



AMIGA®
User's Guide
570 CD-ROM Drive



Commodore®

WARNING

Installation information in this document is for reference only. All installation of internal optional devices or equipment, including third-party optional devices or equipment, should be performed by an authorized Commodore dealer/service center. Also, all servicing or upgrading of original or optional devices or equipment, including third-party optional devices or equipment, should be performed by an authorized Commodore dealer/service center.
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This manual provides a general description of various product configurations and features currently planned for inclusion in Commodore's product line. The configurations and features described may not be available or otherwise apply to your particular system. Please consult your Commodore dealer with any questions.

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NOTICE: This device complies with Part 15 of the FCC Rules and Standard C108.8-M1983 of the Canadian Standards Association Regulations. Operation is subject to the two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation. If you suspect this device is causing interference, you can test this device by turning it off and on.
If this device does cause interference, the user is encouraged to correct the interference by one of the following means:

- Reorient the receiving antenna or AC plug.
- Change the relative positions of the computer with respect to the receiver.
- Plug the computer into a different outlet so the computer and receiver are on different branch circuits.

CAUTION: Only peripherals with shielded-ground cables (computer input-output devices, terminals, printers, etc.) certified to comply with Class B limits can be attached to this device. Operation with non-certified peripherals may result in communications interference. Changes or modifications to this device not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Your house AC wall receptacle must be a three-pronged type (AC ground). If it is not, contact an electrician to install the proper receptacle. If a multi-connector box is used to connect the computer and peripherals to AC, the ground must be common to all units.

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

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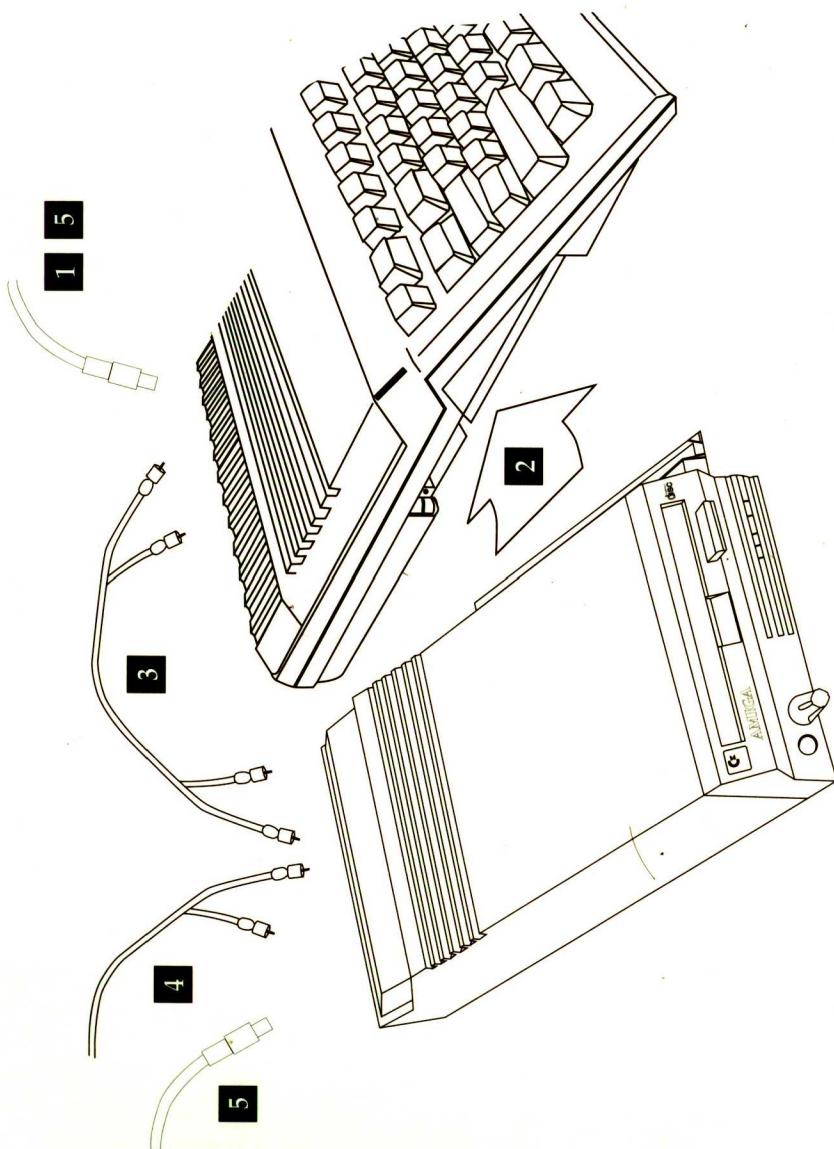
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QUICK CONNECT GUIDE

Experienced users can use these instructions and the diagram below to connect the CD-ROM drive to an Amiga 500 computer.

For more detailed instructions, read Chapter 2, *Installation*.

- 1** Turn off the power to the Amiga, and disconnect the power supply.
- 2** Remove the cover from the Amiga's expansion slot. Slide the CD-ROM drive against the Amiga, so its connector enters, and seats fully in, the Amiga's expansion slot. The two units should fit snugly together.
- 3** Use the audio cable that came with the CD-ROM drive to connect the Amiga to the CD-ROM drive. Plug one end into the Amiga's audio out jacks, and the other end into the CD-ROM drive's audio in jacks.
- 4** Plug the cable from your audio system (stereo system, self-powered speakers, monitor, etc.) into the CD-ROM drive's audio out jacks.
- 5** Re-attach the power supply to the Amiga. Attach the CD-ROM drive's power supply. Turn on the CD-ROM drive first, then your Amiga.



Chapter 1

Introduction

With the 570 CD-ROM drive attached to your Amiga, your system will have essentially the same capabilities as Commodore's CDTV® Interactive Multimedia Player, while retaining the flexibility and power your Amiga has always offered you. Like the CDTV Player, your Amiga/CD-ROM drive system will play CDTV titles, as well as CD+G, CD+MIDI, and standard audio CDs.

