#### Cadaptec

#### FILE COPY

•

#### AHA-2840VL/2842VL

High Performance Bus Master VL-to-Fast SCSI Host Adapter with SCSISelect<sup>™</sup>

#### **Installation Guide**



#### 





ŝ

4

Align the bus connector on the bottom of the host adapter with the VL-Bus slot and carefully press it down into the slot. Secure the host adapter bracket to the computer chassis with the screw from the removed expansion slot cover.

**Note:** *Do not* replace the chassis cover or reconnect the power yet!

#### **Setting Switches**

If you need to change switch block settings, do it now before you replace the chassis cover and run SCSI*Select*. (See Section 9, *Switch Block Settings*.) In most cases, you will *never* have to change the default switch settings. Here are some situations in which you should change the settings:

### **Controlling Floppy Drives**

If your floppy drives are connected to another floppy controller (e.g., the one on the motherboard), set sw5 to On to *disable* the AHA-2842VL floppy controller.

If you want to use the floppy controller on the AHA-2842VL you must *disable* other floppy controllers in the computer; refer to the documentation for your computer or floppy controller.

### Using Multiple Host Adapters

The AHA-2840VL/2842VL port address must be different from the port addresses of other expansion boards and host adapters. If another board is using the default AHA-2840VL/2842VL port address of 1C00h, change sw1-sw4 to a different port address (see Section 9, *Switch Block Settings*).

Each installed host adapter must also have a different BIOS address, which is set by sw6 and sw7. Or, you can *disable* the AHA-2840VL/2842VL BIOS by setting sw8 to On. (See the next section.)

#### **Disabling the BIOS**

CD-ROM drives, tape drives, and other non-disk devices do not use the host adapter BIOS. Therefore, if no SCSI hard disk drives are connected to the host



34-pin ribbon cable to the onboard floppy connector. Be sure to maintain pin-1 orientation, as described earlier.

# Terminating the SCSI Bus Cable

The last physical SCSI device on either end of the SCSI bus must have a set of resistors called *terminators*. Terminators must be removed from, or disabled on, all other devices on the SCSI bus.

The AHA-2840VL/2842VL and most SCSI peripherals have built-in terminators that can be enabled or disabled. Terminate only the devices at each end of the SCSI bus.

### Terminating the Host Adapter

Termination is enabled by default on AHA-2840VL/ 2842VL host adapters. You must disable host adapter termination if you attach SCSI devices to *both* the

G

**Caution:** AHA-2840VL/2842VL host adapters support only *single-ended SCSI* devices. *Differential SCSI* devices may be damaged if connected to the host adapter. The peripheral documentation will tell you whether the device is single-ended or differential.

Lay out the cables and find the *pin-1* element of each cable and peripheral connector.

On *internal* cables, pin 1 is usually marked with a contrasting color on one edge of the ribbon cable, and a small triangle marks pin 1 on the SCSI connector. *External* cable connectors can only be plugged-in one way, so pin-1 orientation is automatic.

Attach the SCSI cable(s) to the host adapter and the peripheral(s), using the internal and/or external connector(s).

N

- **3** Be sure to maintain correct pin-1 orientation throughout the bus. The AHA-2840VL/2842VL uses a 50-pin high-density external connector, and a 50-pin flat ribbon-type internal connector.
- If you are installing an AHA-2842VL and you are using the onboard floppy controller, connect the

- Remove/disable terminators on all other devices on the SCSI bus.
- 4 Be sure the SCSI cables are connected securely. They may have been loosened if you changed jumpers or switch settings on the peripherals.

# Reassembling and Starting the System

- Replace the computer chassis cover, following the instructions in your computer's documentation.
- **2** Be sure all power switches are OFF, then reconnect power cables to your computer.
- **3** Turn ON the power for the computer and the peripheral(s).

At bootup the host adapter BIOS sign-on message appears on the screen (unless the BIOS is disabled). The message includes a list of installed SCSI devices and a BIOS status message.

6

internal and external SCSI connectors, since the host adapter is then in the middle of the SCSI bus.

This table lists the three possible SCSI device/host adapter configurations:

Devices Connected to Host Adapter	Host Adapter Termination
ternal devices only	Enshlad
lost adapter at end of bus)	
xternal devices only	
ost adapter at end of bus)	
ternal and external devices	Disabled
iost adapter in the middle)	

<u> 국 코 국 민 수 코 \_</u>

Host adapter termination for the AHA-2840VL/ 2842VL is controlled by the SCSISelect program, not by switches. If you need to disable host adapter termination, first complete the physical installation, then run SCSISelect and follow the directions in Section 6, Configuring the Host Adapter.

