

OPERATOR'S MANUAL

SupraDrive

Amiga

INTRODUCTION

Congratulations on purchasing a **SupraDrive™** Hard Disk System for your **Amiga®** computer. Your SupraDrive will greatly enhance your computer by providing much better data access time and storage capacity than floppy disks. Directories, icons, and graphics will appear much faster, programs will load quicker, and the Amiga interface will seem smoother.

Prize Performance

Of course, one of the most important reasons to get a SupraDrive is performance, and now you've got it. Your SupraDrive has been carefully designed and finely tuned by engineers who truly understand the intricacies of the Amiga, and the result is the fastest line of hard disks in the industry. Only the best drive mechanisms are used, blind data transfers make the drives three times faster, and Supra software takes full advantage of every shot at speed, including making the most of the **Fast File System**.

Advanced, Easy-to-Install Hardware

All SupraDrives give you state-of-the-art hardware design in an easy-to-use product. Computer-specific features include autobooting capabilities for the Amiga 500 and 2000, Amiga bus pass-through for the Amiga 500 and 1000, and optional RAM that fits in the Amiga 500 Supra SCSI Interface and draws its power from the hard disk, protecting the fragile Amiga 500 power supply. Installation is as easy as plugging the interface into an Amiga 500 or 1000 or placing a DMA hard card in an Amiga 2000 expansion slot. And if you want to daisy-chain drives or build a custom system using a Supra SCSI Interface and your own components, you can do that too — Supra makes it easy.

State-of-the-Art Software

Your SupraDrive comes with many programs, but three are especially important for enhancing its performance and usefulness. The first is the hard disk formatting and partitioning program, **SupraFormat™**, which allows you to divide the hard disk into as many as 30 individual partitions, each accessed as an individually named logical disk drive (**dh0:** through **dh29:**). This allows your computer to access information on the disk more efficiently, improving overall system performance. The second is **SupraEdit™**, which gives you maximum flexibility by providing full access to mount list parameters without actually having to maintain a mount list. The third program is **CLImate™**, which makes your computer easier to use by letting you bypass the Amiga's Command Line Interface (**CLI**) and perform many operations without using the keyboard.

All Supra software is compatible with **Workbench™ 1.3** — including the **Fast File System (FFS)** and autobooting — as well as earlier versions of Commodore-Amiga software. And Supra software gives Amiga Bridgeboard™ owners an extra benefit — the ability to use part of their SupraDrives for **MS-DOS** partitions.

Easy to Use

When shipped, SupraDrives are completely formatted and ready to use. All you need to do is plug the drive in and turn on your Amiga. The drive will automatically boot, and the **Workbench** will appear with an icon for each hard disk partition. Then you can use the SupraDrive the same way you would use a regular floppy disk — you can create, modify, save, and delete files; run applications; and do anything else you need to do.

Please carefully follow the instructions in this manual for installing and getting the most from your SupraDrive. With proper care, your SupraDrive should give you many years of trouble-free operation.

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1

INSTALLING YOUR SUPRADRIVE

Installation instructions for different Supra products can be found in the following places:

<u>Task</u>	<u>Location of Instructions</u>
connecting an external Supra-Drive to an Amiga 500 or 1000	first half of this chapter
installing an internal Supra-Drive in an Amiga 2000	second half of this chapter
building a custom system using your own components and a Supra SCSI Interface	separate installation instructions (supplied with interface kits)

Information on connecting more than one hard disk to your Amiga is in the Docs folder on the SupraTools floppy disk.

NOTE — If you have an autoboot ROM in your Supra SCSI Interface and you *don't* have a **Kickstart™ 1.3** (or later) ROM in your computer, you must add a **Kickstart 1.3** ROM to your computer or remove the autoboot ROM from your interface.

To determine if you have a **Kickstart 1.3** ROM, boot your Amiga without a hard disk connected to your system. If your Amiga asks for **Workbench 1.3**, you *do have* a **Kickstart 1.3** ROM. If it asks for **Workbench 1.2**, you *don't have* a **Kickstart 1.3** ROM.

If you *don't have* a **Kickstart 1.3** ROM and your system won't boot when your hard disk is connected (and your screen stays blank), you have an autoboot ROM in your interface. Contact your dealer to obtain a **Kickstart 1.3** ROM, or refer to the separate instructions called *Removing Autoboot ROMs from a Supra SCSI Interface*.

Connecting an External SupraDrive to an Amiga 500 or Amiga 1000 Computer

Unpacking

The following items should be included in your SupraDrive package:

- SupraDrive Hard Disk
- Supra SCSI Interface
- AC power cord
- two floppy disks: **SupraBoot** and **SupraTools**
- this operator's manual

CAUTION — Like any hard disk, the SupraDrive is a very fragile piece of equipment. Be very careful when handling it. Mechanical shock, high or low temperature extremes, excessive moisture, and a sudden drop or jarring should all be avoided.

We recommend saving the SupraDrive's original box and packing materials in case you need to move or ship your drive.

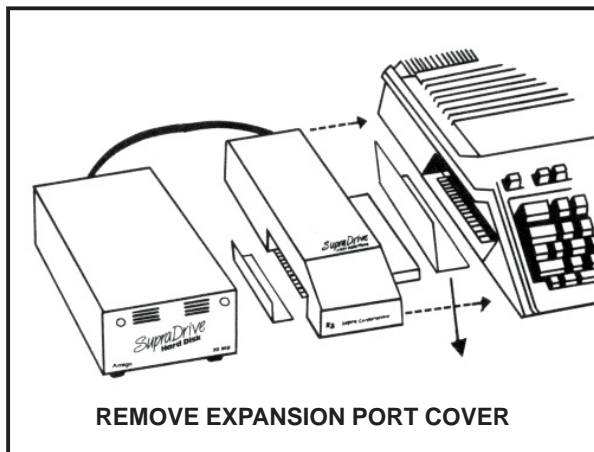
Before using your SupraDrive, please make back-up copies of **SupraBoot** and **SupraTools**. For your convenience, neither disk is copy protected.

Connecting the SupraDrive to Your Amiga

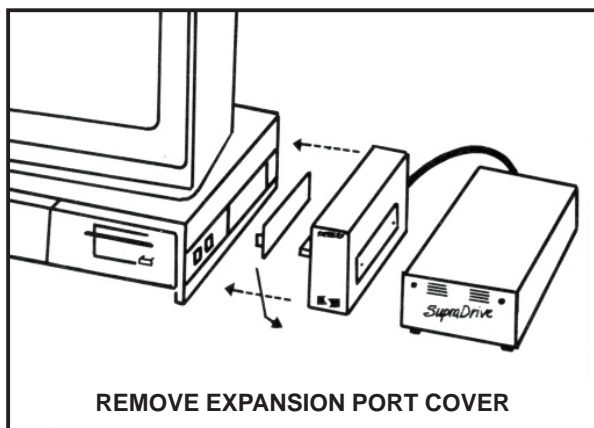
Before connecting the SupraDrive to your Amiga, make sure both are turned off and unplugged. Then follow these steps:

1. Connect the interface to the expansion port on the side of your Amiga. (The expansion port is on the left side of the Amiga 500 and the right side of the Amiga 1000.) You may need to remove the plastic cover from the expansion port.
2. Connect the SupraDrive's interface cable to the back of the interface.
3. Connect the power cord to the SupraDrive and an AC power outlet.

NOTE — It is very important that nothing is blocking the SupraDrive's vents so it has adequate airflow for internal cooling.



Connecting a SupraDrive to an Amiga 500



Connecting a SupraDrive to an Amiga 1000

Connecting RAM Boards to the Amiga 500 or Amiga 1000 Supra SCSI Interface (Optional)

Before connecting RAM boards to the SupraDrive Interface, make sure that the SupraDrive and your Amiga are turned off. Then follow the instructions that came with the RAM board and these guidelines.

Supra RAM Boards for the Amiga 500

Supra Corporation makes specialized RAM boards that can be mounted inside the SupraDrive Interface to expand your RAM capacity. These RAM boards offer two important advantages over third-party RAM boards. The first is assured compatibility with the SupraDrive's SCSI Interface on the Amiga bus (sometimes two products plugged into the bus will not work well together). And the second is that the memory modules are fully powered from the drive's own power supply, avoiding problems that can arise from RAM boards straining the Amiga 500's power supply.

Instructions for mounting these RAM boards are provided with the boards. For further information, contact your dealer or Supra Corporation.

Third-Party RAM Boards for the Amiga 500 or Amiga 1000

Some other companies make external RAM boards you can connect to your Amiga's expansion bus (where the Supra SCSI Interface connects). We have found that most of these boards work best when the RAM board is *not* between the Supra SCSI Interface and the Amiga. When connecting third-party RAM boards, keep the following points in mind:

- You may need to experiment to determine the ideal order of other RAM boards to determine what order allows each board to work properly.
- RAM boards that don't allow additional expansion devices to be attached must be placed farthest from the Amiga.
- RAM boards that fully meet the Amiga standards for "auto-configuration" and properly pass the expansion bus can be placed between the Amiga and the Supra SCSI Interface.

Installing an internal SupraDrive in an Amiga 2000 Computer

If you have an internal SupraDrive with a 3-1/2" hard disk, it is set up as a "hard card" (the hard disk mounted on the interface), so that all you need to do is plug in the interface as described in this chapter, and your drive is ready to use. If you do not want to use a hard card, you can call or write Supra Corporation and get an installation kit that includes installation instructions and necessary hardware.

If you have an internal SupraDrive with a 5-1/4" hard disk, the hard disk mechanism itself is too large to be mounted as a hard card. To install your hard disk system, follow the separate enclosed installation instructions, and skip the rest of this chapter.

The rest of this chapter explains how to install a hard card.

Unpacking Your Hard Card

The following items should be included in your SupraDrive package:

- hard card (hard disk mounted on a Supra SCSI Interface)
- SupraDrive label
- two floppy disks: **SupraBoot** and **SupraTools**
- this operator's manual

CAUTION — Like any hard disk, the SupraDrive is a very fragile piece of equipment. Be very careful when handling it. Mechanical shock, high or low temperature extremes, excessive moisture, and a sudden drop or jarring should all be avoided.

We recommend saving the SupraDrive's original box and packing materials in case you need to move or ship your drive.

Before using your SupraDrive, please make back-up copies of **SupraBoot** and **SupraTools**. For your convenience, neither disk is copy protected.

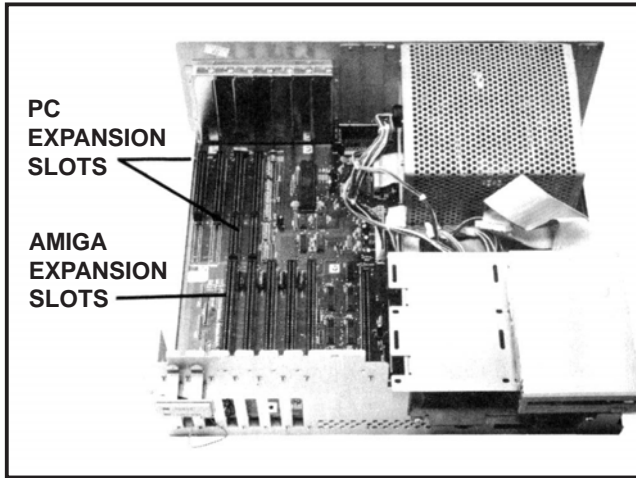
Installing the SupraDrive

Before connecting the SupraDrive to your Amiga, make sure your computer is turned off and unplugged. Then work through the next few sections.

Open the Case

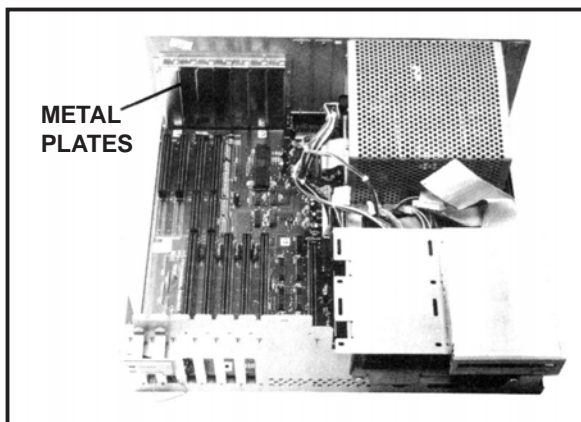
Using a Phillips screwdriver, loosen the five screws that hold the Amiga's case together. There are two screws on each side and one on the back; the one on the back is at the top in the center. Remove the Amiga's top and set it aside.

