

# Acorn User

THE ALTERNATIVE FOR POWER COMPUTING

WWW.ACORNUSER.COM

## **RISC OS TAKE OVER**

Everything about Castle and RISC OS

## **Uninterrupted**

How a RISC PC can be used safely

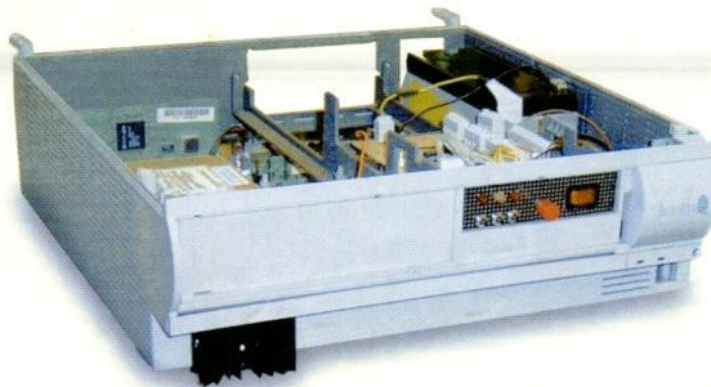
## **Artworks Plus**

The new version running fast and smooth

## **DataPower**

Round up of what this database system  
can achieve for you

***Plus even more  
great articles . . .***



**tau**  
PRESS



9 771471 100001

ISSUE 262

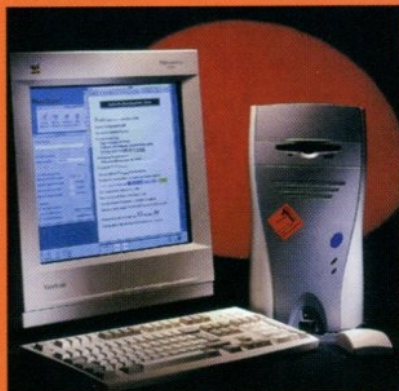
AUGUST 2003

£4.20



# Liquid Silicon

• Computers & Music Hardware • Upgrades • Software • Cables etc. •



**Alpha and Omega systems are now shipping.**

**Please ask for latest delivery information for new orders.**



Call us for your nearest UK dealer for the **POSum** point of sale systems and the **EBMS** business management solutions.

**Second hand A7000s and Risc PCs from only £70.00 inc. VAT & delivery!**

**Also network cards, backplanes, CD drives etc. Please check our web site or phone for details.**

## Iyonix Computers

All Iyonix systems come with a free 6-in-1 memory card reader until 31/8/03.

Iyonix (128Mb, 40Gb, CD)	£1269.00
Iyonix (128Mb, 80Gb, CDRW)	£1319.00
Iyonix (512Mb, 100Gb, CDRW)	£1419.00
Aemulor	£58.75
Iyonix Technical Reference Manual	£105.00
Podule backplane	£49.00
USB to Parallel converter	£25.00
Upgrades/Expansion cards/Extras	£Ask

## Microdigital Computers

Alpha Portable	£1009.00
Alpha Pro Portable	£1340.00
Omega standard tower case	£1355.00
Omega midi tower case	£1399.00
Omega desktop case	£1402.00
Upgrades/Expansion cards/Extras	£Ask

## RiscStation Computers

R7500 Lite	£598.00
R7500 Lite+	£656.75
R7500 NetWorx	£480.50
R7500 NetWorx HD	£539.30
R7500 Scorchor	£797.50
R7500 Scorchor Twindeck	£833.00
Games pack (with a system)	£47.00

## Monitors

Iiyama 1352 (15" FST)	£101.20
Iiyama Vision Master 1403* (17" FST)	£117.45
Iiyama Vision Master Pro 1413* (17" NF)	£177.30
Iiyama Vision Master Pro 413* (17" HBNF)	£199.05
Iiyama Vision Master 1451 (19" FST)	£159.60
Iiyama Vision Master Pro 454 (19" NF)	£316.00
Iiyama Vision Master Pro 455* (19" HBNF)	£267.05
Iiyama Vision Master 506 (21" FST)	£525.45
Iiyama Vision Master Pro 513 (22" NF)	£471.00
Iiyama Vision Master Pro 514 (22" NF)	£566.25

Iiyama Pro-Lite E380S (15" LCD)	£250.75
Iiyama 3817* (15" LCD)	£287.45
Iiyama 3819* (15" LCD)	£397.60
Iiyama 3835* (15" LCD)	£413.95
Iiyama Pro-Lite E430S* (17" LCD)	£403.05
Iiyama 4315* (17" LCD)	£552.65
Iiyama 4332* (17" LCD)	£656.00
Iiyama 4611 (18" LCD)	£452.00
Iiyama 4612* (18.1" LCD)	£647.85
Iiyama 4636 (18.1" LCD)	£785.20
Iiyama 4637 Black (18.1" LCD)	£824.65
Iiyama 4821* (19" LCD)	£824.65
Iiyama 4831 (19" LCD)	£835.20
Iiyama 5131* (20.1" LCD)	£1195.00
Iiyama 5311 Black (20.8" LCD)	£3149.00
Iiyama 5611 Black (22.2" LCD)	£5499.00

\* Also available in black.

Monitors are also available from AOC, CTX, IBM, Phillips, Samsung and Sony.

ViewFinder card (32Mb) £240.00

Touchscreen monitors coming soon.

## 32-bit MIDI Sequencer



Powerful  
Flexible  
Easy to use drag & drop  
Controller maps (e.g. tempo and velocity)  
easily alterable by drawing with the mouse  
Patterns can be linked to reflect changes made to other patterns  
Handles System Exclusives  
Multitrack playback  
Supports any MIDI interface, including parallel and serial  
Up to 162 MIDI channels and no track limit  
Free demo disc available  
Now available - £129.00

## Memory Upgrades

Please call to check current prices.	
Risc PC/A7000/RiscStation/Mico SIMMs:	
16Mb FPM	£28.20
32Mb EDO (HC, works in Risc PCs)	£26.75
64Mb EDO (works in Risc PCs)	£39.00
128Mb EDO	£77.55
2Mb VRAM (upgraded 1Mb cards)	£49.95

## Music & Sound Section

Please call for other musical items	
MIDI interfaces:	
MIDI Max II internal 1x1x1	£93.95
Parallel Port 1x1x1 (back in stock)	£92.95
RiscStation MIDI drivers & cable	£17.95
RiscStation XG card & cable	£116.95
RiscStation XG card, cable & keyboard	£245.95
Sibelius 6	£97.95
Sibelius 7 Student	£245.95
Sibelius 7	£394.95
Sibelius 2 for PC/Mac	£535.50

## Other Hardware

10/100BaseT ethernet card (RCS/Simtec)	£89.00
Mouse (Genius/STD Acorn-compatible)	£19.95
Mouse (PS/2 Logitech)	£14.99
PS2MouseMini adaptor for older machines	£18.95
Printers	£Call
Risc PC second slice (no PSU)	£95.00
RISC OS 4 (fitting & Select available)	£85.00
RiscStation second serial port	£10.95
Scanners	£Call
StrongARM & RISC OS 4	£299.00

## Other Software

Abuse	£20.00
ArtWorks 2	£165.00
C/C++ (26/32-bit version)	£195.00
CD Burn	£55.95
Chaos Engine	£19.50
DataPower 2	£120.95
Doom+ CDs	£30.00
Descent CDs	£25.00
Desktop Repton CD	£19.90
DialUp 2 & Messenger Pro	£56.90
EastWriter Pro+ CD	£78.95
FastSpool+	£17.50
Grapevine	£24.95
Heroes of Might & Magic 2	£32.00
Krisalis Collection Gold CD	£25.95
LanMan98	£39.25
OHP 2 CD	£37.95
Oregano 2 CD	£97.95
Other Worlds CD	£17.95
Ovation Pro CD	£138.95
Personal Accounts	£44.00
Photodesk Olympic CD	£127.95
Prophet 3+ Pro	£179.00
Quake	£22.00
R-Comp Internet Suite	£73.95
Schemata 2	£58.95
SiteWriter	£58.95
Sleuth 3	£48.95
Sound Plugin for browsers	£11.50
SVG Plugin for browsers	£11.50
Syndicate+	£26.50
TBA Games CD	£20.00
TechWriter Pro+ CD	£99.95
TEK	£29.95
WebFX3D	£24.50

## Books & Manuals

RISC OS Manuals CD	£29.95
--------------------	--------



Discs (e.g. 20x black discs - £6.28)  
Batteries (e.g. 4x AA Xtra alkaline - £2.14)  
Also Audio & Video Tapes, Mini Discs, CDRs, DAT tapes etc.

FREEPOST EH2725  
Kirkcaldy, Fife, KY2 5BR  
United Kingdom

Tel: 01592 592265 Fax: 01592 596102

email: sales@liquid-silicon.com

http://www.liquid-silicon.com

**We will attempt to match or beat any advertised price - even special offers.**  
**Our free catalogue contains over 2000 items.**  
**Please ask for a copy or visit our web site.**

**All prices INCLUDE VAT & UK carriage**  
Official orders, foreign orders and callers welcome.



# PRICE AND POWER



## X-STATION 24

Shuttle SK41G Skt A Barebone Chassis, 256MB DDR memory, 40GB Maxtor Hard Drive, 3.5" Floppy Disc Drive, AMD Athlon PR2400+ Processor, 48X Sony CDRW/DVD, Genius keyboard and mouse, include 1 year RTB Warranty

Actual model may differ from shown **£299 + VAT**

**£299**  
+VAT

*Offering the right product, at the right price, at the right time ... There's never been a better time to buy!*

FROM  
**£799**  
+VAT

## WHAT CAN WE OFFER YOU?

Dedicated Account Managers for our Corporate and Education customers  
Bespoke Built Systems  
Upgrade Components  
Call and Collect  
Same and Next Day Delivery



## WHY CCL?

It is our belief that by offering exceptional customer service and support we build a long lasting relationship with our customers. Our relationships with our suppliers enables us to source outstanding quality products to build award winning systems. Offering you a quality system built by a reputable company, at aggressive prices...

## TRY US!



(Home XPL Jan 02)



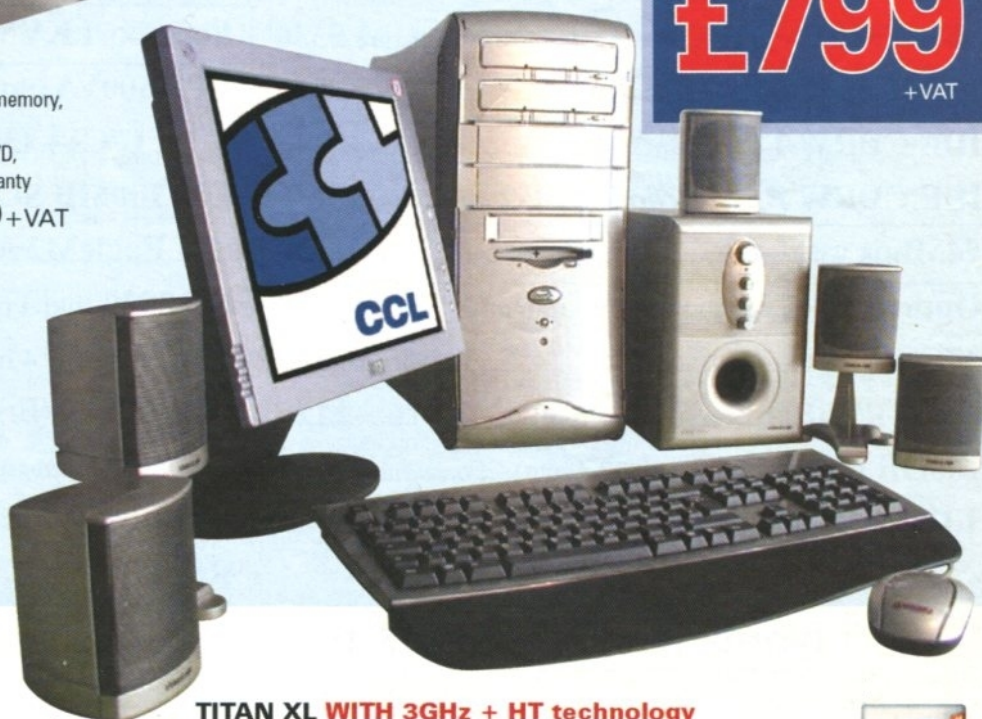
(Home XLS April 02)



(CCL X-Force G2 Jun 03)



(NX-Station May 03)



## TITAN XL WITH 3GHz + HT technology

Suntek Vivid case, Intel® Pentium® 4 3.06GHz processor, Samsung DVD/CDRW, 80Gb Maxtor Hard Drive, XFX 128Mb Geforce 4 Graphics card, Intel D845PEBT2 Motherboard, 256Mb DDR memory, Microsoft Windows XP Home Edition, 56K modem, Qtronix keyboard and mouse, Videologic speakers, include a 1 year RTB Warranty **£799 + VAT**



**OPTIONAL UPGRADES** 15.1" TFT BRANDED Silver/Black monitor **£185 + VAT** 1 year warranty **£30 + VAT**



We accept credit card payments at 2.5% surcharge. Debit cards free of surcharge.

