes. Reboot and watch closely. Use pause key to allow you to hold messages still so they don't scroll off the top of the screen before you can read them. If the AHA-1542CP message does not appear on screen (See figure 19), the problem is an improperly seated card (See figure 13) conflict in the Input/Output Range or (rarely), the BIOS address. If the computer freezes after the card echoes on the screen, the conflict is in other settings, the DMA or (rarely) the IRQ.	Remove and reseal card. Sometimes older computers or ones with particularly stiff connectors will take several insertions for proper contact. Test by rebooting, if still no echo, change Input/Output Range or BIOS address to non-conflicting settings using the dip switches on the card (See figure 22). If system locks after card echoes on screen, change IRQ or DMA values to non-conflicting settings. (See Page 13).

Symptom	Diagnosis	Corrective Action
I completed installation, and now my system has stopped working.	Card or software conflict. Difficult to further diagnose with non-working computer.	Remove card. Utilize Start-Up floppy to restore original computer configuration. Note card settings and other changes you performed on computer or AHA-1542CP card to this point. Call 800-38-Logic, Academy Computer Services for help.
Card echoes on screen but not CD-ROM drives. CD-ROM drive indicator lights are amber for a few seconds when initially turned on but do not flash amber during the computer's boot process.	Loose or flawed connection in the SCSI chain.	Check connection on the back of the computer for a bent pin (See figure 16). Check terminator plug and data cable on the back of the tower for snug connection.
Card Echoes on screen but not CD-ROM drives, drives never indicate amber, and tower light at bottom is not green.	Power Problem	Check to make sure power outlet is active, tower is firmly connected to power cord, and switch is On (I). If still no indication of power, including no fan activity, the likely cause is a bad power supply. Do not attempt to service yourself; return to Academy.
CD-ROM drives echo on bootup but are not available under Windows for Workgroups/Windows 3.1	LASTDRIVE statement in CONFIG.SYS not high enough to accommodate all drives.	At C:> prompt type EDIT C:\CONFIG.SYS. Alter LASTDRIVE statement to LASTDRIVE=Z or other sufficient value, save and reboot.
CD-ROM drives echo on bootup, and work fine under DOS, but not Windows 3.1/Workgroups	Insufficient memory. Windows for Workgroups loads network drivers that utilize additional IRQs than DOS	Upgrade to DOS 6.22 or Windows 95. Under 6.22, run C:\DOS\MEMMAKER to optimize memory. Consult software products to see if EMM can be disabled, thereby increasing available conventional memory. If using Windows for Workgroups, check to see if network card is the same IRQ as the SCSI card. If so, change SCSI card IRQ using SCSISelect (See figure 21)
One Side of 14 Bay CD tower works, but the second side doesn't work.	Duplicate Input/Output Range or BIOS address. Also, in pre-Pentium computers, duplicate IRQ and/or DMA channels	Make sure Input/Output Ranges of each card are unique. That is, dip switches (See Figure 18) 2 through 4 should not be the same for each card. Make sure that the BIOS address is unique. That is, each card has different settings for switches 6,7, and 8 (See Page 11). Also, try making the IRQs and DMAs unique for each card. Finally, check the second card for firm, straight insertion as well as the data cable for no bent pins.

Symptom	Diagnosis	Corrective Action
Two or more drives not working, but some working.	Loose data or power connection. CD media missing or incorrectly inserted. Drive contaminated by dust. AHA-1542CP card set to ID other than 7.	Open tower and reinsert power and data connections. Open drive drawer and use air jet to flush contaminants. Use Control-A setup to reset every card ID to 7.
One drive is not working	CD media bad, incorrectly inserted, dirty or missing. CD data or power cables loose. Rarely, drive bad.	Reinsert media, try different media, open tower and reinsert power and data connections. Open drive drawer and use air jet to flush contaminants. If all else fails, return drive for service.
One or more drive drawers do not open.	Non-problem in Novell environments: eject button is disabled when drive is mounted. Otherwise, media jammed in drive, motor power to drive has loose connector, or data connector to drive loose.	Un-jam media by inserting straightened paper clip in hole to the left of the eject button. Reinsert media carefully. Do not use warped media, as these are unsuitable for high-speed drives such as the Sony 12X, rather request good media from the media supplier. Reinsert power connector (4 wire white plug on right facing the back) leads. Check all data connections for snug fit.
The tower works fine, but the internal drive no longer works under Windows 3.1/Windows for Workgroups	The MSCDEX switches were modified by the EZ-SCSI program to run the tower, but in the process deleted the switch to run the internal drive.	The AUTOEXEC.BAT file should be modified. See directions on page 21.
I cannot find the name of the internal drive to add it back in under DOS/Windows 3.1	EZ-SCSI installed more than once so AUTOEXEC.BAK does not have drive name.	Use Start-Up disk version of AUTOEXEC.BAT to find name of internal drive. Insert floppy, type TYPE A:AUTOEXEC.BAT and write down the /D:<name of internal drive> you see after C:\<PATH>\MSCDEX.EXE Use this name to for insertion under directions on page 21.