With the cover removed, you can see the five internal Amiga Expansion Slots and the five PC Expansion Slots, shown below. The hard card will go in one of the Amiga Expansion Slots.

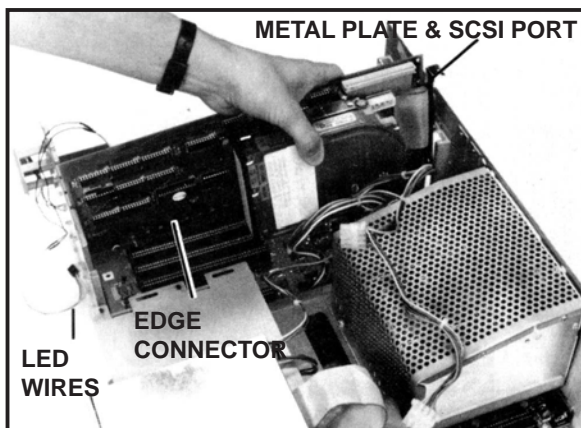


Install the Hard Card

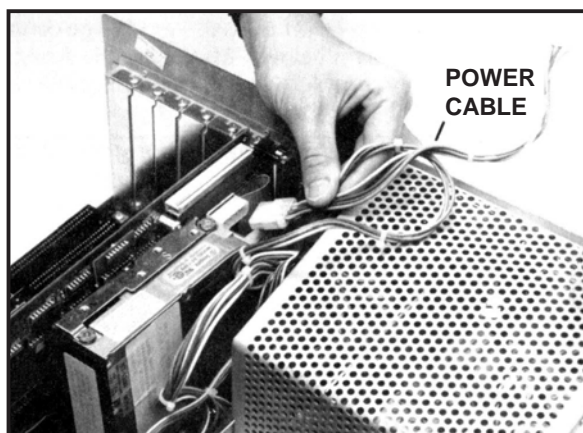
1. The hard card can be installed in any one of the Amiga Expansion Slots, but if it is placed in any but the one closest to the floppy disk drive, it will take up two slots. Refer to the manuals for your other peripherals and cards to determine if they need to be in specific slots or connected in a specific order.
2. On the back of the Amiga are metal plates that cover holes that correspond to the Amiga's internal expansion slots. They're shown in the following illustration. Remove the plate that lines up with the expansion slot you're going to put the interface in. Save the screw that held the plate in place.



3. Note that the Supra SCSI Interface has a metal plate attached to it that is similar to the one you just removed from the back of the Amiga. Hold the interface over the expansion slot so its metal plate and SCSI port face the back of the Amiga and the interface's gold edge connector points down (as shown below). Make sure the Amiga's internal power cable and LED wires are out of the way.



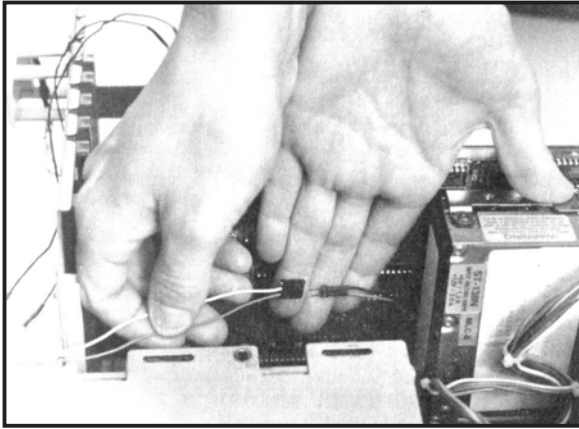
4. Put the interface into the slot and slide it down, holding the cables out of the way as necessary. Push the interface down so the edge connector is snug in the Amiga's internal expansion slot. Make sure the interface's metal plate goes through the hole in the bottom of the Amiga case. You have to push firmly on the interface to get it in as far as it needs to go; when pushed in far enough, less than 1/4" of gold shows above the expansion slot. Also be sure the interface is level.
5. Get the screw that formerly held in the Amiga's metal plate. Use that screw to connect the interface's metal plate to the Amiga case in the same way the Amiga's metal plate was connected before you removed it.
6. Plug a female connector from the Amiga's internal power cable onto the power connector on the hard disk (see below). Make sure the cable is pushed in squarely and as far as it can go.



Connect the LED

Find the wires that are connected to the **HARD DISK** and **POWER** LEDs on the left front of the Amiga. Plug the hard disk's LED wires into the connector attached to the Amiga's LED wires, as shown below.

Note that the Amiga's connector has three holes in it, but only two have wires going to them. Be sure the two wires from the hard disk are plugged into the holes that correspond to the two wires from the Amiga. If the connection is loose, use a piece of tape (any type) to secure it.



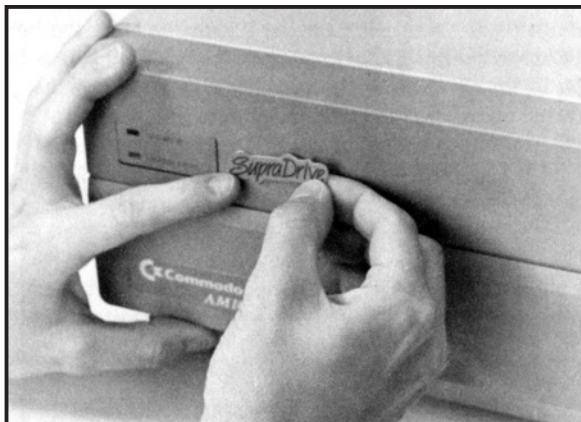
Later, when you boot your system as described in the next chapter, watch the **HARD DISK** LED on the left front of the Amiga to see if it flickers on and off as the system boots. If it doesn't flicker, you may need to change the polarity of the LED by switching the two wires around. To do this, turn off the Amiga, unplug the hard disk LED wires from the Amiga's LED connector, turn over the connector, and plug the wires back in again. (Be sure the hard disk LED wires go into the connector holes to which the Amiga LED wires are connected.) Then try booting again.

Close the Case

Tuck the LED wires inside the Amiga case, replace the Amiga case top, and replace the five screws that hold the top in place. Then connect the monitor, power cord, and mouse. Your SupraDrive is now ready to use.

Apply the SupraDrive Label (Optional)

To determine where you're going to place the label, hold it up against the Amiga case front, to the right of the LEDs, as shown below.



Then peel the back off the label and carefully stick the label onto the Amiga case.

Using Accelerator Boards in an Amiga 2000 (Optional)

If you install a 68020, 68030, or 68060 accelerator board in your Amiga 2000, you need to use the **SupraEdit** program to mask out DMA to 32-bit RAM. A mask value of 0 will allow things to work safely, although not necessarily as fast as possible. To determine the optimum mask value for your system, experiment and/or contact the manufacturer of your accelerator board.

2

GETTING STARTED

Booting Your System

“Booting” means turning on a system’s power and giving it the software it needs to operate. Supra offer two ways to boot your hard disk system:

- traditional booting from a floppy disk
- “autobooting,” which causes your hard disk and computer to boot automatically when you turn them on

Note that autobooting presently is not available on Amiga 1000 systems.

Booting From Floppy Disk

To boot your system from a floppy disk, follow these steps in order.

1. *If you have an external SupraDrive:* Turn on your SupraDrive, and then turn on your Amiga. If both are connected to a power strip, you can turn on both simultaneously by flipping the power strip switch.

WARNING — *If you have RAM in your Supra SCSI Interface:* Do not turn on your Amiga before you turn on your SupraDrive, or you may damage your system.

If you have an internal SupraDrive: Turn on your Amiga.

2. When the Amiga requests the **Workbench** disk, insert the **SupraBoot** disk.

After you boot your system from a floppy disk, the Amiga start-up sequence will run. When it is completed, you'll see the **Workbench** screen, one icon for each SupraDrive partition, and the **SupraBoot** disk icon. If this fails to occur, refer to Chapter 8.

Once the **Workbench** and icons appear, your SupraDrive is completely functional and can be accessed just like a floppy drive. You can copy files to and from the drive, copy files between partitions, and access directories on individual partitions.

Autobootling

To autoboot your system, you must have both of the following:

- a **Kickstart 1.3** or later ROM in your Amiga 500 or 2000 computer
- an autoboot ROM on your Supra SCSI Interface

If you have both, you can autoboot your system as follows:

- *If you have an external SupraDrive:* Turn on your SupraDrive, and then turn on your Amiga. If both are connected to a power strip, you can turn on both simultaneously by flipping the power strip switch.

WARNING — *If you have RAM in your Supra SCSI Interface:* Do not turn on your Amiga before you turn on your SupraDrive, or you might damage your system.

- *If you have an internal SupraDrive:* Turn on your Amiga.

After you boot your system, the Amiga start-up sequence will run. When it is completed, you'll see the **Workbench** screen and one icon for each SupraDrive partition. If this fails to occur, refer to Chapter 8.

Once the **Workbench** and icons appear, your SupraDrive is completely functional and can be accessed just like a floppy drive. You can copy files to and from the drive, copy files between partitions, and access directories on individual partitions.

Miscellaneous Booting Information

You can override autobooting at any time by inserting a bootable floppy disk in your floppy disk drive before turning on your system. If you do this, the boot partition will still be mounted, but the floppy disk will be considered the system disk. The only way to keep the boot partition from being mounted is to remove the autoboot ROM from the Supra SCSI Interface.

Some program disks will not let you use the **SupraBoot** disk to boot your hard disk. These programs are usually copy-protected. To use one of these programs, you must boot using the program disk. Then, depending on the particular program, you may or may not be able to access the hard disk while using the program.

If you have more than one SupraDrive or more than one SCSI device connected to your system: When you turn on your system, the Supra booting software will start looking for the boot partition on SCSI device 0, then will look on SCSI 1, and so on. The first boot partition found will be used to boot the system. Any other boot partitions will be mounted but not be used for autobooting.

Resetting Your System

Occasionally, this manual tells you to reset your system. Amiga computers offer two types of resets: hard and soft. If the manual does not specify hard or soft, either reset will work.

To perform a hard reset (also called a cold reboot), turn off your computer, wait approximately 30 seconds to let the computer power off completely, and then turn your system on again.

A soft reset (also called a warm reboot) lets you reset your system without turning your computer off. To perform a soft reset, simultaneously hold down the **CONTROL** key and both large “**A**” keys (located at either side of the space bar — not the key used to type the letter A).

If you have **Kickstart 1.3** or later, and you don’t have an autoboot ROM in your Supra SCSI Interface, you may want to create a “recoverable ramdrive” so that you can perform a soft reset without using a boot floppy disk. Recoverable ramdrives are explained in the *Enhancer Software Featuring AmigaDOS Version 1.3* manual, which is listed in Appendix C.

Parking Your SupraDrive Before Moving It

WARNING — *If you don't "park" your drive before moving it very far, you may destroy your data.*

Every SupraDrive has an internal read/write head that skims along the surface of the magnetic media. Sudden mechanical shocks or impact can cause this head to mar the surface of the disk, causing permanent damage. To prevent this from happening while the drive is being moved, you must use the **Park** program to "park" the drive head in a special area of the drive to keep it secure.

Before parking your drive, *make sure that all other drive access has completed*. Then to park the drive, run the **Park** utility that came with your SupraDrive. Wait for the message that the hard disk is parked, and then turn off your system as described in the next section. The next time you use the drive, the head will automatically be "unparked."

If, after running **Park**, you don't wait for confirmation that your drive is parked, **AmigaDOS™** may "validate" your hard disk the next time you boot up. This does not cause any damage, but it takes from 5 to 20 minutes and causes the system to appear to freeze up. Note that a drive does not have to be mounted to be parked.

Turning Off Your System

If you have an external SupraDrive: Turn off your Amiga, and then turn off your SupraDrive. Or, if you have them both connected to a power strip, turn them both off at once by flipping the power strip switch.

WARNING — *If you have RAM in your Supra SCSI Interface: Never turn off the SupraDrive before turning off the Amiga. If you turn off the SupraDrive first, you may damage your Amiga bus.*

If you have an internal SupraDrive: Simply turn off your computer to turn off the entire system.