In addition to its CDTV capabilities, the CD-ROM drive can act as a powerful peripheral for your Amiga. With the CD-ROM drive you will be able to read many of the CD-ROM reference discs currently available, even if the disc was produced with another computer platform in mind (as long as the disc is in the industry-standard ISO 9660 format). Considering that each CD-ROM contains up to 600 megabytes of information on topics such as demographics, history, finance and geography, the CD-ROM drive certainly is a valuable and powerful addition to your system.

The CD-ROM drive installs easily. No software installation is required; the built-in software takes care of both CDTV and CD-ROM use. No extra hardware is needed either; when playing CDTV titles, you can continue to use your Amiga's keyboard, mouse and monitor for input and display.

If you want to increase the capabilities of your system even further, the CD-ROM drive has an internal slot for memory expansion, and a rear slot for cartridge-based peripherals such as hard drives.

System Requirements

For CDTV emulation, you need to be using version 1.3 or 2.0 of the Amiga operating system. In addition, your Amiga should have one megabyte (1 MB) of chip RAM.

If you don't know whether your Amiga has 1 MB of chip RAM, do the following:

- Type `AVAIL` in the Shell. If the total for chip RAM is less than 1047520, you may not have enough chip RAM to run some CDTV applications. Contact your Commodore dealer about adding more RAM or reallocating the memory you have.

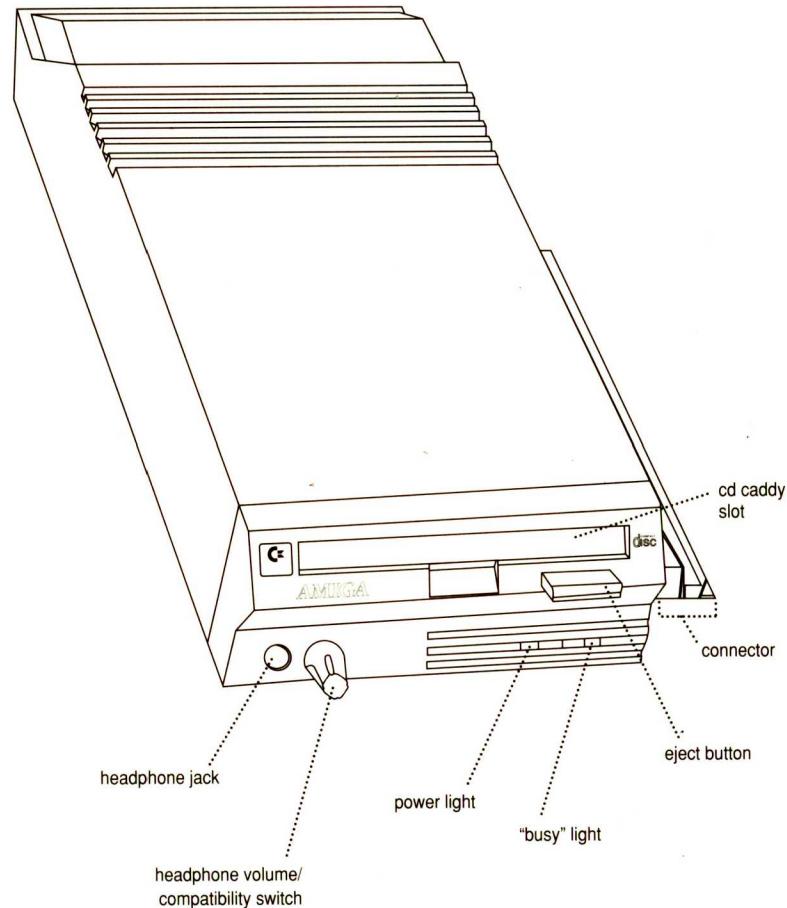
What's in the Box

In addition to this manual, the following items should be in the CD-ROM drive box:

- the CD-ROM drive
- a power supply unit with attached power cables
- a stereo audio cable
- warranty information.

You may also have received an application CD in the disc caddy. If so, refer to its accompanying documentation for directions on using the disc.

The CD-ROM drive



Chapter 2

Installation

The CD-ROM drive attaches directly to the expansion connector on the left side of your Amiga 500® unit.

CAUTION: Before attaching the CD-ROM drive to the expansion connector, switch the power to the Amiga OFF and disconnect the cable that goes from the power supply to the rear of the Amiga. Attaching the CD-ROM drive with the power on or with the power cable connected could damage the CD-ROM drive or the Amiga. Commodore will not be responsible for damage caused by improper installation.

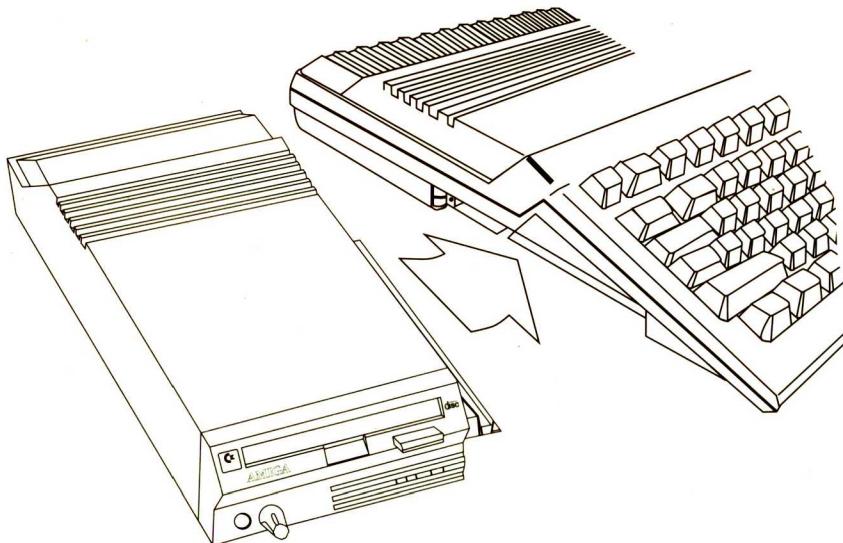
Never connect or disconnect anything from the Amiga's expansion connector, or from any other ports, while the power is on.

