Acorn Customer Service News

ISSUE 4
AUGUST 1989

- *All the documents in this newsletter are available on the Support Information Database (SID).*
- *Back-issues are available via SID and may also be obtained from Customer Services.*
- *Any suggestions you may have for information you would like to see in future issues should be sent to the Newsletter Editor via SID mail (ID 1000) or by post at our head office address.*

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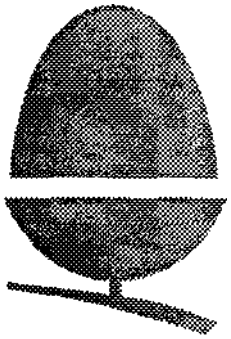
NEWS BULLETIN



1. Bracket for Miniscribe Drive - Part Number: 0177,001

The item in last issue of the News-letter covering the new brackets that are required when replacing Tandon or Western Digitial for Miniscribe drives only applies to the Archimedes 440's, or 305's and 310's that have had a hard disc upgrade fitted. The new brackets are NOT required on the 400/1 series machines.

2. Taxan 770 Multi-sync Monitors

There has been reports of incompatability between some early Archimedes 400/1 Series, the new A3000 and Taxan 770 Multi-sync Monitors. To be precise, the signal input impedance of the SYNC lines,(VS*, HS* and CS*), is too low for our output drivers.

The 400/1 and A3000 series has an additional signal present on the video connector, namely "MODE". This is to provide a "device present" signal to a domestic T.V. when used via a SCART interface.The Taxan requires this extra signal, if present, to be in a defined logic state. This is then used within the monitor to select screen size. At the moment, due to the loading of the monitor, the computer can not drive this signal to a guranteed logic state, thus causing the Taxan to jitter.

To cure this problem.

A400/1 - fit a shunt to Link 2, located near the Analogue RGB socket.

A3000 - fit a shunt to Link 25

This may result in the need to adjust the monitor display size using the controls at the rear. All rear buttons should be in the out position.

3. EPSON GQ3500 Printer in Laserjet emulation

Rescently we have had reports of problems using the Epson GQ3500 printer in Laserjet emulation mode with the ! PrinterLJ application under RISC OS being driven via the parallel port. When printing graphics, faint white lines appear on the print out.

This is caused by an incorrectly set DIP switch on the External Printer Interface Card. DIP switch SW4-4, when in the OFF position strips the eighth data bit which controls graphics output, thus causing the white lines. Setting the DIP switch to the ON position will solve the problem.

Information covering DIP switch SW4-4 can be found on page 13 (problem solving section) of the GQ3500 Manual.

4. EPSON LQ-850 Printers

Early versions of the LQ-850 do not support the [Esc]+ sequence required for 360x360 dpi printing. This resulted in printout that had double spaced lines of graphics terminated by backslashes. This is purely a software problem and there is no mechanical reason for the printer not being able to support this resolution.

A ROM change to the printer will solve the problem. To establish which version of the ROM the printer has, a self test should be run by turning the printer on with the Form Feed button held down. The ROM number will be printed in the top left. If it is not one of the three following then an upgrade will be required.

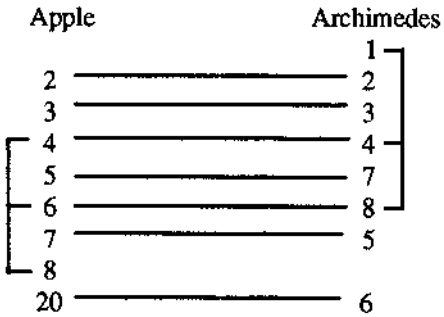
M 80483, N 91785, N 92687 New
ROMs can be obtained from:

Apropriate Technolodgy Limited,
Aptec House,
South Bank Business Center
Ponteon Rd,
London, SW8 5AT

Tel: 01-627-1000

5. Connections between the Archimedes Serial Port and an Apple Laserwriter

Below are the details of the pin connections between the Archimedes serial port and an Apple Laserwriter and how the setup options should be set within the !PrinterPS application supplied with RISC OS.



Laserwriter baud rate : 9600
Data Format
Bits : 8
Parity : Off Stop
Bits : 2 XON/XOFF :
selected

6. SONY 3.5" disc drives - Out of Warranty Servicing Facilities.

Out-of-warranty service facilities for the Sony 3.5" disc drives have been established with:

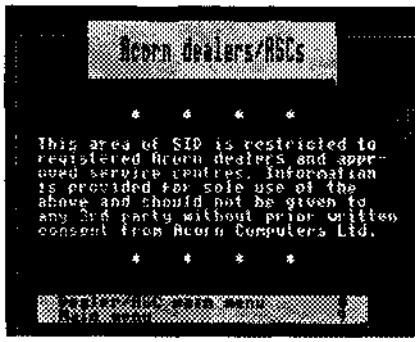
Bedford Technical Engineering,
P.O. Box 31,
Ampthill Road,
Bedford.
Tel: 0234 226474; Fax: 0234 226090.

