REFERENCE GUIDE

Archimedes

Acorn
The choice of experience.

CONTENTS

Acorn
The choice of experience.

Warning: the software supplied with this pack is for demonstration purposes only.

INTRODUCTION

ABOUT THIS PACK

Since its launch, no one has questioned the remarkable power and flexibility of the Archimedes range of micro-computers. You will already be aware that the revolutionary ARM (Acorn RISC Machine) makes it the fastest micro around, at any price. The power this gives us to create the friendliest possible working environment makes it simply the most attractive personal workstation for almost every type of prospective user.

It was this quality that led the Archimedes 300 series to be named **Home and Small Business Computer of the Year 1987**.

Software which complements the technical excellence of the machine is now available. New software is being written, and existing applications are becoming available which, instead of being compromise versions, are actually designed to exploit the native power of Archimedes.
This enables unprecedented flexibility and productivity to be put in the hands of the user at the lowest possible price. For example:

● a full-function word-processor

● an integrated spreadsheet

● a powerful database manager

The list is growing every day, which is why we have produced this pack. This steadily building range must make Archimedes the ideal machine for your customers – whether they want a home, educational or recreational computer, or a highly-productive business or scientific tool.

By keeping you up to date with the development on the applications front, we hope to make it easier for you to sell Archimedes with confidence and assurance.

This Launch Pack contains two items:

● **Reference Guide**   outlining major benefits of the Archimedes range in terms of specification and market orientation.

● **Applications Cards** introducing these exciting new applications in a way which enables you to summarise their major features for a prospective customer, and demonstrate the benefits of using them with Archimedes.

It doesn't end there, however. The Archimedes story is only just beginning. The range of machines will be progressively updated and added to and you need to be kept informed of the latest developments. The list of applications will continue to grow and as details become available, you will be kept informed.

We will be sending updates to this Reference Guide periodically, for storage in this binder. New Applications Cards, with demonstration materials, will be delivered when key applications are launched. This is a resource that will grow with the range.

USING THE APPLICATIONS CARDS

In the smaller binder accompanying this pack, you will find a set of discs and cards describing individual applications. How you make best use of them is up to you, but we would like to make some suggestions.

When you have received the master versions of all the software, you will obviously present them to the prospective customer in the way which best addresses their interest and your knowledge of the package. To get you started, however, we have divided the description of each application into two parts:

● **Features Card**   describing the package, the sorts of benefits particular users would expect to gain, and a list of the selling opportunities it presents.

● **Demonstration** enabling you to show these points in a crisp, informative way without burying

yourself in the documentation before you can begin. To support each demonstration, appropriate examples are included on the Examples Disc or the Welcome Disc.

The cards are not designed to supplant your knowledge of a particular package – they will only be effective as a complement to your understanding of Archimedes and its computing environment.

We have assumed, for demonstration purposes, that you will have Archimedes 310 available. Many of the applications require the 1 Mbyte of RAM this offers so, if you have Archimedes 305, it should have the 0.5 Mbyte upgrade fitted, to ensure the programs run as described.

There are three further points to make about the cards:

FAMILIARITY WITH ARCHIMEDES

There is no attempt to 'educate' you or your customer in using the Archimedes environment. We have assumed that you are able to implement the instructions given without further explanation. We have used the following conventions:

- **Select**   position mouse pointer on object and click left-hand button.

- **Double click**   left-hand button to select and run the application.

- **Program menu**   click middle button on mouse.

- **Supplementary dialogue boxes**   when you are directed to an activity, you will have to leave it, usually by clicking on an **OK** box. This is only described once, the rest of the time we assume you can get back to the main activity unaided.

- **Reset**   'soft' reset by pressing the reset button at the back right of the keyboard. Perform a 'hard' reset (that is, restore all original settings) by switching the computer off, then powering up with the '**R**' key held down.

UNEXPLAINED FEATURES/FUNCTIONS

The demonstrations only cover major selling features. A general description of all the special features will be found in the promotional literature accompanying the packs. If a customer needs more detailed information please supply it from your own knowledge or refer to the documentation.

Similarly, customers don't always follow instructions and might end up in peculiar areas of the program by mistake. We hope you are familiar enough with Archimedes to retrieve these situations.