Figure 46, Common Problems and Solutions

Fixes for Specific Computer Models

While only one exact make and model has been proven to work with each fix, if your computer is similar the fix might still work. For example, the fix for the Compaq Presario holds for all computers with no free IRQs.

Computer	Analysis and Comment	Fix Procedure
ACER Aspire	The Acer Aspire Computer requires changes in all AHA-1542CP settings, and works best with a DOS style software installation even if the operating system is Windows 95	Correct Settings for the Acer Aspire: Input/Output Range 130, DMA 7 IRQ 15 Use the directions for installing EZ-SCSI Lite as directed in the section titled Installing Software under DOS/Windows
AST Advantage Adventure	AST Adventure Computers have sound cards that conflict with the AHA-1542CP card.	Set dipswitches 1,2, and 5 toward the card (see figure 17). This avoids conflicting with the sound card since both the AHA-1542CP and the sound card use Input/Output Range 330 by default. Dipswitch 2 on the AHA-1542CP changes this setting to 334. Access SCSISelect (see figure 21). Change DMA to 6. This sidesteps the sound card's use of DMA 5, the AHA-1542's default. Install SW for your operating system.
Compaq Presario	Compaq Presarios have no unused Interrupt Requests. Towers cannot work unless one or more accessories are defeated, reallocated and/or removed.	Determine through accessing Control Panel, then System, and then Device Manager viewing devices by connection, the devices that are occupying IRQs 9,10,11,12,14 and 15. Discover which one of these can be moved to an unused IRQ or defeated. Perform that operation and reboot. Use the Add New Hardware Wizard to determine the correct hardware settings and proceed accordingly.
Dell Dimension P100	Dell Dimension Computers require changes of all AHA-1542CP adjustments	Hardware: 1542 with switches 1 and 5 down (on) Firmware: IRQ 10, DMA 0. Follow software installation instructions for your particular operating system
Gateway P5-133	The Gateway P5-133 requires a change in every card setting, including BIOS address. And, it has a Windows CD driver that is incompatible with the AHA-1542CP card.	Turn dipswitches 1, 2, 5 and 6 toward the card (see figure 17). In SCSI select, change the IRQ to 10 and the DMA to 6. In the C:\WINDOWS\SYSTEM.INI file, delete the line that reads: Device=wdcdrv.386 . Load software as normal for your particular operating system.

Figure 47, Fixes for Specific Computer Models

Support Numbers:

Academy Computer Services: 800-385-6442, Fax: 617-279-4262

Adaptec Web Site: <http://www.adaptec.com/>

Adaptec BBS: 408-945-7727 (8, 1, N 14.4)

Adaptec Technical Support: 800-959-SCSI

Adaptec Literature Hotline: 800-934-2766

Adaptec Fax-on-Demand Service: 408-945-6776

Call 800-38-Logic for help



Warranty and Disclaimer Information

Specifications subject to change without notice. All trademarks the property of their respective companies. Warranty: One year parts and labor from date of purchase. This warranty is in lieu of all other express warranties which now or hereafter might otherwise arise with respect to this product, implied warranties, including those of merchantability, fitness for a particular purpose and non-infringement shall (A) have no greater duration than 1 year from the date of purchase (B) terminate automatically at the expiration of such period and (C) to the extent permitted by law be excluded. In the event this product becomes defective during the warranty period, the purchaser's exclusive remedy shall be repair. Incidental or consequential damages, including without limitation loss of data or inaccurate retrieval of data, arising from breach of any express or implied warranty are not the responsibility of Academy Computer Services, Inc. and, to the extent permitted by law, are hereby excluded both for property damage, and to the extent not unconscionable, for personal injury damage.

Options

Many installations require modifications or additions for optimal functionality. To this purpose we offer CD changers/jukeboxes, MacIntosh interfaces, OS/2 drivers, Ornetix Software for CD management in Novell or Windows NT environments, dual channel SCSI cards for multiple towers, multiplexers, Virtual CD Towers using hard disks and other options too numerous to list. We have extensive experience with large and custom installations. Please call 800-385-6442 for a tailored quotation.

Recommendations for Further Study

Elshami, Ahmed M. Networking CD-ROMs. American Library Association. Chicago. IL. 1996. 800-545-2433 press 7 to order.

Ridge, Peter M. The Book of SCSI, A Guide for Adventurers. No Starch Press. Daly City. CA. 1995. 800-788-3123 to order.