Attaching the CD-ROM Drive

Once you have disconnected the power from the Amiga, place the Amiga on a flat, level surface, with the area to the left of the computer unobstructed. Remove the plastic access plate that covers the Amiga's expansion slot. Place the CD-ROM drive in the area to the left of the Amiga, with the front of both units facing forward.

Align the connector that projects from the right side of the CD-ROM drive with the expansion slot on the left side of the Amiga. Slide the CD-ROM drive toward the Amiga so that its connector enters the expansion slot.

Connecting the CD-ROM drive to the Amiga



While holding the Amiga so that it does not slide, apply firm pressure so that the CD-ROM drive connector seats fully in the Amiga expansion slot. When fully seated, the right side of the CD-ROM drive should fit snugly against the left side of the Amiga.

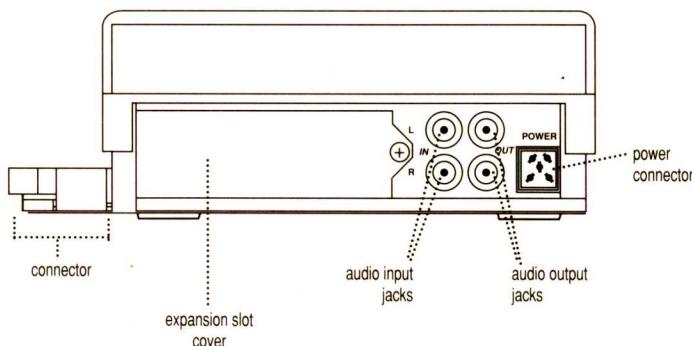
Audio Connections

On the rear of the CD-ROM drive are two sets of stereo RCA audio jacks. One set of jacks is for output from the CD-ROM drive to your audio system — typically your monitor, stereo system or self-powered speakers. The other set of jacks is for audio input from the Amiga.

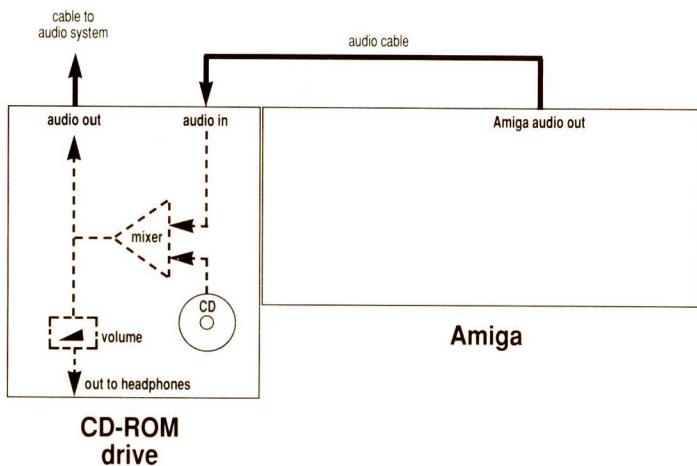
You will be installing the CD-ROM drive between the Amiga and the sound system that the Amiga is currently hooked up to.

When the CD-ROM drive and your Amiga are connected this way, the Amiga's audio and the CD audio are mixed within the CD-ROM drive. The mixed audio is then fed through the CD-ROM drive's output jacks to your audio system. This allows you to use a single set of speakers to hear all the sound generated by your Amiga/CD-ROM drive system.

Rear View of the CD-ROM drive



Audio Interconnection Diagram



Input from the Amiga

The left-hand set of RCA jacks on the back of the CD-ROM drive (when viewed from the rear) is for Amiga audio input. Sounds generated by the Amiga come into the CD-ROM unit through these jacks.

Use the cable included with the CD-ROM drive to connect the two units. Plug one end of the cable into the audio output jacks on the rear of the Amiga (you will probably have to remove plugs you currently have in those jacks). Plug the other end of the cable into the audio input jacks on the rear of the CD-ROM drive (the left-hand set of jacks when viewed from the rear).

NOTE: Do not connect other audio devices to the CD-ROM drive's

audio input jacks. These jacks are designed to handle audio signals from an Amiga only. Distorted sound or damage to the CD-ROM drive may result from non-Amiga audio input to these jacks.

Output from the CD-ROM Drive

The right-hand set (when viewed from the rear) of RCA jacks on the back of the CD-ROM drive is for audio output. Sound generated by compact discs is sent out through these jacks to your audio system. [In this manual, "compact disc" refers to the following: CDTV titles, CD+G, CD+MIDI, standard audio CDs, and ISO 9660 CD-ROM discs.]

Take the cables that you removed from the Amiga audio output jacks (these should connect on the other end to a monitor, stereo system or something else that contains speakers) and plug them into the CD-ROM drive's audio output jacks (right-hand set of jacks on the rear of the CD-ROM drive). This completes the audio installation.

Other Audio Options

If you wish to keep the CD audio separate from Amiga audio, simply connect the CD-ROM drive's audio outputs to your stereo system or other audio device, and leave the Amiga audio outputs the way they were before you installed the CD-ROM drive.

Headphones

Headphones can be connected to the jack on the front of the CD-ROM drive (see page 1-3). The same audio that comes through the audio output jacks will come through your headphones.

The volume knob next to the headphone jack controls only the volume of the headphones — that is, it doesn't control the volume of the audio coming out of your other speakers. Also, plugging headphones into the headphone jack does not cut off the sound coming out of your other speakers.

Note: Do not turn the headphone volume control knob counter-clockwise until it clicks. That will disable the CD-ROM unit and probably cause the entire system to reboot. See the section in the next chapter entitled "Compatibility Switch" for more information about this function.

Power Connection

Now that the CD-ROM drive has been attached to the Amiga and the desired audio connections made, the power supplies can be connected. With the power switch turned OFF, reconnect the Amiga power supply to the back of the computer, and insert the plug into a three-prong AC outlet.

Connect the proper end of the CD-ROM drive's power cable to the receptacle on the rear of the unit (see the illustration on page 2-3) and then insert the plug into a three-prong AC outlet.