They will provide a repair service for £20 plus parts (excl. VAT). Where the total repair cost is likely to exceed £45, the customer will be advised prior to any repair proceeding. BTE are also in a position to offer additional post-warranty services, and contact should be made directly with BTE for further information.

IN-WARRANTY SONY 3.5" disc drive failures will continue to be replaced through Acorn Spares.

Support Information Database

Latest News



Following last month's SID bulletin, here are seven reasons why you should be using SID:

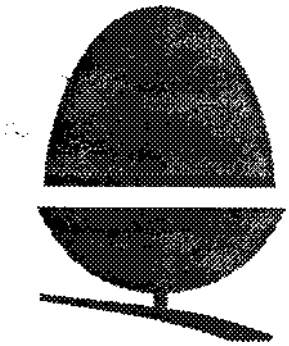
- As from Monday, 4th September, the Prestel gateway will be open, thus allowing any Prestel or Micronet subscriber to use SID from as little as 1p per minute on top of their normal time charge. This can be compared to the 8p per minute charged for using Fastrak.
- Micronet reckon that of their 20000 subscribers, 10000 of them own Acorn computers. That is a lot of people who might use SID.
- You can advertise **FREE OF CHARGE** on SID. Just prepare a mode 7 image of your advert and send it to the SID Editor at the address below. Providing the advert is acceptable (ie it meets ASA rules and does not advertise non-Acorn related products) then it will be put on SID for all the subscribers to see.
- An increasing amount of technical documentation and test software is being released to dealers and ASCs **EXCLUSIVELY** through SID. That means that the only way you can get hold of it is to download it from SID. Examples are test software for the A3000 and the Universal PCB, and new RISC OS printer drivers. The latter may be downloaded and put onto discs for your customers, thus enhancing your after-sales service.
- As from November, the Customer Services newsletter will only be available via SID telesoftware. Only a single sheet of paper will be sent out, detailing the contents of the newsletter and how to download it from SID.
- Fast technical support. If you have ever rung the dealer hotline and got the engaged tone, why not send your query to a technical mailbox on SID? There is a good chance it will be answered within an hour of you sending it if the answer is known! Alternatively, you could share the problem with other STD subscribers by leaving it on a bulletin board.
- Its cheap! Just a local call and 6p plus VAT per minute of use. You will get billed once a quarter, with a minimum charge of £10 per quarter.

So, if you haven't already got a SID ID, we would recommend you apply now! To do so, please write to:

The SID Editor
Acorn Computers Ltd
Fulbourn Road
Cherry Hinton
Cambridge
CB1 4JN

Application Notes Index

Archimedes



The following is a list of application notes available on SID for the Archimedes range of personal workstations.

- Each document may be retrieved by typing **SID Ref#* Eg: *0310011# will take you to the Archimedes 300 series hardware product spec frame from which you can download the document.

SID Ref:	Document Title
0310011	Archimedes 300 series hardware product specification
0310022	Sound commands on the Archimedes machine
0310032	Pinouts on the Archimedes machine
0310052	Archimedes Serial Port Application Note (Issue D)
0310063	6502 to ARM - Application Note
0310071	Archimedes Podule Loaders
0310091	Archimedes applications: authors' guidelines
0310101	A Series Podules
0340011	Archimedes 6052 Emulation: Application Note
0310111	RISC OS Application Image Format (previously Arthur Image Format)
0310121	Acorn Library Format / Object Library Format
0310131	ARM Object Format

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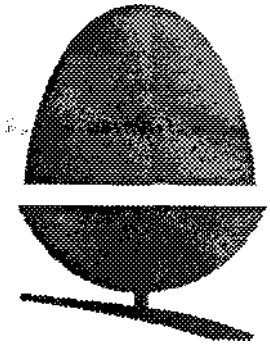
BBC Micro



The following is a list of applicatiom notes available on SID for the BBC Micro.

• Each document may be retrieved by typing: **SID Ref #* Eg: *0040151# will take you to the "Speech System User Guide errata" frame from which you can download the document.

SID Ref:	Document Title
0040011	Test equipment for the BBC and Electron microcomputers
0040021	Fitting two single disc drives to a BBC computer
0040031	Differences between BASIC I and BASIC 1I
0040041	Cassette recorder usage with BBC and Electronc computers
0040051	Use of EPROMs in sideways ROM sockets of the BBC microcomputer
0040061	Parallel printer port: issue 2 board modification
0040071	Use of *FX3 - erratta to the User Guide
0040081	Changing the BREAK key
0040091	Buffer Indirections as used in the BBC microcomputer
0040101	BBC User Guide Errata: UK Version
0040111	Modification to cure teletext mode deterioration
0040122	Second processor timing incompatibility
0040131	Modifications to remove random keyboard interrupts
0040141	5.25" disc interface upgrade for the model B microcomputer
0040151	Speech System User Guide errata
0040163	Differences between DFS/NFS and DNFS
0040171	Hardware Description of the BBC Model B Microcomputer
0040181	Programming the BBC microcomputer serial processor IC
0040191	Disabling the interlace in mode 7
0050011	64K sideways RAM daughter board fitting instructions
0130011	Electron Production Inspection Tester (P.I.T.)
0130021	Electron Watchdog
0130031	Acornsoft games for the Electron
0130041	PCB Component changes for different ULA types for Electron
0150011	Electron Plus 3 User Guide amendments

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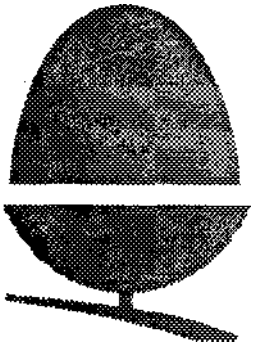
Master 128 & Master 512



The following is a list of application notes available on SID for the Master 128 & Master 512.