SELLING INFORMATION

These bullet points at the side of each activity highlight particular benefits of the Archimedes solution. They are not intended as a comprehensive, exclusive list. You may expand on them, ignore them or present different ones as you see fit.

One final point – the major benefit of each package inevitably centres around the power, ease and friendliness of Archimedes itself. The package will help sell the machine, and the machine will help sell the package.

PRODUCT FEATURES MATRIX

FEATURE	305	310	310M	440
DIMENSIONS AND POWER SUPPLY				
Computer unit				
width	362 mm	362 mm	362 mm	362 mm
depth	406 mm	406 mm	406 mm	406 mm
height (excluding feet)	97 mm	97 mm	97 mm	97 mm
Keyboard unit				
width	485 mm	485 mm	485 mm	485 mm
depth	205 mm	205 mm	205 mm	205 mm
height (excluding feet)	46 mm	46 mm	46 mm	46 mm
Power input 198 – 264 v (50 Hz)	▲	▲	▲	▲
Integral monitor power outlet	▲	▲	▲	▲
CPU				
Acorn RISC Machine	▲	▲	▲	▲
(32 bit CMOS processor with fast interrupt response)	▲	▲	▲	▲
MEMORY				
RAM				
Size	0.5 Mbyte	1 Mbyte	1 Mbyte	4 Mbytes
CMOS (battery-backed) User RAM	▲	▲	▲	▲
Real-time clock (battery-backed)	▲	▲	▲	▲
ROM				
Size	512 Kbytes	512 Kbytes	512 Kbytes	512 Kbytes
ROM-based software				
Arthur (operating system)	▲	▲	▲	▲
HELP system	▲	▲	▲	▲
BBC Basic V	▲	▲	▲	▲
Basic editor	▲	▲	▲	▲
ADFS (Disc filing system)	▲	▲	▲	▲
ANFS (Network filing system)	▲[1]	▲[1]	▲[1]	▲[1]
Desktop (Acorn WIMP system)	▲	▲	▲	▲
Window manager	▲	▲	▲	▲
Font manager	▲	▲	▲	▲
Five ISO character sets	▲	▲	▲	▲
Support for 4096 colour palette	▲	▲	▲	▲
Sprite support	▲	▲	▲	▲

▲ Standard
■ Optional purchase
& Add-on purchase
[1] Requires optional ECONET module
[2] Requires link change from high resolution monitor
[3] Option is 2nd disc drive OR 20 Mbytes hard disc
[4] Requires 0.5 Mbyte RAM upgrade

PRODUCT FEATURES MATRIX

FEATURE	305	310	310M	440
DISC STORAGE				
Single 3.5" floppy disc (1 Mbyte unformatted – 3 millisecond step rate)	▲	▲	▲	▲
Dual 3.5" floppy discs	■³	■³	■³	—
Internal 20 Mbytes high-speed Hard disc (1 to 1 interleave)	■³	■³	■³	▲
DISPLAY Display modes				

Medium resolution monochrome
Medium resolution colour:

Text	Graphics	Colours	305	310	310M	440
20 × 32	160 × 256	4, 16, 256	▲	▲	▲	▲
40 × 32	320 × 256	2, 4, 16, 256	▲	▲	▲	▲
80 × 32	640 × 256	2, 4, 16, 256	▲	▲	▲	▲
132 × 32	text only	16	▲	▲	▲	▲
40 × 25	text only	2	▲	▲	▲	▲
40 × 25	Teletext	16	▲	▲	▲	▲
80 × 25	text only	2, 4, 16	▲	▲	▲	▲
132 × 25	text only	16	▲	▲	▲	▲

High resolution monochrome

			305	310	310M	440
Text Graphics (1280 × 976)			—	—	—	▲
144 chrs 54 lines			—	—	—	▲

High resolution colour
High scan rate for use with monitors such as NEC Multisync
As medium resolution colour with additional:

Text	Graphics	Colours	305	310	310M	440
80 × 64	640 × 512	2, 4, 16	▲	▲	▲	▲

FEATURE	305	310	310M	440
Outputs				
Analogue RGB	▲	▲	▲	▲
Monochrome composite video	▲	▲	▲	▲²
High resolution monochrome	—	—	—	▲
MONITOR OPTIONS				
12" Standard resolution monochrome	&	&	&	&
14" Medium resolution	&	&	&	&
SOUND				
2-channel stereo with 7 stereo positions and 8 voices	▲	▲	▲	▲
Internal loudspeaker	▲	▲	▲	▲
3.5 mm stereo jack (for use with 32 ohm stereo headphones or amplifier)	▲	▲	▲	▲
KEYBOARD AND MOUSE				
103 Key PC-style keyboard	▲	▲	▲	▲
Adjustable holder for function key labelling cards	▲	▲	▲	▲
3-button mouse	▲	▲	▲	▲

▲ Standard
■ Optional purchase
& Add-on purchase
1 Requires optional ECONET module
2 Requires link change from high resolution monitor
3 Option is 2nd disc drive OR 20 Mbytes hard disc
4 Requires 0.5 Mbyte RAM upgrade

FEATURE	305	310	310M	440
INTERFACES				
Serial interface				
Standard 9-pin D-type (selectable baud rate 75 – 19200)	▲	▲	▲	▲
Parallel interface				
25-pin D-type socket (8 bit Centronics compatible)	▲	▲	▲	▲
EXPANSION OPTIONS				
Econet	■[1]	■[1]	■[1]	■[1]
2-card backplane	■	■	■	—
4-card backplane	—	—	—	▲
I/O expansion card	■	■	■	■
ROM expansion card	■	■	■	■
MIDI (Musical Instrument Digital Interface) card	■	■	■	■
STANDARD SOFTWARE				
PC Emulator (with MS-DOS 3.21)	■[4]	■	▲	■
Welcome Suite				
Tutorials, Utilities and Demonstrations	▲	▲	▲	▲
Painting program	▲	▲	▲	▲
Music program	▲	▲	▲	▲
Font Designer	▲	▲	▲	▲
6502 Emulator	▲	▲	▲	▲
Floating Point Emulator	▲	▲	▲	▲
Scalable fonts (2 sets)	▲	▲	▲	▲
DOCUMENTATION				
Welcome Guide	▲	▲	▲	▲
User Guide	▲	▲	▲	▲
Programmer's Reference Manual	■	■	■	■
UPGRADES				
RAM	to 1 Mbyte	—	—	—
Floppy disc	2 max[3]	2 max[3]	2 max[3]	—
Hard disc	20 Mbytes[3]	20 Mbytes[3]	20 Mbytes[3]	—

▲ Standard
■ Optional purchase
& Add-on purchase
[1] Requires optional ECONET module
[2] Requires link change from high resolution monitor
[3] Option is 2nd disc drive OR 20 Mbytes hard disc
[4] Requires 0.5 Mbyte RAM upgrade

ARCHIMEDES 305

"Power is nothing if it cannot be harnessed, and the Archimedes series allows you to translate this power easily into results on the screen."
(PC User – January 1988)

The 305 is designed to be the entry level machine to the Archimedes 300 series, the latest development of the range of BBC Microcomputers – however this goes much deeper than the retention of the red function keys at the top of the keyboard! It is an indication of the power and flexibility that can be expected as standard. Indeed, the 300 series was voted the **Home and Small Business Computer of the Year 1987**.

Ergonomically styled, from the professional-feel keyboard and mouse to the 'hand-angled' disc drive mounting, its four components fit together to produce a compact and highly functional personal workstation.

The provision of an integral power output for the monitor eliminates the usual jumble of cables behind the machine, maintaining its clean lines and professional appearance.

