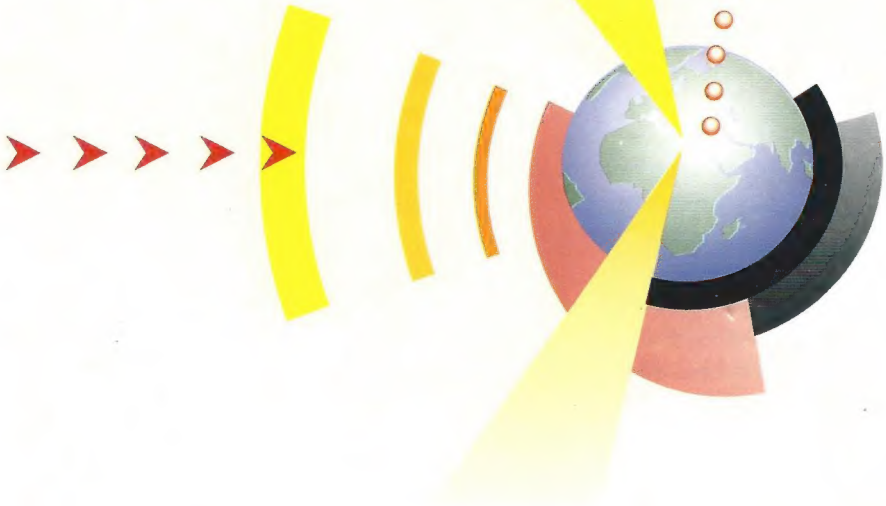
NOTEBOOK COMPUTER

3600

Software

User's Manual



3600

Software

User's Manual

Notice

The company reserves the right to revise this publication and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.

Second Edition May, 1994

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Introduction

This user's manual describes the installation and operation of the utility programs covered in the *NOTE Utilities Diskette*, *Audio Utilities Diskettes #1 & #2*, and *Video Utilities Diskettes #1 & #2*.

NOTE Utilities Diskette

Describing the diskette. The *NOTE Utilities Diskette* contains the utilities which can be categorized into the following four areas: (in four directories)

Configuring the hard disk controller — APPIAN ADI2 Tool Set

Configuring PCMCIA cards — SystemSoft PCMCIA Software

Configuring the trackball — GMOUSE Software

Configuring the floppy drive — FLOPPY.SYS

Backing up the diskette. It is required that you back up each of the four directories in the *NOTE Utilities Diskette* onto a different 1.44M floppy diskette's root directory and use the new diskettes to perform installation. Do not use the original diskette to perform installation because ***you can only install the utilities to your hard disk from the root directory of a floppy diskette inserted in drive A.***

Audio Utilities Diskettes #1 & 2 & Video Utilities Diskettes #1 & 2

Describing the diskettes. *Audio Utilities Diskettes #1 & #2* contain the driver for configuring the audio board and various audio applications. *Video Utilities Diskettes #1 & #2* contain video utilities for the DOS and Windows 3.1 environments including video drivers for various DOS applications and Windows 3.1.

Backing up the diskettes. It is highly recommended that you back up the four diskettes onto another four diskettes, save the original ones, and use the new ones to perform installation.

1

APPIAN ADEz Tool Set

1

APPIAN ADI2 Tool Set

Overview

APPIAN ADI2 Tool Set is designed to optimize the ADI2 IDE local bus controller so that the notebook's hard disk can take full advantage of the IDE interface VESA local bus design to help improve overall system performance.

This chapter will teach you how to install the ADI2 drivers for DOS, Windows 3.1, and OS/2 environments and how to customize the ADI2 DOS driver to enable the hard disk's multiple mode operation.

Installation

This section will separately describe how to install the ADI2 DOS and Windows 3.1 drivers and how to install the ADI2 OS/2 driver.

Installing the ADI2 DOS and Windows 3.1 Drivers

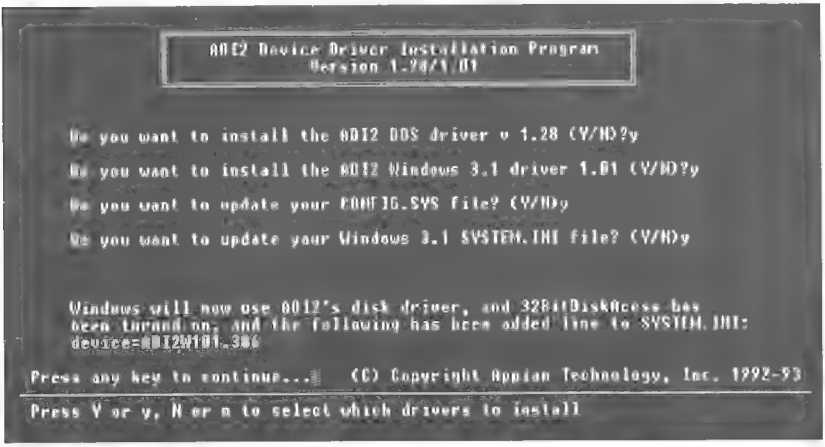
To install the ADI2 DOS and Windows 3.1 drivers, do the following:

1. Insert in drive A the diskette which contains the tool set on its root directory.
2. Type **INSTALL** and press **Enter**. Then, a screen entitled "*ADI2 Device Driver Installation Program*" will be displayed.