Reading Updates to This Manual

Information on product features that change after this manual is printed are included in the **SupraNews** file, which is in the **Docs** folder on **SupraTools**. The **Docs** folder also contains files that explain topics such as those listed below, which are particularly volatile or beyond the scope of this manual:

- using clocks with your SupraDrive
- using an Amiga Bridgeboard with an Amiga 2000
- using a file system other than the original Amiga file system or the **Fast File System**
- connecting additional SCSI devices to your system (daisy-chaining)
- files the boot partition must contain

3

USING YOUR SUPRADRIVE

Copying Files

Copying files on a hard disk is just like copying files on a floppy disk, as explained in your computer manual. If you have problems when trying to copy a file from the **Workbench**, you may need to use one of the following:

- **CLImate**, explained in Chapter 4
- a different **CLI** alternative program
- the Amiga's Command Line Interpreter (**CLI**), covered in Chapter 5

Using Applications Software

Some applications software may not work efficiently and possibly won't work at all with a hard disk. Before using applications software with your SupraDrive, please consider the following issues. If you have problems, refer to Chapter 8 for troubleshooting ideas.

Software Written for Use with Workbench 1.1

Do not use software written for use with **Workbench 1.1**. If you do, it will probably damage the software and data on the hard drive.

Programs that are incompatible with the Fast File System

A few programs are still not compatible with the Amiga **Fast File System (FFS)**. Unless you have a special need for other file systems, we recommend using only **FFS**, because it's very reliable and much faster than the original Amiga file system, and because it allows you to access more of the drive than does the original file system.

If you have programs that must use the original Amiga file system, you may want to reconsider using them. Generally, these programs are disk editors or other utilities that rely on a disk's structure and organization. Several similar programs that *do* support **Workbench 1.3** and **FFS** are already available.

Software that Does Not Work Efficiently with a Hard Disk

Some software, as shipped, is not configured to work efficiently with a hard disk. This means you may have to experiment a little to figure out what needs to be done to make the software work. The rest of this section describes some situations we know of where simple solutions exist to solve confusing problems. These solutions may give you clues to solving problems you encounter with other software.

DeluxePaint II™

This program sometimes requires a little special attention, as described below.

If your system includes only one floppy disk drive: You will probably want to use the **CLI Assign** command (explained in Chapter 5) to assign **df1:** to the location on your hard disk where your picture and brush files are. The following is an example of assigning **df1:** to **dh1:**:

Assign df1: dh1:DPaint/pictures

If your system includes two floppy disk drives: You must have a disk in **df1:** even if you're doing everything from the hard disk.

Everyone: The file selector in **DeluxePaint II** lists **df0:**, **df1:**, and **dh:** as drives that might hold your data files. But if you select **dh:**, it won't be accessed because the Amiga doesn't recognize **dh:** as a valid partition.

One possible solution to this problem is to make the Amiga find a **DPaint/pictures** directory on partition **dh1:** whenever it looks for **dh:**, as follows:

1. So that your **DPaint/pictures** directory is always set up when you reboot, remove the leading semicolon from the following line in the start-up sequence that came with the SupraDrive. (Chapter 5 provides information on the **Assign** command and changing the start-up sequence.)

; Assign dh: dh1:DPaint/pictures

2. Create a directory in **dh1:** called **DPaint** and a directory in **DPaint** called **pictures**.
3. Reset your system.

After the Amiga receives the **Assign** command, you can select the **dh:** gadget on the file selector, which will cause the **DPaint/pictures** directory on drive **dh1:** to be read and displayed. Naturally, you can assign **dh:** to any legal drive and path that is convenient for you.

You may find other software that requires similar modifications. Pay particular attention when a program requests a disk with a specific name. Try using the **Assign** command to give that name (followed by a colon) to the hard disk partition and drawer you want to use.

DeluxeVideo™

When using a version of the **DeluxeVideo** program that is copy protected, do not copy the “**SigFile**” file in **DeluxeVideo’s c** directory onto your hard disk. If you do, all the files that are accessed afterwards may be corrupted. If the files become corrupted, you will have to delete all the damaged files or maybe even zero (erase) some of your hard disk’s partitions.

To use **DeluxeVideo** without having to worry about this problem, contact Electronic Arts for a version of the program that’s not copy protected.

Improving Hard Disk Speed

As you put more and more files and directories on your SupraDrive, three things may inhibit its speed: large amounts of data, fragmentation of files, and using the **AddBuffers** command. You can easily limit the effects of these factors and improve your hard disk's performance.

Large Amounts of Data

The first way you can improve your hard disk's speed is simple and based on this fact: the more data that's stored on a disk, the longer it takes to find specific data. You can easily improve your hard disk's speed by deleting all unnecessary files and by storing seldom-used files on archive diskettes.

Fragmentation

A second way that you can improve your hard disk's speed is by reducing the effects of file fragmentation.

When you first get your hard disk and start saving files, the files are stored sequentially on the hard disk, one after the other. Then when you delete a file, the disk has an empty, unused space where the file was. Now when you save a new file, it may be divided into pieces that are placed in the empty spaces on the hard disk.

The more files that are divided and stored like this ("fragmented"), the more searching the drive has to do to access files. Whereas accessing an unfragmented file would take only one action, accessing a fragmented file could require several (to find all the pieces), obviously taking longer.

Thus, as more and more files are fragmented, the hard disk gets progressively slower. To increase the hard disk's speed, you can periodically copy all the essential information from your hard disk onto another storage medium, "zero" your hard disk's partitions, and then place your files back on the hard disk. (As an alternative, you could copy all your files onto one partition (if possible), zero all the other partitions, and then put the files back in the zeroed partitions.)

Zeroing completely erases the partitions' directories, effectively leaving a blank slate. When you copy your files back onto the hard disk (or partition), each file will be placed in one continuous segment. Note that zeroing is different than simply deleting all the files. Deleting leaves remnants of files on the hard disk and in the directories, while zeroing completely clears the partition. Chapter 6 explains zeroing.

The AddBuffers Command

A third way you can improve your hard disk's speed is by NOT using the **AmigaDOS 1.2 AddBuffers** command to create additional buffers for the hard disk. This command is designed to improve floppy disk performance, but it has the opposite effect on hard disks, causing the hard disk to access files more slowly. If you use the **Amiga DOS 1.2 AddBuffers** command on an Amiga 2000 SupraDrive, it may create read/write errors.

Note that the **AddBuffers** command that comes with **AmigaDOS 1.3** does not cause this problem.

Installing Supra System Software

Every once in a while, you may need to install Supra software. There are two files that do this: **Install-Sequence** and **SupraAutoInstall**.

Use **Install-Sequence** if you have accidentally destroyed a system directory. It copies the entire **Workbench** disk and select files from the **SupraBoot** disk onto the hard disk system partition (**sys:**). It also copies select files from the Commodore-Amiga **Extras** disk onto **sys:**. Make sure you have all three floppy disks handy before running **Install-Sequence**.

Use **SupraAutoInstall** if you have just received an update of the autoboot software or the **Fast File System**, or if you have just added an autoboot ROM to your Supra SCSI Interface. It is an executable program that installs the **Fast File System** and **SupraAuto.DevInit** files on a reserved part of the hard drive.

To invoke either one, click on its icon in the **Supra** drawer or type its name followed by a carriage return from a **CLI** window. When it is finished, reset your system and your system will be ready to use.

Backing Up the SupraDrive

“Backing up” a hard disk means copying the disk’s contents to some other storage medium, such as floppy disks or magnetic tape. Backup copies can save the day when things like power failures or system crashes cause the data you have stored on your hard disk to be lost. We recommend you back up your SupraDrive regularly. (**Climate** offers an easy way to copy groups of files and drawers all at once.)

We recommend that you carefully test any backup software before using it on your SupraDrive, because some public domain programs have been known to erase the entire contents of the drive that they were supposed to be backing up.

Saving Preferences

If you autoboot your system, your preferences are set automatically when you boot, and you can skip this section.

When you save your system preferences (in the **Preferences** window), the Amiga creates a file called “**system-configuration**” in the **devs** directory on **dh0:**. If you boot your system from a floppy disk, you must copy the **system-configuration** file to your boot disk to cause your preferences to be set automatically when you boot your system.

If you use **Workbench 1.3** or later, you can do this from the **Workbench**, as follows:

1. Open the **Prefs** drawer.
2. Click on the **Copy Prefs** icon. This copies the **system-configuration** file from the current **devs:** drawer to **df0:devs**.

If you use **Workbench 1.2** or earlier, you cannot perform this operation from the **Workbench**. Instead, use **CLImate** to copy the file, as follows:

1. Put **SupraBoot** in **dh0:** and run **CLImate**.
2. Make **dh0:** the source device and **SupraBoot** the destination device (by clicking on the **Source** or **Destination** gadget and then clicking on the appropriate device).
3. Click on **devs** in the source directory using the right mouse button, and then click on the “**system-configuration**” file with the left mouse button.
4. Click on the **Batch** gadget, and then click on the **Copy** gadget. The file will be copied to the **SupraBoot** diskette.

If you prefer to use **CLI**, you can perform the same task by typing the following in **CLI** (with **SupraBoot** in the floppy drive):

Copy dh0:devs/system-configuration to df0:devs

Renaming Partitions

By default, SupraDrive partitions are named **SupraDrive0**, **SupraDrive1**,... **SupraDrive29**, where **SupraDrive0** is the first partition. You can easily change a partition name by using **Rename** from the Workbench menu — the same way you would change a floppy disk name.

Because your partitions can have any name, this manual refers to them as **dh0:** (for the first partition), **dh1:** (for the second), etc.

4

USING CLIMATE

Introduction

CLImate has been designed to give you an easier, more effective way of managing disks and disk files on your Amiga. With **CLImate**, you can use the mouse to perform various disk and file operations. Normally, these operations would require using the Command Line Interface (CLI) and **AmigaDOS** commands. This chapter explains each of **CLImate's** functions.

CLImate Features and Capabilities

CLImate allows you to perform all of the following tasks without using CLI:

- Copy from one disk to another without using the keyboard.
- Easily examine a disk's contents.
- Determine the size of disk files.
- Rename files.
- Move files from one disk to another.
- Delete files.
- Create new directories.
- Use **AmigaDOS** "wild cards."
- Print files and have full control over the printout.
- Display files and have full control over the display.
- Format disks and control the format options.
- Use up to three external 3-1/2" or 5-1/4" floppy disk drives and four or more hard disk drive partitions.

CLImate System Requirements

CLImate will operate on an Amiga with at least 512K of RAM. All connected disk drives are automatically recognized, including the external A1020 (5-1/4") floppy drive.

NOTE — You must use **Workbench** version 1.2 or later with **CLImate** for **CLImate** to function properly. To obtain the most recent version of **Workbench**, contact you local Amiga dealer.

Starting CLImate

To start **CLImate**, double click on the **CLImate** icon. The **CLImate** title screen will be displayed until you click either mouse button, and then you'll see the **CLImate** screen, shown below.



Using CLImate

This brief overview will help you put together the individual details of **CLImate**. Once you understand the overview, the rest of the chapter will make more sense.

First, **CLImate** lets you access information on two devices — such as a floppy disk drive and one of your SupraDrive partitions — at the same time. One of these devices is your “source” device, and the other is your “destination” device. After you select them, they are displayed in the two large windows on the **CLImate** screen. If you are copying or moving a file, or performing some similar operation, the file comes from the source device and goes to the destination device.

Second, **CLImate** has four general “modes” of operation: **Batch**, **Rename**, **Display**, and **Showpic**. The following list shows the operations you can perform in each mode:

Batch	copy, move, delete, and print files and directories
Rename	rename files and directories
Display	display the contents of files
Showpic	display “.IFF” picture files

Third, **CLImate** lets you perform additional tasks regardless of the mode it is in: formatting floppy disks, creating directories, and using **AmigaDOS** features without quitting **CLImate**.

With this basic knowledge, you’ll be an efficient **CLImate** user in no time. Three small details to note before you get started:

- All of **CLImate’s** functions are visible on the screen; there are no hidden pop-up menus that require pressing the right mouse button to access.
- The **CLImate** screen colors are fixed for maximum readability and cannot be changed.
- **CLImate** requires 125K of the Amiga’s RAM memory. (Refer to the “CLImate and RAM” section for more information.)

Source and Destination

To specify the source and destination devices, first click on either the **Source** or **Destination** gadget, and then click on a device gadget (**df0:**, **dh0:**, etc.). (Device gadgets are in the center of the screen and refer to 3-1/2" and 5-1/4" floppy drives, RAM, and hard disk drive partitions.) This will cause the contents of the selected device to be displayed in the **Source** or **Destination** window (whichever you chose) and the name of that device to be displayed just below the window.