• Each document may be retrieved by typing: **SID Ref #* Eg: *0190011# will take you to the "Advanced Disc Filing System Application Note" frame from which the document can be downloaded.

SID Ref:	Document Title
0190011	Advanced Disc Filing System application note
0190022	Advanced Network Filing system application note
0190031	Differences between BASIC 2 and BASIC 4
0190042	Master series cartridge interface application note
0190053	Master series Welcome Disc "Convert" utility: functional description
0190061	Expanding files under ADFS
0190071	The use of BAS 128 on the Master 128 and Master Compact
0190082	Summary of the features of EDIT
0190092	Summary of the functional differences between the Master 128 and BBC models B and B+
0190102	Master 128 operating system description
0190111	Master 128 operating system commands part 1
0190121	Master 128 operating system commands part 2
0190131	Master series terminal software: functional description
0190141	Copying files from the cassette filing system to other filing systems on the Master 128
0190161	Master 128 hardware description
0190171	Known differences for the Master RS423 serial interface
0190181	Changes between different versions of the Master series 1770 DFS
0220021	Media compatibility with the Master Compact
0200032	Master 512: applications compatibility and software list part 1
0200042	Master 512: applications compatibility and software list part 2
0200052	Master 512: applications compatibility and software list part 3
0200061	Master 512: technical information and monitor documentation part 1
0200071	Master 512: technical information and monitor documentation part 2

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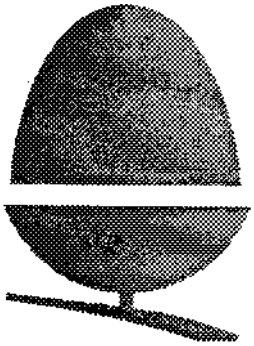
Z80, View family & Econet



The following is a list of application notes available on theSID info server for the Z80, the View family & Econet.

• Each document may be retrieved by typing: **SID Ref #* Eg: *0300011# will take you to the "Z80 documentation errata" frame from which the document may be downloaded.

SID Ref:	Document Title
0300011	Z80 documentation errata
0300021	Using CP/M with non-standard disc configurations
0230011	View hints & tips
0230021	Printing labels from a View macro file
0230031	ViewStore hints & tips
0230041	Copying the ViewSpell utility disc to ADFS
0230051	Copying the ViewStore utility disc to ADFS
0230061	How to write a ViewStore utility, part 1
0230071	How to write a ViewStore utility, part 2
0230081	How to write a ViewStore utility, part 3
0090011	Econet System User Guide errata
0090021	Econet fault-finding guide part 1
0090031	Econet fault-finding guide part 2

A3000 expansion

Internal expansion

DANGER

DANGEROUS VOLTAGES ARE EXPOSED INS1DE THE CASE OF THE COMPUTER WHEN THE COVER IS REMOVED. THE COMPUTER SHOULD BE DISCONNECTED FROM 'THE MAJNS SUPPLY BEFORE THE COVER IS REMOVED.

The following internal upgrades are currently available for the A3000 computer:

- User port / MIDI interna1 expansion card
- 1 Mb Ram upgrade
- Serial port
- Econet module

Interface

The electrical signals available on the internal expansion are a subset of those described in 'A Series Podules', available from Acorn Customer Service on the SID system (Doc Ref 0310101) or as an Application Note.

The connection is via two 17-way 0.1 inch pitch connectors. Expansion cards should use 0.025 in square pin headers.

The interface is configured as 'Podule 1, Module 1'.

Expansion bus connectors

Pin no.	SK3	SK11*
1	+5v	0v
2	PWE*	+5v
3	PS1*	PRE*
4	CLK2	PRnW
5	LA[2]	LA[4]
6	LA[3]	LA[5]
7	BD[0]	LA[6]
8	BD[1]	LA[7]
9	BD[2]	0v
10	BD[3]	LA[8]
11	BD[4]	LA[9]
12	BD[5]	LA[10]
13	BD[6]	LA[111
14	BD[7]	LA[12]
15	RST*	LA[13]
16	0v	PIRQ*
17	+5v	0v

Note: Pin 1 is at the right hand end when viewed from the front of the computer.

Power supply

The maximum power available from the +5V rail is 600 mA. The maximum dissipation inside the case Js 0.5W (100mA).

5-way connectors

There are two 5-way 0.1 inch connectors fitted to the main circuit board:

Pin no.	SK8	SK9
1	C[01	0v
2	C[1]	REF8M
3	Br	PFIQ*
4	IORQ*	Ms[1]*
5	IOGTt*	+5

Note: Pin 1 is at the righthand end, when viewed from the front of the computer.