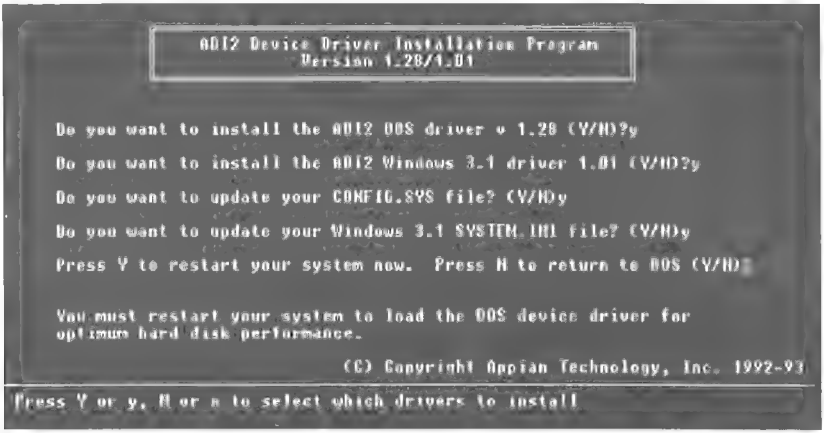
   You will be asked if you want to install the ADI2 DOS driver and ADI2 Windows 3.1 driver respectively.

   Then, you will be asked if you want the program to automatically modify your DOS **CONFIG.SYS** and your Windows 3.1 **SYSTEM.INI** files respectively.

   A sample screen is shown below.



3. Give the answer "Y" or "y" to the next question "`Press Y to restart your system now. Press N to return to DOS (Y/N)`" to load the DOS device driver for optimizing the hard disk performance.



Installing ADI2 Windows 3.1 Driver Separately

If you didn't install the ADI2 Windows 3.1 driver at the time you installed the ADI2 DOS driver, when you want to install the ADI2 Windows 3.1 driver, you must do the following:

1. Rerun the INSTALL program.
2. Reinstall the ADI2 DOS driver.
3. Install the ADI2 Windows 3.1 driver.

To install the ADI2 OS/2 driver, do the following:

1. Boot the system with the OS/2 operating system.
2. Go to the OS/2 prompt by first double-clicking on the OS/2 System icon on the desktop, then double-clicking on the Command Prompts icon in the OS/2 System - Icon View, and last double-clicking on the OS/2 Full Screen icon in the Command Prompts - Icon View.
3. Insert in drive A the diskette which contains the tool set and go to drive A and then to the OS2 directory.
4. Type **INSTALL** and press **Enter**. Then, the following message will appear on the screen.

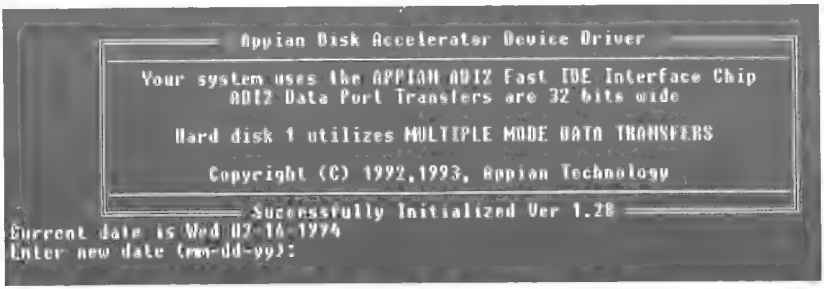
5. Type "Y" or "y" to proceed with the installation and then press any key when you see the line `"Press any key when ready..."` or type "N" or "n" to cancel the installation.

The ADI2 OS/2 driver will be activated each time you boot the system.

Multiple Mode Operation

Many types of hard disks support multiple mode operation. The default operation mode of a hard disk is single mode. You can expect better performance if a hard disk operates in multiple mode than in single mode. The ADI2 DOS driver can be customized to enable the hard disk to operate in multiple mode if the hard disk supports this function.

After the ADI2 DOS driver is installed, add the option "**c=m**" to the end of the command line "**device=c:\adi2c128.sys**" in your **CONFIG.SYS** file. (i.e., **device=c:\adi2c128.sys c=m**) If your hard disk can operate in multiple mode, you will see a screen message similar to the one below after you reboot the system.



SystemSoft PCMCIA Software

Overview

SystemSoft CARDSOFT PCMCIA software, available on the *NOTE Utilities Diskette*, consists of drivers and utilities for configuring the notebook's PCMCIA sockets and the PCMCIA cards to be used with the notebook. This chapter describes the installtion procedure of this software solution.

Installing CardSoft PCMCIA Software

Perform the following procedure in the DOS environment for Standard Installation of CardSoft PCMCIA software:

1. Insert in drive A the diskette that contains the CARDSOFT PCMCIA software on its root directory.
2. Switch to drive A (A>), type **INSTALL** and press **Enter**.
3. Press any key other than **Esc** to continue.
4. Press **Enter** at **First Time Install**.
5. Press **Enter** at **Standard Installation**.
6. Move the highlighted bar with ↓ (the **Down Arrow** key) to **2** (indicating 2 PCMCIA sockets) and press **Enter**.
7. Press **Enter** to confirm that drive C is the destination drive for installing CardSoft (or move the highlighted bar to the drive desired and press **Enter**).
8. Press **Enter** to confirm that the file to be copied is correct.
9. Press **Enter** again to confirm that the directory path and the file to be copied are correct.
10. CardSoft will be installed and the system's **CONFIG.SYS** file will be reconfigured.
11. Follow the messages on screen and press any key other than **Esc** to continue.
12. After the screen returns to C>, remove the diskette in drive A and reboot the system. A screen message similar to the one on the next page should appear to indicate that CardSoft has been installed into the system.

for IDE hard disk cards

for memory cards

The following provides a sample of the PCMCIA components loaded into **CONFIG.SYS**. These components should be in the order shown below.

```
device=drive:\path\ssvadem.exe
device=drive:\path\cs.exe
device=drive:\path\csalloc.exe drive:\path\csalloc.ini
device=drive:\path\atadrv.exe
device=drive:\path\memdrv.exe
device=drive:\path\dblflash.exe
device=drive:\path\ms-flash.sys
device=drive:\path\cardid.exe
```

Note: Any I/O card should be removed before you warm-start the notebook.