For example, to select files from the internal Amiga disk drives, click on **Source**, and then click on **df0:**. The contents of **df0:** will appear in the **Source** window, and the line just below the **Source** window will say "**df0:**."

Within the **Source** and **Destination** windows, file names are displayed in black type, and directory names are displayed in white. You can also display the names of files and/or subdirectories that are in a directory by moving the mouse pointer to the directory name and then clicking the right mouse button.

You can also specify source and destination devices which do not have gadgets. To do this, perform these steps:

1. Click on the line just below the **Source** or **Destination** window.
2. To clear the line, press the right "Amiga" key (to the right of the space bar), the Control key, and the x key simultaneously.
3. Type the name of the device you want to specify, followed by a carriage return.

You can also use this method to access low-level directories faster.

Parent

The **Parent** gadget, in the center of the screen, displays the contents of the "parent directory" — the directory that holds the file or subdirectory that is currently displayed.

Double Arrow ()

The double arrow gadget, in the center of the screen, is used to “swap” the devices and directories that are in the **Source** and **Destination** windows.

For example, suppose you just finished copying a file from **RAM:** to your hard disk’s **dhØ:** partition, and now you want to copy a file from **dhØ:** to **RAM:**. To do the first operation, **RAM:** was your source, and **dhØ:** was your destination. Now you need to swap these devices. By simply clicking on the double arrow gadget, **dhØ:** becomes your source and **RAM:** becomes your destination, and you can easily copy a file from **dhØ:** to **RAM:**.

Modes

As noted before, **CLImate** has four modes: **Batch**, **Rename**, **Display**, and **Showpic**. Enter each mode by clicking on its gadget on the **CLImate** screen.

Batch Mode

Batch mode allows operations on multiple files or directories. In this mode, the left mouse button is used to select or unselect files or directories, which can then be copied, deleted, moved, or printed. The right mouse button is used to select a subdirectory, as described in the “Source and Destination” section.

In Batch mode, you can use several of the other **CLImate** gadgets, which the following sections describe.

All

The **All** gadget selects all of the files and/or directories in the selected source or destination window.

Clear

The **Clear** gadget does the opposite of what the **All** gadget does — it “unselects” all of the files and directories in the active **Source** or **Destination** window.

Copy

The **Copy** gadget copies to the destination device all of the files and/or directories that are selected in the Source window.

Move

The **Move** gadget copies all of the files and/or directories that are selected in the **Source** window to the destination device, and then it deletes the copied files from the source device.

Be careful! The **Move** gadget does not work like the Amiga **Trashcan**. When you click on the **Move** gadget, it permanently erases the selected files and/or directories from the source device, and the only way to retrieve them is to copy them back from the device you copied them to.

Delete

The **Delete** gadget permanently deletes (erases) the files and/or directories that are selected in the **Source** window.

CAUTION — The **Delete** gadget does not work like the Amiga **Trashcan**. When you click on the **Delete** gadget, it *permanently* erases the selected files and/or directories from the source device.

Pattern

The **Pattern** gadget allows you to use **AmigaDOS** “wild card” patterns and wild card sort patterns. When you click on **Pattern** and then enter a wild card at the keyboard, all the files that match that pattern will be selected in the active window. A pound sign (#) followed by an asterisk (*) let you create a wild card sort pattern. For complete information, refer to an **AmigaDOS** reference publication.

Print

The **Print** gadget sends files to the printer that is indicated in the **Workbench** “preferences.” After you click on the **Print** gadget, you will see the following window:

PRINTER SETTINGS			
File Name	ON	Time & Date	ON
Page Numbers	ON	Line Numbers	OFF
Lines per Inch	6	Left Margin	1
Lines per Page	66	Right Margin	80
Tab Value	4	FormFeeds	0
CANCEL		OK	

These are the possible settings for the printing options:

File Name	ON/OFF
Page Numbers	ON/OFF
Lines per Inch	6 or 8
Lines per Page	1 through 66
Tab Value (spaces)	1, 2, 4, or 8
Time & Date	ON/OFF
Line Numbers	ON/OFF
Left Margin	1 through 80
Right Margin	1 through 300
Form Feeds (per page)	Ø through 4

You can change these options by clicking on the box to the right of them. The ON/OFF boxes simply switch back and forth when you click the left mouse button; **ON** means include the information, and **OFF** means exclude it. The boxes with numbers in them can be changed by pointing to the number you want to change, holding down the left mouse button, and simultaneously rolling the mouse either away from you (to increase the number) or toward you (to decrease the number).

After you've selected the options you want to use, click on **OK** to print or **CANCEL** to cancel the printing job.

Rename Mode

Rename mode allows you to rename files and directories. To rename a file, use the left mouse button to select a file or directory, or use the right mouse button to select a subdirectory. Only one file or directory can be renamed at a time.

Display Mode

Display mode lets you display files in either ASCII or hexadecimal (HEX) format. If you display a file that is too large to fit on a single screen, use the pause/continue option to scroll through it. In this mode, use the right or left mouse buttons to access subdirectories.

Showpic Mode

Showpic mode allows you to display “.IFF” files, including those from popular “paint” programs and digitizers. **CLImate** will only display .IFF files, and if you try to display a different type of file, it will display this error message at the top of the screen: “**Not an IFF ILBM file**”.

To display a file, use the left mouse button to select the file you want to display. Once the picture is displayed, the right mouse button activates and deactivates “color cycling.” (Color cycling is a technique used by many paint programs to simulate animation or create special effects; only a few pictures have cycling in them.) To stop viewing the picture and return to **CLImate**, press the left mouse button.

Tasks that Aren't Mode-Specific

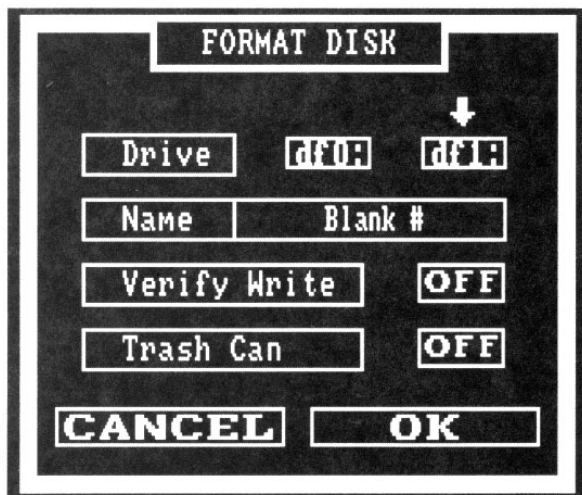
CLImate also lets you perform three tasks regardless of the mode:

- formatting floppy disks
- creating directories
- running other programs and using other Amiga features without quitting **CLImate**

Formatting Floppy Disks

The **Format** gadget lets you prepare blank floppy disks for use. Only disks in **df0:** and **df1:** can be formatted using **CLImate**. Thus, if you need to format a 5-1/4" floppy disk, you must connect your 5-1/4" floppy disk drive so it is the external disk drive that is closest to your Amiga; that is, so it is **df1:**. If you need to format your hard disk, refer to Chapter 6.

When you click on the **Format** gadget, this window will appear:



When formatting a floppy disk, you'll need to type its name using the keyboard. Keep your disk names fairly short, and try to avoid using spaces in them. If you want to separate two words, use the underline character (_). If you follow these suggestions, the disk will be easier to work with if you ever need to use it from **CLI**.

After typing the disk name, you will need to specify some formatting options. One of these is **VERIFY**, which causes **CLImate** to check that your disk is being formatted correctly. **VERIFY** should be set to **ON**. A second option is the **Trashcan**. If you turn the **Trashcan** off, the following will be true:

- You will have more space on the disk you're formatting.
- You won't be able to use the **Workbench Trashcan**.
- Files you delete from the disk will be permanently destroyed, with no way to retrieve them.

Creating Directories

The **Makedir** gadget lets you create new directories in the source or destination directory, depending on which is selected. Once you've created a new directory, you can access it by clicking on its name using the right mouse button.

Running Other Programs and Using Other Amiga Features Without Quitting CLImate

CLImate runs in its own background screen. In other words, you can run other programs and use other Amiga features without exiting **CLImate**. To "hide" **CLImate** in the background temporarily, move the mouse pointer to the front/back gadget (the two small hearts) in the upper right corner of the screen, and click on the left heart. Note that you can pull other screens down over the **CLImate** screen, but the **CLImate** screen itself cannot be pulled down.

CLImate and RAM

CLImate uses approximately 125K of the Amiga's RAM. When you run **CLImate**, it creates a "RAM disk" that the Amiga recognizes as a separate device (like a floppy disk or a partition). This device stays on the Amiga until you reboot or turn off your system.

This RAM has a disk icon on the **Workbench**. You can click on the RAM disk icon and open it just like a regular disk, but you can't delete or rename it. If you have a RAM expansion board, you can copy data from disks into the RAM disk to gain fast access to it.

Quitting CLImate

The **Quit** gadget allows you to exit **CLImate**. Exiting **CLImate** does not erase files from the RAM disk or any other disks.

5

USING CLI AND SHELL

Most of the time, you can avoid using the Amiga's Command Line Interface (**CLI**) and **Shell** by using **CLImate** instead. But some operations related to using your SupraDrive must be done from within **CLI** or **Shell**. This chapter explains the most common of these situations.

Because **CLI** and **Shell** are very similar, this manual uses the name **CLI** to mean either **CLI** or **Shell**. In cases where a distinction needs to be made, the two are named specifically.

For more information on using **CLI**, contact your dealer, or consult the books listed in Appendix C.

The CLI and Shell Icons

Supra's software makes both **CLI** and **Shell** available automatically when you boot your system. To use either one, simply double click on its icon.

From **Workbench 1.3**, the icons can be found in the following places:

CLI	System drawer on dh0: System drawer on the Workbench 1.3 disk
Shell	root directory of SupraBoot root directory of dh0: root directory of the Workbench 1.3 disk

From **Workbench 1.2**, **Shell** is not available, and the **CLI** icon is not visible unless you "turn it on" yourself. If the **CLI** icon is not visible on the copy of **Workbench 1.2** you're using, you can do one of the following:

- Drag the icon from **dhØ:** to your **Workbench 1.2** disk. (This is an easy solution.)
- Drag the icon from **SupraBoot:**. (This is also easy, if you have two floppy disk drives connected to your system.)
- Turn the icon on using **Set Preferences** on the **Workbench** disk, save the preferences, and reboot your system. Refer to your Amiga computer manual for information on how to do this.

The Start-up Sequence

The Amiga start-up sequence, accessible through **CLI**, allows you to customize your system beyond what **Preferences** allows. When the system boots, the start-up sequence executes and does things like load the **Workbench** and set the system clock.

You probably will not have to change your start-up sequence. However, you will need to change your start-up sequence if you want to customize your system as described in the following section or in Chapter 8.

Two versions of the start-up sequence came with your SupraDrive. One is streamlined to be as fast as possible, and the other contains extensive comments explaining each line. By default, your system uses the streamlined version. The one with many comments is an example, to help you learn about the start-up sequence and to provide information you can use if you try to modify your start-up sequence. The streamlined version is in the **startup-sequence** file, and the commented version is in the **commented-sequence** file.

Using CLI Commands to Maximize the Usefulness of a Hard Disk

Two **CLI** commands can be particularly useful in maximizing the usefulness of a hard disk: **Assign** and **Path**. Both simplify access to directories, and both are used in the start-up sequence. While the **Assign** command is useful whether you are using the **Workbench** or **CLI**, the **Path** command is only helpful for **CLI** users.

The **Assign** command lets you assign a logical device name to a directory, partition, or device. It is useful for creating simulated drives and for organizing files into small, manageable groups. The **Path** command lists, creates, or changes the search path that **AmigaDOS** follows when looking for a program (or command) to execute. It allows you to access a file without typing the names of the directories that hold the file.

When a **CLI** command is issued, the computer searches specified directories to find the command. The directories searched are specified by a **Path** command in the start-up sequence. When shipped, the start-up sequence is set up to cause the following directories to be searched in order when a command is issued: the current directory, **RAM**, **c**, **Utilities**, **System**, **Tools**, **s**, **Prefs**, **Supra**, and **c**. The system stops searching when it finds the command.

The **Assign** and **Path** commands are described in the *AmigaDOS Manual* and the *Enhancer Software Featuring AmigaDOS Version 1.3* manual. Both books are listed in Appendix C.