Inmoor Road, Cross Lane, Tong, West Yorkshire BD11 2PS. Customer Service: 01274 471206

All orders exclude delivery. Next day delivery available from £6.46 inc VAT. All prices correct at time of publication and subject to change. E&OE. For full terms and conditions write to address above.

Intel®, Intel logo, Intel Inside logo, are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Performance may vary depending on the system configuration and software applications used. See [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading) for information





**NEW**

## Memory Card Readers

Two slot 4-in-1 CF I & II, MD & SM £22

Four slot 7-in-1 CF I & II, MD, SM, SD,  
MMC & Memory stick

Internal or external versions £36

*Iyonix & Castle USB module compatible*

## Duplex Laser Printer

**NEW**

**Cheapest Duplex printer ever!**

600DPI, 14ppm, 16MB, PCL6, USB & parallel ports.  
PDF for RISC OS Duplex printing in development.



**£285 inc VAT**

**Price Drop!**

## ADSL Routers Now from

**£95** for cable line e.g. NTL

**£115** for standard BT line

Please phone for more info or see  
<http://www.cjemicros.co.uk/adsl/>

## Network Card

10baseT & 2  
for RPC/A7000

**Special offer £45+**

## 4M Pixel & (2/4M) Cameras

Yakumo Mega Image VI  
2M Pixel (4M interpolated) **£176**

Olympus C4000Z 4M Pixel  
3x Optical Zoom **£380**

*Iyonix & Castle USB module compatible.*

**NEW**

## Congratulations to Castle on their acquisition of RISC OS from Pace!

User & Analogue Podule .....	from £50+	S/H StrongARM cards.....	from £150+
17" LCD Dual input 1280x1024 .....	£495	750MB ZIP drive IDE inc disc .....	£150
15" LCD 1024x768 .....	£270	MyHopper2 KVM switch (with cables) .....	£85
15" Widescreen LCD 3 inputs, picture-in-picture	£330	Four port KVM switch (1-5m cables available).....	£80
10/100 Switching Hub 8 port.....	£60	UPS 600VA (supports two computers) .....	£75
IDE CDRW 12836 inc CD Burn .....	Price drop £125	32bit C/C++ (30% off!).....	£138
IDE CDRW Burn Proof 522452 inc CD Burn.	£135	ZIP 100MB SCSI S/H (External £120) .....	£65
54Mbps Wireless networking no USB needed. ....	coming soon!	S/H EagleM2 Audio/Video digitiser .....	£160
Optima Video editing system upgrades .....	from £500+	HP 3820 Inkjet printer inc driver .....	£130
40GB IDE Hard Disc.....	Special offer £90	Canon S750 4 Ink tanks inc driver .....	Price drop £180
80GB IDE Hard Disc (7200rpm).....	£125	Psion 5MX (Ericsson MC218).....	Last one £260+
160GB IDE Hard Disc (7200rpm).....	£200	Impact3 Database Now 32bit compat. ....	Special offer £60+
EDO RAM 32MB £30 64MB £45 128MB £85		S/H RiscPCs.....	from £90+
FPM RAM 64MB £50 128MB £90		RiscPC slices .....	from £35

**Iyonix pcs from £1249** Please phone or see: <http://www.cjemicros.co.uk/iyonix/>

## RISC OS 4 & StrongARM compatible games

Full retail versions boxed with manuals

Rick Dangerous £15, Alone in the Dark# £25, BattleChess £20, Gods £12,  
Simon the Sorcerer (FD) £15, Premier Manager# £20, Wavelength £15, Sally & Wally £20,  
Abuse £25, Scrabble £20, Fire & Ice £20, High Risc Racing# £20, Syndicate £25, Small £20

# StrongARM compatible but not RISC OS 4



**All CJE prices INCLUDE VAT @17.5%**

& UK mainland delivery, unless otherwise stated.

Official orders welcome. E&OE. Prices subject to change & stock.

Items marked † are sold by 4D (Fourth Dimension) and have no VAT

CJE Micro's & 4D  
78 Brighton Road  
Worthing  
West Sussex  
BN11 2EN

CJEV791 Tel 01903 523222 Fax 01903 523679 sales@cjemicros.co.uk <http://www.cjemicros.co.uk/>



# Acorn User

THE ALTERNATIVE FOR POWER COMPUTING

WWW.ACORNUSER.COM

## RISC OS TAKE OVER

Everything about Castle and RISC OS

## Battery Power

How a PISC 5 can be used outdoors

## Digital Video

Getting RISC OS into moving pictures

## Datapower

Sorted up of what this database system can do for you

Plus even more great articles...



Next issue on sale: 21th Aug 03

Published by



28a Middle Hillgate  
Stockport SK1 3AY UK  
enquiries@acornuser.com  
www.acornuser.com

Tel: (+44/0) 161 429 8902

Fax: (+44/0) 161 429 0685

Printed by The Manson Group, St Albans

Editor Rob Donaldson

Designed by Mark Atkinson & John Caldwell

Finance Manager Michelle O'Neill

Distribution COMAG (01895 444055)

Advertising Steve Turnbull

Managing Director Sharon Henderson

### Subscriptions:

(+44/0) 161 429 8902

E-mail: [subscrip@acornuser.com](mailto:subscrip@acornuser.com)

Annual (13 issue) subscription rates:  
£46.99 (UK) £51.99 (EU) £63.99 (World)

Copyright © 2003 Tau Press Ltd

No material may be reproduced in whole or in part without written permission. While every care is taken the publishers cannot be held responsible for any errors in articles, listings or advertisements and the views of the contributors do not necessarily reflect the views of the publishers.



If you know someone who is Blind or partially sighted Acorn User is available on Audio format. Full information is available from The Talking Newspaper Association, National Recording Centre, Heathfield, East Sussex TN21 8DB. Tel 01435 866102

Internet services provided by Spellings Computer Services  
[www.spellings.net](http://www.spellings.net)

## Editor's Comments

I bet you weren't expecting that? Okay, I admit it, neither was I. But that big things were afoot was certainly on the cards. The fact that we even had an article that was talking about the branding and positioning of RISC OS was certainly timely.

So what can we look forward to in the future? From the press release that you can read on the news pages of this issue you will be able to see that Jack Lillingston of Castle is not looking to put all his eggs in one basket.

He is going to be working with another company and getting RISC OS-based consumer products into the market place in a big way.

You might liken this to the activity of ARM Ltd. The fact is that there are more, many many more, ARM chips in use in the world than there are Pentium chips of whatever variety. It's just that you don't see them. Just about every mobile phone has an ARM chip and there are a lot of other places they are put.

What we will be hoping to see with RISC OS is the extension of the use of RISC OS (now that it is 32-bit) into a whole multitude of alternate products. The only "problem" with that is that, as with ARM, the user will neither know nor care that the system they are using is running on RISC OS.

However it does matter to the "Trade" what is running, companies that produce mobile phones are aware that they are driven by ARM. This in turn means that they know that they have a reliable chip on their hands that does not absorb a lot of power.

The same will have to become true of RISC OS. It may take quite a bit of work, and we're talking marketing here not programming, to make RISC OS the operating system of choice. But when you consider how many ARM chips there are it becomes reasonable to promote the operating system that is tailor-made for it.

What then happens to the RISC OS desktop market? Well as Jack pointed out at least RISC OS is owned by a company that actually cares about the desktop market now. Obviously Iyonix will be continued and expanded as a product and we will look to having the excellent Select Scheme improvements incorporated into RISC OS 5. Eventually going back to a single operating system and frankly that is not a moment too soon.

This one act was wiped out the divisive break-up of the market, not instantaneously, but over a period of time perhaps six months maybe a little longer. At that point we will see all the strands of the market coming back together and we can move forward as a single unit again.

Rob Donaldson  
[aueditor@acornuser.com](mailto:aueditor@acornuser.com)

## 8 News

The latest news from the world of RISC OS and power computing

## 15 Graphics

Nigel Gatherer with more about graphic design in the real world with RISC OS

## 10 RISC OS Takeover

Comment from around the RISC OS world on the Castle takeover

## 21 Blogger

What is blogging? How do you do it and where can you go to get it?

## 24 Illegal software

Do you think that registering software doesn't apply to you? Think again.

## 26 Datapower 2

S-Base is not the only database on the block we our look at the new Datapower

## 32 Battery Power

Are you on the move? Want to have Risc PC in a caravan? Get battery powered.

## 40 Free Ads

Get what you need at a cheaper price from other RISC OS users

## 41 Education News

All the latest news about the RISC OS and the education market

## 42 ECDL

The European Computer Driving Licence is rubbish and isn't for RISC OS ... is it?

## 44 Education Review

We check out a site that will help with GCSE ICT in a very big way.

## 49 Short reviews

Take a look at this new low cost mouse and professional Digital Video charger

## 50 Subscriptions

Make sure you don't miss out on the next few issues of Acorn User



# STOP!

## Are you paying too much for Internet access?

Join the thousands of happy customers at  
Gio Internet and save yourself hundred's!

Officially The UK's Cheapest

### Broadband ADSL Only £18.95

a month

- ▶ High Speed Internet Access
- ▶ Up to 10x Faster
- ▶ No Restrictions
- ▶ Unlimited Download
- ▶ Unmetered Usage
- ▶ 24/7 Always On Access
- ▶ No Blocked Ports
- ▶ No Port Throttling
- ▶ Optimised for Kazaa/Imesh
- ▶ No Speed Restrictions
- ▶ Use the Internet/Phone at the same time!
- ▶ You won't find a better Broadband deal!

Cheaper than BT,  
Freeserve & AOL!

Featured in the Sunday Times, Sunday Express & Most Internet Magazines!

#### Pay As You Go Internet from 1p a minute

- ▶ No monthly fee
- ▶ No activation fee
- ▶ No minimum contract
- ▶ 7 Email Addresses
- ▶ 80,000 News Groups
- ▶ FREE Webpace

Now  
Supports  
BT & NTL  
Lines

#### 24/7 Anytime Internet £7.99 a month

- ▶ No call charges
- ▶ No minimum contract
- ▶ No connection fee
- ▶ 7 Email Addresses
- ▶ 80,000 News Servers
- ▶ FREE Webpace

Now  
Supports  
BT & NTL  
Lines

#### 128K ISDN Flat Rate £19.99 a month

- ▶ No call charges
- ▶ No minimum contract
- ▶ No connection fee
- ▶ 7 Email Addresses
- ▶ 80,000 News Servers
- ▶ FREE Webpace

Now  
Supports  
BT & NTL  
Lines

Visit [www.GioInternet.com](http://www.GioInternet.com)  
or Call 0870 922 4000 Now!





# Wireless Networking...

## NO USB REQUIRED!

In association with: [www.RISCOS-USB.com](http://www.RISCOS-USB.com)

**RISCOS-USB**.com

We present a range of devices for the SIMTEC USB Card.....

# DigiFlash

The data card reader for RISC OS

# 2/7

Sorry for "shouting", but the reference to USB in our previous advert seemed to confuse one dealer.....