CardSoft Utilities

The following paragraphs briefly explain the CardSoft PCMCIA drivers and utilities needed for the notebook's PCMCIA sockets and the PCMCIA cards to be used with the notebook to function properly.

Socket Services

The Socket Services driver provides a standard software interface to the PCMCIA controller and isolates the socket hardware from higher level software. Socket Services includes functions such as configuring a socket for an I/O or memory interface and controlling socket power voltages.

Card Services

The Card Services driver manages competition for system resources and manages adapter and card resources.

CSALLOC (Resource Allocation Utility)

This resource allocation utility manages and distributes incoming resources from the system (i.e.., IRQ, I/O port, memory window mapping).

CARDAPP (Card Application Client)

This client device driver detects the insertion and removal of PCMCIA PC cards, automatically determines the card type upon insertion, and then configures the card. This driver communicates with PCMCIA-aware device drivers.

MTDAPI (Memory Card MTD)

This is the memory card driver for SRAM and flash card support. It provides the interface to the Flash File System which is provided through Microsoft's **MS-FLASH.SYS**.

MS-FLASH.SYS (Flash File System)

The flash file system provides memory data management for flash cards.

DBLFLASH.EXE (Data Compression)

This driver compresses data on a flash card to increase its storage capacity.

MEMCARD.EXE

This file formats flash cards.

Note: Under the CARDSOFT directory, there are three **.ASC** files that further explain the **MS-FLASH**, **DBLFLASH**, and **MEMCARD** utilities.

CONFIG.EXE

Run this utility to check and reconfigure the PCMCIA sockets (if the PCMCIA card/socket is not working properly).

IDE/ATA Support (ATADRV.EXE & ATAINIT.EXE)

ATADRV.EXE is a block device driver which supports ATA/Type 3 hard drive PCMCIA cards. The **ATAINIT.EXE** utility places a hard disk partition table onto a blank ATA drive. This utility initializes the ATA drive in the same manner as **fdisk** does with a standard hard drive.

Card Boot (INT13.COM, ENDBOOTR.COM & FLASHINIT.EXE)

The Card Boot product consists of a suite of components that provide boot capabilities to SRAM or flash (Intel Series II) cards. They consist of the following components:

The **INT13.ROM** is the Boot Extension ROM (in segment EC00). It redirects reads of drive A to reads of the PCMCIA card. It is a binary image of a ROM file which should be put into the system ROM and will be found during the standard BIOS extension ROM scan.

ENDBOOTR.COM turns off the drive A redirection, making floppy drive A accessible after the boot from the PCMCIA card is completed. (Also refer to page 2-16 for an example on how to use a SRAM card to boot the system.)

FLASHFMT.EXE will create a bootable partition on an Intel Series II flash card.

PCMCIA for Windows

This component permits hot insertion/removal of communications and memory cards within Windows. To install Windows support for PCMCIA:

1. Insert in drive A the floppy diskette that contains the CARDSOFT PCMCIA software on its root directory.
2. Enter *Windows version 3.1* and open the File Manager utility.
3. Open drive A and double-click on the **SETUP.EXE** file icon.
4. Click on the Continue button to allow recognition of PCMCIA cards under Windows.
5. Remove any PCMCIA cards from the sockets then click on the Continue button.
6. Click on the Continue button to confirm the drive, directory path, and directory name.
7. The CARDVIEW directory will be installed in Windows.
8. Click on the OK button to finish the installation process. Exit or restart Windows.

At the DOS prompt of C:\, enter the CARDVIEW directory to make sure that three files (**SSVRDD.386**, **SSVCD.386**, and **SSCOMM.DRV**) are present.

CardBoot

The CardBoot product is a set of programs that allow the user to:

- Boot the system from a PCMCIA card inserted into a PCMCIA socket.
- Build a bootable SRAM or Intel Series 2 flash card.

CardBoot consists of the following components:

Boot Extension ROM

The boot extension ROM code is initialized during the standard BIOS extension ROM scan. During initialization, it looks for a PCIC adapter, and examines each slot of the adapter for a bootable card. If it finds a bootable card, it makes the card look to the PC like the A drive. The boot then proceeds normally, except that attempts to read drive A are directed to the boot partition of the PCMCIA card.

ENDBOOTR.COM

Once booting is done, the user may wish to use the actual A drive. To allow this, it is necessary to run the **ENDBOOTR.COM** program. This program makes the diskette accessible again.

FLASHFMT.EXE

If it is desired to boot from an Intel Series 2 Flash card rather than an SRAM card, the card must be given a bootable partition. This cannot be done with standard utilities, so we supply the **FLASHFMT** program to create and format a bootable partition on a flash card.