Power up the system by first switching the CD-ROM drive power supply ON, then switching the Amiga power supply ON. (The CD-ROM drive will not power up until the Amiga is also switched on.)

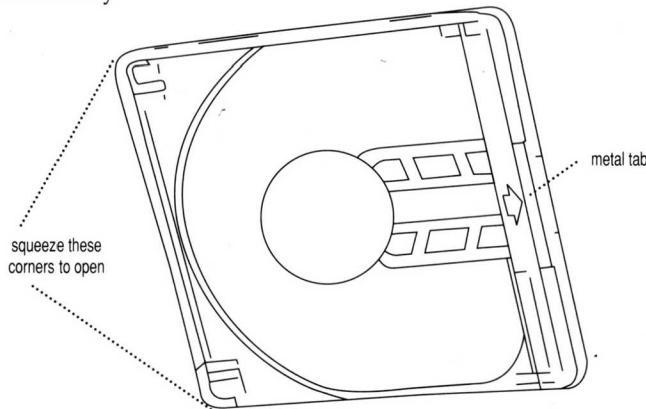
Your Amiga/CD-ROM system is now ready for use.

Chapter 3

Basics

The CD-ROM drive uses a disc caddy to assure data integrity and reliability, and to protect the CD from dust and accidental damage to its surface.

The Disc Caddy



IMPORTANT: You must use a disc caddy to insert a compact disc in the CD-ROM drive. Never insert a disc without a caddy into the CD-ROM drive's front slot. Without a caddy, a disc will not play and could be difficult to remove from the unit without causing damage.

To open the caddy, set it down with the clear cover facing you and the metal tab to the right. Squeeze the left corners of the caddy with your thumb and middle finger. While you are doing that, flip open the clear cover with your other hand — there is a tab on the left edge of the cover.

Load the CD into the hinged end of the caddy first, then let it drop into place. Handle CDs by the edges only.

Close the clear cover. Make sure both of the left corners lock — you should hear an audible click.

To unload a disc, open the clear cover, turn the caddy over, and let the disc drop into your hand.

Extra disc caddies, for discs that you use often, are available from your authorized Commodore dealer (part # CD 1400).

Compatibility Switch

Some Amiga software, particularly games, may not boot properly when equipment such as the CD-ROM drive is attached to the Amiga expansion slot. If this problem occurs, you can temporarily disable the CD-ROM drive with the compatibility switch. To the system, the CD-ROM drive will appear to be disconnected but you won't have to go to the trouble of physically disconnecting it.

The compatibility switch is built into the headphone volume knob. Normally the knob should be turned somewhat clockwise — this will allow CDTV emulation, CD-ROM use, and an adjustable headphone listening level. However, when the knob is turned fully counter-clockwise until it clicks, the CD-ROM drive will be disabled and rendered "invisible" to the system.

CAUTION! Don't disable the CD-ROM drive while the system is running. Disabling the CD-ROM drive while the system is on will force an immediate reboot, interrupting any CDTV or Amiga software that is running. The safest method is to quit any software you are running, turn off the Amiga (the CD-ROM drive will turn off automatically), then disable the CD-ROM drive.

Inserting a disc into the CD-ROM drive will have no effect when the unit is disabled. Expansion devices (RAM, network, hard disk) that are installed in the CD-ROM drive will also be unavailable when the unit is disabled.

Once the CD-ROM drive is disabled, software that has problems with expanded systems should work properly.

If you have booted the system with the CD-ROM drive disabled, turning the headphone volume knob clockwise won't re-enable the unit. You need to turn the headphone volume knob on and reboot the Amiga before the CD-ROM drive will work again.

Amiga/CDTV Modes

Your Amiga/CD-ROM system has two basic modes of operation: Amiga mode and CDTV mode.

In general, when you use the system in Amiga mode, you use it the same as you did before you attached the CD-ROM drive. The only difference is that now you have a CD-ROM drive attached. In Amiga mode, the CD-ROM drive acts like a high-capacity, read-only floppy drive. See Chapter 5 for details about using the system in Amiga mode.

When you use the system in CDTV mode, it acts just like a standalone CDTV Player. Since the hardware isn't the same as a CDTV Player —

the lack of an infrared remote controller and front panel control are the most notable differences — you need to control things a little differently. These techniques are covered in the next chapter.

Choosing the Mode

You choose whether to run your system in Amiga or CDTV mode when you boot the computer. You change modes by rebooting.

Previously, if you powered up your Amiga but didn't provide something for it to boot with (e.g., a bootable hard disk, a Workbench floppy, etc.), the image of a hand holding a Workbench floppy would appear on the screen. Now that you have connected the CD-ROM drive, that image will be replaced by the animated CDTV prompt screen: a laser beam reflecting off a compact disc and illuminating the CDTV logo.

When the CDTV prompt screen appears, you can either boot the system into CDTV mode or Amiga mode. Chapters 4 and 5 cover this in more detail, but the basic ways to enter into CDTV or Amiga (CD-ROM) modes are:

- To get into CDTV mode, insert a bootable disc (in a disc caddy – see warning above) into the CD-ROM drive.
- To get into Amiga mode, insert a bootable floppy disk in the Amiga's disk drive or have a bootable hard drive attached when you turn on the system.

If you enter Amiga mode, you will be able to access data from compact discs you insert into the CD-ROM drive, but to emulate a CDTV Player you will need to reboot into CDTV mode.

Another possibility: you won't see the CDTV prompt screen at all if you

have an autobooting hard drive attached to your CD-ROM drive. If you do, your system will always boot into Amiga mode using the data from the hard drive. To use CDTV mode with such a system, either:

- insert a bootable compact disc;
- set the hard drive to non-bootable and then reboot; or
- turn off the system, disconnect the hard drive and boot.

Boot Priorities

If you have more than one bootable device connected at power-up, the system will attempt to boot from the devices in this order:

- 1 - floppy disk in DF0:
- 2 - CDTV application disc
- 3 - SCSI device attached to the CD-ROM drive (e.g., an autobooting hard drive)
- 4 - CD audio disc

For example, if both a bootable floppy disk and a CDTV disc are inserted in their respective drives at power-up, the Amiga/CD-ROM system will boot into Amiga mode using the floppy disk.

