Atomwide Parallel SCSI Adaptor

Installation instructions - Revision 1 - March 1993

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Atomwide Parallel SCSI Adaptor

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The Atomwide Parallel SCSI Adaptor was created by David Knell for Atomwide Ltd.

Some of the software contained in this product is licensed from Acorn Computers Limited, Cambridge.

Hardware installation

Introduction

This document describes how to install the Atomwide Parallel SCSI Adaptor and its supporting software.

The Atomwide parallel port SCSI adapter is a product which will allow the connection of a wide variety of devices to your computer. These include hard disc drive units, CD-ROMs, floptical drives and magneto-optical units. This is achieved without using an expansion. slot within the computer; the adapter plugs into the parallel printer port instead.

The adapter is compatible with a wide variety of SCSI devices. The interface software is compatible with any properly-written RISC OS application, and also allows the playback of Acorn ReplayTM movies from hard disc or CD-ROM. It is compatible with the PC Emulator (provided that the MS-DOS CD drivers are used) and with the Aleph-One PC cards.

Getting started

The Atomwide Parallel SCSI Adaptor requires no soldering or opening of your computer.

Only one version of the Atomwide Parallel SCSI Adaptor exists and fitting it is the same with all types of computer. The adaptor requires the presence of a bi-directional parallel port so will only work with the A3010, A3020, A4000, A5000 and A4 computers.
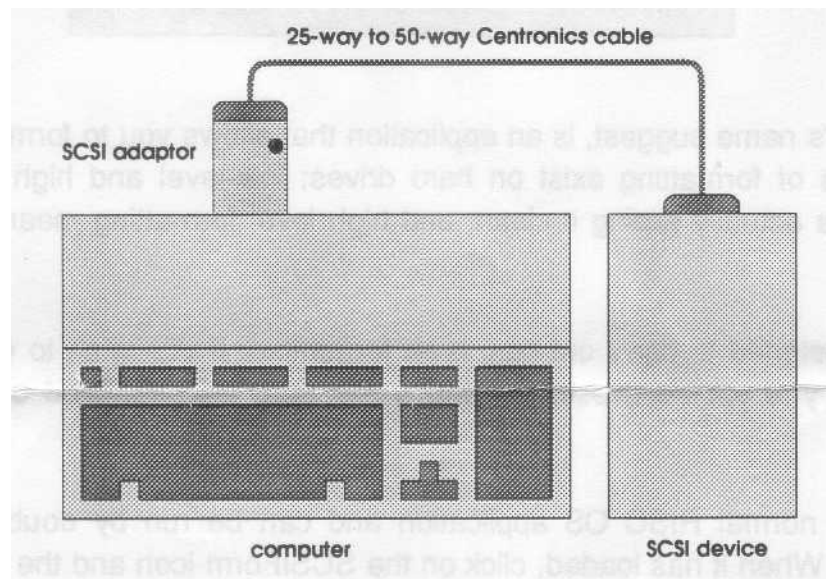
Fitting

Begin by disconnecting the computer from the mains supply.

Locate the parallel port on the back of your computer and insert the adaptor into the socket. Next, fit the cable supplied to the other end of the adaptor, and then link the cable to your SCSI device.

IMPORTANT

It is essential that you have the SCSI adaptor fitted between your computer and the SCSI device. If you connect the SCSI device directly to the parallel port of your computer, it is extremely likely that you will cause considerable damage to both the computer and the SCSI device. Check that you have the computer, SCSI adaptor, cable and SCSI device connected like so.

Power for the adaptor is supplied by the SCSI device and the red LED (light emitting diode) on the adaptor will glow brightly when power is available. Check this is so by connecting your SCSI device and turning it on.

If the light fails to come on or glows dimly, it means that the 'terminator power' link is not fitted in your SCSI device. This can be rectified by removing the lid of the device and altering the necessary link. Please refer to your drive manual or contact your drive supplier on how to do this.

Termination

Each end of the bus should be terminated. The termination absorbs the signals coming down the bus and prevents them from being reflected back down the cable. These reflections can cause data errors if they are severe. The SCSI adapter is terminated; hence there should only be a single other termination, t the far end of the cable.

Testing & software configuration

Once you have fitted the SCSI adaptor and connected your SCSI device, you can install the software. Place the supplied disc in your floppy disc drive and catalogue it. The disc contains two applications, !SCSIForm and !BootSCSI and a directory 'Acorn'.
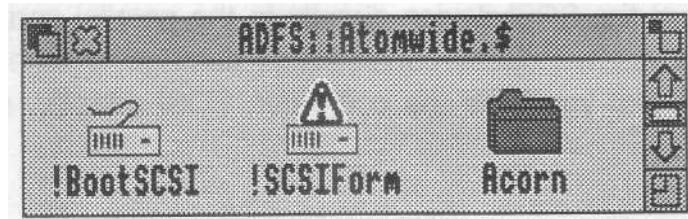

!SCSIForm

!SCSIForm, as it's name suggest, is an application that allows you to format your hard disc drive. Two types of formatting exist on hard drives; low-level and high level. Low level formatting means actually wiping it clean, and high level formatting means organising the disc space.