- To create bootable SRAM cards, you must load **SSCIRRUS.EXE**, **CS.EXE**, **CSALLOC.EXE**, **MEMDRV.EXE**, and **CARDID.EXE**.
- To use an MS-Flash partition on a bootable flash card, you need the above mentioned drivers as well as Microsoft's **MS-FLASH.EXE** driver and **MEMCARD.EXE**.

To create a bootable SRAM card, use the standard DOS **format** command with the **/s** and **/u** switches (**format /s /u**). Files may then be copied using standard DOS utilities.

To create a bootable flash card, use the **FLASHFMT** program to create and format a bootable partition as well as copy any required files to the new partition. The bootable partition cannot be created using standard utilities (including **MEMCARD**). The following line provides a sample **FLASHFMT** invocation:

flashfmt *drive:* -size 384 - files \flash\image

This command creates a 384K bootable partition on the flash card in socket 0 of adapter 0. It also copies the "\flash\image" directories including all files in those directories and places them under the root directory of the new partition. If you do not specify the drive designation, **FLASHFMT** prompts the user to supply the drive letter.

If the "-files" directory contains files named **IO.SYS**, **MSDOS.SYS**, and **COMMAND.COM**, they are copied to the boot partition. If they are not located in "-files" directory, they are copied from the root directory and written to the root directory of the new partition.

FLASHFMT supports the following parameters (where applicable, default values are specified):

-adapter *n*	Specifies the adapter where the flash card is located. *The default is 0.*
-dirsize *n*	Specifies the number of root directory entries. *The default is 64.*
-fatsize *n*	Specifies the size of one FAT, in sectors. *The default is dynamically specified.*
-files <dir>	Specifies the directory tree that is copied to the root directory of the newly created bootable partition.
-hw_win *n*	Specifies the hardware window number to use. On the PCIC, windows 0-4 are valid entries for the first socket, windows 7-11 are valid entries for the second socket.
-nfats *n*	Specifies the number FATs (1 or 2). *The default number is 1.*
-size *n*	Specifies the total size, in kilobytes, of the partition (must be a multiple of 128). *The default size is 256.*
-socket *n*	Specifies the socket where the flash card is located. *The default socket is 0.*
-window *hhhh*	Specifies the memory window base segment (in hexadecimal). The default segment is D800.
-v	Set the "verbose" flag, to cause the program to report its actions.

Note: After running **FLASHFMT**, you need to create an MS FLASH partition. To do this, run the **MEMCARD** utility available from Microsoft.

The requirements for booting from a card are:

1. A bootable PCMCIA SRAM or Series II flash card must be in a socket of that adapter.
2. The notebook's ***PCMCIA Boot Function*** is set "**Enabled**" (via *Setup*). *Setup* is described in the section, "The Setup Program," in Chapter 4, "Operation," in the notebook's *Hardware User's Manual* .

If these requirements are met, the PC will boot from the card. DOS will regard the boot partition on the card as A drive until the **ENDBOOTR** program is run.

Boot Messages

The CardBoot program can display any of the following messages during boot time.

- If the boot code is in the extension ROM, the following message is displayed when the ROM is initialized:

  PCMCIA Boot Services Option ROM
  Copyright SystemSoft 1992. All Rights Reserved

- If the boot code is in the extension ROM and a PCIC adapter is found, the following is displayed:

  SystemSoft PC Card Boot Utility Version 1.00

- When CardBoot finds a bootable card, the following message appears:

  Found a bootable PCMCIA Card

ATAINIT.EXE

ATAINIT.EXE is a disk partitioning utility that must be used to create a partition on any drive supported by **ATADRV**. When a new drive is placed in a socket, it will not be recognized since there is no CMOS or other common method to find out its physical parameters. **ATAINIT** interrogates the drive to find its physical parameters. **ATAINIT** will only work with devices managed by **ATADRV**. To format a disk managed by **ATADRV**, type

ATAINIT <drive letter>

and press **Enter**, then follow the prompts on the screen.

Note: After running the **ATAINIT** utility, you should immediately format the drive using the DOS **format** utility using the **'/u'** option (for example, **format d: /u**).

Installation Examples

Examples of **CONFIG.SYS** which are configured for a specific card type only are as follows. This will save memory space if you only use one type of PCMCIA card.

Using an I/O Card

Example of the **CONFIG.SYS** file configured for I/O cards only:

```
device=drive:\path\ssvadem.exe
device=drive:\path\cs.exe
device=drive:\path\csalloc.exe drive:\path\csalloc.ini
device=drive:\path\cardid.exe
```

Using a SRAM Card or Flash Card

Example of the **CONFIG.SYS** file configured for SRAM cards or flash cards only:

```
device=drive:\path\ssvadem.exe
device=drive:\path\cs.exe
device=drive:\path\csalloc.exe drive:\path\csalloc.ini
device=drive:\path\memdrv.exe
device=drive:\path\dblflash.exe
device=drive:\path\ms-flash.sys
device=drive:\path\cardid.exe
```

Note: Before you use a SRAM card, it should be formatted with the MS-DOS **format** command.

Before you use a flash card, it should be formatted with the **FLASHFMT.EXE** and **MEMCARD.EXE** commands.

Using an ATA/IDE Type Hard Disk Card

Example of the **CONFIG.SYS** file configured for ATA/IDE cards only:

```
device=drive:\path\ssvadem.exe
device=drive:\path\cs.exe
device=drive:\path\csalloc.exe drive:\path\csalloc.ini
device=drive:\path\atadrv.exe
device=drive:\path\cardid.exe
```

Note: Before you use an ATA/IDE type hard disk card, it should be: 1) partitioned with the included **ATAINIT.EXE** utility and 2) formatted with the MS-DOS **format** command.