To be clear: If you have a Simtec USB card already, or are looking to add one to your machine, you might consider using a wireless USB adaptor to connect your machines wirelessly.

If you do not wish to take advantage of USB (for example if you have no module slots spare), or if you have an Iyonix machine our flexible access point / media converter will allow you to convert any wired network into a wireless one. Simply add a NET100 card if required.

All products comply with IEEE802.11b and interwork with other compliant systems.

Wireless USB adaptor: plugs into RISC OS machines fitted with Simtec USB card. Stack based on acclaimed NET100 code. £79.95. PC version (no RISC OS drivers) £69.95

Wireless Access Point / Bridge / Media Converter: This versatile device allows single machine or groups of machines fitted with network cards to be integrated into a wireless network. £99.95inc

Wireless PCMCIA Card: For use with Portable machines. £59.95inc

Wireless Broadband Router: Probably the most impressive broadband router and firewall yet! £129inc

We prefer to talk through every install, so please contact us if you are considering a wireless solution. We promise not to leave you confused.....

Got a Digital Camera or a Palmtop? You need DIGIFLASH!!!

These brand new interfaces, supplied with a new, full read/write filing system allow owners of the Simtec USB card to use virtually all camera card formats.

DigiFlash2 read/writes SmartMedia and Type1 Compact Flash.

DigiFlash7 adds Type2 CF, Memory Stick, Secure Digital, MultiMedia Card and Microdrive.

Digiflash2: NEW PRICE £39.95    Digiflash7: NEW PRODUCT £59.95



### NET100

- 10/100BaseT Network card for RiscPC/A7000
- Provision for access to 10 or 100 Megabit networks
- Several hundred KBytes of FLASH memory for drivers
- Provision to modify FLASH contents for other drivers
- Lower latency than conventional 10 Megabit cards
- High integration brings affordable networking

Only £69 + del + VAT = £89inc

RISC OS to PC (Net100, PC card, xover) = £110inc

Network switches: 8 port = £45inc; 4 port = £37inc

Lanman80 = £41inc

Cables and other networking devices available



### UPS

A sensibly specified uninterruptible power supply

- 650VA rated
- Up to 45 minutes backup
- AVR (will boost or buck mains voltage if out of tolerance)
- 320 Joule mains spike protection
- EMI filtering
- Filtered and protected modem sockets
- Supplied with cabling to attach to 2 machines/devices

£64.95 + £10 carriage = £74.95inc



### Simtec USB card

Provides USB expansion to RISC OS machines. Supplied with drivers for keyboards, mice, joysticks etc.

NEW PRICE £69 + del + VAT = £89inc

4 port hub £10 with card (£20 alone)



### Pen Drives and MP3!

Simply transfer data between RISC OS and PC machines.

64MB: £37.95  
128MB: £57.95  
256MB: £97.95

With MP3 playback £79  
With MP3 playback £99  
MP3 version soon!



### Epson 1660 scanner

USB scanning at true 3200x1600dpi. Includes transparency adaptor, USB cable etc.

Scanner only £179.00

TWAIN and scanning software £35

SPECIAL OFFER: Scanner, USB card and

FREE TWAIN and Scanning Software: £268

### USB gives you MUCH MUCH MORE!

USB Printer interfaces - add more printers to your machine!

USB Zip drives for transfer of data. no SCSI problems ever again!

USB "fun" cameras. Affordable snapshots! (please contact PhotoDesk for professional solutions)

USB Printers. USB wireless networking. USB SEN devices....

As developers, we commission, design and supply these and MUCH MUCH MORE! Contact us for further details

### PS2MouseMini

Our PS2MouseMini interface allows you to use PS/2 PC mice with your RISC OS machine.

Over 2000 sold!

Only £18.95inc

3 button PS/2 mouse £5.95inc

Genius wheel mouse £12.95inc

Genius optical mouse £17.95inc

Genius wireless wheel mouse £19.95

Genius Optical Wireless mouse £29.95

Devices above require PS2MouseMini for use on RiscPC.

### SAVE MONEY - Share keyboard, monitor and mouse between several machines!

Our Keyboard Controlled Switch allows a single keyboard, monitor and mouse to be used with several machines!

Fully buffered - machines may be powered up in any order. Supplied with UL2019 rated cabling. Enhanced for RISC OS machines - If it hasn't got our name outside the box it doesn't have our modifications inside the box. Simple to set up with full instructions. Simply the best quality switch available for RISC OS machines.!

2 port switch: £89inc; 4 port switch: £129inc. Includes all cabling etc. PS2MouseMini only £10 with a switch.

Don't compromise on a retail PC - let us give you a no-obligation quote for a custom machine which does what you need!



**Stuart Tyrrell Developments**  
PO Box 183, OLDHAM OL2 8FB  
Tel: 0845 458 8803 / 01706 848 600  
Fax: 0870 164 1604 (national rate)

Email: [info@stdevel.co.uk](mailto:info@stdevel.co.uk)  
<http://www.stdevel.co.uk>  
All prices include VAT and P&P  
Switch/Visa/Mastercard welcomed.  
All trademarks acknowledged. E&OE



# Castle buys RISC OS from Pace

Following the success of their Lyonix PC launch last year, Castle Technology have secured the previously uncertain future of RISC OS by buying the entire operating system from Pace.

Pace acquired RISC OS when they bought the assets of Element 14 in 1999 when it was split up to relinquish the value of ARM shares held within Acorn at the time. The staff at the former Acorn headquarters in Cambridge were all transferred to Pace, as was the ownership of RISC OS.

Since then, Pace has only produced a couple of products based upon RISC OS, the most popular of which was the Bush TV with integrated Set Top Box. Last year, Pace announced that it would no longer be continuing its RISC OS development, and many ex-Acorn staff were made redundant as a result. Since that date, the future of RISC OS has been in question, with Pace having little interest in its development.

It now transpires that many of the ex-Pace/Acorn staff formed a new company called Tematic Ltd, who were the team responsible for bringing the 32-bit version of RISC OS licensed from Pace to the Lyonix PC for Castle in the form of RISC OS 5, and are now looking at new opportunities for RISC OS on the countless mass market ARM-powered devices, phones and PDAs now available.

The purchase, announced on July 4th, nicely coincided with the American Independence day, although given that RISC OS is now owned by the largest hardware developer in the marketplace, other hardware developers might balk at the irony of that date.

Castle paid an undisclosed cash sum to Pace, and the deal also includes providing ongoing technical support for Pace's existing RISC OS-based products and the grant of a licence back to Pace for intellectual property rights.

Jack Lillingston, Castle's Managing Director, said, "The purchase of this technology combines perfectly with our expertise in manufacturing and marketing RISC OS computers. This deal will allow us to be at the heart of exciting new products." Jack concluded, "RISC OS provides a proven, small-footprint

solution, for cutting edge products such as handheld media devices; we are all very excited with this new development and relish the future for RISC OS"

Castle appears to be feeding of the success of their Lyonix PC released last year, and still the world's only X-Scale-based desktop computer, and Pace, keen to further reduce their head-count even further as they slide into the red with ever-falling sales of set-top boxes, seem to have finally dropped their price tag to something affordable, while ensuring that whoever the buyer is has the ability to support their existing RISC OS set-top boxes.

RISC OS Ltd, who's original Head Licence for RISC OS 4 was with Pace, issued a statement to shareholders stating that this licence has now been transferred to Castle Technology, who also become a major shareholder of RISC OS Ltd having the "A" shares transferred to them from Pace. It is not yet known whether Castle will take up this opportunity to have a director placed on the board.

All the existing RISC OS 4 licences from third party developers such as Riscstation and Microdigital held with RISC OS Ltd remain unchanged by the deal, as does the Select Scheme and availability of RISC OS 4. RISC OS Ltd are already in negotiations with Castle about implementing many of the features of Select for Lyonix PC users on RISC OS 5.

Initial reaction to the announcement in the developer community seems mixed. Martin Wuerthner of MW Software, the developers of *Artworks 2*, was optimistic on hearing the news. "I think this has been the best news for the RISC OS platform for a long time, only the release of RISC OS 4 by RISC OS Ltd and the release of Castle's Lyonix were of equal significance". He continues "I am glad that the ownership of RISC OS has returned to a member of the RISC OS market who cares about it. Castle have shown outstanding performance in designing, producing and improving the Lyonix and are thus the ideal candidate to foster our cherished operating system."

Stuart Tyrrell, hardware developer for RISC OS machines was less enthusiastic. "It will be very tempting for

Castle to make decisions at the expense of the commercial developer community, and this might harm Castle themselves (and therefore RISC OS) longer term" Stuart points out that we are back to the days of hardware sales subsidising software development, the model which Acorn themselves adopted.

What do you think of the change of ownership? Good for the market, or stifling competition? We'd love to hear your view, contact details on the letters page on [auleters@acornuser.com](mailto:auleters@acornuser.com).

## Omega and Alpha shipping?

Reports are trickling though that some dealers have received production Omegas to ship to customers. We've had no confirmation from Microdigital themselves, although this is no surprise as they have stated at a number of events they don't "deal with the press" so we can only report on what we are hearing, rather than from the horse's mouth as we'd prefer. The machines are apparently caveat-free, as opposed to the pre-production machines that Microdigital were handing out at the recent Wakefield and Dutch Expo 2003 shows.

## Pace plunge into red

Plunging sales of digital TV set-top boxes have dragged manufacturer Pace Micro Technology into the red. The group, which has borne the brunt of ITV Digital's collapse and the turmoil of cable operators NTL and Telewest, saw full-year sales halve to £166.1m.

That led to a pre-tax loss before one-off items of £16.2m, compared to a profit of £13.1m a year ago. But Pace said results for the second half of the financial year had seen "a significant improvement". The company said its performance had been boosted by its cost-cutting drive, which had seen its workforce shrink from 900 last year to around 650, which included many of the ex-Acorn staff working on RISC OS-related projects.

As a result, operating losses had been reduced to £400,000 in the second half from the £15.7m reported in the first half. Pace, which will not pay shareholders a



dividend for last year, said it expected the UK market to stabilise at its current levels.

## Aemulor 2.2 released

Aemulor, the 26-bit emulator for Castle's Lyonix PC has been upgraded to version 2.2. The new version fixes many bugs reported in 2.1, and improves emulation in a number of areas, meaning compatibility is improved and the range of applications Aemulor can run is much greater.

Some of the major changes are:

Memory requirements reduced; ARM610 and StrongARM engines, since they're mutually exclusive, now share workspace to roughly halve the memory requirements.

Aemulor now translates error numbers returned by the Internet module (Socket SWIs) for compatibility with 26-bit apps that assume RISC OS 4 behaviour (&00-&7F rather than &20E00-&20E7F). This should allow applications like ArcWeb and Fresco to fetch online pages and not just local ones.

Aemulor now supports 26-bit environment handlers (for example, escape handler, exit handler, error handler) and vector claimants.

¥ Aemulor UI now masks out the events that it doesn't need (in particular null events which are now used and masked properly)

Interactive help added

Applications using the StrongARM-engine while 26-bit modules with service call handlers are loaded were unstable, giving essentially random failures because service call handlers can be invoked at any time, and the foreground state of the emulated app wasn't being preserved. This problem did not occur with the ARM610 engine, and has now been fixed in the StrongARM engine also.

Aemulor was interfering with 32-bit GhostScript (ps2pdf). The \* command was expanding (via macros) to exceed 256 char limit in Aemulor's handling of macros; behaviour should now be the same as RISC OS 5 OS\_CLI, with 1KB buffers

Aemulor was interfering with 32-bit TaskUsage by introducing a space at the start of the command tail passed to a module when entered (via OS\_Module 2)

Large config files (those with more than about 30 apps), caused Aemulor to data abort when the UI started up. Resizing of app/module window definitions incorrectly calculated the new size, thus corrupting the emulated RMA

Emulated apps issuing WimpTask would sometimes find the \*command corrupted/truncated, typically giving a 'file not found' error owing to the \*command remaining on the SVC stack but not being used until later (\*WimpTask)

Shutdown delay removed. Aemulor was trying to access the hard disk after the \*Shutdown command had been processed, thus causing a 2 second delay while the hard disk silently spun up again!