Using Shell Scripts

Shell allows you to create and use “scripts” — single commands that actually execute several commands at once. The *Enhancer Software Featuring AmigaDOS Version 1.3* manual explains how to create and use your own scripts.

The following scripts and possibly others are available in the **s** directory. To run a Supra script, simply type its name.

<u>Script</u>	<u>Purpose</u>
ls	Generates a sorted list of directories and files in the current directory.
ls <i>name</i>	Generates a sorted list of directories and files in the <i>name</i> directory.
drawer <i>name</i>	Creates the <i>name</i> directory.
Install-Sequence	Installs system software. Chapter 3 contains details.

6

FORMATTING, MAPPING, AND ZEROING YOUR SUPRADRIVE

Should You Format, Map, or Zero Your Hard Disk?

Your SupraDrive was formatted before it left the factory, so you don't need to format it to use it. Unless you have a special reason to format, map, or zero your hard disk, you can skip this chapter.

What Are Formatting, Mapping, and Zeroing?

Formatting, mapping, and zeroing are all ways to change your SupraDrive's basic configuration. They differ in what they do and what they are used for.

What They Do

Formatting initializes the hard disk and organizes the disk's storage space so the computer can access it.

Mapping (formatting with the map option turned on) checks all the sectors on the hard disk by reading and writing to them individually and noting which are bad, and then it maps out (makes inaccessible) the damaged areas so the drive won't access them and cause data to be lost. It does all of this in addition to normal formatting. Mapping can take between 30 minutes and 2 hours, depending on the hard disk's size.

Zeroing erases the data in specific partition(s). In addition to deleting files and drawers, it also gets rid of all the information the SupraDrive has used to keep track of where those files and drawers were — leaving a partition's directory truly empty.

What They Are Used For

Formatting should only be used if you have built a hard disk system using your own components and a Supra SCSI Interface, and you have an integrated hard disk (one with a controller built in).

Mapping should be used in these situations:

- Your drive has been bumped and you suspect it is damaged.
- You suspect the hard disk has a bad sector.
- You have built a hard disk system using your own components and a Supra SCSI Interface, and you have a non-integrated hard disk drive (one with a separate controller).

Zeroing can be used to accomplish a variety of tasks, including most of the tasks listed in the next section.

An alternative to formatting, mapping, and zeroing, called "writing partition information," can be used when only partition names, IDs,, or mounting status need to be changed.

Using SupraFormat

To format, map, or zero your hard disk, or to write partition information, you'll use the **SupraFormat** program. The following table lists specific tasks you can perform using **SupraFormat** and the individual steps required to accomplish specific tasks. The steps assume you have already started running **SupraFormat**.

CAUTION — Please do not attempt any of these tasks without first reading the rest of this chapter.

Task	Steps
Change the number and/or sizes of the hard disk partitions. <i>Destroys data.</i>	<ol style="list-style-type: none"> 1. Set the number and/or sizes of the partitions. 2. Enable zero for the affected partitions. 3. Start a zero.
Select the file system being used. <i>Destroys data.</i>	<ol style="list-style-type: none"> 1. Set the file system. 2. Enable zero for the affected partitions. 3. Start a zero.
Clear all information from a partition. <i>Destroys data.</i>	<ol style="list-style-type: none"> 1. Enable zero for the partition(s) you want to clear. 2. Start a zero.
Improve the hard disk's speed by erasing the effects of fragmentation. <i>Destroys data.</i>	<ol style="list-style-type: none"> 1. Enable zero for the partition(s) you want to erase. 2. Start a zero.
Designate a partition other than dh0: to be the boot partition. <i>Does not destroy data.</i>	<ol style="list-style-type: none"> 1. Change the flag of the current boot partition to MOUNT. 2. Change the flag of the new boot partition to BOOT. 3. Write partition information. 4. Do <i>not</i> format, map, or zero.
Cause a partition to not be used. <i>Does not destroy data.</i>	<ol style="list-style-type: none"> 1. Change the flag of the partition to be skipped to SKIP. 2. Write partition information. 3. Do <i>not</i> format, map, or zero.
Check the hard disk because you suspect it has a bad sector. <i>Destroys data.</i>	<ol style="list-style-type: none"> 1. Start a map.
Specify your hard disk and controller type if you are building a hard disk system using your own components and a Supra SCSI Interface. <i>Destroys data.</i>	<ol style="list-style-type: none"> 1. Click on Drive or Controller. 2. Specify your disk and controller types. 3. Return to the main SupraFormat window. 4. <i>If you have an integrated drive:</i> Start a format. <i>If you have a non-integrated drive:</i> Start a map.

Before Running SupraFormat

Before running **SupraFormat**, be sure to do both of the following:

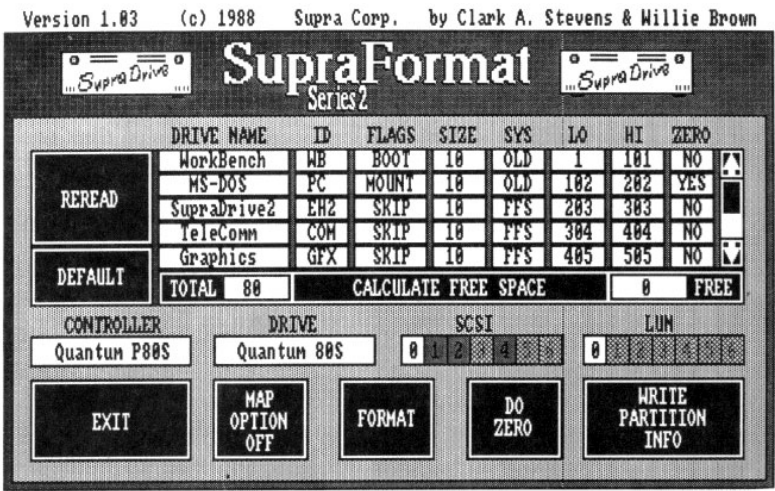
- 1. Make back-up copies of all the files that are in the hard disk partitions you plan to format, map, or zero.

WARNING — *All data in these partitions will be destroyed during the format, map, or zero operation.*

- 2. Stop all of your programs that are currently in memory, including **CLimate** and your background processes. Don't stop system programs or system background processes.

Running SupraFormat

To run **SupraFormat** simply double click on its icon, which is in the **Supra** drawer. The following screen will appear:



If you've never used **SupraFormat** before, the variety of options on its screen may seem overwhelming at first. The program has been designed to keep you out of trouble, though; if you select an option that will alter your hard disk, you will see a warning message and have an opportunity to cancel the operation.

If you make changes on the **SupraFormat** screen and then decide you don't like them, and you haven't started a format, map, or zero yet, you can use the **DEFAULT** and **REREAD** gadgets to reset the partition information. (You haven't actually changed your SupraDrive until you've started a format, map, or zero.) **DEFAULT** restores the factory default partition sizes and high and low cylinder positions for your selected hard disk type. **REREAD** restores the current settings.

Specifying the Hard Disk Type and Controller Type

The **SupraFormat** screen displays the hard disk type and controller type it thinks you have. Both are probably accurate. However, if you have received the **SupraBoot** disk as an update or you have built a custom system using your own components and a Supra SCSI Interface, you should verify your hard disk and controller types and change them if necessary.

Verifying Hard Disk and Controller Types

If you choose to verify the hard disk and controller types, first use one of the following methods to determine the types used in your system.

- Check the sticker on your SupraDrive case (if there is one).
- Open the SupraDrive case and look for the hard disk and controller names on the components themselves.
- If you are building a system using your own components and you don't know what type of drive and controller you have, look at the components and/or refer to their manuals.

Possible hard disk types include Miniscribe, Rodime, Seagate, Xebec, Quantum, and Konica, and possible controller types include Omti and Adaptec. On integrated drives (those with built-in controllers), the controller type is the same as the hard disk type.

Once you've determined the components used in your system, compare the hard disk and controller type actually used in your system with the ones shown on the **SupraFormat** screen. If they're different, change them on the **SupraFormat** screen.

Changing Hard Disk and Controller Types

If you do need to change the hard disk and controller types, click on the **DRIVE** gadget. When the window appears on your screen, click on the correct controller and drive types, and then click on the **Return to Main Window** gadget.

CAUTION — Do not make any other changes in this window unless you are *absolutely sure* of what you're doing. If you do, you might decrease the drive's capacity or performance.

Setting the SCSI and LUN Numbers

You do not need to change the SCSI and LUN numbers on the **SupraFormat** screen unless you have connected more than one SCSI device to your system or you are building a custom system using your own components and a Supra SCSI Interface. In either of these cases, change the numbers on the screen so they match the hardware settings of the hard disk you want to format, map, or zero.

The **SCSI** and **LUN** gadgets show the available SCSI devices and the one that will be formatted, mapped, or zeroed, as follows:

- The SCSI numbers that are *not* grayed out indicate all the available SCSI controllers. For example, if you have two devices, SCSI #0 and SCSI #1, numbers 2 through 6 will be grayed out.
- The SCSI number that is highlighted indicates the SCSI device that will be formatted, mapped, or zeroed.
- The LUN numbers that are not grayed out indicate the available LUNs for the *highlighted* SCSI controller.
- The LUN number that is highlighted indicates the LUN that will be formatted, mapped, or zeroed.

To change which SCSI device is formatted, mapped, or zeroed, click on the SCSI or LUN numbers of the device you want to be affected.

Specifying the Number of Partitions and Setting Partition Attributes

The large box in the center of the **SupraFormat** screen is used to set the following:

- the number of partitions the disk is to be divided into
- each partition's name and ID
- the size of each partition
- the role each partition plays
- the file system each partition uses
- the high and low cylinder locations of each partition

Number of Partitions

Your SupraDrive can be divided into as many as 30 partitions. To set the number of partitions, you'll allocate hard disk space to each partition (as described in an upcoming section, "Partition Size").

All partitions following one that has no space allocated to it (one with a size of Ø) will be ignored. For example, if you allocate space to **dhØ**, **dh1**, **dh2**, and **dh4**, and leave **dh3** set to Ø, **dh4** will not be recognized.

To make sure you have enough RAM memory available, we recommend dividing your hard disk into only one or two partitions if any of the following is true:

- You have a 256K Amiga 1000 computer.
- You plan to use an extremely large application program.
- You plan to use an extremely large data file.

The reason you want to do this is that you'll probably run out of RAM memory if you use more partitions. The *first* mounted SupraDrive partition uses 62K of RAM when the Amiga Fast File System is used and 46K of RAM when the original Amiga file system is used. With either file system, each *subsequent* mounted partition uses an additional 32K. When the RAM used for partitions is combined with the large amounts of RAM used by very large application programs or data files, the available RAM can be exceeded. Using fewer partitions simply decreases the amount of RAM used.

Partition Name and ID

By default, SupraDrive partitions are named **SupraDriveØ**, **SupraDrive1**,... **SupraDrive29** and given the IDs **dhØ**, **dh1**, ... **dh29**. For example, your first partition is named **SupraDriveØ** and has the ID **dhØ**.

NOTE — You don't have to use **SupraFormat** if all you want to do is change a partition name. You can easily change a partition name from the **Workbench** the same way you would change a floppy disk name.

If you changed partition names on the **Workbench** and the **SupraFormat** screen does not show the changes, *don't worry*. Your changes are still in effect on the **Workbench**, and **SupraFormat** recognizes the partitions accurately. You will find it easier to keep track of your partitions when you use **SupraFormat** if you make your partition names on the **SupraFormat** screen match the names they have on the **Workbench**.

To change a partition name or ID in **SupraFormat**, click on the **NAME** gadget or the **ID** gadget, type in the new name or ID, and press the carriage return. A partition name can be 32 characters long, and an ID can be 4 characters long.

CAUTION — Every partition must have both a name and an ID, or **AmigaDOS** will not recognize it.

If you change an ID, be sure that at least two of your partitions have an "h" as the center character, because some software only recognizes hard disk partitions with h as the center character. If you have more than one SCSI device connected to your system, note **SupraFormat's** default partition IDs, listed in Appendix B. Also note that **dhØ:** is used throughout this manual to refer to the first partition on the SupraDrive, even if that partition's ID has been changed to something else.

Partition Size

To set the size of a partition, click on that partition's **SIZE** gadget, change the number, and press the carriage return. The size must be a whole number (a number with no decimals) representing the partition size in MB.