Perform the following steps to make a SRAM card bootable:

1. Format the card using the MS-DOS **format** command by typing at the DOS prompt

   ```
   drive:\path\format d:/s/u
   ```

   and press **Enter**.

2. Copy **SSVADEM.EXE**, **CS.EXE**, **SRAMDRV.EXE**, and **CARDID.EXE** to the card.

3. ***Create a* CONFIG.SYS *file on the card*** and install the above files in the **CONFIG.SYS** file by adding to it the following command lines in the order shown below

   ```
   device=drive:\path\ssvadem.exe
   device=drive:\path\cs.exe
   device=drive:\path\csalloc.exe drive:\path\csalloc.ini
   device=drive:\path\memdrv.exe
   device=drive:\path\dblflash.exe
   device=drive:\path\ms-flash.sys
   device=drive:\path\cardid.exe
   ```

4. ***Create an* AUTOEXEC.BAT *file on the card*** and adding the following command lines to it.

   ```
   prompt $p$g
   drive:\path\endbootr
   ```

Supported PC Cards

The following is a list of CardSoft supported PC cards (this list is continually expanding and is not limited to the following):

Intel Modem 2400+, Intel FAX 9600, Librex, Rockwell 96, AT&T Paradyne KeepInTouch™ 3761, Megahertz, OmniTel Business Card™ 2496c+, PNB, Dr. Neuhaus Engineering Fury Card.

Note: Any properly PCMCIA-compatible (those with a valid Card Information Structure) FAX/Modem card should work with the PCMCIA software.

Intel, Xircom CreditCard 10Base-T, D-Link, Socket Communications, IBM, National Semiconductor.

Intel Series I or compatible, Intel Series II or compatible.

Sundisk or compatible ATA/IDE memory card, Integral Peripherals, Ministor Peripherals.

HP95LX, Poqet, IBM, Fujitsu, Hitachi, ASCII, Dupont, Fujisoku, ITT, Macro, Mitsubishi, Mips, Epson, Smart Modular Technologies, Panasonic, ASIS, International Integrated Systems, Pretec, Sumitomo, Rohm.

GNOUSE Software

3

GMOUSE Software

Overview

The built-in trackball should be enabled and configured to be able to work with the notebook. The trackball's default setting is enabled. *GMOUSE Software* which comes with the notebook on the *NOTE Utilities Diskette* is designed for configuring the trackball for both DOS and Windows environments.

The following sections will describe how to install *GMOUSE Software* and how to adjust the trackball speed in DOS and Windows environments.

Installation

To install *GMOUSE Software* in your hard disk, perform the following steps:

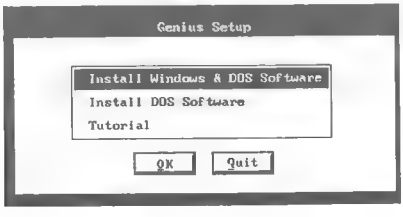
Note: In the following text, "clicking" means "pressing the upper trackball button" and "double-clicking" means "pressing the upper trackball button twice".

1. Insert in drive A the diskette which contains *GMOUSE Software* in its root directory.

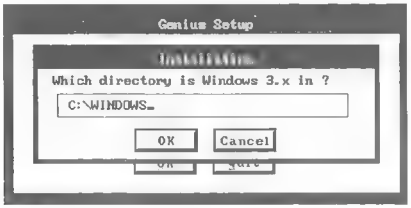
2. Type **SETUP** at the DOS prompt of A:> and press **Enter**.

3. Move the trackball for at least three seconds when you see the following message on the screen.

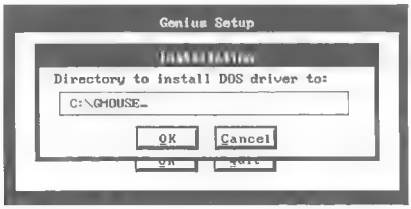
4. Then you will see the following screen message. Click on your selection to install both Windows & DOS software or install DOS software only dependig on whether Windows is installed in the notebook.



5. Enter the name of the directory in which your Windows is (default is WINDOWS) and click on **OK**.

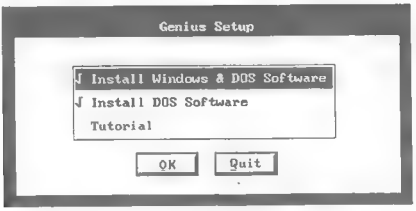


6. Enter the name of the directory in which you want the DOS driver installed (default is GMOUSE) and click on **OK**.

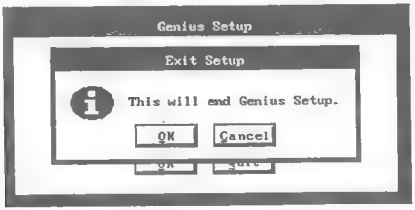


7. When the installation is done, it will display the following message on the screen. Click on **OK** to continue.

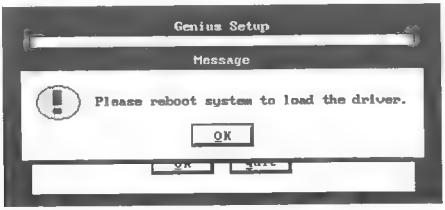
8. You will see another message on the screen. A check mark will appear next to your selection to confirm the software has been successfully installed. Your DOS **AUTOEXE.BAT** and Windows **SYSTEM.INI** files have been updated. Click on **Quit** to indicate you want to leave Genius Setup.