If more than one bootable SCSI device (e.g., two hard drives and a removable hard drive) are attached to the system, you'll need to use HDToolbox or another hard drive setup tool to set their priorities; or the priorities can be specified in the devices' MountList entries. For more information, see the manual that came with your SCSI device.

Screen Saver

If a still image is left displayed on a computer monitor for an extended period of time, it can permanently “burn-in” a ghost of the image on the screen. To prevent that, the CD-ROM drive activates the CDTV screen saver.

If your system is powered up but not booted by either a compact disc, a Workbench floppy, or a SCSI device, the CDTV screen saver will appear on the monitor after a pre-set period of time. This bouncing, rotating CDTV logo will protect your screen from “burn-in.”

Inserting a compact disc or floppy disk, or touching the mouse or any key, exits the screen saver.

You can set the amount of time that passes before the screen saver takes effect through the CDTV Preferences program. See the next chapter for details.

Chapter 4

CDTV Mode

The Amiga/CD-ROM system in CDTV mode will run CDTV applications just as they should run on a standard CDTV Player. There are, however, some differences between the hardware of your Amiga/CD-ROM system and a standard CDTV Player.

The Amiga/CDTV does not include the following items found on the CDTV Player:

- infrared remote control
- dedicated audio CD control buttons (Play, FF, etc.)
- fluorescent display
- Personal Memory Card slot
- RF or composite video output to TV or VCR
- MIDI ports

Functional equivalents to most of these items are already a part of the Amiga to which the CD-ROM drive is attached. For instance, the Amiga keyboard and mouse can be used by CDTV applications in place of the CDTV remote control and CD audio control buttons.

Other items are either redundant, or are easily added to your system. See Chapter 6 of this manual for information about expansion options.

Loading a Compact Disc

To start a CDTV application or to play an audio CD, first make sure the CD-ROM drive's compatibility switch is not in the Disable position. Place the disc in an empty disc caddy, and insert the caddy into the CD-ROM drive's front slot until the caddy drops into place.

- If the disc is a CDTV application, the black-and-white "CDTV Interactive Multimedia" screen will appear while the application loads into memory, then the application's own intro screen will appear. After that, you should follow the instructions given with the application.
- If the disc is an audio CD (standard, CD+G, or CD+MIDI), the CD Audio Control screen will automatically appear. This screen is described in a later section entitled "The CD Audio Control Screen."
- If the disc is a non-CDTV CD-ROM, the CDTV logo will turn to shades of red to indicate that the disc doesn't include the data needed to boot the system. These CD-ROM discs (if they are in the ISO 9660 format) are accessible through the Workbench and Shell when the Amiga/CD-ROM system is in Amiga mode. See the next chapter for more information.

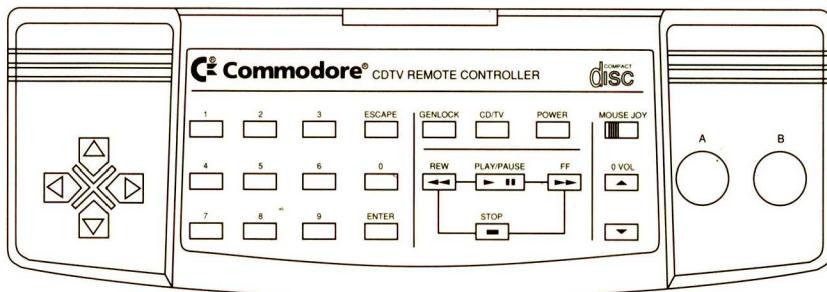
You can eject the disc caddy from the CD-ROM drive at any time without damaging the caddy or disc by pressing the eject button on the front of the unit. It is advisable (though not absolutely necessary) to first stop and exit whatever operation is currently being performed before ejecting the caddy.

In most cases, ejecting the disc will reboot the system.

Emulating the Remote Controller

The standard CDTV Player includes an infrared remote controller which is used for almost all interaction with the CDTV. The CD-ROM drive does not come with this remote controller because the keyboard and mouse you already have with your Amiga can serve the same purpose.

CDTV Remote Controller



In many cases, it will be fairly obvious how to use the mouse and keyboard instead of the CDTV remote, but there are some operations that need explanation. The chart on the next page shows how Amiga keyboard and mouse actions correspond to the CDTV player's remote controller buttons.

CDTV Remote Emulation

CDTV Remote	Amiga Keyboard	Amiga Mouse/Joystick
cursor buttons	cursor keys	mouse or joystick movement
0-9	keypad number keys	
ESCAPE	Esc or Help	
ENTER	Return or keypad Enter	
"A" button	Left Alt + Left Amiga	left mouse button, joystick fire button
"B" button	Right Alt + Right Amiga	right mouse button
STOP	F1	
REW	F2	
PLAY/PAUSE	F3	
FF	F4	
PAUSE	F5	

Note that in some CDTV applications, the mouse may not do what you expect. The way the A/B buttons and the cursor buttons on the remote are defined by CDTV applications is somewhat different from the way the mouse and its buttons are used by the Amiga.

Experiment with the mouse and/or consult your CDTV application's manual, help text, or tutorial to determine the proper method. In some cases, it may be easier to use the keyboard equivalents only.

Other Remote Controller Buttons

Some of the buttons on the CDTV remote do not have mouse or keyboard equivalents. Their functions are either not applicable to the Amiga/CD-ROM, or are accessible in some non-keyboard manner.

GENLOCK The GENLOCK button on the CDTV remote is for mode selection of a video genlock device that can be installed in the CDTV Player. If you have an external genlock attached to your Amiga, the genlock's own hardware should provide this function.

CD/TV The CD/TV button determines whether the television/monitor screen is displaying input from the CDTV Player or from a broadcast or cable TV source. If your Amiga is hooked up to a television, the RF modulator you already have connecting the two should provide this function.