Aemulor was unqueueing 32-bit modules on behalf of the OS, but doing it incorrectly in specific cases; only known to give a problem with a pre-release version of 32-bit PhotoDesk. Aemulor now leaves unqueueing 32-bit modules to RISC OS, for safety, and has its own corrected unqueueing code for 26-bit modules.

Aemulor was loading the DigitalRenderer module even though it is marked as 32-bit compatible. Caused by the module SWI chunk having the X bit set which is very unusual but ignored by RISC OS and now ignored by Aemulor to ensure compatibility.

While Aemulor is loaded all applications, including 32-bit apps are, unfortunately, limited to a maximum of 28MB each. Applications requesting more than this amount could cause unpredictable failures while Aemulor is running, for example, creating a 4800x2400x16m sprite in !Paint demonstrates this problem.

Aemulor now correctly prevents apps from claiming more than this 28MB limit, but we recommend loading Aemulor in PreDesk because problems will still occur if there are apps with more than 28MB already running when you start Aemulor manually.

Apps using the SA engine and running in a TaskWindow could result in

unpredictable failures if task switching is performed on returning from an IRQ (callback) because the state info for the SA engine wasn't being preserved. It is now. This problem could also cause failures in 32-bit apps running alongside the TaskWindow.

Aemulor now consults the Run\$Path allowing users to manually start 26-bit applications in their Library directory, for example, without having to type the full pathname or change directory.

'Add' button and dialogue box added to the Applications window, allowing entry of wildcarded filenames such as "\*.!Schema2" so that the list doesn't need to be altered if Schema2 is moved to another location.

The 2.2 upgrade is free to all registered users, and can be obtained by logging into [www.aemulor.com](http://www.aemulor.com) with the userid and password which was used to purchase the software. There is a download link from the support page.

## Technical Reference for Lyonix

Castle have released the Technical Reference Manual for their Lyonix PC. Badged as the definitive hardware reference guide to the motherboard used in the Lyonix PC it provides full technical details as follows:

- system and architecture overview
- the 200MHz DDR RAM interface
- power requirements and the software power control
- the audio input/output system and details of the Risc PC compatible audio connectivity
- the non volatile EEPROM and flash memory and accessing the RTC
- the enhanced expansion bus implementation
- the ATA100 UDMA hard disc interface
- using the floppy drive
- the motherboard gigabit networking hardware
- USB ports and power control
- the RS232, IrDA, MIDI, and S/PDIF serial ports
- a survey of all of the option headers
- the 64-bit PCI bus and its low latency bus mastering capabilities
- the programmable logic function and register layout
- a full bill of materials and build options
- references, standards, and datasheets





# engtel™

## after a simple life?

make a change...switch to engtel.™

with no fuss & no hassle we are the telecommunications company that could save you money

### uk call tariff

#### engtel rates

daytime	off-peak	weekend	
3.5p	2.5p	1.5p	uk national
3p	1p	1p	uk local

#### BT equiv.\*

daytime	off-peak	weekend	
8p	4p	2p	uk national
4p	1.5p	1p	uk local

**transfer** your existing BT landlines  
its **free and simple** with:

- no need to change your phone number
- no prefix numbers to dial
- no equipment to fix
- no transfer charges to pay

call us now

0845 080 4400





# PHOTODESK LTD

1 The Courtyard, Southwell Business Park, Portland, Dorset DT5 2NQ

Telephone +44 (0) 1305 822753

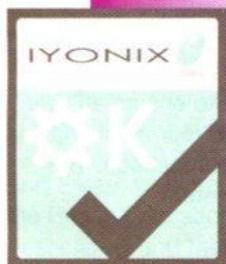
chris@photodesk.ltd.uk

www.photodesk.ltd.uk

All Prices Include VAT — PHOTODESK LIMITED

## PHOTODESK

PHOTODESK The studio quality image editing package is now available as a CD-ROM edition. It includes an HTML manual and in addition a CD of professional digital photos by David Cowell. It also includes the complete set of special effects plug-ins. This is the full CMYK/Layers version of Photodesk.



Upgrades: v1.xx v2.xx v3.xx to v3.05 (32bit) £50

v3.04Olympic to v3.05 (32bit) £40

Special Offer: Dave Cowells 3 CD Tutorials worth £75 with any 32 bit upgrade only £12.50 each

NOW ONLY £80



OHP 2.5 £40 (all upgrades £13)

A presentation Package on CD-ROM:

Version 2.5

32 bit Compliant

OHP is a screen-based presentation package for use with RISC OS computers

OHP lets you compile Presentations comprised of a number of graphics files, which you create or purchase outside OHP, and show them on your computer's VDU as a full-screen presentation. OHP has facilities to order the graphics, give them consistent styling, add sound effects and help you present them to an audience. If you have access to an electronic projector, you can use that to project the presentation onto a screen.

The read-only version, OHP\_Show (which is Freeware) can be given away with your presentations or used on any number of computers; this makes OHP presentations an ideal way of communicating or advertising.



## Canon Digital Cameras

USB cameras, Card reader or USB podule required for RISCOS



All cameras include PhotoShow software FREE (worth \$25)

# CAMERA

# DESK



Cameradesk is a specialised utility for USB cameras and the SIMTEC USB podule. It is auto sensing, just plug in your camera and have immediate access to the entire contents. In conjunction with Photoshow and Photodesk a complete Digital darkroom with enhanced photo editing facilities is yours. What is more Photoshow and Photodesk are included free of charge with the camera, if purchased from us! Cameras currently supported are the entire Canon range.



LOOK

...FREE PHOTODESK with any Canon Camera!



The Technical Reference is over 93 pages and is supplied in a sturdy 4 hole ring binder with full size A2 schematics of the hardware, and A3 engineering drawings of the front and rear side of the PCB. The manual also contains an updated (Issue 6) Expansion Card Specification (the Acorn Podule specifications).

Aimed primarily at developers and volume OEMs, the accompanying CD-ROM also contains electronic copies of many examples of the artwork and datasheets used in the creation of the motherboard and this manual.

This Technical Reference Manual (product code TEC10) is priced at £99 (delivery is £6). Castle are keen to point out that this price is the same as the original Risc PC TRM that was released nearly 10 years ago.

Meanwhile, not content with purchasing RISC OS, Castle are offering a free 6-in-1 USB card reader with every Lyonix purchased in July and August.

The card reader, worth around £30, supports six of the most popular types of removable card media in use today: CompactFlash, Smart Media, Memory Stick, Multimedia Card, Secure Digital media and IBM Microdrive cards.

The card reader enables fast and simple data exchange between a huge range of digital cameras, MP3 players and many other compatible devices.

### User group meetings

The RISC OS User Group of London (ROUGOL) meets on the third Monday evening of every month, at The Blue-Eyed Maid, 173 Borough High Street, London SE1 1HR. The provisional September meeting is a talk and demonstration by Peter Naulls (of [www.drobe.co.uk](http://www.drobe.co.uk), the UNIX Porting Project, and Linux for the Lyonix), and the provisional October meeting is a hands-on networking evening featuring RISC OS and Windows (and maybe more). Admittance and membership are free. For more information, e-mail [info@rougol.jellybaby.net](mailto:info@rougol.jellybaby.net) or phone 07876 035 495.

The ICENI Computer Club meets on the first Wednesday evening of every month at Bourne Vale Social Club, Halifax

Road, IPSWICH, IP2 8RE. The September meeting will be a visit by Jack Lillingston with Castle's Lyonix; the October meeting will cover CD burning on Lyonix, Windows PC, and possibly also Risc PC or Lintel systems. Entry to your first meeting is free. For more information, e-mail [iceni@archipel.demon.co.uk](mailto:iceni@archipel.demon.co.uk) or phone 01255 503048.

Southampton Acorn Users Group: Normally the second Monday in every month, except no meeting in August. Provisional dates for the rest of 2003: September 8th; October 13th; November 10th; and December 8th.

BAUG: The oldest established Acorn/RISCOS Group, now in their 22nd year:

August 12th No meeting College closed for Summer Holidays

August 26th No meeting College closed for Summer Holidays

September 09th Programme To be advised

September 23rd CD-burning on Lyonix

Email: [dgmcdowell@bigfoot.com](mailto:dgmcdowell@bigfoot.com) Web site <http://come.to/baug>

### ARM Programming on the Web

You may remember ARM Assembly Programming being published way back in 1987 by Computer Concepts. This guide to the ARM processor how to program it in assembler is now available to read over the Web, or download and print via PDF files: [www.peter-cockerell.net:8080/aalp/](http://www.peter-cockerell.net:8080/aalp/)

### Litigation against UK Web sites

The Royal National Institute for the Blind confirmed that it is supporting a number of individuals in cases against companies that are failing to make Web sites accessible to visually impaired users. Under the UK's 1995 Disability Discrimination Act, organisations are required to make reasonable adjustments to their systems to allow people with disabilities to access them. "Litigation will particularly apply when people who cannot use Web sites are

excluded from financial incentives, such as when low-cost airlines offer cheaper flights online rather than over the phone," said Suzanne Mercer, an IT and e-commerce attorney.

### Mobiles live up to their name

For ten years, four Ukrainian cities have hosted celebrations of mobile communications. The key event is mobile handset throwing. The first stage of the competition involves throwing mobiles presented by sponsors of the event. Some models, apparently, are still working after that. In the second stage, ten finalists throw the same model, a Samsung SGH-R200, to ensure an even playing field. This year, four additional cities are joining the competition. The current record is 55 meters.

### Wi-Fi group approves new standard

Products using the 802.11g standard received a clean bill of health from the Wi-Fi Alliance, an influential industry group. The Alliance has certified its first batch of products for interoperability. This means that the products have passed tests proving they are compatible with one another, enabling users to seamlessly connect to the Internet.

### Protecting its proprietary pork

Hormel Foods, which has sold over 6 billion cans of its Spam "lunch" meat since it was introduced in 1937, challenged Spam Arrest's applications to trademark its own company name with the US Patent and Trademark office. But on its Web site, Hormel states that it does not object to use of the word spam as a "slang term," as long as pictures of the meat are not used with such references. Spam, as a term for Internet junk mail, originated with a Monty Python comedy sketch. In it, a group of patrons at a restaurant chant the word "spam" in louder and louder volume, drowning out other conversation.



## APDL/Proaction upgrades

APDL have released two patches to their software portfolio. The first is to Repton 2, which seemed to suffer from completion issues, namely it was impossible to complete the first desktop release. This, along with a few other minor issues, has now been resolved and is available for owners of the APDL-issued CD-ROM edition.

Users of previous versions can upgrade to the latest CD edition for £10 inclusive. For a limited period, you can upgrade any version of Repton to the new Desktop Repton for just £15, return the original discs including packaging to APDL. You will not get these discs back, but will instead receive the latest edition.

Secondly, there was a bug present in versions of Rhapsody 4 around v4.09 which meant that pressing Return after entering text into a score didn't function correctly. This, along with a few other minor issues, has now been resolved and is available for owners of the APDL-issued CD-ROM edition from [www.apdl.co.uk/proact.htm](http://www.apdl.co.uk/proact.htm)

Users of previous Clares-issued versions can upgrade to the latest CD edition for £10 inclusive. Please return the discs to APDL, but not the box or manuals.

## TV on your Lyonix?

Simon Wilson has revealed details of a project to port a Linux driver to RISC OS which will allow a PCI TV Card to be used in Castle's Lyonix. The project makes use of the open source nature of Linux, and the fact that the Lyonix PCI API is loosely based upon Linux to bring desktop TV to Lyonix users. The driver is restricted to certain makes of TV card, those that employ the Conexant BT848/849/879 chipset (a Pinnacle PCTV Rave is one example)

The TV card works by communicating directly with the Lyonix PCI-based video card so it can plot images directly to the screen without involving the CPU, which means watching TV while working won't impact performance much.