9. When you see the following screen message, click on **OK** to end Genius Setup.



10. When the following screen message appears, click on **OK** and reboot the system to load the driver.



Adjusting the Trackball Speed

This section will describe how to adjust the trackball speed when you work in DOS and Windows environments.

[illegible]

To adjust the trackball speed in DOS, perform the following procedures:

- *Execute* **GDPANEL.COM**.
- *Activate Genius Control Panel.*

[illegible]

GDPANEL.COM can be executed by typing the following command line at the DOS prompt:

(device:) (path) GDPANEL

then pressing **Enter**.

For example, if Genius DOS software is installed in drive C's GMOUSE directory, perform the following procedure to execute **GDPANEL.COM**:

1. Type C:\GMOUSE\GDPANEL at the DOS prompt.
2. Press **Enter**.

You can only activate *Genius Control Panel* while in text mode. Pressing **Ctrl + Alt + the upper trackball button** simultaneously will activate *Genius Control Panel*. (as shown below).

The feature, **Acceleration**, provides the user with four speed choices:

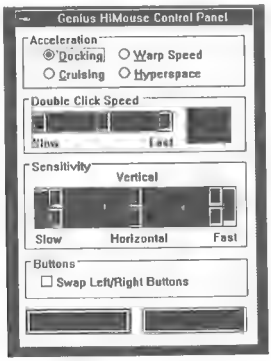
Choice	Speed
Docking	normal
Cruising	a little faster
Warp-Speed	much faster
Hyperspace	the fastest

Click on your desired choice and then on **OK** to make a selection and leave *Genius Control Panel*. (Click on **Cancel** to void your choice and leave *Genius Control Panel*.)

To adjust the trackball speed in Windows, perform the following steps:

1. Enter Windows' File Manager and click on the directory in which Genius Software has been installed to display a group of files.

2. Execute **GWPANEL.EXE** by double-clicking on its filename to display *Genius HiMouse Control Panel.* (as shown below)



The feature, **Acceleration**, provides the user with four speed choices:

Choice	Speed
Docking	normal
Cruising	a little faster
Warp-Speed	much faster
Hyperspace	the fastest

3. Click on your desired choice and then on **OK** to make a selection and leave *Genius HiMouse Control Panel.* (Click on **Cancel** to void your choice and leave *Genius HiMouse Control Panel.*)

FLOPPY.SYS

Overview

The driver, **FLOPPY.SYS**, is specially designed for configuring the notebook's floppy drive for the Windows NT environment. This chapter describes the driver's installation procedure.

Installation

If Windows NT is not already on the system, install it first, then perform the following procedure to install **FLOPPY.SYS** for the floppy drive.

Windows NT's Default Directory Name, "WINNT", Has Not Been Changed:

1. Insert in drive A the diskette which contains **FLOPPY.SYS** and **INSTALL.BAT** in its root directory and switch to drive A.
2. Type **INSTALL** and press **Enter**. The **FLOPPY.SYS** file on the diskette will be copied onto the **FLOPPY.SYS** file in the DRIVERS subdirectory.
3. Restart Windows NT.

Windows NT's Default Directory Name Has Been Changed:

1. Insert in drive A the diskette which contains **FLOPPY.SYS** and **INSTALL.BAT** in its root directory (do not switch to drive A).
2. Type CD\<Windows NT directory name>\SYSTEM32\DRIVERS (while at **C:>**). Type DIR and search for the **FLOPPY.SYS** file.
3. Copy **FLOPPY.SYS** to a different name, for example, **FLOPPY.OLD**. This will save your old **FLOPPY.SYS** file in case of later use.
4. Copy the **FLOPPY.SYS** file from drive A by typing

   ```
   COPY A:\FLOPPY.SYS C:\<Windows NT directory
   name>\SYSTEM32\DRIVERS\FLOPPY.SYS
   ```

5. Restart Windows NT.

Audio Utilities

5

5 Audio Utilities

Overview

Audio Utilities Diskettes #1 and *#2* come as part of the audio unit. The audio unit is hardware compatible with ADLIB and Sound Blaster1[1] and software compatible with Microsoft Windows Sound System. This chapter describes the installation procedure of the audio driver and various audio applications available on the two diskettes. The audio driver is to be used with Windows version 3.1 only.

Note 1

Sound Blaster Compatible: compatible with Sound Blaster™ version 2.01 voice I/O functions as documented in the Sound Blaster Series Developer Kit (except 44KHz playback).

Installation

Perform the following procedure for the standard/full installation of the audio driver and audio applications.

Note: Make sure that *Setup*'s *Notebook Audio function* field is set "**Enabled**" for the audio feature to work properly. How to change the setting of the *Notebook Audio function* feature is described in the section, "The Setup Program," in Chapter 4, "Operation," in the notebook's *Hardware User's Manual.*

1. Insert *Audio Utilities Disk #1* in drive A.
2. Enter *Windows version 3.1* and open the File Manager utility.
3. Open drive A and double-click on the **SETUP.EXE** file icon.
4. Click on the Continue button.
5. Click on the Driver Installation icon.
6. Click on the AUTO icon for automatic board configuration (the I/O address, the IRQ interrupt, and the DMA channel will be auto-configured).