N.B. C[0] and C[1] are used as the 1IC bus.
It is recommended that the load on each signal does nct exceed 3HCT gates or that stated in 'A Series Podules'. Any upgrade must be able to drive at least 7 HCT and 3 TTL loads on the data bus.

Mechanical

The rear panel required is shown in the drawing at the back of this manual. The size of the User Port / MIDI expansion card PCB and position of the connectors is also shown in the drawing included at the back of the manual.

User port / MIDI expansion card (UPM)

Introduction

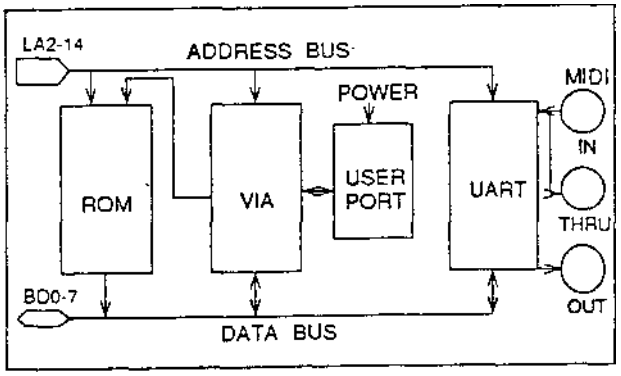
The A3000 User Port / M1DI expansion card fits inside the computer, and provides:

- An 8-bit User port, largely compatible with the User Port interface on the BBC Model B and Master 128 computers (and with the User Port on the Archimedes I/O expansion card)
- MIDI (Musical Instrument Digital Interface), with IN, OUT and THRU connections, compatible with the International MIDI Association specification.

Main components

- 65C22 VIA for the User Port
- 2691 UART for the MIDI
- **27128** EPROM containing firmware and ID byte.

UPM block diagram



Comparison with Archimedes expansion cards

ARCHIMEDES J/O EXPANSION CARD

- The VIA is at the same address and clocked at the same speed. Port A PA<0..2> is used to page ROM. These are the same as the UPM when set for 2764/27128.
- The User port is the same (Port B). The VIA interrupts go through a link, which is not normally fitted.
- The MID1 section is not the same.
- The ADC and 1 MHz bus are not fitted to the UPM.

MIDI EXPANSION CARD

- The UART is the same (Signetics 2691), but is at a different address (see below).
- The ROM page latch is not the same.

	LA13	LAI2	offset address
MIDI Podule UPM upgrade	1 1	0 1	&2000 &3000

Addresses of main system components

Address	Component
&0000-1FFC	ROM/EPROM 27128 as standard (16k x 8 bit). Larger EPROMS can be fitted if the links marked X are cut between pins 1 & 2, and relinked 2 to 3.

Eprom size	LK1	LK2	LK3	LK4
2764				
27128				
27256			X	
27512	X		X	
1M bit (JEDEC)	X		X	
2M bit	X	X	X	
4M bit	X	X	X	X

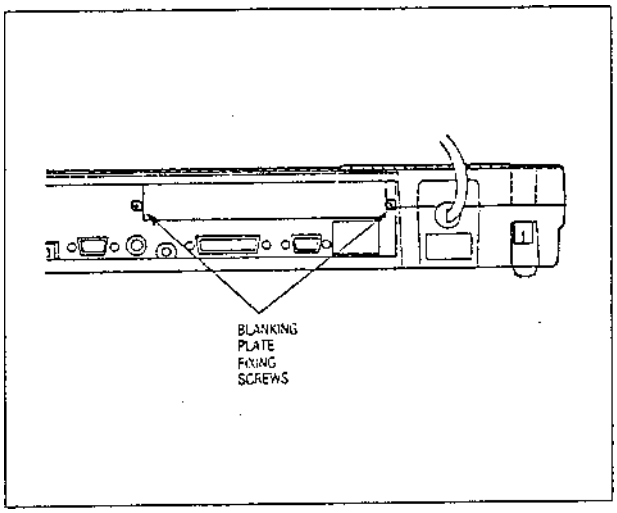
	Contains the ID byte 63 (dec).
	The start-up information must be at the top of the ROM.
&2000-2FFC	VIA 65C22 - 2Mhz part.
	Port A PA<7..0> used to page the ROM. CAs Not Used.
	Port B PB<7..0>, CB1 and CB2 for the User Port.
	Use 2Mhz synchronous cycle to access the VIA.
	The interrupt output connects directly to PIRQ*.
	No User Port interrupt handler provided.
&3000-3FFC	UART 2691 - For the MIDI interface.