## TV Card Project:

<http://ucsu.colorado.edu/~wilsonsl/lyonix/tvcard.html>

Lyonix PCI Specification:  
[www.lyonix.com/32bit/PCI\\_API.shtml](http://www.lyonix.com/32bit/PCI_API.shtml)

## CJE offer Lyonix cameras

CJE Micro's have announced the availability of two new digital cameras for the Lyonix and Castle USB podule. They are the Yakumo Mega-Image IV 4-MegaPixel Digital Camera for £176 inc VAT and delivery, featuring:

- CMOS image sensor
- LCD display 1.5in TFT
- Lens: fixed focus, type 5G, F2.8, 4x Digital zoom
- Mode: macro 55-80 cm; normal 160 cm ~infinity
- Resolution: 2304x1728 (4M), 2048x1536 (3M), 1600x1200 (2M); 1280x1024 (1.3M)
- Memory: built-in 16 MB NAND Flash + 16 MB SDRAM; slot for SD/MMC memory card
- File format: EXIF 2.1 comp (JPEG) / AVI (video)
- Lens: fixed, switchable between Macro and normal state
- Focus length: Macro 40-70 cm; normal 70cm ~ infinite
- Flash: automatic, off, forced
- Self-timer with 10 second delay
- White balance: automatic, sun, shadow, tungsten, fluorescent
- Video: QVGA resolution, 15 fps
- Web cam: 320x240 @ 20 fps
- Connection via USB 1.1
- DPOF direct print compatible
- Built-in microphone
- TV out NTSC / PAL
- Power 2x AA alkaline /NiMH batteries
- Also suitable for Windows 98/2000/ME/XP and Mac O.S 8.9 and above

While the Lyonix can download the pictures stored on the internal memory or SD/MMC card, we aren't aware of any drivers that allow you to use the Webcam feature on the Lyonix as yet.

The other camera is the Olympus C4000Z 4Mpixel 3x Optical Zoom camera £380 inc VAT and Delivery, featuring:

- 4.0 million pixels for image processing.
- 4.140.000 pixel 1/1.8 inch CCD

- 3x optical zoom, equivalent to 32 - 96 mm
- 3.5x digital zoom
- Bright zoom lens F2.8
- Versatile automatic & manual functions for exposure, focus, white balance
- Easy "virtual dial" operation
- QuickTime Motion JPEG
- USB AutoConnect
- Video interface

CJE Micros, Tel: +44 (0)1903 523222  
Fax: +44 (0) 1903 523679 E-mail: [sales@cjemicros.co.uk](mailto:sales@cjemicros.co.uk) Web: [www.cjemicros.co.uk](http://www.cjemicros.co.uk)

78 Brighton Road, Worthing, BN11 2EN, England.

## MiniB updates

The MiniB, the "DIY" BBC Micro kit the size of a floppy disc has been updated. Now available to download with an updated version of the OS which includes a more complete implementation and documentation. There are also details of buying ready-built MiniB boards for those who prefer not build it themselves.

Existing MiniB owners can upload the new ROM image in circuit from a parallel port and then use the built-in MiniB \*SRWRITE command. For machines with no parallel port a parallel device driver is available to download for free which implements Parallel\_HardwareAddress and Parallel\_Op but over USB.

An updated DFSReader is now available which is a simple desktop filer which allows BBC DFS format floppies to be read and written under RISC OS. The latest version is now compatible with 32-bit systems such as the Lyonix PC.

All updates, and more information on the project, can be found at: [www.sproy.co.uk/bbc](http://www.sproy.co.uk/bbc)

Neil Spellings  
[news@acornuser.com](mailto:news@acornuser.com)



# Accounting Software

Twice Winner of Acorn User Best Business Software Awards

## Prophet3+ professional

- Customer Relations Management
- Invoice/Order Layout Editors
- Stock Control
- Simple Ledgers
- VAT Control
- Multi Currency
- Accountants Reports
- Lifetime Licence
- Loved by its users!
- RISCOS
- Iyonix
- Virtual Acorn

Accountz.com Ltd 2003



- Boxed in Slip Case with CD + printed Manuals £200
- CD version (HTML/PDF e-manuals) £150

Accountz.com Ltd • Hostmoor Avenue Ind Est • March • Cambridge • PE15 0ND  
08700 111747 • Fax 01354 680432 • sales@accountz.com • www.accountz.com

# Domain names

## Domain registration with forwarding

2 year registrations

**£20** +VAT .CO.UK, .ORG.UK, .ME.UK

**£40** +VAT .COM, .NET, .ORG, .NAME, .BIZ

**£65** +VAT .UK.COM, .GB.COM, .UK.NET, .GB.NET

### Includes :

Domain registration fees  
DNS Hosting  
Email forwarding  
URL forwarding

### .COM, .ORG and .NET long-term

1 year only £25  
5 years £100  
10 years £180

### Extras :

POP3 mailboxes £10  
Mailing list £50  
Auto-responder £20  
Transparent forwarding £10

# Web hosting

## Domain registration with hosting

Take above prices and add :

**+£25** 1Mb site +VAT

**+£45** 5Mb site +VAT

**+£70** 10Mb site +VAT

### All hosting includes :

Domain registration fees  
DNS Hosting  
Web site hosting  
PHP4  
SSI (Server Side Includes)

### Web Extras :

Search Engine Registration £25  
CGI-BIN £20  
Domain transfer £10

All prices exclude VAT @ 17.5%

We can also design your site - ask us for a quote!

Spellings Computer Services  
www.spellings.net

domains@spellings.net  
Tel. 07785 935497  
45 Hillview Close  
Purley  
Surrey. CR8 1AU

# Cheesed off with your Current PC card?



There is a option...Here is the answer you have been looking for.

**microbits**  
The Microbits Alternative PC

This is a real PC based on a 1.7 GHz Celeron or AMD 1700+ CPU. Etc.

### The basic kit includes:

- Mini tower case
- 1.7 GHz Celeron or AMD 1700+ CPU
- Socket A or PIII/Celeron Motherboard
- 256Mb 133 SDRAM/DDR 2100 266PSB (AMD)
- 30 Gb hard drive
- 3.5 floppy drive
- True colour AGP graphics
- 16 bit Sound/Master Comp sound & Speakers
- 10/100 Network card or 56K Modem
- All cables and connectors
- Setup Acorn Browser/Network Software
- Acorn Network card
- VNC software so you can run windows software on your Risc PC or the RISC OS Desktop on the PC
- Santha software to enable you to see your Acorn hard drive on PC
- Installation so you don't have any problems
- 12 Months RTB warranty
- All this for just £450.00 + vat

Extras if needed:  
Windows 98SE/Me Full version CD-ROM installed £79.00 + vat  
Windows 2000/XP Full version CD-ROM installed £129.00 + vat  
52 Speed CPU upgrade available £35.00 + vat  
60 Gb hard drive upgrade £35.00 + vat  
So if you want to see the full range of what you can get from using your system to the full, for the lowest cost of using this system are:  
No other compatible systems  
No need to upgrade your current Risc PC  
Higher spec kits based on Pentium 4 available (Prices on application)

www.micro-bits.co.uk  
644 Forehill Road  
Cirencester  
Glos GL7 4GB  
Tel: 0124 7660100  
Fax: 0124 7660299  
Mobile: 07714251011  
Email: sales@microbit.demon.co.uk

www.hawkwoods.com

**Hawk-Woods**

## V-Lok Camera Battery System



V-Lok Lithium Batteries 60W -90W -120W  
V-Lok NiCad Batteries 30W -50W -75W  
V-Lok Ni-Mh Batteries 110W

For more information contact.

Tel: 020 8715-0999 / 8286-1919 Fax: 020 8330-5659

Email:sales@hawkwoods.com



CAMERA FITTINGS

Available For Most Cameras

**V-LOK HAS ALL THE ANSWERS FOR TODAY'S VIDEO PROFESSIONAL**

V-lok compatible with existing SONY chargers and camera fittings

## V-Lok Multi Chemistry Chargers

In-Car Charging PSU Function



### OTHER PRODUCTS

Camera PSUs  
Radio Mic Holders  
Video Transmitters  
Camera Adaptors  
V-lok Battery Belts



Hawk-Woods Ltd. 32 Brinkley Road, Worcester Park, Surrey, KT4 8JF. England.



# Graphic Design in the Real World, Part 3

Although it's not necessary, you often find that visual images are used to great effect in logo design. This often requires illustration, and there have been a number of jobs where my old-fashioned skills of drawing have had the cobwebs dusted off. Now, at one time everything was done by hand, but since the computer revolution almost everything is done with the keyboard and the mouse.

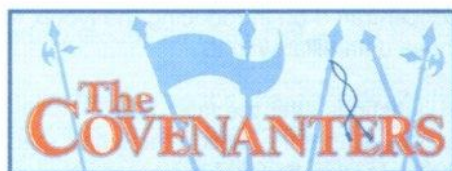
While it was very easy swapping the time-heavy jobs for a few mouse-clicks, it was a tough education changing from creating illustrations with pen and paper to re-creating them on-screen.

Eventually, however, I learnt a new way of rendering visual images and over the years discovered the advantages that vector applications like *Draw* and *ArtWorks* can offer.

The graphic doesn't have to be very sophisticated. One job required a depiction of a diamond for a jeweller's logo. An oval created in *Draw* started it off, and a few geometric shapes added results in an adequate representation of a gemstone. Not brilliant art, admitted, but it very quickly suggests to you what the company does.

When I decided to use a classical urn to enhance a logo for an organisation concerned with the arts, I stylised the drawing. The most important element of the urn is its curved sides; once you've done one side it's easy to copy it and flip it over to form the other side. A couple of straight lines to join the two sides up and you have the basic vase-like shape. I added a rim and a base, a zig-zag stripe through the middle, and a shadow, but the basic shape is simple.

Other designs have been much more involved, such as a picture of a garden for a landscape gardener. It's still stylised, but there's a lot more to it. The flat, coloured shapes were done first: the sky, the various shades of green to represent grass, the simple white cloud outline. The tree trunk was then added, and over that I drew one circle in black, copied it a few times, changed one of the copies to red and copied that. Then I created a simple leaf shape in green and copied and rotated it a few times. The flower bed was done in roughly the same way: create simple shapes, fill them different colours, and arrange them to convey the effect.



You might have deduced that I favour simplicity. If a design is simple and works, it's difficult to better it. However, there are occasions when you need to go into a little more detail. If a brief asks for a specific drawing of an eye, for example, you have to do it, and you build up a drawing with carefully drawn lines and layers. It's a different way of thinking and takes a while to give the impression that it's easy.

I had a job which required a drawing of a Roman centurion; I could have drawn it with pencil and paper and then scanned it, but I relished the challenge of tackling it on-screen. The resulting Drawfile consisted of layers of shapes and simple tints of black. The staff was a long rectangle, two or three circular shapes, a clip art eagle, and an open font to create the lettering. A few areas of gray to suggest shadows finish the piece off.

An impression of accuracy is sometimes needed. When a pub called The Covenanters needed a new sign, I wanted to use a concept which suggested the historical connections with the name. A little research revealed incidents where the Covenanters raised spears and banners; I searched through my boyhood collection of Look and Learn for suitable images and constructed silhouettes of spears and banners.

However, when a traditional music and song organisation asked for some illustrations my love of simplicity won out once again: my depictions of various instruments and singers were all drawn on-screen very simply, broken down into their essential elements only. Accuracy was certainly not what was required, but rough sketches conveying the fun and excitement of learning music in an informal environment. These illustrations were also great fun to do!

Drawing in general is something which most people say they can't do. Very detailed artwork does require particular artistic skills, but simple line drawings can require imagination as much if not more than draughtsmanship.

Nigel Gatherer  
gatherer@argonet.co.uk



## Going Dutch

The RISC OS Expo 2003 took place on June 21st. Defying the trend of other recent RISC OS shows, it maintained its original format as regards length and size of venue. The show has a consistent venue that has been unchanged for some years now; I wrote briefly about the many pleasurable ways of reaching it from the UK in this magazine, about a year ago.

It was rather a disappointment to me, therefore, that almost none of "les rosbeefs", apart from exhibitors, took the chance to take an enjoyable trip to one of Europe's friendliest countries on a very sunny weekend.

live.