Note: For any software (that supports audio feature) to be compatible with the audio board, set **I/O Address :240; IRQ Interrupt: 2 or 9; and DMA Channel: 1**.

7. Click on the Install Software button to install the audio applications.
8. Click on the OK button to confirm the audio applications' destination directory's location and name.
9. Click on the Create Directory button to create the audio applications directory.
10. Click on the Complete Installation button for the entire audio application package **or** click on the Custom Installation button and unmark the applications that you do not want to install on the system.

11. The audio applications will be installed. Insert *Audio Utilities Diskette #2* when requested.

12. The Audio Application Software Setup window will reappear. Click on the Exit button to exit *Setup*.

13. Click on the Restart Windows button. After Windows has been restarted, the Audio Applications menu should appear on the desktop along with sound to indicate that the installation has been successful.

Video Utilities

6

6

Video Utilities

Overview

The notebook's display subsystem, built around Cirrus Logic's CL-GD6440 VGA Controller, can support high-resolution display to an external monitor and various display features via the video utilities supplied by Cirrus Logic.

The video utilities can be categorized into five areas. See page 6-2 for a brief introduction. This chapter only describes the installation of the video utilities designed for the DOS and Windows 3.1 environments.

The video utilities supplied by Cirrus Logic are available in the following diskettes:

Label	Contents	Remark
Video Utilities Diskette #1	Video utilities for the DOS environment, including drivers for various DOS applications, and **6440UG.TXT**	Bundled with the notebook
Video Utilities Diskette #2	Video utilities for the Windows 3.1 environment	Bundled with the notebook
Video Utilities Diskette #3	Video utilities for the Japanese Windows 3.1 environment	For Japanese customers only
Video Utilities Diskette #4	Video utilities for the OS/2 2.0 environment	Available from your local dealer
Video Utilities Diskette #5	Video utilities for the Windows NT environment	Available from your local dealer

- For information on using the Japanese Windows and Windows NT consult the section, "Windows 3.1," in the document file **6440UG.TXT.**
- For information on using OS/2 2.0 refer to the section, "OS/2 2.0," in the document file, **6440UG.TXT**.

Video Utilities for DOS

Video utilities for DOS including video drivers for various DOS applications are covered in *Video Utilities Diskette #1*. This section lists the DOS applications for which high resolution display is supported, introduces other utilities, and describes how to install the DOS video utilities.

Video Drivers

The video drivers for the following DOS applications are provided:

Title	Release/Ver No.	Resolution	Number of Colors
AutoCAD 386	Release 11	Multi-res	Multi-color
AutoCAD 386	Release 12	Multi-res	Multi-color
AutoDesk 3D Studio	Ver 1.0, 2.0	Multi-res	Multi-color
AutoShade with RenderMan	Ver 2.0	Multi-res	Multi-color
Lotus 1-2-3	Ver 2.x	Multi-res	16-color
Word	Ver 5.0, 5.5	800 x 600	16-color
Word	Ver 5.0, 5.5	1024 x 768	16-color
WordPerfect	Ver 5.1	Multi-res	16-color

Other Utilities

The following utilities can be used to provide additional video features under DOS. (How to use these utilities is described in the document file, **6440UG.TXT**.)

CLMode The utility allows the user to configure the LCD screen options, define the type of monitor attached, and set the video modes supported by the CL-GD6440 VGA Controller.

Switcher The utility allows rapid configuration of the VGA subsystem. It is a Terminate and Stay Resident program. Once loaded, it'll remain in memory and can be invoked by keystrokes from the keyboard.

Bold Font Driver The utility allows a higher contrast level in some video modes on the LCD screen. It increases the contrast by providing a bold font that is used in place of text that is bright or bold on the CRT.

The video utilities including the video drivers should be installed in the system using the installation program, **INSTALL.EXE**.

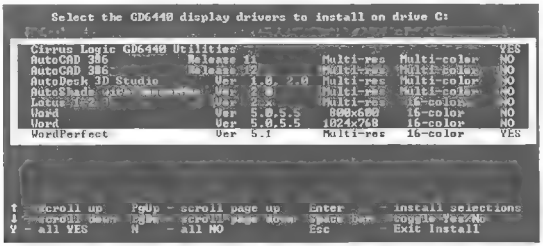
To install video utilities, do the following:

Important: Be sure to install the video driver after its associated application has been installed in the system.

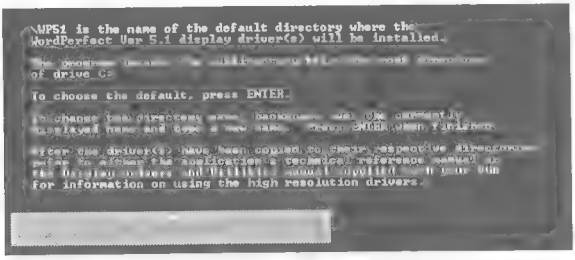
1. Insert in drive A *Video Utilities Diskette #1* and press **Enter**. Then, press any key other than **Esc** to continue.

2. Move the highlighted bar to mark the disk drive in which you want the video utilities installed and press **Enter**. (The following screen message shows Drive C: is the destination drive.)