FEATURES	DESCRIPTION	ARCHIMEDES POWER
CPU	**32 bit ARM** (Acorn RISC Machine)	Makes comparison with other micros in this bracket almost impossible.
		Typical execution rate of 4 mips (millions of instructions per second) makes it quite simply the fastest micro around.
MEMORY	**0.5 Mbyte RAM**	Makes the 305 the ideal machine for the less demanding user.
	ROM suite	
	Arthur (operating system)	Designed to exploit the power of ARM.
	ADFS and ANFS	Expanded versions – more powerful than ever before.
	Desktop WIMP environment	Disguises the complexity of the system by putting the user firmly in control, in a friendly, graphics-led way. Mouse-driven pointer makes task selection very easy.
	Utilities	Painlessly handle the windows environment, the text fonts and the incredible colour and graphics facilities.
DISC STORAGE	**3.5" Disc** 1 Mbyte capacity (unformatted)	The single industry-standard disc drive supplied gives enormous flexibility in handling large files and documents.
		Upgrade to a dual disc system, or add a 20 Mbyte hard disc. The **1 to 1 interleave** makes this about the fastest available – it reads **once** where a standard PC disc reads **6 times.**
DISPLAY	**24 Screen modes**	Whatever application is running, the display will always be capable of using the best combination of text/graphics resolution and choice of colours to reflect the requirement for clear and concise presentation of information.
	Monitor options	From standard resolution (text processing, perhaps) monochrome or colour, right through to medium resolution colour (for advanced graphics applications) there is a display specification to best meet the user's demands.

ARCHIMEDES 305

FEATURES	DESCRIPTION	ARCHIMEDES POWER
SOUND	**2-Channel stereo**	With 7 stereo positions and 8 voices, the Archimedes sound capabilities really stand out from those of competitor's.
	Output	Output to stereo headphones or a conventional music/hi-fi system direct. Combine with optional MIDI to give control over professional-quality synthesizers.
KEYBOARD & MOUSE	**PC layout** (enhanced)	Professional keyboard, together with the three button mouse, puts the power of the machine at the user's fingertips.
	12 Function keys	Common to all BBC Microcomputers, they offer vast opportunities to increase efficiency and productivity.
INTERFACES	**Industry standard serial and parallel**	Offering limitless opportunities in terms of communication with the outside world.
	Uses: Printers and plotters	The widest range of hard copy devices is supported – even laser printers!
	Modems	For external communications – access public databases like PRESTEL and Telecom Gold, or transfer important information between systems.
	Control systems	Drive machines and systems from a programmed environment – get feedback, take decisions and take **actions!**
	Instrumentation	Connect scientific/measuring instruments and use the data they provide in controlled experiments.
EXPANSION OPTIONS	**2-Card backplane**	This offers the opportunity of expanding the system, in virtually any direction.
	Some options: Econet module	Harness the power of Archimedes in a network. Swap information with other users and increase overall productivity.
	I/O module	Provides the familiar **User Port, 1 MHz Bus** and **Analogue to Digital** ports used by so many existing BBC applications.
	ROM	Provides five, 32-pin sockets to take ROM, EPROM or even additional RAM chips – to support the widest possible range of applications.
	MIDI	**Musical Instrument Digital Interface**, giving operating system command over musical signal generation. Not just a keyboarding system but a composer's development tool as well.
STANDARD SOFTWARE	**Welcome Suite**	Not just an introduction to Archimedes but a set of tools for continuing to exploit its power.
	Tutorials and demonstrations	Show the user how to get started, explaining the hierarchical directory structure, and keyboard functions. The graphics demonstrations show fully the power of Archimedes.
	Utilities: 6502 Emulator Floating Point Emulator Font Designer	Provided as a resource for the user, the **6502 Emulator** enables re-use of many BBC programs written for the 6502 co-processor. The **Floating Point Emulator** gives a floating point arithmetic capability (vital for any demanding arithmetic application). **Font Designer** allows the creation and definition of fonts for use in screen display and hard copy presentations.
	Sample programs	Powerful pieces of software in their own right, **Painting** and **Maestro** allows the creation of complex graphics (including Sprite Graphics) and sophisticated musical exercises.

FEATURES	DESCRIPTION	ARCHIMEDES POWER
DOCUMENTATION	The Welcome Guide	Gives an introduction to Archimedes through the **Welcome Suite** of software.
	The User Guide	A comprehensive reference guide to Archimedes and its capabilities. A full explanation of **Arthur**, **ADFS** and **Basic** commands opens up the world of programming on Archimedes.
	Programmer's Reference Guide	An optional purchase, it supports serious programmers developing their own applications – making sure that none of the power of Archimedes is lost.
UPGRADES	Ease of upgrade	Already a very powerful microcomputer, the 305 can easily be upgraded into a formidable personal workstation.
	RAM	Upgradable to the full 310 specification of 1 Mbyte.
	Disc storage: *Either* **additional 3.5″ disc drive**	Increases the flexibility of disc copy and data access with an additional floppy disc drive.
	Or **hard disc drive**	20 Mbyte of mass storage, with the highest possible access speed. With this upgrade, the 305 becomes a very powerful business or scientific personal workstation indeed.