After you've made the size changes you want, click on the "CALCULATE FREE SPACE" gadget. **SupraFormat** will display the amount of unallocated disk space (in MB) next to **FREE**. You will probably want to resize your partitions until all the hard disk space is allocated (free space = Ø). The total amount of space on the drive — both allocated and unallocated — is shown next to **TOTAL**.

Partition Flag

A partition can have one of three labels (flags) that indicate the role the partition plays:

- **BOOT**, which indicates that the **Workbench** belongs on the partition. If you have an autoboot ROM in your Supra SCSI Interface and **Workbench 1.3** (or later) ROMs in your computer, the **BOOT** flag *also* indicates that the partition contains files that allow the drive to autoboot (the names of these files are listed in the **Docs** folder on **SupraTools**).

NOTE — You *must* have a **BOOT** partition, even if you're not autobooting.

Only one partition can be a boot partition at any time. The boot partition can run any Amiga file system. If you want to boot an Amiga Bridgeboard from an **FFS** partition, you must use **SupraEdit** to set the partition's memory mask to Ø as described in Chapter 7.

- **MOUNT**, which indicates that the partition is to be used (mounted by **SupraMount** and made accessible to **AmigaDOS**).
- **SKIP**, which indicates the partition is *not* to be mounted. A partition can have space allocated to it and be set to **SKIP**. Such a partition can be mounted using the **AmigaDOS Mount** command, described in Chapter 7. A partition that is to use a non-Amiga file system, such as **MS-DOS**, should have its flag set to **SKIP**.

To change a partition's flag, click on its **FLAG** gadget until you see the flag you want. Before a **BOOT** partition is specified, all partitions will switch between the three possible flags. Once a **BOOT** partition is specified, the non-boot partitions will switch between **MOUNT** and **SKIP**. A partition with no space allocated to it can only be set to **SKIP**.

File System Used

The **SYS** gadget is used to tell **SupraFormat** which file system to use for each SupraDrive partition. You can use the original AmigaDOS file system or the newer Amiga file system, **FastFileSystem (FFS)**. If you have appropriate hardware and software, you can also use other file systems, such as **MS-DOS**, **UNIX**, etc.

Each partition can use only one file system, but you can set up partitions to use different file systems as necessary to meet your needs. For example, you could set up three partitions to use **FFS**, one to the original Amiga file system, and one to use **MS-DOS**.

Unless you have a special need for other file systems, we recommend using only **FFS**, because it's very reliable and much faster than the original file system, and because it allows you to have larger partitions than does the original Amiga file system. If you have programs that must use the original Amiga file system, you may want to reconsider using them, as explained in Chapter 3.

To change a partition's file system between **FFS** and the original ("old") Amiga file system, click on the partition's **SYS** gadget until you see the file system you want to use: **FFS** or **OLD**. To change a partition's file system to a file system other than the original file system or the **Fast File System**, follow the instructions in the **Docs** folder on **SupraTools**. If you specify a file system that **SupraFormat** does not recognize, the **SupraFormat** screen will show **XXX** for the affected partition's file system.

For the **Fast File System** to be used, the **FastFileSystem** file must be in the **I** directory. If any of your partitions are set to use the **Fast File System** and the **FastFileSystem** file is not in your boot disk's **I** directory, those partitions will not be logged in when you boot your SupraDrive. The old file system does not require any special files to be loaded.

Cylinder Locations

The **HI** and **LO** gadgets indicate each partition's high and low cylinder locations on the hard disk. **SupraFormat** sets these locations automatically.

WARNING — *Do not change these numbers unless you know what you are doing.*

If you do need to change a partition's cylinder locations, note that cylinder location 0 is reserved, and data must start at 1 or higher.

Starting a Format, Map, or Zero

When you are satisfied with the selections you've made on the **SupraFormat** screen, you can start a format, map, or zero. If you are unsure which operation to use — format, map, or zero — re-read the sections at the beginning of this chapter that explain the differences between them and the situations for which each is appropriate.

Formatting

To start a format, click on the **FORMAT** gadget. **SupraFormat** will ask if you want to format the hard disk and erase all the data on it. *This is your last chance to change your mind.* If you click on **FORMAT**, the format operation will start.

Mapping

To start a map operation (a format with the map option on), click on the **MAP OPTION** gadget until it is set to **ON**, and then click on the **FORMAT** gadget. **SupraFormat** will ask if you want to format the hard disk and erase all the data on it. *This is your last chance to change your mind.* If you click on **FORMAT**, the map operation will start.

Zeroing

To start a zero operation, first specify which partitions are to be zeroed and which are to be left alone. To do this, click on each partition's **ZERO** gadget until it shows **YES** (indicating that the partition is to be zeroed) or **NO** (indicating that the partition is not to be zeroed).

Then click on the **DO ZERO** gadget. **SupraFormat** will show you the partitions selected for zeroing, one at a time. *This is your last chance to change your mind.* If you click on **ZERO** for a partition, that partition will be zeroed.

After a Format, Map, or Zero

When the format, map, or zero is finished, a message will appear confirming the success of the operation and telling you to reset your system. Make sure **SupraBoot** is in the floppy drive, and then reset the system.

NOTE — The first time you boot after running **SupraFormat**, you must boot from a floppy disk — even if you are set up to autoboot.

If you just finished zeroing a partition other than your boot partition, your system is ready to use.

If you just finished formatting or mapping your drive or zeroing your boot partition, you'll see a series of prompts. Follow the prompts, which may ask you for any of these disks: Commodore-Amiga's **Workbench** and **Extras**, and Supra's **SupraBoot** and **SupraTools**. After you respond to the prompts, your system will be ready to use.

Writing Partition Information

If you *only* want to change partition names, IDs, and/or flags, you can use the **WRITE PARTITION INFO** gadget to make the changes without destroying any data.

WARNING — Do NOT use this gadget for any other purpose unless you are very sure of what you're doing.

To write partition information, follow these steps:

1. Be sure that the only thing you have changed in **SupraFormat** are your partition names, IDs, and/or flags.
2. Click on the **WRITE PARTITION INFO** gadget.
3. When prompted, specify the partitions for which you changed flags.
4. When asked if you want to rewrite the rigid disk block partition, respond "yes."
5. Next you will see a message that says you may need to reset your system. None of your changes will take effect until you reset your system, with one exception. If all you have done is changed a partition flag to **MOUNT** and you don't want to reset your system, you can mount the partition yourself by issuing the **SupraMount** command, described in Chapter 7.

After you reset your system or use **SupraMount**, your system is ready to use.

7

CREATING SPECIALIZED SYSTEMS

This chapter explains how to create a specialized system. You will probably not need to do this, because the default system setup works for 90% of SupraDrive users. The other 10% need or want to create specialized systems, either to optimize their systems or simply to experiment.

The list of possible system setups is endless, and the approaches to creating those setups is equally endless. This chapter simply describes some of the possibilities. Specific examples of setups and approaches are available in the books listed in Appendix C.

Before you start changing things, be sure you make a backup of your current start-up sequence and any other files you plan to change. This will allow you to restore your current setup if you get too far afield.

“Bailing Out” After Making Changes

If you change the files in your boot partition and your system does not work the way you want it to, either use the back-up copies you made before you started, or restore the default files to the boot partition by placing an unaltered **SupraBoot** disk in **dh0:** and then doing the following:

1. Issue this **CLI** command followed by a carriage return **[CR]**:

Execute df0:s/Install-Sequence [CR]

This executes a script file that will automatically install on **sys:** the files that are required for autobooting. The **Docs** folder on **SupraTools** lists these files. Note that **Install-Sequence** expects **sys:** to be assigned to your boot partition.

2. Reset your system. When the system boots, the contents of **sys:** will be installed on the first boot partition found. If no boot partition is found, you will be prompted to run **SupraFormat** and designate a boot partition.

Re-Installing Icons Using Supralcons

SupraIcons finds every partition that uses an **AmigaDOS** file system, and gives each one a **SupraDrive** icon. It is especially useful if you make changes to your system that inadvertently cause one or more of your SupraDrive icons to disappear. **SupraIcons** runs automatically whenever the boot partition is formatted, mapped, or zeroed by **SupraFormat**. To run **SupraIcons**, click on its icon (in the **Supra** drawer). Then reset your system.

Making Any Floppy Disk Capable of Booting the System

To make any floppy disk capable of booting the system, either copy **Workbench** to that disk or use the **CLI Install** command on the disk. Then modify the disk so that the following are true:

- If you use Supra's start-up sequence, the following files must be in the floppy's **c** directory: **Assign**, **If**, **Echo**, **Else**, **Type**, **Ask**, **Copy**, **CD**, **EndIf**, **Run**, **Date**, **BindDrivers**, **LoadWB**, **EndCLI**, **Quit**, **MakeDir**, **FailAt**, **Path**, **Execute**, **Dir**, and **SupraMount**.
- These directories must be in the floppy's root directory: **c**, **s**, **l**, **libs**, **devs**, and **t**. The **Supra** directory is optional but recommended.
- The **.info** file must be in the floppy's root directory.
- The **harddisk.device** file and the **system-configuration** file must be in the floppy's **devs** drawer.
- The **FastFileSystem** file must be in the floppy's **l** directory unless you aren't using **FFS**. (Note that you can hide **FFS** partitions by not including **FastFileSystem** on the floppy disk and then using a separate boot disk that includes **FastFileSystem** when you want to access those partitions.)

The following files will be very helpful if also placed in the floppy's **c** directory: **Info**, **List**, and **Ed** or **MEMacs**.

Changing How Partitions Are Mounted

When your SupraDrive is shipped from Supra Corporation, it is set up to automatically mount any partitions set to **BOOT** or **MOUNT** in **SupraFormat**. Thus, *you don't have to do anything to mount your partitions; they will be mounted automatically.*

This section explains how mounting works and tells what you need to know if you want to modify the mounting information in your start-up sequence.

CAUTION — If all you want to do is change which partitions get mounted, use the **SupraFormat FLAGS** gadget (described in Chapter 6), and don't mess with the **SupraMount** or **Mount** commands.

Using SupraMount

SupraMount is a program that makes the SupraDrive accessible by the Amiga. It mounts any partition that has its **SupraFormat** partition flag set to **BOOT** or **MOUNT** but has not been mounted by the autoboot ROM or the **AmigaDOS Mount** command. **SupraMount** tells the Amiga about the SupraDrive's physical layout (tracks, cylinders, sectors, etc.), and logical layout (number of partitions, partition sizes, file system, etc.).

SupraMount allows you to have hidden partitions, partitions mounted by the **AmigaDOS Mount** command, and partitions that use alternative file systems.

SupraMount requires the following:

- The **harddisk.device** file must be in the current **devs:** directory.
- The **SupraMount** file must be in either the current **c:** directory or the current working directory.
- **SupraMount** must be called from the start-up sequence for your SupraDrive to be accessed.

Using the CLI Mount Command and Mount List

The programs **SupraMount**, **SupraFormat**, and **SupraEdit** provide easy ways to accomplish the tasks that the **CLI Mount** command and the mount list have been used for in the past. Because of these Supra programs, you never need to use the **CLI Mount** command or the mount list.

If you want to use them anyway, note the following and refer to the *Enhancer Software Featuring AmigaDOS Version 1.3* manual, listed in Appendix C.

- You must get the appropriate information for your hardware from the **SupraFormat** program screen, and you might want to get the Supra default parameters from the **SupraEdit** program screen. Then put the information you get from **SupraFormat** and **SupraEdit** into the mount list — you may want to use the **SupraEdit** program to do this.
- You must run **SupraMount** before you try to mount the drive, because **SupraMount** sets up the interrupt server for the hardware.
- Using **SupraFormat**, set the flags for the affected partitions to **SKIP**.
- If you choose to, you can mount some partitions using the **Mount** command and others using **SupraMount**.