Jack Lillingston (Castle) and Paul Reuvers (X-Ample) took turns to present in English and Dutch respectively, in roughly minute long sections. This worked quite well, although the adjoining sections weren't intended to be direct translations, and there was a little confusion sometimes as the speakers changed the order in which they were talking.

The slide presentation was completely different to what I have seen Castle present previously; apparently it had been prepared by X-Ample (but still used Photodesk Ltd's OHP2). However, there

powerful AGP graphics card would be wasteful for ordinary desktop use. The 32MB nVidia GeForce 2 MX400 in the Lyonix does provide very impressive desktop performance, and is also sufficiently low-end as not to require a separate fan, important for the computer's extreme quietness.

However, Jack did say this was the graphic card used "at the moment"; this seemed a strong hint that higher specified cards may be used in future. The Lyonix's PCI bus is ideal for trying out new graphics cards options, and posts on the Lyonix support mailing list indicate that some third party developers are already doing so, while others are



Despite this traditional British parochialism, the show was fairly busy shortly after I arrived at about 10:30 local time. (One should keep in mind that some visitors were travelling from much further afield, including Germany, Belgium, France and other European countries).

The opening theatre presentation took place at 11:00, and saw the first real attempt by a RISC OS company to produce a dual language presentation. This featured Castle and their distributor in the Netherlands, X-Ample. They had arranged two Lyonix systems connected to two projectors, with one showing a slide show, and the other displaying an Lyonix desktop, so that points raised in the presentation could be demonstrated

was very little genuinely new information; it was the first presentation about the Lyonix given at the RISC OS Expo, so concentrated on introducing the Lyonix to those unfamiliar with it.

In questions after the talk, Jack explained that the reason the Lyonix uses 200MHz DDR SDRAM is because that is the fastest that the 80321 X-Scale processor in the Lyonix supports. He did point out that all other current X-Scale processors can only use 100MHz DDR SDRAM. Though both options still represent a huge improvement over the memory in the Risc PC.

Jack reiterated previous comments about the efficiency of the RISC OS graphics system, meaning that a

investigating writing drivers for other PCI cards for the Lyonix, not just graphics cards.

Jack was also asked about 3D graphics acceleration. Although 2D acceleration (essential with high resolution and colour depth screen modes) is already in use on the Lyonix, the chances of 3D acceleration in the near future did not seem so good. Jack rightly pointed out that 3D acceleration is "mainly only useful for games", and described its implementation as "an option for the future", not something being worked on at present.

One concern for potential Lyonix owners has been the absence of a proper monitor mode definition file (MDF)



generator. Although the computer itself is shipped with a wide variety of MDFs for different monitors, there is no generator included. This isn't a significant problem, as most monitors will function entirely happily with an MDF from a similar monitor. However, when pushing a monitor to its limits, it is much better to have a properly created MDF, to avoid any possible problems. Jack promised that a suitable generator was "on the list", and would arrive "fairly soon".

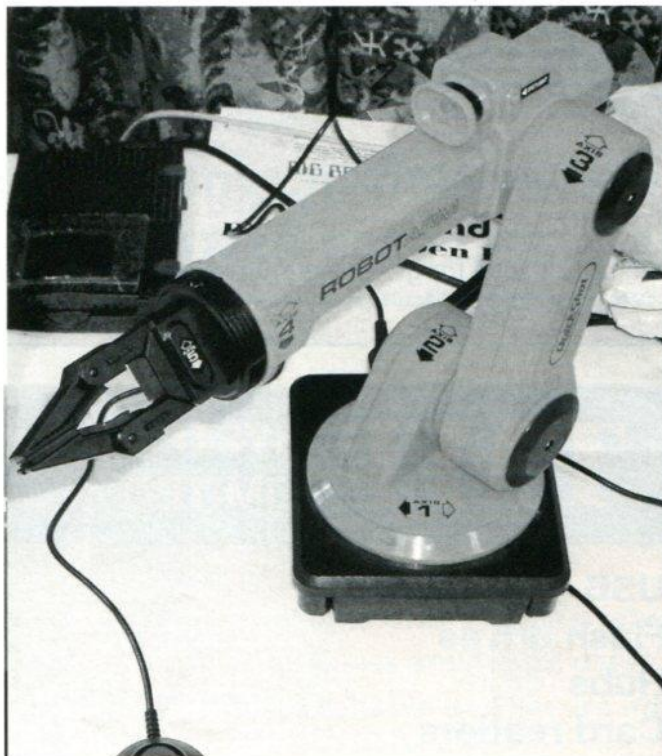
Jack was asked yet again whether RISC OS Select would appear on the Iyonix. He replied that Castle and RISCOS Ltd "haven't agreed the commercial terms yet, but I hope it will happen in the future". Asked exactly how this would be achieved, the response was "you have to

operate; so long as the device supports the required specifications, there is no problem. R-Comp's Iyonix specific instructions for the multi-format card reader I purchased read something along the lines of "plug into your Iyonix, click on one of the iconbar icons to open a filer window"; and that's it!

Many people have been purchasing ordinary USB devices on the open market, and finding they work with their Iyonix without any configuration at all. Other users, including myself, are happy to pay a little more for USB devices already tested on the Iyonix and supported in that configuration by a RISC OS dealer. With multi-format USB card readers for the Iyonix costing roughly £30 (perhaps £2 extra if bought

sufficient supplies of internal card readers for the show anyway; and someone else had pointed out to me the advantages of external card readers (you can easily detach them from your computer, carry them round, and plug them into a friend's Iyonix or even PC). It was interesting to note that one of Castle's demo systems had never had a floppy disk drive fitted at all.

I also asked if there was any upgrade beyond the 512MB RAM with which my Iyonix shipped. Jack said that Castle had indeed tested a 1GB module in the Iyonix's single SDRAM slot. However, at £500 or more for the upgrade, he didn't consider it an option likely to be popular with most RISC OS users. While 1GB of RAM may be useful if running Linux on



leave that to us to decide" (meaning Castle and RISCOS Ltd). This was, of course, before the Castle announcement of the purchase of RISC OS from Pace.

This was the first RISC OS show since Castle released their USB mass storage drivers for the Iyonix. They were very much in evidence at the show, with dealers such as R-Comp selling multi-format USB memory card readers suitable for use with digital cameras and other products, and Castle's own stand even being open for visitors to plug in their own USB devices (I saw one visitor plug his USB watch into the Iyonix).

The Iyonix USB mass storage drivers have the advantage of not requiring any extra RISC OS software or hardware to

through a RISC OS dealer), as against £80 or more for equivalent functionality on a Risc PC, there's little comparison.

Back at Castle's stand, I also asked Jack about upgrade options for the Iyonix. Like a lot of other people, I've purchased a 512MB Iyonix with an 80GB hard disk drive. I already knew that a second 80GB (or, now, 120GB) hard disk was an option, however Jack confirmed that if I fitted an internal multi-format USB memory card reader, as well as keeping the floppy disk drive, there would be no space for a second internal 3.5" hard disk, unless I fitted it in the free 5.25" slot using an adapter.

This wasn't a problem, as it turned out that R-Comp had been unable to obtain

the Iyonix, under RISC OS even 512MB is far more than enough.

Back in the red corner, MicroDigital had news about their Windows laptops running RISC OS 4 under emulation. As well as the previously announced specification upgrades to the original Alpha laptop, MicroDigital also bowed to pressure and introduced an Alpha Professional laptop. The principal distinction is that, while the Alpha has a 2GHz Celeron processor, the Alpha Professional has a 2.4GHz Pentium 4 processor.

The Alpha Professional laptop has various facilities not present on the ordinary Alpha, but it wasn't explained which of these were accessible directly

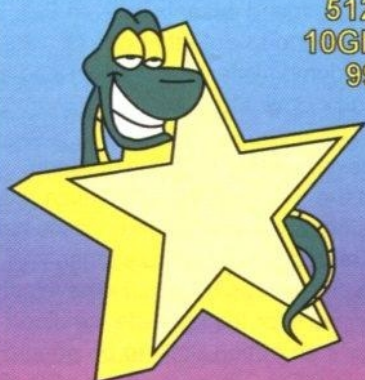


# DATASNAKE

QUALITY UK WEB HOSTING

## DEDICATED SERVER SPECIALISTS

Intel Pentium 4 2.4GHz Server  
512Mb RAM, 40Gb HDD  
10Gb monthly bandwidth  
99.9% network uptime  
Just £99 per month



Acorn User readers pay no  
set up fee (usually £99)  
Quote offer code AU03

## COLOCATE YOUR OWN SERVER

Rack space for your 1U server  
2 IP addresses assigned  
10Gb monthly bandwidth  
99.9% network uptime  
Just £75 per month

Call now or order online

**0800 092 3441**

Prices exclude VAT @ 17.5%

<http://www.datasnake.co.uk/>

VISION INTERNET SERVICES

**RISC OS  
specialists**

**UK Domain Name Registration**  
from £9.99 for 2 years

**UK Web Hosting**  
from £14.99 per year  
Looking for a cheap web hosting package  
without annoying banner ads or popups?  
This is for you.

**Web Design**  
Looking for a web site design company based  
in the UK with many years of experience and a  
no nonsense approach to quality web design?

**[www.vision-internet.net](http://www.vision-internet.net)**

0845 123 2694 for general enquiries and support  
Vision Internet Services, PO Box 82, Hyde, Cheshire, SK14 6FF, United Kingdom.

## High Speed Computing



Order your RISC OS  
Machine today...

Call us for friendly  
advice or visit our  
website

We also stock a wide  
range of  
RISC OS Software and  
accessories.

We specialise in all your RISC OS needs for individual  
customers or small businesses.

• P.O. Box 519 • Doncaster  
• South Yorkshire • DN4  
• 0GE  
• [sales@etcsystems.co.uk](mailto:sales@etcsystems.co.uk)

 **RiscStation**  
RISC Based Technologies

**MicroDigital**

**IYONIX** 

# TMT SYSTEMS LIMITED

**USB accessories**  
**Flash drives**  
**Hubs**  
**Card readers**  
**Lights**  
**Wholesale & Retail**

## SPECIAL OFFER

**4 PORT HUB PLUS 32mb FLASH DRIVE**  
**£22.00**

**4 PORT HUB PLUS 64mb FLASH DRIVE**  
**£28.00**

**£2.00 P&P (prices include vat)**

**[www.tmteshop.co.uk](http://www.tmteshop.co.uk)**  
**tel: 01234 270 505**

TEL: 01302 337559

FAX: 01302 337564



# Finest Quality EPSON

## Compatible Ink Cartridges

We only stock **brand new** cartridges - not recycled or refilled cartridges. All our ink cartridges are **guaranteed** to perform to the same standard as original Epson cartridges - and have a **100% money back guarantee!**

Stylus C20ux	<b>£1.99</b>	Stylus C42ux	<b>£3.99</b>
Stylus C20sx	Black Each	Stylus C42plus	Black Each
Stylus C40ux		Stylus C44ux	
Stylus C40plus		Stylus C44plus	
Stylus Color 400	<b>£4.99</b>	Stylus C60	<b>£9.99</b>
Stylus Color 440		Stylus C62	
Stylus Color 460		Stylus Color 680	
Stylus Color 480	Black 3 Pack	Stylus Photo 790	Black 3 Pack
Stylus Color 580		Stylus Photo 810	
Stylus Color 600	<b>£2.99</b>	Stylus Photo 830	<b>£4.99</b>
Stylus Color 640	Colour Each	Stylus Photo 870	Colour Each
Stylus Color 660		Stylus Photo 890	
Stylus Photo 700		Stylus Photo 895	
Stylus Color 740	<b>£7.99</b>	Stylus Photo 900	<b>£12.99</b>
Stylus Photo 750	Colour 3 Pack	Stylus Photo 915	Colour 3 Pack
Stylus Color 760		Stylus Photo 925	
Stylus Color 880		Stylus Photo 935	

**Inkjet  
Printers**

EPSON Stylus Photo 830u **£87.99**  
EPSON Stylus C42ux **£45.99**  
EPSON Stylus C62 **£67.99**



Freephone: **0800 161 36 38**  
Online: **www.Britink.co.uk**

-- Prices Include VAT -- Fast Delivery -- No Minimum Order -- P&P 99p Per Order --

## Offers from Icon Technology

EasiWriter and TechWriter now come on CD complete with documentation in both EasiWriter format and HTML. Also included are extra utilities, stationery and examples.