JOY/MOUSE The JOY/MOUSE button determines whether the remote's cursor buttons respond as a joystick or as a mouse. This is not necessary with an Amiga/CD-ROM system since you will actually be using a joystick or a mouse — not emulating one. Just connect whichever input device your CDTV application requests (joystick or mouse) to the Amiga mouse port.

headphone volume The headphone volume control for the CD-ROM drive is found on the front of the unit. Note: Don't turn this knob all the way to left (you would feel it click) or you will disable the CD-ROM drive and reboot the system.

POWER The POWER button on the remote controller switches the CDTV Player on and off. To turn off your Amiga/CD-ROM system, simply switch off the A500 power supply — power to the CD-ROM drive will be shut off at the same time (they are interconnected).

Preferences Control Screen

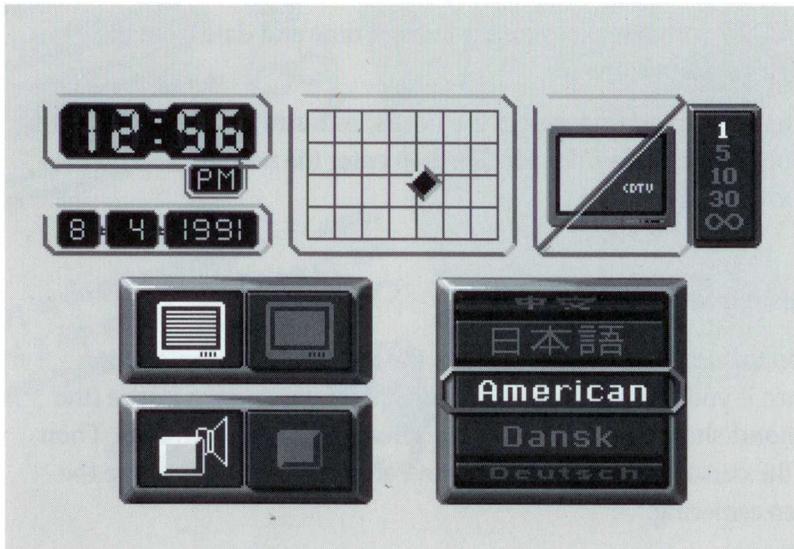
The software built into the CD-ROM drive includes a Preferences program. This allows you to set certain aspects of the CDTV-mode operation. These are:

- time and date
- screen centering
- screen saver delay time
- button beep (on/off)
- screen mode (interlace/non-interlace)
- native language

You can get to the CDTV Preferences program when either the CDTV logo or the screen saver screen are displayed. To call up the CDTV Preferences screen:

- a) click the right mouse button once, or
- b) press Return, or
- c) press Right Alt + Right Amiga.

Whatever image is on the screen will disappear, and in a few seconds the Preferences screen will appear.

CDTV Preferences Control Screen

Each option is shown in a large tile-like icon. The currently active option is indicated by an animated highlight. Move through the different options using the cursor keys or the mouse.

When a tile is highlighted, you can select or modify that option.

When you are done with all the options, press Return on the Amiga keyboard or the Enter key on the keypad to save the settings. Then click the right mouse button or press Right Alt + Right Amiga to exit the CDTV Preferences screen and return to the intro screen. The settings you made will be put into effect for that session and used in future sessions even if you turn your system off.

Each option is described below. It begins with the set of icons in the upper left and proceeds clockwise around the screen.

Setting Time and Date

The CDTV software picks up the current time and date from the Amiga's system software.

To change this setting, select the hours, minutes, mode (AM/PM or 24 hour), month, day, or year tile, then enter the new value with the keyboard number keys.

Adjusting Screen Centering

When this icon is highlighted, click the left mouse button or press Return if you want to change the position of your screen image (the diamond shaped indicator on the screen grid will turn red). Then use the cursor keys or mouse to move the indicator and change the screen centering.

This setting only affects screens related to the CD-ROM drive or CDTV applications.

Setting Screen Saver Delay Time

This lets you set the length of time the CDTV logo screen will sit idle before the screen saver takes over.

Click the left mouse button or press Return to cycle the screen saver delay time through its five possible values: 1, 5, 10, 30, and infinity (screen saver disabled). Values represent minutes of idle time. The value in yellow is the chosen value.

Setting Native Language

Because CDTV is an international product, some CDTV applications are designed to be used by readers of many different languages. Use the cursor keys to scroll through the various language choices. Press Return or click the left mouse button to select the language. This setting only affects CDTV applications that have a language option for their displays.

Setting Screen Mode

Click the left mouse button or press Return to switch from non-interlaced to interlaced screen mode. This setting affects CDTV applications only.

Setting Button Beep

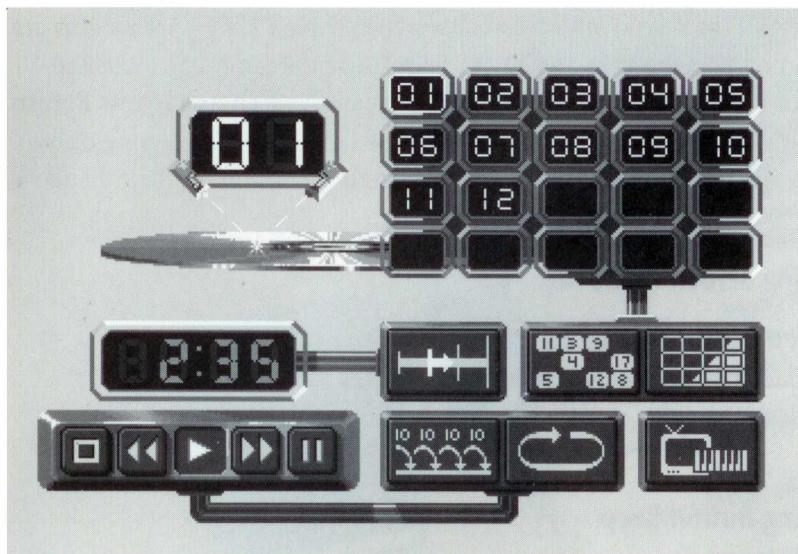
As an audio cue to let you know that a response has registered, the CDTV software can produce a beep whenever you press a key. Click the left mouse button or press Return to toggle this option on or off.