Fitting an internal expansion card

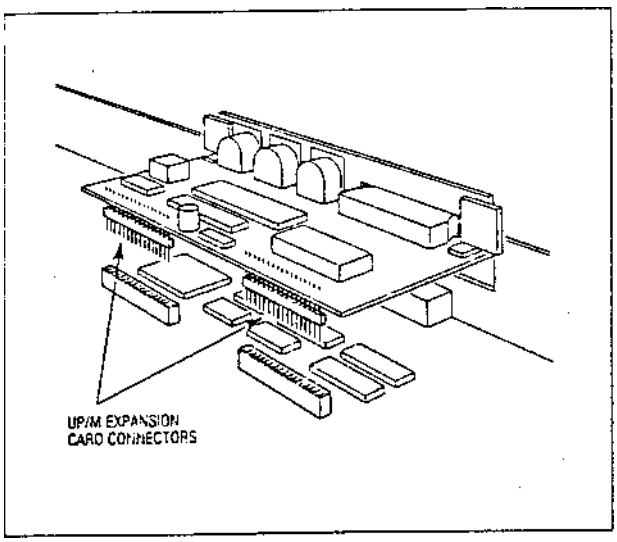
This procedure covers the fitting of an internal expansion card, such as the User Port / MIDI expansion card. This work should only be carried by - Acorn Dealers or Approved Service Centres:

1 Follow the procedure for removing the cover of the computer given in the next chapter.

2 Unscrew the two machine screws holding the rear blanking plate in place:



3 Plug the expansion card into the two connectors on the PCB:



4 Replace the two screws holding the expansion card backplate.

5 Replace the cover of the computer.

6 Run the dealer test software to test the correct function of the computer and the upgrade, and of any other upgrades fitted.

Keep the rear panel blanking plate with the computer, in case the expansion card is removed later.

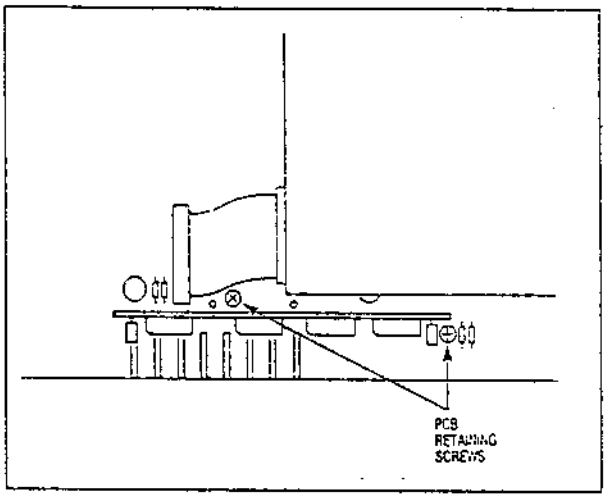
1Mb RAM upgrade

-The A3000 computer RAM can be upgraded from 1 Mb to 2 Mb by the addition of a 1Mb RAM module which plugs into the main PCB.

Fitting a RAM upgrade

1 Follow the procedures detailed in the next chapter for the removal of the computer cover and the keyboard.

2 To fit earlier RAM upgrades with securing lugs, remove two PCB retaining screws and plug the upgrade module, in a vertical position, into the board. Later upgrades, with no fitting lugs, simply push into the connectors on the PCB:



3 Replace the screws securing the PCB and the upgrade module.

4 Replace the keyboard and the cover of the computer.

5 Run the dealer test software to test the correct function of the computer and the upgrade, and of any other upgrades fitted.

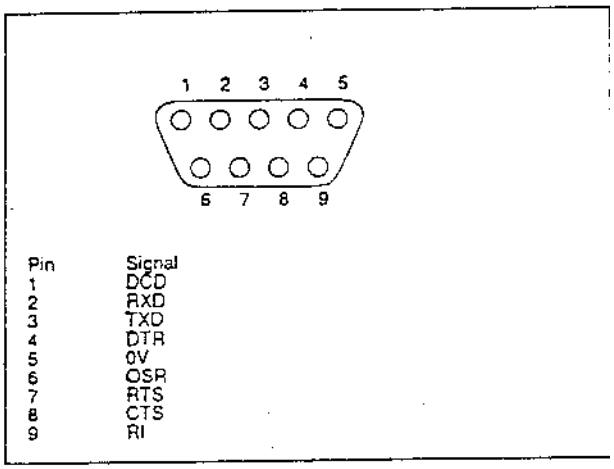
Serial port upgrade

Introduction

The A3000 computer is fitted with a 9-way D-type serial connector on the back panel, but this is not functional-until a serial port upgrade kJt has been fitted by an Acorn Dealer or Approved ServJce Centre. Only Acorn Serial Port Upgrade kits should be used.

The A3000 serial port upgrade consists of a serial processor chip and a line driver chip, which fit into existing sockets on the PCB.