**EasiWriter Pro+ CD £79.00 inc.**

Upgrade from !Writer (RISC OS 4)  
or EW 4.08 for £40.00 inclusive

- Powerful easy to use multi-column word processor.
- Reads and writes **MS Word** with *100% elimination of Macro viruses.*
- Built-in Table editor.
- Reads and writes **HTML** and **RTF**.
- Reads **Impression** 'Text with styles' documents.

**TechWriter Pro+ CD £104.00 inc.**

**NEW** Upgrade from EasiWriter Pro+  
for just £25.00 inclusive



All the power of EasiWriter Pro+ with:

- Built-in equation editor. Write equations as easily as you type text. In-line  $ax^2 - bx - c = 0$  or displayed:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

- Writes **TeX**.

Icon Technology Ltd, Church House, Church Street, Carlby, Lines. PE9 4NB.  
www.IconTechnology.net 01 778 590563

RESELLER / TRADE WELCOME

# E.C.B. DIRECT

CHECK OUT OTHER  
**GREAT DEALS**  
ONLINE

VISIT OUR  
WEBSITE

**ORDER  
ONLINE**

**www.ecb-direct.co.uk**

## THE MUST-HAVE STORAGE DEVICE FOR THE 21ST CENTURY

- ✱ DOWNLOAD ANYTHING YOU LIKE FROM THE INTERNET DIRECT TO YOUR Q-MAX DRIVE.
- ✱ SAVE SPACE ON YOUR COMPUTER'S HARD DRIVE.
- ✱ TRANSFER AND STORE DATA EASILY & QUICKLY.
- ✱ IDEAL FOR CARRYING FILES BETWEEN HOME AND OFFICE.

Store all MP3'S / PDA Data / Digital Camera Images  
Plugs into USB PORT - NO External power required  
Supports Windows 98/ME/SE, 2000, XP, IMAC & Linux  
Hot Plug & Play / Size 9.15 X 2.4 X 1.4cm  
Lightweight ONLY 17.5g / Includes USB  
extension lead

	£ EXC. VAT	£ INC. VAT
<b>32 mb</b>	18.60	21.86
<b>64 mb</b>	22.20	26.00
<b>128 mb</b>	33.00	38.78
<b>256 mb</b>	55.80	65.57
<b>512 mb</b>	108.00	126.90
<b>1 gb</b>	201.00	236.18

colour & design may vary



**CHECK OUT  
GREAT DEALS AT  
www.ecb-direct.co.uk**

Small, stylish  
storage that will  
fit in your pocket!

Checkout our new Twinmos usb drive  
prices online. eg. 32mb £10.56 exc. VAT  
32mb £12.45 inc. VAT

Memory powered by  
**SAMSUNG**

**ORDER NOW**

TEL 023 9243 1279 FAX 023 9234 9798

EMAIL [e.c.b@telco4u.net](mailto:e.c.b@telco4u.net)

OPEN: 9am - 8pm, 6 days a week

TRADE WELCOME



from RISC OS under emulation (lack of proper networking from RISC OS on an Alpha has been cited as a major stumbling block). A little investigation revealed that the 2GHz Celeron Alpha was selling for £999 including VAT, and the 2.4GHz Pentium 4 Alpha Professional for £1330 including VAT.

The MicroDigital stand itself was very impressive, with two motorbikes making a re-appearance, along with laptops, Omegas of various shapes and sizes (and well prepared for their outing with high resolution photographs and other demonstrations), and plenty of people to discuss it all.

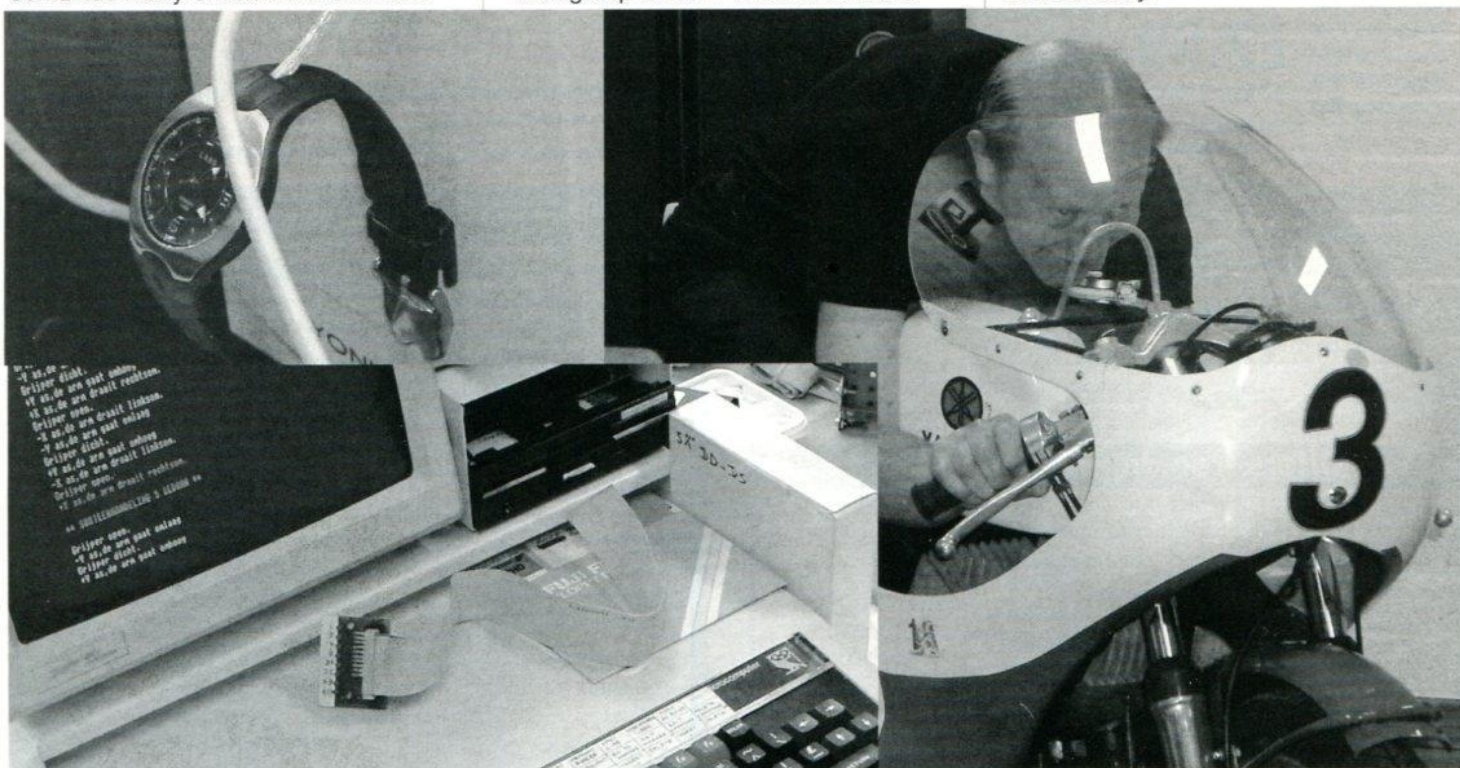
David Atkins' talk in the theatre contained many criticisms of the RISC

comments about the Press were at least accompanied by some actions "to prove them wrong". As he was speaking, Frank from Desk, assisted by David Prosser, brought in boxed Omega and Alpha computers. Frank then read out a list of names of people who could come and collect their computers.

Escaping the anger and acrimony in the presentation room, I found reminders that the Utrecht show has qualities not much seen at British RISC OS shows. A great deal of emphasis is placed upon the user group aspect of the show. So there were stands for "Regio Den Haag", "Regio Oost", and other regions of The Netherlands; and also for "Werkgroep Hardware", "Werkgroep Genealogy" and "Werkgroep 8-bits". There was also a

environments and utilising input from several different members of the user group.

Another exhibitor encouraging people to take things into their own hands, but this time from the UK, was the Unix Porting Project, represented by Peter Naulls. Peter is also well known for his involvement with the Drobe website and with Linux for the Lyonix, so it was perhaps appropriate that the stand boasted two Lyonix systems showing different aspects of development. But there were also the diagrams explaining the process by which Unix (or even Linux) software can be made available to RISC OS users, as well as some CDs to take away and try out what had been done already.



OS Press. He also had to contend with two very determined questioners quite early on. One of them was incensed at failure to deliver on promises made to his company about Omega delivery dates. The other had in-depth technical knowledge of the Xilinx software used for circuit board design by MicroDigital, and was very concerned by some of the statements made about track lengths during the design phase.

A further questioner asked if MicroDigital could not try and make use of the Press for publicity, rather than attacking them. David Atkins did not think much of this suggestion, and said that MicroDigital no longer talked to the Press, at all.

On a more positive note, David's

substantial stand run by RISCOS.be, the Belgian RISC OS user group.

Among the various regions and workgroups, all sorts of projects were on display. This went right down to the level of soldering irons being available, and in use, on some stands. There were two different sorts of robot arms (one built using Meccano and controlled by a BBC), and all sorts of other attractions.

After the MicroDigital presentation, one of the Dutch user group stands also saw a newly delivered Omega unboxed and brought into action by its owner. On the RISCOS.be stand, there was a telephone logging system based upon a Risc PC with a custom podule and custom software, destined for use in industrial

As always, continental developers and dealers such as Uffenkamp Computer Systems, Martin Wuerthner, Desk, X-Ample and others were very much in evidence. The Big Ben Club are once again to be congratulated in managing to keep the show running in what is pretty much a prestige venue. They had allocated themselves only a quite small stand, on this occasion displaying an Lyonix, but it is due in part to their hard work that the RISC OS Expo was once again a success, and very enjoyable.

dgs  
dgs@argonet.co.uk



# Killer Art

Back when we really needed it, Computer Concepts Ltd devised two "killer apps": *Impression* and a little later, *ArtWorks*. They were needed at a time when computers were revolutionising the graphics and publishing businesses. *Impression* brought professional desktop publishing to the Acorn platform, while with *ArtWorks* we finally had an illustration application which could stand beside *Illustrator* or *Freehand* on Macs and PCs. It was a great disappointment when Computer Concepts decided not to continue to develop these applications, although both are still the choice for many on RISC OS.

Without continued development, *ArtWorks* lost ground over time, but Martin Wuerthner (MW Software) began to provide plug-ins which improved functionality. Therefore it was with some excitement that I heard about the release of *ArtWorks 2*, the first new version for many years. I was eager to see what changes and improvements there were. It's worth mentioning that although *ArtWorks 2* is the first version to run natively on Castle's XScale-powered Iyonix, I'm running it on a plain old Risc PC.

Installation was easy and pain-free. When you open Choices from the iconbar you notice there are new global choice options, such as JPEG and Crystal modules; more of Crystal later, but the JPEG module means that now we can use JPEGs within *ArtWorks* files without them being converted to Sprites.

When the first blank page is opened, the first thing you'll see is that there are many more tools on the tool bar. All the older tools are there, but a few of these have been enhanced; the Zoom tool, for example, now has some great features which are mouse-accessible from the Info Bar, including the ability to customise certain zoom settings.

There are new intersect capabilities, another major plus. This sort of function has long been standard on professional kits, and it's good to have them. With the new intersect capabilities we can create and combine new shapes very easily.

One of the most important skills you need to have if you're using RISC OS, particularly if you're working profes-

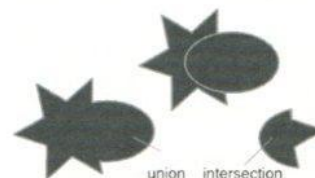
sionally, is communication with other platforms. Without that ability, you can encounter a great deal of frustration. *ArtWorks 2* is a significant contribution to cross-platform compatibility with its enhanced exporting facilities. You can still export as old *Freehand* and *Illustrator* files (although these have been well out of date for a long time, and can't be imported into any recent copies of *Freehand* and *Illustrator*, although *Illustrator* only requires a minor textual fix to import), and Drawfiles and Sprites, but now you have the option of exporting as SVG, a vector format used by PCs and Macs, or bitmaps in the form of TIFFs, or GIFs. The latter is extremely useful if you're creating graphics for use in Web pages; you can now create your image, save it out as a GIF and it's ready to use.