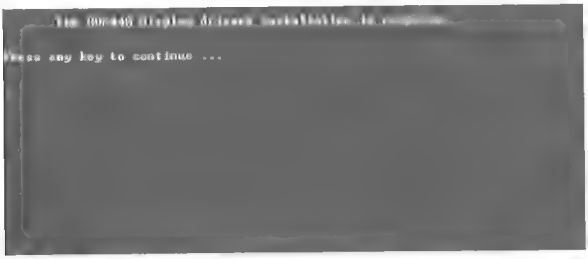
3. Choose the utilities/drivers to install using the suitable keyboard commands. (The following screen message shows Cirrus Logic GD6440 Utilities and the video driver for WordPerfect are chosen to be installed.)



4. Enter the name of the directory where you want each of your chosen utilities installed and press **Enter**. (The following screen message shows the installation program is prompting you for the name of the directory where the driver for WordPerfect will be installed.)



5. Press any key to leave the installation program when you see the following message.



Video Utilities for Windows 3.1

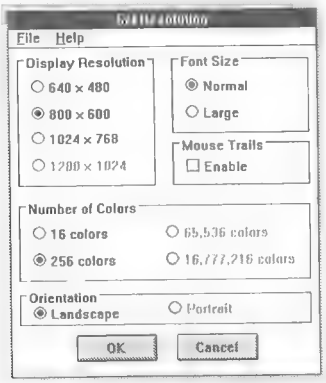
Video utilities for Windows 3.1 are available in *Video Utilities Diskette #2*. This section describes how to use the **SetRES** utility to set different resolutions for Windows 3.1 and briefly mentions other utilities.

To install and operate the **SetRES** utility, do the following:

1. Start Windows.
2. Insert *Video Utilities Diskette #2* in drive A.
3. Enter File Manager and select the A drive icon to display a group of files.
4. Double-click on the **INSTALL.EXE** file icon.
5. Enter the path to your Windows and click on OK.
6. Follow the screen instructions to complete the installation process. (The VGA Utilities group will be established. It will contain the five utilities: **SetRES**, **WinPANEL**, **Panel**, **CRT**, and **SimulSCAN**.)

To use the **SetRES** utility to change the display resolution, do the following: (Changing the resolution to 1280 x 1024 is an exception. See the subsection "Changing the Display Resolution to 1280 x 1024" on pages 8 & 9 for details.)

1. Double-click on the **SetRES** icon in the VGA Utilities application group window to activate the **SetRES** utility.



Depending on the display device you use, the highest resolution you can get is different. (Refer to the following table.) The key combination, **Fn + F4**, can be used to change the display type.

Display Type	Highest Resolution Supported by the CL-GD6440 VGA Controller
LCD screen only (LCD)	640 x 480 pixels
LCD screen & an external monitor (SimulSCAN)	640 x 480 pixels
External monitor only (CRT)	1280 x 1024 pixels, interlaced 1024 x 768 pixels, non-interlaced

Before you proceed to change the display resolution, you should do the following:

Step 1. Switch to the display device(s) you will be using.
Step 2. Close and reactivate the **SetRES** utility if you just changed the display type in Step 1.

2. Click on the display resolution and number of colors you want and then on OK.

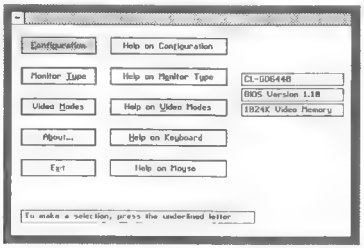
3. Restart Windows for the new format to take effect.

To change the display resolution to 1280 x 1024, do the following:

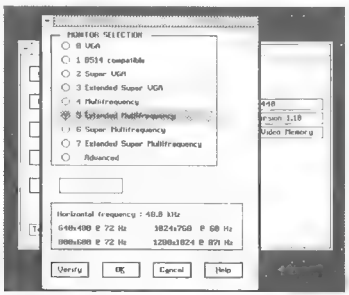
1. Install Cirrus Logic GD6440 Utilities. (Refer to pages 6-4 & 6-5)

2. Go to the directory where GD6440 Utilities were installed.

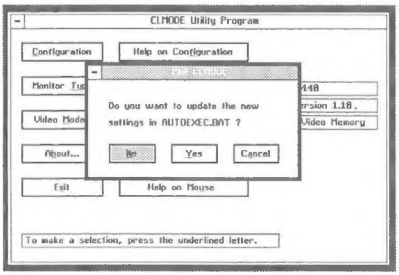
3. Execute the **CLMODE** utility by typing CLMODE and pressing **Enter**. Then, you will see the following screen message.



4. Press the letter "t" to go to the *Monitor Type Setup* screen as shown below, use the upper or down arrow key to move the highlight bar to choice 5, 6, or 7, and press the letter "k" to go to the main screen.



5. Press the letter "x" to display the following screen message. Press the letter "y" to update the new settings in your **AUTOEXEC.BAT** file or "n" not to do the updating. (If you press "y" to update your **AUTOEXEC.BAT** file, the system will automatically set the monitor type to the one you just selected every time you boot the system.)



Note: Since different monitors may support different frequency ranges, it is highly recommended that you use the **CLMODE** utility to reset the monitor type which the monitor to be used can support when you want to use it.

Other Utilities for Windows 3.1

In addition to the **SetRES** utility, other utilities in the VGA utilities application group can be used.

WinPANEL	This utility is a Windows program which provides much of the configuration power of **CLMode** from within Windows 3.1.
Panel, CRT and Simul	These utilities are programs to set the current display type from the DOS command line or from within Windows 3.1.

For more information on using the above utilities refer to the document file, **6440UG.TXT**.

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