Connector pinouts

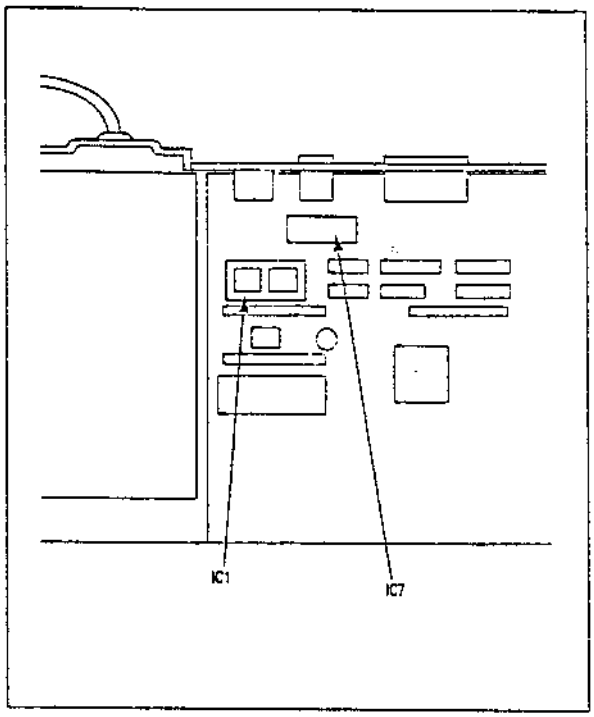


Fitting the Acorn A3000 serial port upgrade

1 Follow the procedures in the next chapter for the removal of the cover and the keyboard.

2 Bemove the Econet module and the User Port / MIDI expansion card, if fitted.

3 Insert the 28-pin IC 65C51 into socket IC1, and the 24-pin IC LT1133 into socket 1C7. The notched ends of the ICs should face towards the left hand side of the PCB (viewed from the front of the computer) :



4 Fit the serial number label to the PCB near the upgrade 1Cs.

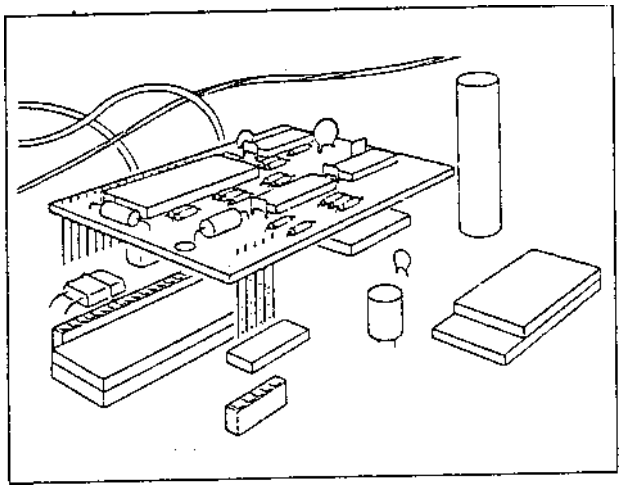
5 Refit any modules and expansion cards removed in • step 2 above, and replace the cover of the computer.

6 Remoye the labe1 'Seria1 not fitted' from the rear panel.

7 Run the dealer test software to test the correct function of the computer and the serial port, and of any other upgrades disturbed during this installation.

Fitting an Econet module

1 Follow the procedure in the next chapter for removing the cover of the computer.
2 Plug the module onto the PCB connectors:



3 Replace the cover of the computer.

4 Run the dealer test software to test the correct function of the computer and the Econet module, and of any other upgrades fitted. Refer to the appropriate Econet file server Manager's Guide for instructions on setting the station id.

External expansion

-Interface

Introduction

The A3000 computer supports an external expansion card (podule) interface, although with some minor differences from other ARM based systems:

- Single +5Volt power supply rail, rated at a maximum of 1 Amp (no +12 or —5 Volt rails provided)
- No support for Co-Processor type cards
- The external expansion card is in software slot 0
- The podule must be capable of driving 3 TTL and 7HCT loads on the data bus.

Refer to the application note 'A series podutes' (referenced at the start of this chapter) for a full podule interface specification.

Physical dimensions

As the podule is external to the computer enclosure there is no real limit on the size of the unit. Care should be taken not to block off any of the other expansion ports on the rear of the computer.

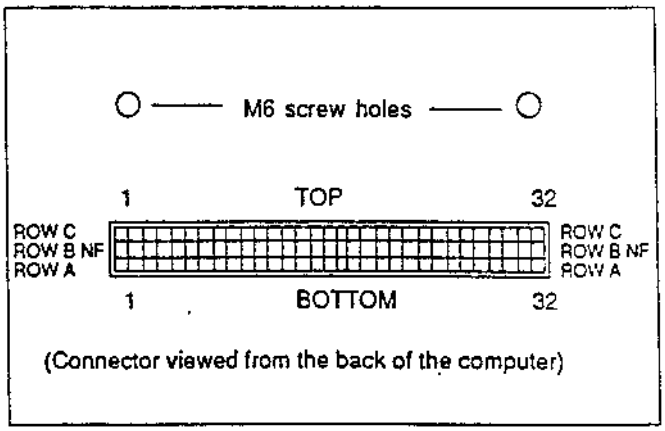
Fitting an expansion card

WARNING
Power down the computer before fitting an external expansion card.

It is anticipated that expansion cards will be fitted into a suitable external expansion card unit. Slots are provided underneath the case of the computer, into which a tongue in the case of the expansion card unit can locate. Tapped holes are provided in the backplate of the computer to enable the expansion unit to be secured to the computer with two M6 screws.

Connector

The podule interface is provided via a 64 way DIN 41612 socket fitted at the rear of the computer:



The connections to the interface are shown overleaf.