# Terminating Other SCSI Peripherals

- 1 Check the manufacturer's documentation to determine how to enable or disable SCSI bus termination on your SCSI peripheral device(s).
- 2 Install/enable terminators on SCSI devices at the *ends* of the SCSI bus (cable).

			- :
	0		us scan.
	uter system power is on.		Include in Block of a Sector Trees
	'g you may not rer		Enable Discourse to the SCSI bus: Initiate
~	cd axed Jisks option to All Jisks. If	while your co	Nonctistion Will and change the
5	you use this ( ) the Support Removable Disks	you use this	each device on the Configure Configure Configure and
	S mp anced Configuration	Under BIO	view another har in the standard
	ndethin and alsk drives. To do this, run	<b>Options</b> , an	If you select a mine which value to Synchronous
<b></b>	SCSISelect, cH is range adapter treat removable	SCSISelect, o	help you dettes. Some options incluse options for
dev	es ser	media drive	possible value within and press Enteration you can
the	1k ogs date two hard disk drives.	You can ma	Highlight an acking and Host Adapation
	f as hisabled by default.) Older versions		ID, Parity Chitable options: IRQ, Hogardar
171	me the Support for More than Two	of DOS sup	ware configuration screen displays a information to
Driv	ic do this you	Drives, whi	The Contracting to see a list of
ΥĦ	e IIII Trisk drives to the AHA-2840VL/	must enable	•
	he source of the second s	2842VL witl	Sonfigure Win 19:0018
	seven SCSI hallo and the seven SCSI hallo and the seven sev	seven SCSI	Main Menu Charles and Soft-
_		Under MS®-	the changes.
			want to save and select No when
-			menu, press Minfigure/View Host
			made in the Cy settings. To abandor
			original defaultient. You can press F
	<b>All the remination</b> DOS memory con-		the previous steet. Press Esc at any action if you
	would be access to useful information	figuration of	tions in SCSIM(1) and Enter keys than the Settings
•	about host and filling	e taoq triode	
		This option	The second sector is the second sector in the second sector is the second sector is the second sector is the second secon
-	ine will no longer be used.	View Config	address in a strate of hostime to return to
I	where want the blocks reassigned: if	you selett i	where xxx
	von select <b>Ye</b> kata 200 ad blocks are encountered, a	von select V	g=xxxx Debug prompt (a hy
thes	all ascans the selected device's	prompt will all	Then at the promot type debug
	media for default.	media for d	■ At the DO when prompted at the line and a RIOS
14	Chief and a second s	Verify Disk	
œ	Netensestie Anapier Science motod	and do not i	hinvoke SCSI
5	tormat utility	format utilit	There are two Select
284	Format Disk ed ties menu appears.	Format Disi	huilling acc joot time.
IOF	More select one of the installed		Dimping Conformatting utilities.
Cor	devices, the Lagree agree (including non-disk	devices, the	includes disky or setting switches.
)	he <sup>1</sup> wices installed at SCSI IDs 0	devices). Whether	your computivation with the second seco
0fh	really, CSEDisk Utilities from the Main	through 7 ai	net and nost capter settings such at
	Menu, the SQU TO	Menu, the S	change host a signation utility. SCS
		When you s	Scollect compter includes the built scollect also
•	till Sand 2 Drives.	SCSI Disk U	Contraction Contraction Contraction Contraction
	and BIOS Sup-	-	voir heat and the Host Ade interrupt chan-
	port for Moreities ded BIOS Translation, SCSI Bus	port for Mo	<b>6 Config</b>
	s unde	Reset at Hos	e now ready to use. An, menu-driven
I	Fixed Disks, Hunness-Adapter BIOS Enable or Dis-	Fixed Disks	peripherals aryour computer, host a
•	able. Support Mana treese advanced options: Data	able. Suppor	In most cases
You	hc	FIFO Threshc	-
		can view a mes	
		the select Attack	

You need additional software if you want to:

- Remove and insert CD-ROMs and other removable media while your computer is running
- Support more than two hard disk drives under versions of DOS prior to MS-DOS 5.0
- Use devices other than hard disk drives, such as SCSI tape drives, CD-ROM drives, scanners, etc.

# Other Operating Environments

ontact Adaptec or your operating system vendor or information on the availability of AHA-2840VL/ 342VL drivers for other operating environments.