Changing Low-Level System Information Using SupraEdit

The **SupraEdit** program lets you access and change low-level system information, including the following for each hard disk partition:

- partition name and ID
- partition flag (boot, mount, or skip)
- boot priority
- number of buffers
- buffer memory type
- number of bytes that can be transferred at once
- memory mask
- file system used
- autobooting code
- blind reads and writes

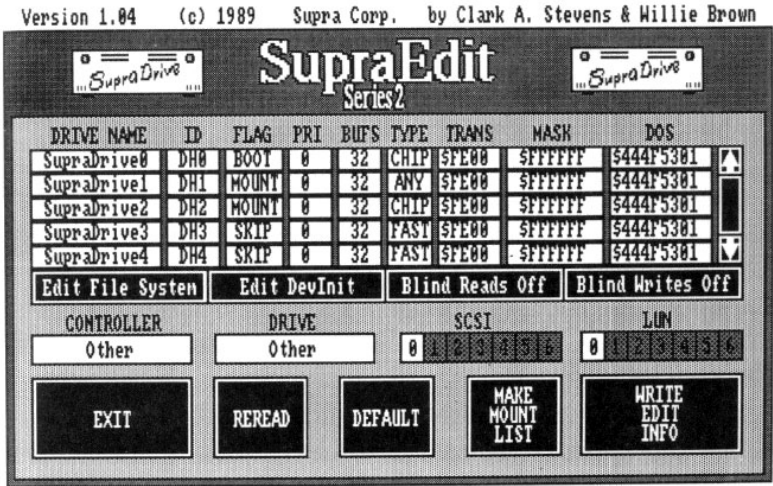
WARNING — *Do not use **SupraEdit** unless you absolutely know what you are doing. If you don't know what you are doing, any changes you make could have catastrophic results. These results may be so bad that your drive will not be able to recover without being reformatted.*

Running SupraEdit

Before running **SupraEdit**, make back-up copies of all your files. If you have built your own hard disk system using a Supra SCSI Interface, be sure that your hard disk is formatted and operating properly before you run **SupraEdit**.

WARNING — When running **SupraEdit**, don't have any background tasks running that will access your hard disk. If you do, *your data will probably be destroyed.*

To run **SupraEdit**, simply double click on its icon in the **Supra** drawer. This causes the following screen to appear:



Note that hexadecimal numbers on the **SupraEdit** screen and in this manual have a dollar sign (\$) in front of them. When changing values in **SupraEdit**, you don't have to include the dollar sign prefix in front of a hexadecimal number, but you can, for clarity, if you choose to.

If you make changes on the **SupraEdit** screen and then decide you want to change them, you can use the **DEFAULT** and **REREAD** gadgets to reset the partition information. **DEFAULT** restores the factory default settings. **REREAD** restores the current settings.

Making Changes on the SupraEdit Screen

This section describes each gadget on the **SupraEdit** screen. Where applicable, the name a feature assumes in the mount list follows the gadget name.

DRIVE NAME and ID

These gadgets are exactly like the **NAME** and **ID** gadgets in **SupraFormat**. Chapter 6 describes these gadgets in detail.

FLAG

This gadget is exactly like the **FLAG** gadget in **SupraFormat**, which can be toggled between **BOOT**, **MOUNT**, and **SKIP**. Chapter 6 describes the **FLAG** gadget in detail.

PRI (BootPri)

This gadget represents the boot priority your SupraDrive has. The boot priority of all your peripheral devices determine the order in which your system attempts to boot them. Typically, **PRI** is set to 0, but it can be set to any decimal number between -99 and 99. The device with the highest number bit priority is booted first. We recommend not setting **PRI** to be greater than 5, because doing so will prevent you from booting from a floppy disk.

BUFS (Buffers)

This gadget represents the number of 512 byte buffers used by a partition. **BUFS** can be any decimal number between 0 and 999; its default value is 32.

TYPE (BufMemType)

This gadget represents the buffer memory type. It can be toggled between the following:

- **CHIP**, which causes chip memory to be used
- **FAST**, which causes fast memory to be used
- **ANY**, which causes the system to use fast memory if available and then, if fast memory is not available, to use chip memory

TRANS (MaxTransfer)

This gadget represents the maximum number of bytes that can be transferred at once (in hex). The default value is \$Fe00 (64K).

MASK (Mask)

This gadget represents the memory mask (in hex). The default value is \$FFFFFF (16384K).

DOS (DOSType)

This gadget represents the file system used (in hex). It is intended to be used for changing a partition's file system to one other than the original Amiga file system or the **Fast File System** (a process that is described in detail in the **Docs** folder on **SupraTools**). If you want to change a partition's file system between the original Amiga file system and **FFS**, you must use **SupraFormat**, which is explained in Chapter 6.

If a partition uses the original Amiga file system, the **DOS** gadget value is \$444F5300. For **FFS**, it is \$444F5301. Numbers representing other file systems must be obtained from the file system vendor.

Edit File System

This gadget lets you add or delete a file system. To use it, click on it and follow the instructions given.

Edit DevInit

This gadget lets you add or delete “DevInit” code — the code that actually does the autobooting. To use it, click on it and follow the instructions given.

Blind Reads

This gadget turns blind reads on and off. When blind reads are on, reading from the drive is faster, but if the controller cannot keep up with the driver that initiates the blind reads, the system will freeze or generate read/write errors. By default, the blind reads option is on. To turn it on, click on the **Blind Reads** gadget and follow the instructions given.

Blind Writes

This gadget turns blind writes on and off. When blind writes are on, writing to the drive is faster, but if the controller cannot keep up with the driver that initiates the blind writes, the system will freeze or cause data to be damaged. By default, the blind writes option is on. To turn it on, click on the **Blind Writes** gadget and follow the instructions given.

CONTROLLER/DRIVE

These gadgets indicate the controller and drive for the selected SCSI and LUN devices. They are provided for reference only and cannot be changed using **SupraEdit**. To change them, use **SupraFormat**, explained in Chapter 6.

SCSI/LUN

These gadgets work exactly like the **SupraFormat** SCSI and LUN gadgets, which are described in Chapter 6.

WRITE EDIT INFO

The **WRITE EDIT INFO** gadget actually makes the changes that you’ve specified on the **SupraEdit** screen. After the changes have been made, you can exit **SupraEdit** by clicking on **EXIT**. After making changes using **SupraEdit**, you don’t have to reset your system immediately, but you won’t see the results of your changes until you do.

MAKE MOUNT LIST

This gadget appends to the mount list in the current **devs:** directory an entry for each partition on the current SCSI device. If no mount list exists, **MAKE MOUNT LIST** creates one. When the **CLI Mount** command is issued, it uses the first of each type of mount list entry it encounters. If you have duplicate types of entries in the mount list, be sure to delete the entries that you don't want used. The section in this chapter called "Changing How Partitions Are Mounted" provides information on the **CLI Mount** command and the mount list.

EXIT

To exit **SupraEdit** without making the changes to your drive that you've made on the **SupraEdit** screen, simply click on **EXIT**.

8

TROUBLESHOOTING

If your system is not working properly and you have followed the instructions in this manual, try the potential solutions described in this chapter. The solutions are grouped as follows:

- general troubleshooting ideas
- booting problems
- software problems
- miscellaneous problems

Note that some parts of this chapter recommend that you change your start-up sequence. The start-up sequence can only be changed using the Amiga's Command Line Interpreter (**CLI**). Both **CLI** and the start-up sequence are described in Chapter 5.

General Troubleshooting Ideas

Before trying any other idea, make sure your hard disk is plugged into the interface, the interface is securely connected to the Amiga, and both the computer and the hard disk are connected to AC power. Also verify that all your connectors are clean (ensuring complete connections) and that there is ample airflow around the SupraDrive.

If possible, try to use your SupraDrive with someone else's Amiga (the same model as yours is). If the SupraDrive works when connected to a different computer, the problem is with your computer, not with your SupraDrive.

Booting Problems

If none of the suggestions in this section solves your booting problems *and* you have additional peripherals connected to your system, you can be sure your SupraDrive is working properly by doing the following. Remove any other peripheral devices you have connected to your system and try using just the SupraDrive with your Amiga. If the SupraDrive works when it's the only peripheral connected, experiment with the arrangement of the peripherals or consider that one of the other peripherals may have a problem. Chapter 1 provides more information on connecting additional peripherals.

Problems When Booting from Floppy Disk

If you are booting from your working copy of the **SupraBoot** disk, make sure that the copy has not been improperly altered. To find out if your floppy disk is the problem, try booting from your back-up copy of **SupraBoot**. If you can boot successfully using the back-up copy, you need to either make a fresh working copy of **SupraBoot**, or you need to fix the problem on your working copy.

Blank Screen When Trying to Boot

If you try to boot your system and your screen is blank (without even the request for the **Workbench** disk), one of the following is probably the problem:

- You have version 1.2 **Kickstart** ROMs in your Amiga 500 or Amiga 2000 computer, and you did not remove the Supra autoboot ROMs from your Supra SCSI Interface before you connected your system. Unless you get **Kickstart 1.3** or later ROMs, the Supra autoboot ROMs *must* be removed from your interface before you can use your system. Contact your dealer to obtain the latest version **Kickstart** ROM, or refer to the separate instructions called *Removing Autoboot ROMs from a Supra SCSI Interface*.
- You likely have a problem with your **Kickstart 1.3** or later ROMs. Contact your dealer for assistance.

Missing Workbench, Icons, or Partitions

If you have an internal SupraDrive and the **Workbench** does not appear on your screen when you boot or the **Workbench** appears but there's no **SupraDrive** icon, turn off your computer and make sure all your cables are connected accurately and securely. (If you have a Supra SCSI Interface in an Amiga 2000, also make sure the interface is firmly seated.) Then reboot your system. If the **Workbench** or icons still don't appear, run **SupraIcons** as described in Chapter 7.

If no icons appear for partitions set to use the **Fast File System**, make sure that the **FastFileSystem** file is in the **I:** directory of your boot partition or your boot floppy disk.

If you recently used **SupraFormat** to change partition cylinder locations and now your system does not recognize one or more partitions, you probably accidentally set two partitions' cylinder locations so that they overlap. To solve this problem, run **SupraFormat** again and look for your mistake. When you find it, make the necessary change(s) and zero the affected partition(s).

If you are having problems with icons and none of these ideas seem to be the problem, try using your computer without the SupraDrive connected to it. If the computer still doesn't work, the problem is with your computer, not with your SupraDrive. Contact your dealer for assistance.

Unusual LED (BUSY Light) & Frozen System

If, when you boot your system, the **BUSY** light on the front of your external SupraDrive (or the **HARD DISK LED** on the front of your Amiga 2000) is either solid or blinking for a long time, and the system appears to be frozen, AmigaDOS may be validating the hard disk — a process that can take from 1 to 20 minutes to complete, depending on the drive's size, speed, and partitions. This is not really a problem, but it's annoying.

In the future, you can avoid this problem by doing all of the following:

- Be sure to *not* access the drive while **Park** is running.
- Always wait for the requestor that indicates that **Park** is finished before shutting off your system.
- Don't use software that deals with the file system improperly and writes corrupt data onto the hard disk. For help trying to determine which software deals with the file system improperly, refer to the section in Chapter 3 and the section in this chapter on software that does not work properly.

Amiga 2000 LED Doesn't Flicker When System Boots

If you have a SupraDrive in an Amiga 2000 and the **HARD DISK** LED on the front of the computer doesn't flicker when you boot your system, you may need to change the polarity of the LED by switching the LED wires around. To do this, turn off the Amiga, unplug the hard disk's LED wires from the Amiga's LED connector, turn over the connector, and plug the wires back in again. (Be sure the hard disk's LED wires go into the connector holes to which the Amiga LED wires are connected.) Then try booting again.

Can't Boot After Changing Start-up Sequence

If you can't reboot your system and you recently made changes to your start-up sequence, the problem may be that a command that the start-up sequence needs to execute is missing from the boot partition or the boot floppy disk. Make sure your start-up sequence contains at least the files needed for autobooting, which are listed in the **Docs** folder on **SupraTools**.

Boot Takes One Minute or More to Complete

If your system includes an autoboot ROM and booting your system takes one minute or more to complete, it's most likely because you have removed these files from your boot partition:

devs:SupraAuto.DevInit and **l:FastFileSystem**. Replace the files, and your system will boot much more quickly.

Error Messages Encountered While Booting

The following messages are listed alphabetically.

Message: **ERROR: Cannot find devs:SupraAuto.DriveInit or
ERROR: Cannot find devs:SupraAuto.DMAInit**

Solution: Make sure the named file is in the **devs:** directory on your current disk. Note that this directory may be different than the **devs:** directory on your floppy disk.

Message: **ERROR: Cannot find FFS**

Solution: Make sure the **FastFileSystem** file is in the **l:** directory.

Message: **ERROR: Cannot open filename**

Solution: This message occurs when you format your drive and

then boot your system from floppy disk, but these files are not on the floppy disk: **devs:SupraAuto.DevInit** and **l:FastFileSystem**. Boot your system using your back-up copy of the **SupraBoot** disk, and then copy the missing files onto the floppy disk you were trying to boot from.