ARCHIMEDES 310

"Power is nothing if it cannot be harnessed, and the Archimedes series allows you to translate this power easily into results on the screen."
(PC User – January 1988)

Retaining all the features of Archimedes 305, but with additional memory, Archimedes 310 constitutes an extremely powerful personal workstation. Indeed, the 300 series was voted the **Home and Small Business Computer of the Year 1987**.

Ergonomically styled, from the professional-feel keyboard and mouse to the 'hand-angled' disc drive mounting, its four components fit together to produce a compact and highly functional personal workstation.

The provision of an integral power output for the monitor eliminates the usual jumble of cables behind the machine, maintaining its clean lines and professional appearance.

FEATURES	DESCRIPTION	ARCHIMEDES POWER
CPU	**32 bit ARM** (Acorn RISC Machine)	Makes comparison with other micros in this bracket almost impossible.
		Typical execution rate of 4 mips (millions of instructions per second) makes it quite simply the fastest micro around.
MEMORY	**1 Mbyte RAM**	This makes the 310 a very powerful machine indeed, handling the widest range of applications quickly and effectively.
	ROM suite	
	Arthur (operating system)	Designed to exploit the power of ARM.
	ADFS and ANFS	Expanded versions – more powerful than ever before.
	Desktop WIMP environment	Disguises the complexity of the system by putting the user firmly in control, in a friendly, graphics-led way. Mouse-driven pointer makes task selection very easy.
	Utilities	Painlessly handle the windows environment, the text fonts and the incredible colour and graphics facilities.
DISC STORAGE	**3.5″ Disc** 1 Mbyte capacity (unformatted)	The single industry-standard disc drive supplied gives enormous flexibility in handling large files and documents.
		Upgrade to a dual disc system, or add a 20 Mbyte hard disc. The **1 to 1 interleave** makes this about the fastest available – it reads **once** where a standard PC disc reads **6 times.**
DISPLAY	**24 Screen modes**	Whatever application is running, the display will always be capable of using the best combination of text/graphics resolution and choice of colours to reflect the requirement for clear and concise presentation of information.
	Monitor options	From standard resolution (text processing, perhaps) monochrome or colour, right through to medium resolution colour (for advanced graphics applications) there is a display specification to best meet the user's demands.

ARCHIMEDES 310

FEATURES	DESCRIPTION	ARCHIMEDES POWER
SOUND	**2-Channel stereo**	With 7 stereo positions and 8 voices, the Archimedes sound capabilities really stand out from those of competitor's.
	Output	Output to stereo headphones or a conventional music/hi-fi system direct. Combine with optional MIDI to give control over professional-quality synthesizers.
KEYBOARD & MOUSE	**PC layout** (enhanced)	Professional keyboard, together with the three button mouse, puts the power of the machine at the user's fingertips.
	12 Function keys	Common to all BBC Microcomputers, they offer vast opportunities to increase efficiency and productivity.
INTERFACES	**Industry standard serial and parallel**	Offering limitless opportunities in terms of communication with the outside world.
	Uses: **Printers and plotters**	The widest range of hard copy devices is supported – even laser printers!
	Modems	For external communications – access public databases like PRESTEL and Telecom Gold, or transfer important information between systems.
	Control systems	Drive machines and systems from a programmed environment – get feedback, take decisions and take **actions!**
	Instrumentation	Connect scientific/measuring instruments and use the data they provide in controlled experiments.
EXPANSION OPTIONS	**2-Card backplane**	This offers the opportunity of expanding the system, in virtually any direction.
	Some options: **Econet module**	Harness the power of Archimedes in a network. Swap information with other users and increase overall productivity.
	I/O module	Provides the familiar **User Port, 1 MHz Bus** and **Analogue to Digital** ports used by so many existing BBC applications.
	ROM	Provides five, 32-pin sockets to take ROM, EPROM or even additional RAM chips – to support the widest possible range of applications.
	MIDI	**Musical Instrument Digital Interface**, giving operating system command over musical signal generation. Not just a keyboarding system but a composer's development tool as well.