!SCSIForm is designed to carry out high level formatting. If you wish to (low level) format your hard drive, you should use the SCSIDM program, also supplied on the   disc i n the Acorn directory.

!SCSIForm is a normal RISC OS application and can be run by double-clicking on its application icon. When it has loaded, click on the SCSIForm icon and the following window will appear.

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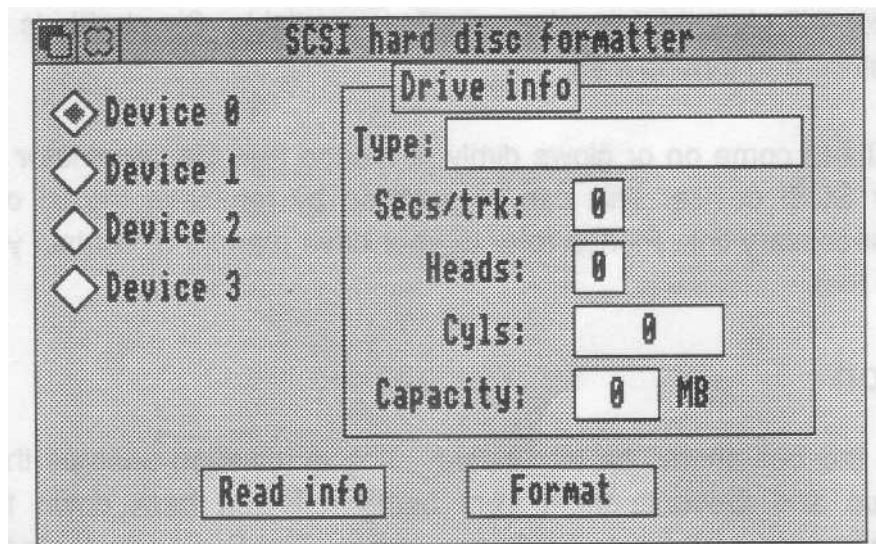
Start by selecting a device number (ie. 0-3) and then click on the 'Read info' button. This will interrogate the attached drive and report back the make, size etc. in the box labelled 'Type'. You then need to click on 'Format' to format the disc.

!BootSCSI

!BootSCSI is used to load the various modules required by the adaptor. If you already have a hard drive fitted to your computer (e.g. an IDE drive on an A5000), you can include !BootSCSI in your existing !Boot sequence.

A !Boot file can be created from the Task manager menu on the desktop. Full details on how to do this are given in your computer's Welcome Guide. Once created, the !Boot file can be edited to include a line to start up the !BootSCSI application. A typical line for this might be

```
    *Run ADFS::IDEDisc4.$.!StartUp.!BootSCSI
```

If you are using the SCSI adaptor with a floppy disc based system, you will have to run the !BootSCSI application from floppy disc, each time you turn on your machine or reset it.

The software should be run only after all of the devices to be driven have been turned on and given time to complete their power-on sequences. If they are powered down, or have not completed their power-up, they may not be recognised. In this case, simply re-run the software a few seconds later.

When run, !BootSCSI automatically determines which SCSI devices are present and configures itself accordingly - there is no need to tell the system how many drives are connected, as is the case with other systems. For example, if you have three SCSI devices with the IDs 3, 5 & 6, they will automatically be mapped to device numbers 0, 1 & 2.

If all the relevant hardware/software is functioning correctly, a drive icon for each device will appear on the left hand side of the icon bar.

Troubleshooting the Atomwide Parallel SCSI Adaptor

If you are having problems, getting your Parallel SCSI Adaptor to work, check through the following list.

1) The SCSI adaptor needs to powered from the SCSI device connected to it. You can determine whether power is getting through by the state of the red LED on the SCSI adaptor. If the LED is on, power is being supplied. If the LED is off, there is no power coming from the SCSI device.

   To remedy this problem, the Terminator power' link must be set in the SCSI device connected to the SCSI adaptor. Details on how to set this link should be given in your SCSI device manual or alternately can be obtained from the supplier of the device.

2) All connections need to be secure. Make sure that the adaptor is inserted fully into the parallel port on the back of your computer and that all other plugs/sockets are matched, correctly. Because the adaptor 'hangs' from the back of the computer, it ran occasionally come loose. Make sure the 'hex nuts' on the adaptor are fully screwed into the back of your computer, to ensure this can't happen.

3) The SCSI adaptor will not function with any dongles (such as those for Impression and ArtWorks) you may already have fitted to your computer. This is because the adaptor needs to pass data in both directions, whereas the dongles will only allow data to travel in one direction. Any dongles should be removed from the computer when using the SCSI adaptor.

4) Make sure you have connected the SCSI adaptor between the computer's parallel port and the SCSI cable (as shown in the diagram on page 5 of this manual). Forgetting to do so could result in substantial damage to both your computer, and the SCSI device connected to it.

5) Finally, check termination; there should be only one terminator at the far end of the device chain.

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