CD Audio Control Screen

Audio compact discs have a different format than CDTV application discs. When you insert an audio compact disc in the CD-ROM drive, the built-in CDTV software recognizes it as an audio disc.

First, the CD Audio Control screen appears. You'll notice that it is similar in appearance and operation to the CDTV Preferences screen. You'll also notice that it offers the same CD play options found on full-

CD Audio Control Screen



function audio CD players, including track programming, track scan, and shuffle play.

If you want to activate an option, use the cursor keys or the mouse to move the animated highlight to the desired tile. The symbols on the tile will be highlighted in yellow when the icon has been selected.

When the option you want is highlighted, click the left mouse button or press Return.

Some of the options can also be activated with the function keys ("F" keys) on the Amiga keyboard. These are indicated in the following chart:

Keyboard Shortcuts for CD Audio Control Screen

F1 Stop	F6 Time display mode
F2 Last track/REW	F7 Shuffle play
F3 Play/Pause	F8 Program/Clear
F4 Next track/FF	F9 Intro scan
F5 Pause	F10 Loop

Track Display

The large animated numeric display in the upper left shows the current track number.

Track Grid

To the right of the track display is the track grid. This shows the numbers of the tracks and the order in which they will be played. On the sample screen shown on page 4-10, the 12 tracks will be played in numerical order.

If a disc has more than 20 tracks, the track numbers above 20 will not be displayed at first (there are only 20 spaces on the grid). These tracks will scroll into view when you move down to the bottom of the grid.

If you want to re-arrange the order of the tracks, you can easily tell the CD-ROM drive exactly which tracks you want to hear. You can either use the cursor keys or the mouse to select or de-select individual tracks

on the grid while they are highlighted, or you can select a block on the grid and enter a track number using the number keys on the keyboard. (Numbers larger than the number of tracks on the disk will not be accepted.)

If you don't have a preferred order in mind, you can let the CD-ROM drive re-arrange the order of tracks at random. See the Shuffle Play section for this option.

Shuffle Play

The center icon below the track grid is the Shuffle Play option. The Shuffle Play option tells the CD-ROM drive to play the tracks in random order for listening variety. When you select this button, a new track order is generated and then displayed on the track grid above it.

Selecting this button a second time will put the tracks back in numerical sequence. Selecting it a third time will generate a new "shuffle".

Keyboard equivalent: F7.

Program/Clear

The icon to the right of Shuffle Play is the Program/Clear button.

Select this icon once to turn off all the tracks displayed on the grid.

Selecting this icon a second time will clear the grid. Selecting it a third time will reset the tracks in numerical order (i.e., not shuffled).

Keyboard equivalent: F8.

Transport Controls

The rectangle in the bottom left corner contains five icons that should

look familiar. These are known as transport controls and function in much the same way as the controls on a standard audio CD player.

Stop The first button on the left is used to stop play. This resets the play sequence to the first track listed in the Track Grid (normally Track 1). Keyboard equivalent: F1.

Last track/REW If you briefly select this button the play will skip backward one track in the sequence displayed in the Track Grid. If you select and hold this button, the current track will rewind while the song is playing (the track number will not change). Keyboard equivalent: F2.

Play/Pause Select this button to play a CD, starting with the current track and proceeding in the order shown in the Track Grid. Selecting this button while the CD is playing will pause the current track. Reselecting this button, or selecting the Pause button, will resume play. Keyboard equivalent: F3.

Next track/FF Briefly select this button to skip forward one track in the sequence displayed in the Track Grid. The number in the Track Display will change appropriately. Select and hold this button to fast-forward through a track while the song is playing (the track number will not change). Keyboard equivalent: F4.

Pause Select this button to pause the current track. Keyboard equivalent: F5. Selecting the Pause button a second time, or selecting the Play button, will resume play.

Intro Scan

The button to the right of the transport controls is the Intro Scan button. Select this button to hear the first ten seconds of the current track selec-

tions, in the order shown on the Track Grid. Keyboard equivalent: F9. To cancel Intro Scan, select this button again or select Stop.

Loop

To the right of the Intro Scan button is the Loop button. Loop allows you to automatically repeat any section of the CD. The loop can be any length ranging from under a second to the entire CD. Keyboard equivalent: F10.

If you select Loop before CD play has started, you toggle the CD-ROM drive between loop play and normal play. In normal play, each track is played once and CD play ends at the conclusion of the last track. In loop play (indicated by a highlighted loop arrow) the CD will automatically start over when the last track ends.

You can also use the Loop button to define a smaller loop. When you select the Loop button while the CD is playing, you define the start point of the loop. The button symbol will change to a double arrow with the left-hand arrow highlighted, but the track will continue to play normally.

Select the button again when you wish to define the end point. The right-hand arrow on the button will then also become highlighted, and play will jump back to the loop start point. The defined part of the track will continue to play over and over as many times as you wish.

To cancel the loop mode and allow play to continue beyond the end point, select the Loop button again. The arrow on the icon will return to a single, unhighlighted image.

Time Display

The large numerical display below the Track Display is the Time Display. By default, this displays the amount of time that the current track has been playing. It can also display other information which can be accessed through the Time Display Mode button (see next section).

Time Display Mode

To the right of the Time Display is the Time Display Mode button. This button will change the information presented in the Time Display. Selecting the Time Display Mode button will cycle through these options:

- time elapsed in the current track (default)
- time remaining in the current track
- time elapsed since the beginning of the CD
- time remaining in the entire CD.

The symbol on the button changes to indicate the current mode.
Keyboard equivalent: F6.

CD+G/CD+MIDI

The button in the lower right corner is the CD+G/CD+MIDI button. Select this button to access the graphics or MIDI data on a CD+G or CD+MIDI disc.

Play will start automatically from the first track. When a CD+G track is played, the screen displays the still image(s) or slow-scan graphics stored on the disc, and the audio plays normally.

Some CD+G discs have more than one graphics “channel.” Click the left mouse button to select the desired graphics channel. The channel number will appear in the lower right corner of the screen.