Message: **ERROR: Insufficient Free Space**

*Don't confuse this message with the **Insufficient Free Store** message, described in the "Miscellaneous Problems" section in this chapter.*

Solution: This message indicates that your **SupraDrive** needs more space for its disk management information than it currently has. Usually, the SupraDrive's disk management information is stored in cylinder 0, and the first partition (**dh0:**) starts at cylinder 1. However, if you received this message, *your* SupraDrive needs more space.

To solve this problem, run **SupraFormat** (described in Chapter 6), change the low cylinder location of **dh0:** as indicated in the message, and then zero **dh0:**. (If you have more than one SCSI device connected to your system, zero the first partition of your first SCSI device.)

Message: **ERROR: No boot partition found**

Solution: Make sure your system includes at least one boot partition (even if you are not set up to use autobooting).

Message: **ERROR: No SCSI device found**

Solution: This message indicates that there is no connection between the Supra SCSI Interface and the hard disk. Make sure the connection between your interface and your hard disk is correct and complete. If you built your own system using a Supra SCSI Interface and your own components, the controller itself might be the problem; try using a different controller.

Message: **ERROR: Supra SCSI Interface not found**

Solution: Make sure the connection between your interface and your computer is correct and complete.

Software Problems

Software that Doesn't Work Properly

If you're using software that doesn't respond correctly to the hard disk, carefully reread the section in Chapter 3 called "Using Applications Software." If you've read the information in Chapter 3 but the software still doesn't work correctly with the SupraDrive, you need to become a detective. The techniques listed below will almost always give you the information you need to solve your problem. With that information, you can experiment to find a solution.

- Use the **CLI Assign** command, which can assign a single name to a lower-level directory (a drawer in a drawer in a drawer...). Used by itself (with no arguments) in a **CLI** window, **Assign** lists all such assignments that have been made. Verify that assignments you think you've made have actually been made correctly.
- Look at the software's start-up sequence and manuals.
- Be sure your **Assign** commands are after the **CLI SupraMount** command in your start-up sequence.
- Use the **CLI Info** command, which lists everything that's logged onto the system.

When you figure out the settings that work, add them to your start-up sequence so they will be in effect every time you use the software. Chapter 5 provides more information on using **CLI**.

The following example shows how to use some of these techniques. Suppose you get this message: “**Please Insert Volume dhØ:**”. Since **dhØ:** is a hard disk partition, you obviously can’t insert it into anything. To find out how to satisfy this request, first issue the **CLI Info** command. This will provide a variety of information, including whether **dhØ:** is mounted (it probably isn’t). From the information that **Info** has provided, determine if any other partitions are mounted. If they aren’t, one of the following may be true:

- **SupraMount** might not have run yet.
- The **FastFileSystem** file might not be in the appropriate **l:** directory.
- The **harddisk.device** file might not be in the appropriate **devs:** directory.

Problems While Using Hard Disk Backup, “Rearranger,” and Optimizer Programs

If you try to use any two of the following together, you may have problems: a hard disk backup program, a hard disk “rearranger” program, or a hard disk optimizer program. Unfortunately, the only solution is to stop using one program or the other.

SupraFormat Problems

If you have problems when you try to format, map, or zero your hard disk using **SupraFormat**, the first thing to do is verify that the hard disk and controller type specified in **SupraFormat** match the type of hard disk and controller in *your* system. Chapter 6 explains how to do this.

If this doesn’t solve the problem and you were formatting or mapping (not zeroing), you may have deleted or changed the names of files in your **s** directory. Use your back-up copy of **SupraBoot** to replace these files.

“Not a DOS Disk” Message

If you continue to get the “**Not a DOS Disk**” message after zeroing, the problem is that you incorrectly changed a partition’s high and low cylinder locations when you ran **SupraFormat**. If you do not know the settings you had before running **SupraFormat**, you need to format your entire drive to solve the problem.

Other Problems

If you continue to have problems after trying the other solutions listed in this section, it may be because other peripherals you have connected to your system are interfering with **SupraFormat**. Try disconnecting the other peripherals and rerunning **SupraFormat**. Then reconnect your system.

Miscellaneous Problems

System Crashes While Copying Large Amounts of Data

If your system “crashes” while copying large amounts of data, it has probably run out of RAM memory. You can probably solve the problem by resetting your system. If you plan to copy large amounts of data in the future (increasing your chances of having this problem again), you should consider using the **CLI Stack** command. By default, **CLI** stacks are 4000 bytes each. The following example **CLI** command, followed by a carriage return (**[CR]**), sets a stack size to 10000 bytes:

Stack 10000 [CR]

A 10000 byte stack will be adequate for most situations. If it's not adequate for your situation, experiment with different stack sizes to determine which size works best for you. Chapter 5 provides more information on **CLI**, and the *Enhancer Software Featuring AmigaDOS Version 1.3* manual (listed in Appendix C) provides more information on the **Stack** command.

The **Workbench** provides an alternative way to set a program's stack size, but usually, it's not necessary to change the stack size of a program that can be run from the **Workbench**.

Running Out of Memory

If you run out of memory while using a 256K Amiga 1000 or a large program or large groups of data files, you can solve the problem by adding more RAM to your system or dividing your hard disk into only one or two partitions as explained in Chapter 6.

Screen Problems

If you try to boot your system and your screen remains blank, refer to the “Booting Problems” section in this chapter.

If your screen flickers momentarily and then your drive seems to be working improperly, your monitor might be the problem. Have your dealer check your monitor.

Amiga 1000 Clock Returns “Garbage” Characters

If you have a system that includes an Amiga 1000 computer and a Supra SCSI Interface, on rare occasions a commercial program or a program you write might accidentally write to the interface clock’s address. If this happens, when you use the clock you’ll find it shows “garbage” characters instead of a real date and time, and the system will temporarily freeze up.

To solve this problem, repeat this sequence two or three times: when the system unfreezes after a few seconds, click on the clock window, and the system will freeze up again. After this happens a couple of times, the system will truly unfreeze. Go ahead and change the date and time, and save them. If you can determine which program caused the problem, stop using that program.

Read/Write Errors

If you get read/write errors when using your hard disk, the problem may be that your monitor is emitting too much RF interference. Try placing the drive farther from your monitor.

You can also get read/write errors if you are copying an extremely large file or groups of files that combine to be larger than 1MB. This problem seems to be most noticeable when using file handling programs designed to be an alternative to **CLI** (including **CLImate**). You can avoid the problem by using smaller files and copying smaller groups of files.

If you have an Amiga 1000 and your system has frozen up after giving you a read/write error message, you may need to ground your Amiga 1000 computer’s PAL chips. (This problem sometimes happens only when the **Fast File System** is used.) Please contact your dealer or Supra Technical Support for assistance.

“Insufficient Free Store” Message

*Don’t confuse this message with the **Insufficient Free Space** message, described in the “Booting Problems” section in this chapter.*

This message indicates you do not have enough RAM in your system to perform the operation you’re attempting. To solve the problem, use fewer partitions as described in Chapter 6, or add more RAM to your system.

“Key Not Set” Message

If you see this message, you have a serious problem with your drive. You can read the drive, but you cannot write to it. Remove any files and software that you can, and then *zero* your entire drive using **SupraFormat**. Chapter 6 explains **SupraFormat**.

Message Saying To Use DiskDoctor

If you get a message that says one of your partitions is “not validated” and you click on “**Cancel**,” and this gives you a message telling you your disk structure is corrupt and you should use **DiskDoctor** to correct it, you may need to use the **DiskDoctor** program. But *avoid using **DiskDoctor** if you can!*

First try to copy all the important files you have on your disk onto another storage device (like floppy disks) or to another partition, and then use **SupraFormat** (described in Chapter 6) to zero the corrupted partition. If you can’t copy files you really need, run **DiskDoctor**. *But only run **DiskDoctor** as a last resort.* **DiskDoctor** probably won’t save the damaged file, but it may salvage the files that follow it. After you run **DiskDoctor**, your SupraDrive will basically be a read-only device until you remove all the files on it and zero the partition. This is a real hassle, and if you can find a way to avoid it, do.

This situation suggests that some software you’re using is not working properly. Try to figure out which software is causing the problem (by trial and error, if necessary), and stop using that software.

Contacting Supra Customer Service

If you have tried the suggestions in this chapter and still cannot get your drive to work, call our service department at (503) 967-9081 for service instructions. If possible, note the version number of your hard disk software before you call. Give this number to the customer service representative you talk to.

NOTE — Do not return any equipment for service without first contacting us and obtaining a Return Materials Authorization (RMA).

If you do need to send your SupraDrive to us, be sure to pack it in both the original packing materials (if available) and a *second, sturdier* box. The original SupraDrive packing materials are not adequate to protect your drive during shipping, and if you neglect to put your drive in a sturdier box, *you risk damaging the drive*.

Warranty

Supra Corporation warrants the SupraDrive and included software to be free of defects in material and workmanship for a period of 90 days from date of original purchase. If any parts or equipment become defective through normal use within this period, Supra will repair or replace them without charge. Any product deemed to be defective through accident, misuse, or neglect will be repaired at current shop charges for materials and labor. Supra Corporation does not assume any liability for any consequential damages caused by the use of the SupraDrive hard disk system or included software.

FCC Rules

This equipment, like other electronic equipment, generates and uses radio frequency energy. If not installed and used according to the instructions in this manual, this equipment may cause interference with your radio and television reception.

If you believe that this equipment is causing interference with your radio or television reception, try turning the equipment off and on. If the interference problems stop when the equipment is switched off, then the equipment is probably causing the interference. You may be able to correct the problem by doing one or more of the following:

- Adjust the position of the radio or TV antenna.
- Move the hard disk away from the radio or TV.
- Plug the hard disk into a different wall outlet than the one the radio or TV uses.

If necessary, consult your dealer or an experienced radio or television technician for additional suggestions. You may find the following booklet helpful: "How to Identify and Resolve Radio and TV Interference Problems" — Stock No. 004-000-00345-4. This booklet was prepared by the Federal Communication Commission and is available from the U.S. Government Printing Office, Washington, D.C. 20402.

A

SUPRADRIVE HARD DISK UTILITIES

The following table lists files that came with your SupraDrive, each file's type, directory location, and purpose. For your convenience, **sys:Supra** is set to be part of **CLI**'s search path.

File Name	Type	Directory	Purpose
SupraNews	ASCII	Docs	updates manual
Park	executable	Supra	prepares hard disk for moving
CLImate	executable	Supra	lets you bypass CLI
SupraFormat	executable	Supra	formats, maps, and zeroes
SupraEdit	executable	Supra	edits low-level system info
SupraIcons	executable	Supra	installs icons
Supra AutoInstall	executable	Supra	installs system software
SupraAuto .DevInit	device driver	devs	loads DevInit code from hard disk
harddisk .device	device driver	devs	holds hard disk drivers for all Supra systems and replaces DMA disk.device
SupraMount	executable	c	makes disk accessible
MountList	ASCII	devs	holds example info for mounting 20MB hard disk using the Mount command

B

SUPRAFORMAT'S DEFAULT DEVICE IDS

Listed below are the default device IDs that **SupraFormat** assigns to partitions on various SCSI devices if you don't assign different IDs. Chapter 6 explains **SupraFormat**, device IDs, and SCSI devices.

<u>SCSI #</u>	<u>LUN#</u>	<u>Possible Partition IDs</u>
Ø	Ø	DHØ, DH1, ... DH29
1	Ø	EHØ, EH1, ... EH29
2	Ø	FHØ, FH1, ... FH29
3	Ø	GHØ, GH1, ... GH29
4	Ø	HHØ, HH1, ... HH29
5	Ø	IHØ, IH1, ... IH29
6	Ø	JHØ, JH1, ... JH29
7	Ø	reserved
Ø	1	DIØ, DI1, ... DI29
1	1	EIØ, EI1, ... EI29
2	1	FIØ, FI1, ... FI29
3	1	GIØ, GI1, ... GI29
4	1	HIØ, HI1, ... HI29
5	1	IIØ, II1, ... II29
6	1	JIØ, JI1, ... JI29
7	1	reserved

C

RESOURCES

The following books provide more information about getting the most from your Amiga. They are available from your local computer dealer or bookstore:

- *Enhancer Software Featuring AmigaDOS Version 1.3* manual, Commodore-Amiga, Inc., 1988
- *The AmigaDOS Manual*, Bantam Books, 1987
- *The Amiga Companion*, Rob Peck, IDGC, 1988

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