ARCHIMEDES 310M

"Power is nothing if it cannot be harnessed, and the Archimedes series allows you to translate this power easily into results on the screen."
(PC User – January 1988)

The 310M shares the same high specification as the 310, the base level machine to the Archimedes 300 series. It is designed to broaden the range by offering a complementary facility to run under an MS-DOS environment, giving access to the vast range of PC-based software, through the supplied **PC Emulator** package, which is only available as an option on the rest of the range.

The position of the 300 series as the latest development of the range of BBC Microcomputers goes much deeper than the retention of the red function keys at the top of the keyboard! It is an indication of the power and flexibility that can be expected as standard. Indeed, the 300 series was voted the **Home and Small Business Computer of the Year 1987**.

Ergonomically styled, from the professional-feel keyboard and mouse to the 'hand-angled' disc drive mounting, its four components fit together to produce a compact and highly functional personal workstation.

The provision of an integral power output for the monitor eliminates the usual jumble of cables behind the machine, maintaining its clean lines and professional appearance.

FEATURES	DESCRIPTION	ARCHIMEDES POWER
CPU	**32 bit ARM** (Acorn RISC Machine)	Makes comparison with other micros in this bracket almost impossible.
		Typical execution rate of 4 mips (millions of instructions per second) makes it quite simply the fastest micro around.
MEMORY	**1 Mbyte RAM**	This makes the 310M a very powerful machine indeed.
	ROM suite	
	Arthur (operating system)	Designed to exploit the power of ARM.
	ADFS and ANFS	Expanded versions – more powerful than ever before.
	Desktop WIMP environment	Disguises the complexity of the system by putting the user firmly in control, in a friendly, graphics-led way. Mouse-driven pointer makes task selection very easy.
	Utilities	Painlessly handle the windows environment, the text fonts and the incredible colour and graphics facilities.
DISC STORAGE	**3.5″ Disc** 1 Mbyte capacity (unformatted)	The single industry-standard disc drive supplied gives enormous flexibility in handling large files and documents.
		Upgrade to a dual disc system, or add a 20 Mbyte hard disc. The **1 to 1 interleave** makes this about the fastest available – it reads **once** where a standard PC disc reads **6 times.**

ARCHIMEDES 310M

FEATURES	DESCRIPTION	ARCHIMEDES POWER
DISPLAY	**24 Screen modes**	Whatever application is running, the display will always be capable of using the best combination of text/graphics resolution and choice of colours to reflect the requirement for clear and concise presentation of information.
	Monitor options	From standard resolution (text processing, perhaps) monochrome or colour, right through to medium resolution colour (for advanced graphics applications) there is a display specification to best meet the user's demands.
SOUND	**2-Channel stereo**	With 7 stereo positions and 8 voices, the Archimedes sound capabilities really stand out from those of competitor's.
	Output	Output to stereo headphones or a conventional music/hi-fi system direct. Combine with optional MIDI to give control over professional-quality synthesizers.
KEYBOARD & MOUSE	**PC layout** (enhanced)	Professional keyboard, together with the three button mouse, puts the power of the machine at the user's fingertips. The keyboard is automatically reconfigured, under PC Emulator, to give the standard PC environment.
	12 Function keys	Common to all BBC Microcomputers, they offer vast opportunities to increase efficiency and productivity.
INTERFACES	**Industry standard serial and parallel**	Offering limitless opportunities in terms of communication with the outside world. PC Emulator supports the parallel, serial and mouse interfaces as in the PC environment.
	Uses: **Printers and plotters**	The widest range of hard copy devices is supported – even laser printers!
	Modems	For external communications – access public databases like PRESTEL and Telecom Gold, or transfer important information between systems.
	Control systems	Drive machines and systems from a programmed environment – get feedback, take decisions and take **actions!**
	Instrumentation	Connect scientific/measuring instruments and use the data they provide in controlled experiments.
EXPANSION OPTIONS	**2-Card backplane**	This offers the opportunity of expanding the system, in virtually any direction.
	Some options: **Econet module**	Harness the power of Archimedes in a network. Swap information with other users and increase overall productivity.
	I/O module	Provides the familiar **User Port, 1 MHz Bus** and **Analogue to Digital** ports used by so many existing BBC applications.
	ROM	Provides five, 32-pin sockets to take ROM, EPROM or even additional RAM chips – to support the widest possible range of applications.
	MIDI	**Musical Instrument Digital Interface**, giving operating system command over musical signal generation. Not just a keyboarding system but a composer's development tool as well.