When a CD+MIDI channel is played, the MIDI data is passed to the Amiga serial port and the audio plays normally. (You must have a MIDI interface attached to the Amiga serial port to make use of the MIDI output.)

Once you are at the CD+G and CD+MIDI screen, you must reboot the system to return to the main CD Audio Control screen.

Chapter 5

Amiga Mode

In addition to allowing you to play CDTV applications, the CD-ROM drive can function as a very high-capacity, read-only disk drive. Since the CD-ROM drive's built-in software reads the industry-standard ISO 9660 format, this opens up a wealth of opportunities.

Many types of textual, numerical, and graphical data are available in this CD-ROM format. Because the format is standard, even discs produced with other computer systems in mind are accessible to your Amiga. The CD-ROM drive will not allow your Amiga to run programs designed for other computers, but it will make it possible to read the data files that form the bulk of CD-ROM storage.

It is also possible to play audio CDs while in Amiga mode by using the CDPlay utility included with the CD-ROM drive. See the accompanying disc documentation for further information.

CD-ROM Access

To access a CD-ROM, you must first boot the system into the standard Amiga environment. Make sure a CDTV application disc is not in the CD-ROM drive, then reboot.

If you have an autobooting hard drive attached to the CD-ROM drive's expansion port, and a bootable compact disc is not in the drive, your system will automatically boot into Amiga mode. If you don't

have an autobooting hard drive:

- insert a Workbench floppy in the Amiga's DF0: drive either before you power up the system or when you see the CDTV prompt or screen saver screens; or
- if you have a removable-media drive attached to the CD-ROM drive's expansion port, insert a bootable cartridge in that drive.

If you try to boot the system directly from a CD-ROM (non-CDTV) disc, the CDTV logo will turn red. This is to tell you that the disc is not bootable. The logo will return to the normal colors when you remove the non-CDTV application disc from the CD-ROM drive.

Note: If the CD-ROM drive has been disabled with the compatibility switch, turn off the Amiga, turn the compatibility switch on, and turn the system back on.

Once you have booted into Amiga mode, the CD-ROM drive is recognized by the system as a standard disk device — just like your floppy or hard drive — except that it is always read-only. If you attempt to write to a compact disc, the operation will be blocked and you'll see the message: "Volume <name> is write-protected."

Workbench Access

When you insert a CD-ROM or CDTV application disc while the system is in Amiga mode, an icon for the disc will appear on the Workbench screen. The Amiga will display the default floppy disk icon unless the disc is a CDTV application or some other disc created especially for Amiga use. As with any disk icon, you can double-click on it to open a disk window.

If you use Release 2 of Amiga Workbench, you will be able to see icons for all the files and directories on disc by choosing the "Show All Files" option from the Workbench Window menu. This makes it very easy to view and copy files from non-CDTV discs — you can use the familiar icon selection and dragging methods.

Any Workbench operation that does not involve an attempt to write to the compact disc (e.g., copying files to other Amiga drives, viewing, or executing files, etc.) should work as expected. Attempting to delete, rename, or edit icons in the CD-ROM disc window, or to drag icons into any of the compact disc's windows, will fail with a requester stating that the disc is write-protected.

If you use earlier versions of Workbench, you cannot view icons for files unless the files were written with the Amiga in mind. You will need to use the Shell to manipulate these files that you will find on non-Amiga-specific CD-ROM discs.

Shell Access

The device name for the CD-ROM drive is CD0:. Use CD0: or the volume name of the disc as the first part of a path to CD-ROM files when working in the Shell and in file requesters; for example, DIR CD0:pictures/Saturn. If you have another device with CD0: as its device name, you must change it to avoid conflicts.

Any AmigaDOS commands that you usually use with disks — CD, DIR, LIST, COPY, etc. — which do not attempt to write to the CD-ROM can be used normally. Commands that write to the disc — DELETE, RENAME, PROTECT, etc. — will fail with a requester stating that the disc is write protected.

File Conversion

You can transfer data from CD-ROM discs to your Amiga memory or to writable disks regardless of the format of the file. However, you may not be able to use that data immediately.

Text files, normally stored on CD-ROM discs in the generic ASCII format, should be viewable right away when loaded into an Amiga text editor or word processor. Other types of files, however, may require some sort of conversion before you can view or process them on the Amiga.

Graphic files, in particular, are commonly provided in a wide variety of formats other than the Amiga's native IFF format. Images in GIF, TIFF, or EPS formats, for example, may be found on CD-ROMs.

Some Amiga applications have built-in conversion modules to load formats other than IFF. If the application you are using does not have such a facility, you will have to use a conversion program to translate the file into an accessible form. Several conversion programs are available; contact your local Amiga dealer for recommendations.

CD-ROM data may also be stored in a compressed format. To use such data, you must first decompress the file with a special program. Compressed files are usually identified by an extension on the filename, such as .arc, .zoo, or .lzh, that identifies which compression program was used. The file must be decompressed with the proper type of program.

Compression/decompression programs are commonly available in the public domain from many sources. Consult your local user group, BBS, Amiga dealer, or Amiga publication for sources.

Chapter 6

Expansion Options

The CD-ROM drive is expandable, which means you can increase its capabilities by adding devices to it.

There are two general ways to add devices to your CD-ROM drive:

- an internal memory module
- plug-in option cartridges for the rear expansion slot.

Instructions for installation and connection of expansion devices should be included with the expansion units.

Memory Module

A Commodore Memory Module adds 2 megabytes of fast RAM to your Amiga/CD-ROM system. Consult your local dealer for more information about this device.

Plug-in Expansion Units

An expansion slot on the rear of the CD-ROM drive allows you to tie your system to other systems or add peripherals. Each of these optional devices comes in the form of a cartridge that can be easily plugged into the CD-ROM drive's rear expansion slot, so you don't have to open the CD-ROM drive or Amiga main units.

- Extremely compact 40- and 80-megabyte hard drive units give your

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system the high-speed read/write storage capacity that can be necessary to make full use of CD-ROM data sources. Each drive has an built-in autobooting controller.

Contact your Commodore dealer for more information about these or other expansion devices as they become available.

