

CD-ROMs - The Ultimate Add-On?

Lee Calcraft takes a look at what is involved in accessing CD-ROMs on the Arc.

D-ROM is an exciting new arena for Archimedes users, offering a rapidly expanding range of multimedia discs, each holding up to 600Mb of data in a read-only format (enough space for the full text of over 1000 novels). In previous issues of the magazine (5:7, 6:1 and 6:3) we have reviewed a variety of CD-ROMs. Here we take a closer look at the practicalities of upgrading your Archimedes to read these revolutionary

CDs + drive

Figure 1. Archimedes with Cumana CD-ROM player, and CD-ROMs

discs.

SAY IT WITH SCSI

To access CD-ROMs on the Archimedes you need a SCSI interface (short for Small Computer System Interface, and pronounced scuzzy), as well as the CD-ROM drive itself. This is a fast interface capable of transferring data at up to 4Mb

per sec. Only the Acorn A540, and the Acorn Risc_iX UNIX machines are currently supplied with a SCSI interface as standard, but it is possible to upgrade pretty well any other RISC OS machine, with an add-on card. A number of companies supply suitable interfaces, including HCCS, Morley, Oak and Acorn themselves (further details appear at the end of the article).

As you may be aware, a SCSI port can be connected to a whole host of different devices - such as hard disc drives, tape

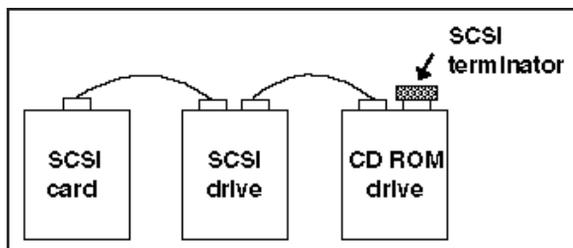


Figure 2. Connecting SCSI devices

streamers and other peripherals. Moreover, because you can daisy-chain these devices, you can hang a whole lot (up to seven) onto just one interface. Daisy-chaining simply means that each device has two SCSI sockets. The first device is connected directly to the interface, while the second socket is used to link it on to the next device, and so on. The last device in the chain has a terminator plug (see fig. 2).

ENTER THE CDFS

If you are using an Acorn card you will need to ensure that the ROM-based software supplied with the board contains a recent version of CDFS (CD Filing System). You will need version 2.1 or later in order to get the best from video clips in Acorn Replay format. To check your version, just press F12 from the Desktop,

takes 1.5 secs to load into Edit from my SCSI hard disc takes around 5.5 seconds to load from CD.

You can equally well open a directory viewer on a PC CD-ROM. The only difference is that, since the Filer cannot cope with filenames longer than 10 characters, all those which are longer than this (e.g. LONGFILE/EXE) will be truncated.

Of course, you will not always be able to make sense of the contents of PC files. PC executables for example (i.e. programs) are designed for the 8086 family of processors. You may be able to run them using the Emulator

Figure 3.
The Hutchinson
Encyclopedia

and type:
Help Modules

If the CDFS module is not present, or is only present in an early version, you will need to upgrade (contact your supplier).

Once you have a sufficiently recent version of CDFS, and a CD-ROM drive plugged into the SCSI port, you should see the CDFS icon at the left hand side of the icon bar along with your other drives.

Clicking Menu over this allows you to configure both the number of drives connected, and the size of the directory buffer. This should be set to somewhere between 16 and 64K.

USING THE FILER

If you now slip an Archimedes CD-ROM into your drive, and click on the CDFS icon on the icon bar, you will get a directory display. It will be just like the directory display of a hard disc, except that there may well be many more objects per directory, and it will typically take longer before the display appears, because CDs are much slower devices than hard discs. As a comparison, a 600K datafile which

however - though database searching and so on will tend to be very slow. A better solution to the PC CD problem is the use of RISC OS front ends. A growing number of companies prominent in the PC CD market are authoring RISC OS front ends for their CD software. This is usually supplied on floppy disc, and enables the

Figure 4.
Acom's
Multimedia
Expansion Unit

user to access the corresponding PC CD directly from the RISC OS Desktop, just as if it were a native RISC OS product. Both the Times and the Hutchinson Encyclopedia (fig. 3) have adopted this approach (reviewed in RISC