External expansion connections

Pin	ROW A	ROW C	Description
1	0V	0V	Ground
2	LA[15]	reserved	
3	LA[14]	0V	Ground
4	LA[13]	0V	Ground
5	LA[12]	reserved	
6	LA[11]	$\overline{MS[0]}$	MEMC Podule select
7	LA[10]	reserved	
8	LA[9]	reserved	
9	LA[8]	reserved	
10	LA[7]	reserved	
11	LA[6]	reserved	
12	LA[5]	$\overline{RST}$	Reset (see note below)
13	LA[4]	PR/$\overline{W}$	Read/not write
14	LA[3]	$\overline{PWE}$	Write strobe
15	LA[2]	$\overline{PRE}$	Read strobe
16	BD[15]	$\overline{PIRQ}$	Normal interrupt
17	BD[14]	$\overline{PFIQ}$	Fast interrupt
18	BD[13]	$\overline{S[6]}$	
19	BD[12]	C1	IIC serial bus clock
20	BD[11]	C0	IIC serial bus data
21	BD[10]	$\overline{S[7]}$	External Podule select
22	BD[9]	$\overline{PS[0]}$	Simple Podule select
23	BD[8]	$\overline{IOGT}$	MEMC Podule handshake
24	BD[7]	$\overline{IORQ}$	MEMC Podule request
25	BD[6]	$\overline{BL}$	I/O data latch control
26	BD[5]	0V	Supply
27	BD[4]	CLK2	2MHz Synchronous clock
28	BD[3]	CLK8	8MHz Synchronous clock
29	BD[2]	REF8M	8MHz Reference clock
30	BD[1]	+5V	Supply
31	BD[0]	reserved	
32	+5V	reserved	Supply

Note: The $\overline{RST}$ signal is the system reset signal, driven by IOC on power-up or by the keyboard reset switch. It is an open-collector signal, and expansion cards may drive it also if this is desirable. The pulse width should be at least 50ms.

FCO 2005 - AEH26 FileStore E01

Upgrade instructions

Ensure that the FileStore unit is switched off, and disconnected from the mains, the printer and the FileStore E20 unit.

Prise off the back cover of the E01 unit. It is easiest to pull this backwards and downwards. You will need to pull it quite hard to move it.

Similarly, remove the front panel, complete with the front flap. You will not be able to remove this completely without removing the LEDs but it is not necessary to remove the front panel completely in any case.

Remove the two side panels.

Undo the six screws on the underside of the unit which hold the cream coloured top metal unit to the bottom metal unit.

Slide the metal top backwards and off the main unit.

Remove the power connection and data connection from drive 5(the one closer to the middle of the circuit board). Note carefully the alignment of the data cable as this may vary between different FileStores, and it is important that this is put back on in the correct manner later.

Undo the four screws holding drive 5 to the bottom of the case.

Slide the drive forward, tilting it so that the back supports rest on the circuit board. This reveals two Eproms, IC4 and 105.

Remove the Eprom in socket IC4 carefully, and retain it. Insert the new Eprom marked 0254, 204-03 in the socket, with pin one at the rear. Similarly, remove the Eprom in socket IC5 and replace it with the new Eprom marked 0254,205-04.

Re-assemble the unit, following the disassemb|y instructions in reverse. Ensure that the connections are made from the front panel to the circuit board connectors, as these may have been removed when removing the front panel. Ensure that the grating on the top unit is situated at the front of the machine when assembled to keep adequate air flow.

Test the assembled unit by switching on with the front flap down, ensuring that the Mode light remains on, then closing the flap, and checking that the unit enters user mode. If possible, check using a computer that communication is possible with the computer. Remember that you can just connect a computer fitted with an Econet interface to the FileStore - the FileStore will provide the necessary clock signal.

Return two removed Eproms to Acorn (Spares department). Please return in anti-static foam with pins intact, so we can reblow the Eproms.

Supplement to the FileStore Network Manager's Guide

In addition to hardware changes, a number of changes were made to the software resident in ROM within FileStore, concurrent with the introduction of E01S, E4OS and E6OS models. Some of these changes are performance improvements, and others are command changes in response to suggestions from customers and user groups. The following supplement to the FileStore Network Manager's Guide (Part No. 0454,010 Issue 1) dated 19 February 1987, covers these changes:

Printer server management

The following command has been added:

```
*PRPAGE <Y |N>
```

This will switch on or off the form feed between printing jobs.

FileStore management

The following commands, used to configure FileStore for use, are now available in maintenance mode:

Old version	*New* command *and* syntax
`*FORMAT`	`*FSFORMAT <415>`
`*FSMODE`	`*FSMODE <U|M>`
`*VERIFY`	`*FSVERIFY d`
`*FSSTN`	`*FSSTATION sss`
`*FSMAXDIVE`	`*FSMAXDRIVE d`
`*FSUSER`	`*FSUSER <name>`
`*FSPROT`	`*FSPROT <ON |OFF>`
a new command	`*FSNAMEDISC d <name>`

Published by Acorn Computers Limited
February 1989

FCO 2006 - AEH35 FileStore EMS Upgrade Instructions

Ensure that the FileStore E01S unit is switched off, and disconnected from the mains, the printer and any other FileStore units.