FEATURES	DESCRIPTION	ARCHIMEDES POWER
STANDARD SOFTWARE	**PC Emulator**	Put the wide world of MS-DOS software (it comes complete with MS-DOS 3.21) at the disposal of the user – virtually all the market-leading software will run.
		The keyboard and disc drives are automatically reconfigured to give the highest possible degree of compatibility – far superior to any machine in this range.
		Purpose-written utilities allow the transport of data files between the two environments.
		With the optional hard disc upgrade, PC Emulator will painlessly partition the disc to give equal workspace to **Arthur** and MS-DOS.
	Welcome Suite	Not just an introduction to Archimedes but a set of tools for continuing to exploit its power.
	Tutorials and demonstrations	Show the user how to get started, explaining the hierarchical directory structure, and keyboard functions. The graphics demonstrations show fully the power of Archimedes.
	Utilities: 6502 Emulator Floating Point Emulator Font Designer	Provided as a resource for the user, the **6502 Emulator** enables re-use of many BBC programs written for the 6502 co-processor. The **Floating Point Emulator** gives a floating point arithmetic capability (vital for any demanding arithmetic application). **Font Designer** allows the creation and definition of fonts for use in screen display and hard copy presentations.
	Sample programs	Powerful pieces of software in their own right, **Painting** and **Maestro** allow the creation of complex graphics (including Sprite Graphics) and sophisticated musical exercises – read, play and **print out** musical annotation.
DOCUMENTATION	**The Welcome Guide**	Gives an introduction to Archimedes through the **Welcome Suite** of software.
	The User Guide	A comprehensive reference guide to Archimedes and its capabilities. A full explanation of **Arthur**, **ADFS** and **Basic** commands opens up the world of programming on Archimedes.
	PC Emulator Installation Guide	Brief guide to the installation and most common MS-DOS commands.
	Programmer's Reference Guide	An optional purchase, it supports serious programmers developing their own applications – making sure that none of the power of Archimedes is lost.
UPGRADES	**Ease of upgrade**	Already a very powerful microcomputer, the 310M can easily be upgraded into a formidable personal workstation.
	Disc storage: Either **additional 3.5"** **disc drive**	Increases the flexibility of disc copy and data access with an additional floppy disc drive.
	Or **hard disc drive**	20 Mbyte of mass storage, with the highest possible access speed. With this upgrade, the 310M becomes a very powerful business or scientific personal workstation indeed.

ARCHIMEDES 440

"Power is nothing if it cannot be harnessed, and the Archimedes series allows you to translate this power easily into results on the screen."
(PC User – January 1988)

The latest addition to the award-winning Archimedes range, Archimedes 440 combines the proven advantages of Archimedes' high speed processing with additional built-in memory and data storage. The specification of this personal workstation reflects the demands users will make on it, with a massive 4 Mbyte of user RAM, and a 20 Mbyte hard disc as standard.

Ergonomically styled, from the professional-feel keyboard and mouse to the 'hand-angled' disc drive mounting, its four components fit together to produce a compact and highly functional personal workstation.

The provision of an integral power output for the monitor eliminates the usual jumble of cables behind the machine, maintaining its clean lines and professional appearance.