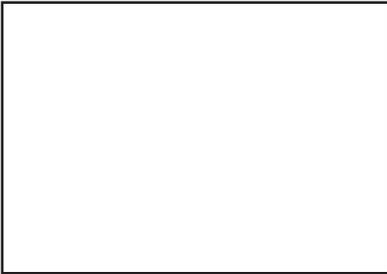
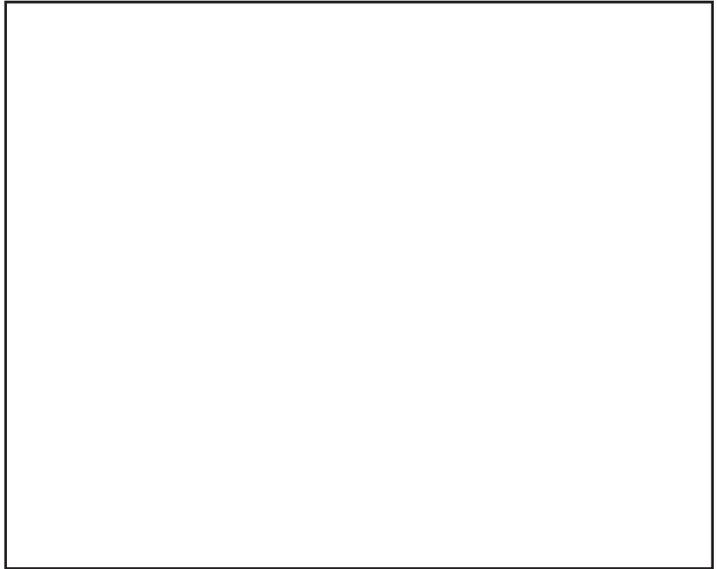


Figure 5. CDFS drive Menu

were audio compact discs, and CD-ROM readers are generally capable of reading these discs. Most CD-ROMs have a stereo output socket, and often a volume control as well, and it is possible to use the CD-ROM drive as a CD player. To this end, Acorn supply a neat Desktop application CDPlayer (fig. 7) for controlling the beast. This provides all the features normally associated with a CD player, including random track playing, track selection etc. - though it is somewhat less intuitive to use than it ought to be. The display includes a numeric keypad for track selection, fast forward and reverse, and even an eject button.

CHOOSING A CD-ROM DRIVE

A number of companies supply CD-ROM drives suitable for use with the Archimedes, including Cumana and Oak. Typically a drive will cost around £400+VAT. But I

User 6:3 and 6:1 respectively).

PLAYING AUDIO CDS

Before there were CD-ROMs there were audio compact discs, and CD-ROM

would expect prices to fall in the near future.

Certain drives have a small RAM cache

which helps to prevent bottlenecks in data transfer rates, and although these cost a little more, there are significant improvements to be had when using Acorn

Figure 6. Opening a directory viewer on a CD-ROM



Figure 7. Acorn s CDPlayer software.

Replay for example.

But before you buy, it is well worth considering a brand new product from Acorn. The Multimedia Expansion Unit (fig. 4), which was launched at the BETT Show on 20th January, costs very little more than a conventional CD-ROM drive, but offers a great deal more.

Contacts:

Acorn Computers

0223 254 254

HCCS

091 487 0760

Oak

0274 620 423

Cumana

0483 503121

CIA Factbook
 Creepy Crawlies
 Dictionary of the Living World
 Frontier 2000
 Grooves
 Hutchinson Encyclopedia
 Image Warehouse
 Ma Ville
 NASA Planetary Images
 Really Useful CD-ROM
 Revelation 2
 Times & Sunday Times
 British Birds
 Illustrated Holy Bible
 Illustrated Shakespeare

Allied Interactive
 MDI (Media Design Interactive)
 MDI
 Cambridgeshire Software House
 MDI
 Attica Cybernetics
 MDI
 Oak Solutions
 Spacetech
 APA Multimedia
 Longman Logotron
 Times Network Systems
 Interactive Learning Products
 Animated Pixels
 Animated Pixels



Currently available CD-ROM Title for the Archimedes

Firstly the Expansion Unit contains a

If YOU are thinking seriously about

STATISTICS

Then "FIRST"

NOW MULTI-TASKING

1st and 1st JR have enhanced specifications. For example:

RISC OS 2 and 3 compliant. Structured Menu System. "Spreadsheet" data entry.

Simple access to UNMATCHED STATISTICAL FACILITIES. Drawfile output of Graphics. Ultra-easy import and export of CSV files giving smooth data interfaces to other software. Automatic, context sensitive Manual.

Mouse driven with optional keyboard shortcuts

Statistical content of 1stJR is highly relevant to Educational requirements Upgrade paths from single tasking versions are available.