Prise off the back cover of the E01S unit. It is easiest to pull this backwards and downwards. You will need to pull it quite hard to move it.

Similarly, remove the front panel, complete with the front flap. You will not be able to remove this comp|ete|y without removing the LEDs but it is not necessary to remove the front panel completely in any case.

Remove the two side panels.

Undo the six screws on the underside of the unit which hold the cream coloured top metal unit to the bottom metal unit.

Slide the metal top backwards and off the main unit.

Remove the Eprom in socket 107 careful|y, and retain it. Insert the new Eprom marked 0282, 008-01 in the socket, with pin one at the rear.

Re-assemble the unit, following the disassembly instructions in reverse. Ensure that the connections are made from the front panel to the circuit board connectors, as these may have been removed when removing the front panel. Ensure that the grating on the top unit is situated at the front of the machine when assembled to keep adequate air flow.

Test the assembled unit by switching on with the front flap down, ensuring that the Mode light remains on, then closing the flap, and checking that the unit enters user mode. If possib|e, check using a computer that communication is possible with the computer. Remember that you can just connect a computer fitted with an Econet interface to the FileStore - the FileStore will provide the necessary clock signa|.

Return the removed Eprom to Acorn (Spares department). Please return in anti-static foam with pins intact, so we can reblow the Eproms.

ARCHIMEDES A410/1 COMPUTER - CITIZEN FLOPPY DISC DRIVE. MODIFICATION WHEN FITTING SECOND FLOPPY DISC DRIVE. DEALER UPGRADE.

A problem has been identified when a second Floppy Disc Drive upgrade is fitted to within the Archimedes 410/1 computer. The problem manifests itself by showing both disc drive LED's being lit when either of the disc drives is accessed.

A 'Field Change Order (FCO 2007) has been authorised by Acorn to effect the replacement of the original drive within the computer. Details of how to detect the problem and the means of rectifying this problem are given below.

Replacement Instructions.

1. Remove the unit from the packaging and set aside the packaging for re-use following the repair.

2. Remove the upper case by unscrewing the 5 fixing screws, 3 are located at the rear and 1 on each side. Slide the upper case towards the rear of the computer.

3. Gently disconnect the data cable and the power cable from the drive. Note the orientation of these cables before they are removed.

4. Unscrew and remove the 2 fixing screws which secure the floppy drive bracket to the saddle

5. Carefully slide the disc drive bracket and the floppy drive assembly towards the rear of the unit. Turn the drive over to check if component number R61 is fitted. This device is located adjacent to the MOD rev box. If R61 is fitted, proceed to No.6. If not, refit the drive and leads - no further action is required. Therefore, proceed with the fitting of the Second Floppy Disc Upgrade as described in the fitting instructions supplied with the upgrade kit.

6. Remove the disc drive from the bracket by removing the 4 fixing screws - retain these for later use.

7. Fit the new disc drive into the bracket - refit the 4 fixing screws. NOTE - the new drive can be identified by checking that R61 is NOT fitted. •

8. Gently slide the bracket and disc drive assembly back into the front plastic moulding ensuring that the disc drive bezel is flush or within 0.5mm of the front face.

9. Refit the data cable and power cable (check orientation). Carry out the second Floppy Disc Upgrade as per the instructions supplied with the kit.

10. Slide on the upper case and refit the 5 fixing screws. Submit the unit for testing.

11. Configure the drives as per the instructions supplied with Floppy Drive Upgrade Kit, AKD 51. Ensure that the drive select switch on the disc drive is set correctly.

12. Test the disc drives by powering up the unit, and using a formatted and verified disc, carry out following sequence:-

i) Catalogue Drive 0: Check drive 0 LED is on only.
11) Catalogue Drive 1: Check drive 1 LED is on only.

13. The original disc drive should be be suitably packed and returned to the Acorn Spares and Warranty Department, Fulbourn Road, Cherry Hinton, Cambridge, with a fully completed Service Report. A replacement unit will be sent to you to replenish your stock. Distributor dealers should return the exchanged drive to their distributor for action - not to Acorn direct.

NOTE: This modification is to overcome a fault when the Second Floppy Disc Drive is added to the Archimedes A410/1 computer. If R61 is fitted to either drive then both drive select LED's will illuminate regardless of which drive is accessed. This modification applies to Archimedes 410/1 computers with a second drive fitted. Single floppy drive machines do not require modification.

All AKD51 upgrade kits should contain Citizen drives which are correct, i.e. R61 is not fitted. It should be noted that both drives to be used must have R61 removed.

* Before fitting a new drive check that R61 is not present.

When completing the Service Report, please ensure that the full serial number of the host computer AND the Second Drive Upgrade Kit is quoted accordingly. Failure to do so will result in the Service Report being returned without action.

Please note: R61 is mounted upon the disc drive PCB by means of surface mount technology. NO attempt should be made to remove this component. Any unauthorised rework of this drive will invalidate the warranty of the modified item.