FEATURES	DESCRIPTION	ARCHIMEDES POWER
CPU	**32 bit ARM** (Acorn RISC Machine)	Makes comparison with other micros in this bracket almost impossible.
		Typical execution rate of 4 mips (millions of instructions per second) makes it quite simply the fastest micro around.
MEMORY	**4 Mbyte RAM**	This makes the 440 an extremely powerful machine indeed, capable of running the most demanding of applications with ease.
	ROM suite	
	Arthur (operating system)	Designed to exploit the power of ARM.
	ADFS and ANFS	Expanded versions – more powerful than ever before.
	Desktop WIMP environment	Disguises the complexity of the system by putting the user firmly in control, in a friendly, graphics-led way. Mouse-driven pointer makes task selection very easy.
	Utilities	Painlessly handle the windows environment, the text fonts and the incredible colour and graphics facilities.
DISC STORAGE	**3.5" Disc** 1 Mbyte capacity (unformatted)	The single industry-standard disc drive supplied gives enormous flexibility in handling large files and documents.
	20 Mbyte hard disc	The 20 Mbyte capacity hard disc is also standard, making the 440 an extremely powerful business or scientific personal workstation.
		The **1 to 1 interleave** makes this about the fastest available – it reads **once** where a standard PC disc reads **6 times**.

ARCHIMEDES 440

FEATURES	DESCRIPTION	ARCHIMEDES POWER
DISPLAY	24 Screen modes	Whatever application is running, the display will always be capable of using the best combination of text/graphics resolution and choice of colours to reflect the requirement for clear and concise presentation of information.
	Monitor options	From standard resolution (text processing, perhaps) monochrome or colour, right through to high resolution mono (for advanced graphics applications) there is a display specification to best meet the user's demands.
SOUND	2-Channel stereo	With 7 stereo positions and 8 voices, the Archimedes sound capabilities really stand out from those of competitor's.
	Output	Output to stereo headphones or a conventional music/hi-fi system direct. Combine with optional MIDI to give control over professional-quality synthesizers.
KEYBOARD & MOUSE	PC layout (enhanced)	Professional keyboard, together with the three button mouse, puts the power of the machine at the user's fingertips.
INTERFACES	Industry standard serial and parallel	Offering limitless opportunities in terms of communication with the outside world.
	Uses: Printers and plotters	The widest range of hard copy devices is supported – even laser printers!
	Modems	For external communications – access public databases like PRESTEL and Telecom Gold, or transfer important information between systems.
	Control systems	Drive machines and systems from a programmed environment – get feedback, take decisions and take **actions!**
	Instrumentation	Connect scientific/measuring instruments and use the data they provide in controlled experiments.
EXPANSION OPTIONS	4-Card backplane	Standard on the 440, it offers the opportunity of expanding the system, in virtually any direction.
	Some options: Econet module	Harness the power of Archimedes in a network. Swap information with other users and increase overall productivity.
	I/O module	Provides the familiar **User Port, 1 MHz Bus** and **Analogue to Digital** ports used by so many existing BBC applications.
	ROM	Provides five, 32-pin sockets to take ROM, EPROM or even additional RAM chips – to support the widest possible range of applications.
	MIDI	**Musical Instrument Digital Interface**, giving operating system command over musical signal generation. Not just a keyboarding system but a composer's development tool as well.

FEATURES	DESCRIPTION	ARCHIMEDES POWER
STANDARD SOFTWARE	**Welcome Suite**	Not just an introduction to Archimedes but a set of tools for continuing to exploit its power.
	Tutorials and demonstrations	Show the user how to get started, explaining the hierarchical directory structure, and keyboard functions. The graphics demonstrations show fully the power of Archimedes.
	Utilities: 6502 Emulator Floating Point Emulator Font Designer	Provided as a resource for the user, the **6502 Emulator** enables re-use of many BBC programs written for the 6502 co-processor. The **Floating Point Emulator** gives a floating point arithmetic capability (vital for any demanding arithmetic application). **Font Designer** allows the creation and definition of fonts for use in screen display and hard copy presentations.
	Sample programs	Powerful pieces of software in their own right, **Painting** and **Maestro** allow the creation of complex graphics (including Sprite Graphics) and sophisticated musical exercises – read, play and **print out** musical annotation.
DOCUMENTATION	**The Welcome Guide**	Gives an introduction to Archimedes through the **Welcome Suite** of software.
	The User Guide	A comprehensive reference guide to Archimedes and its capabilities. A full explanation of **Arthur**, **ADFS** and **Basic** commands opens up the world of programming on Archimedes.
	Programmer's Reference Guide	An optional purchase, it supports serious programmers developing their own applications – making sure that none of the power of Archimedes is lost.