# 3 Troubleshooting Checklist

f you have a problem during installation, check hese items first:

- Are all SCSI peripheral devices powered?
- Are all SCSI bus cables and power cables properly connected?
- Do the host adapter and all devices on the SCSI bus have unique SCSI IDs?
- Are all devices on the SCSI bus terminated properly? (See Section 5, *Connecting Peripherals.*)
- If your system has multiple host adapters, did you assign each host adapter a unique BIOS address or disable the BIOS on all but one host adapter?

### f Your Computer Will Not Boot from a SCSI Disk Drive

If both SCSI and non-SCSI disk drives are installed, then the non-SCSI disk drive is always the boot device. If the system has only SCSI disk drives:

- Make sure your computer's CMOS Setup is set to No Drives Installed, as required for SCSI host adapters.
- 2 Make sure the boot hard disk SCSI ID is 0. The SCSI ID is normally set with jumpers or switches on the drive.

					3-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		
			ĩo		ate: .caI	For the lates services, cal	■ For ser
Adaptec products and at 408-957-7150.	t Adaj e at 40	i about Service	e information eractive Fax S	ne Line	vice, call <sup>75</sup> 8-945-772 con-1 , no parit/cne l	advice, c 408-945- bit, no p	adv 408 bit,
ns, and technical ırd Service at 8 data bits, 1 stop	rograms, tin Board using 8 d	lity programs Bulletin Board baud, using 8	Con objupgrades, utility pro Constant for the constant of the	1200		for information	Adaptec
			Support	Š Ra			
					olc	З S	s
			Reserved	្ធ	ာဝ	? ♀	2 2 2
			Reserved	S.		₽₽	₽₽
UÉ	f = Open	₽	ECOOH	s c		₽ ₽	r∣⊊
				<u> </u>	၊၀	₽	ç
				Ş		₽	₽
Disabled	ž	9		Č Č		3	s
Enabled	₽		9000h	3		ŝ	₽
Host Adapter BIOS	<u>ه</u>	Sw8	8C00h	l B∣c		₽ ₽	₽₽
Ennoch	3 9	3	7000h		lq 1	Q	ð
C8000h	P ₽	ŝ	scoon	ļ		ð	웈
D8000h*	₽	Q₩	4 cooh	S		ŝ	9
<b>BIOS Address</b>	sw7	sw6	3.000h	Q.	ဂုန	Q#	₽
Disabled	Ĩ	9	2000h	Р Ш		ŝ	CW1
Enabled*	₹	₽	1 Cooh*	Å			Deia
Floppy Controller	5	SW2	awa Do Address		ļ	nlf ea	Defa
With an asterisk (").	an as	vitn a	irked	N.	ਤੋਂ ਦ	ad	the up
	he ei	soft	settin		י אַ י	AHA	The
I. I NIS TADIE	board.		corner or	0.21	10		
c is lo	block	vitc		UVC		Swi	9
		S	k Settings	ğ	100	different por Brock	diffe
						SCSISelect 1	SCSI
	apte Sadi	for BIOS add	ess and /or			overlappinghuy	over
els with the	channels danter su	net ad	s change I		host adocuti	host	Your
If you	addresses.	) a i	Witteniory and port	e po	<b>X</b>	Conflicts	Cont
		devices	other		ense Distriction Distriction	n par	c
r Devices	ds or	Cards	er Option	o :	e V	See the N	្ល
tting.		after formatting	disk	х 6	S.	format	) fr
at Disk option. for instructions		tation for	OS documentation	€ <i>1+</i> 7	dolution of the second se	If this on the	<b>3</b> If
a low-level			skan	- C	<u>.</u>		
back up all data		problem,	or solve the p	2.4	<u> </u>		
				ж.	338		

the follun ence at 10 ce dom interfenymulation ence by ence by

Council is with part 15 of the FCC rules. Or that is subject to a subject to a subject of the subject and the subject to this device, intust accept any interference received, including the maxy cause undesired operation.

# Cadaptec

### FILE COPY

# AHA-2840VL/2842VL

VL-to-Fast SCSI Host Adapter with SCSISelect<sup>TM</sup> **High Performance Bus Master** 

## Installation Guide



Stock What BUS A. Information 510431466 Rev. B KL 8/93 subject to change without notice.

Copyras California 95035 the Add California 95035 SCSIS 211 Ch 993, Addams

SCSIS error Chops, Adaptec, Inc. All rights reserved. Adaptec and MS is error of the trademarks, and AHA and VLB water and trademarks, of Adaptec, Inc.

Print Stock

Video Fegis

E segstered trademark of Microsoft Corporation. Sisjant demark and VESA is a registered trademark of the trademark Association.

Adaphii II

.....

\*\*\*\*\*\*