Text handling has always been little more than rudimentary with *ArtWorks*. The *TextArea* plug-in introduces more features which have been enjoyed in rival products such as *Freehand* and *Illustrator* for years. It allows you to drag out a text area in which you may apply styles to text in the same way as you would in a DTP programme. You can control the layout, font styles and characteristics (such as size, leading, and so on) with ease, you can create text areas with multiple columns and have the text flow from one column to another, and you can force text to the next column (this is achieved using the same key-shortcut as in *Impression*: Control+G), and features such as indentation and tabs are supported. You can even rotate the frame while the text remains fully editable. This is an astonishing leap forward and all of these features will be celebrated by users.

There is now an Auto-save function, a serious omission from the original, which allows you to pre-set the file to save at regular intervals. Anyone who has lost an hour's work after a crash will appreciate this feature.

If there is one new feature which I found jaw-droppingly amazing it was the transparency tool "Crystal." With it any object you create within *ArtWorks 2* can be made transparent, and the control you have over how it looks is tremendous. There are three types of transparency settings, each giving astounding results, and with the slide bar in the info window, with which you can select the percentage of transparency,

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur aliquam. Class aptent taciti sociosqu ad litora torquent per cunubia nostra, per inceptos hymenaeos. Phasell	Curabitur aliquam. Class aptent taciti sociosqu ad litora torquent per cunubia nostra, per inceptos hymenaeos. Phasell adipiscing elit. Curabitur aliquam.	nostra hymer ipsum amet, adipis Curab Class socios torque nostra
--	---	---



you have a wide range of effects at your fingertips. The results have to be seen to be believed, although exporting the result as anything other than bitmap capture is limited (one exception is that the SVG export can handle transparency in certain settings), which slightly lessens the impact.

*ArtWorks* was a killer application when it was first released but, predictably when CC dropped it, lagged increasingly behind. Martin Wuerthner has dragged the program into the 21st century by the scruff of its neck, and should be rewarded for it. Professional users will appreciate being able to apply the new techniques, but absolutely anyone who uses *ArtWorks* will benefit from its enhanced functionality. Another great advantage is that now it's constantly being developed. For example, there wasn't any interactive help in my early copy, but the latest versions already have more than 300 entries.

I really want to proclaim the arrival of *ArtWorks 2* with all the fuss it deserves.



Nigel Gatherer  
gatherer@argonet.co.uk



# hostinguk.net

Web sites start at just **£7 a month**. ASP, ASP.net 1.1, Perl, PHP, ODBC, FrontPage (all versions), supported as standard, hosted on Windows 2003 IIS 6.0, with a load of ASP components free to use.

Advanced hosting options include SQL 2000, ColdFusion MX and FREE domain.

**CHEAPEST PRICES IN THE UK...  
NO HIDDEN EXTRAS, THE PRICE  
YOU SEE IS WHAT YOU PAY!!**

Domain name price guide

**Nominet | £9.99 + VAT**  
.co.uk, .net.uk, .ltd.uk, .org.uk, .plc.uk, .me.uk

**Nominet Personal | £ 9.99 + VAT**  
.me.uk

**Global | £19.99 + VAT**  
.com, .net, .org, .biz, .info

**Alternative | £44.99 + VAT**  
.br.com, .cn.com, .eu.com, .gb.com, .nu.com, .no.com, .qc.com,  
.ru.com, .sa.com, .se.com, .uk.com, .us.com, .uy.com, .gb.net,  
.se.net, .uk.net

The above prices are for 2 years  
including ALL domain fees.

**www.hostinguk.net**  
**08702 00 30 44 / 01492 863960**



Broadband ADSL internet

**www.not.ms**

looking for something different?

- \*Block of real IP addresses
- \*No blocked ports or protocols
- \*Fixed cost permanent link
- \*Fast installation

are you well connected?

**www.aaisp.net.uk**



*cutting edge  
solutions  
for your IT needs*

**Bespoke Software  
Development**

**Database Design**

**Web Site Design  
& Development**

**Web Site Hosting**

**Network  
Consultants**

**Legacy System  
Migration**

**IP Telephony  
Systems**

call us on

**0845 644 5 333**

to discuss what we  
can do for you

**www.hki-systems.co.uk**

**info@hki-systems.co.uk**

**HKi** • SYSTEMS LTD



## Proper protection

Oh my word. Now they really have gone too far, publishing information about a Windows program? That really is just too much (and so on and so on). Why on earth would we do this? Well it is very simple. Legislation on computer software is such that, as many businesses don't realise, company directors are held responsible for the legality of the software on their company's computers.

What that means in practice is that if you (as a company director) are caught with unlicensed software on your computer system, you could expect a very big fine and up to two years in prison. Worse still, there are incentives of up to £10,000 for your employees to inform on you. We know that very many readers of *Acorn User* are in managerial positions in companies so we thought we ought to tell you.

Even if you're not running a business most RISC OS owners have at least one PC and often two or more on a network with their RISC OS machine. So that is another reason for using this sort of software so you can keep tabs on the software on your home machines.

No matter what you think of software companies like Microsoft, if you install or use their software without their permission, you're breaking the law and can expect prosecution. This is also something to bear in mind if you buy a very cheap PC with a "demonstration" operating system. It will be illegal and you will be liable. Ignorance of the law is not a permissible defence.

If just one person in your organisation has an unlicensed copy of a software title on their machine, you, as a director, are held to be personally responsible. It's you who could face the prison term, not them.

If you don't think your employees will tell on you, think again. If a sacked or disgruntled employee wanted to leave you something to remember, all they'd have to do is install an unlicensed piece of software on your computer system then report you.

There are different programs that you can get that will help you keep track of your software and their licences. A lot of them are very expensive so we have chosen one that isn't. We are giving an

overview this time and in a couple of months we will report back on how easy it is has been to use.

The product is called ICS Licensing and it enables you to build and maintain a complete, up-to-date audit of your licence holding.

No matter how big your organisation or how widely distributed the hardware used by your staff you will be able to keep track of what's installed and where. You'll be able to tell at a glance what software you own and what software you don't.

You can find all the illegal and unlicensed software in your organisation and do something about it. You can track software installations and movements throughout your system. Whenever a new piece of software is installed anywhere in your system, you'll know about it.

It's quick and easy to maintain. You can make it part of your normal office housekeeping. A simple drag-and-drop system allows you to move software or licences from location to location at the click of a mouse.

There's no limit to the number of different software titles and installations you can add to the system and you can call up more than one separate database.

A sophisticated reporting facility allows you to view and print a number of management and executive reports or export the results to a text file or to a formatted Microsoft Excel spreadsheet.

### Accurate auditing

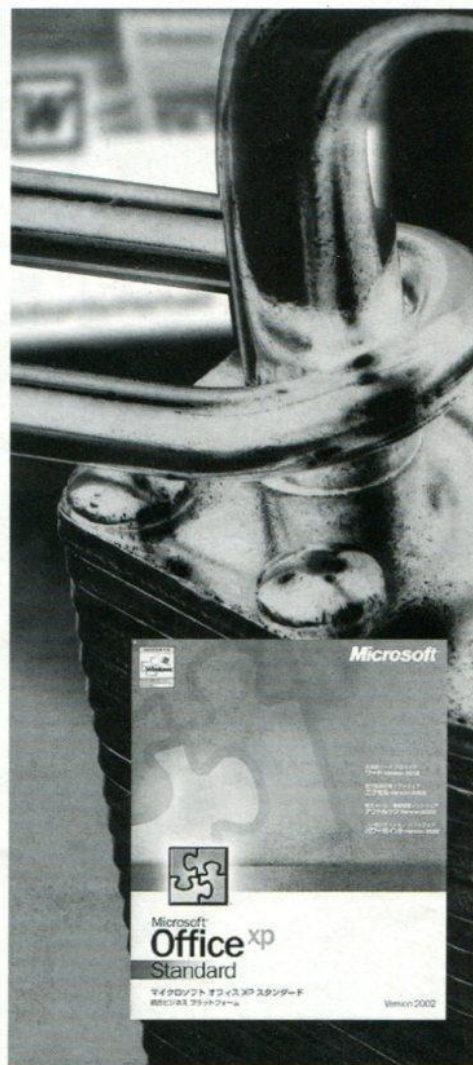
Maintaining an accurate audit of your organisation's software to avoid prosecution is a compelling enough reason to use this sort of software, but that's not the only thing it can be used for.

By knowing exactly what's installed throughout your system, you can make sure all your employees are using the same version of the software, eliminating the problems of incompatible data formats. Rather important in the world of Windows.

With a complete software inventory you can see what software or hardware upgrades are needed and who to give them to. Knowing what's installed on every machine, you'll be able to get the employee up and running again with minimal fuss and delay if their machine is put out of action by virus attack, hard disk failure or damage.

As you're in control, you'll be able to identify and discipline staff caught downloading programs from the internet without permission.

There are two versions: the standalone and the network. The latter is undoubtedly the more useful and that's the one we'll be looking at. If you want to take a look too you can download a demo version from the [www.icguk.biz](http://www.icguk.biz) Web site.



Steve Turnbull  
steve.turnbull@acornuser.com



## Get bloggered

**W**hat's the in-est thing on the Web? Blogging. From which we get an interesting new set of words: He blogs, we blog, they blog, have you seen the latest blog? Well I'll be bloggered! (Perhaps not that last one.)

In the world there are people who want to make their thoughts and actions available to everyone else. Want to make their lives public and I'm not talking about Webcams directed at coffee machines (what a great loss to the world that was).

Now any reasonably competent person can put together a diary in HTML form, with pictures. But it does take technical knowledge. So someone had the bright idea of creating a web interface that allows a person to have their diary on the Web without having to know anything clever about creating web pages.

Blog stands for Web Log. We don't use the term Web Log because that can also be a list of all the hits that a particular web site gets. So we have Blog.

### You can be bloggered

We thought we'd get down to [www.blogger.com](http://www.blogger.com) and see what all the fuss was about and whether it really is to get into the blogger habit. (I can see we're going to have a lot of fun with this word.)

Blogger is a Web-based tool that helps you publish to the Web instantly, whenever the urge strikes as long as you are near a computer, but as it is web-based you only have to remember your username and password to add to your blog. There are quite a few blogger tools about the place but Blogger.com is the leading tool in this rapidly growing area of Web publishing.

A blog is a Web page made up of usually short, frequently updated posts that are arranged chronologically like a "what's new" page or a journal. The content and purposes of blogs varies greatly from links and commentary about other web sites, to news about a company/person/idea, to diaries, photos, poetry, mini-essays, project updates, even fiction. Blog posts are like instant messages to the Web.

Many blogs are personal, "what's on my mind" type musings. Others are collaborative efforts based on a specific topic or area of mutual interest. Some blogs are for play. Some are for work. Some are both.

Blogs can be an excellent team/department/company/family communication tools. They help small groups communicate in a way that is simpler and easier to follow than e-mail or discussion forums. Use a private blog on an intranet to allow team members to post related links, files, quotes, or commentary. Set up a family blog where relatives can share personal news. A blog can help keep everyone in the loop, promote cohesiveness and group culture, and provide an informal "voice" of a project or department to outsiders.

Blogger itself gives you a way to automate (and greatly accelerate) the blog publishing process without writing any code or worrying about installing any sort of server software or scripts. And it gives you control over the look and location of your blog. Instead of hand-coding your blog posts and frequently uploading the newest version of your page, you make posts to your blog by submitting a simple form on the Blogger Web site, and the results immediately show up on your site, with your design.

Getting started with Blogger takes just a few minutes. If you already have a Web site you want to use Blogger to publish to, you simply need FTP access to it. But if you don't already have a Web site, don't worry, Blogger will create one for you on BlogSpot.

The way it works is that you provide Blogger with a template of your page (or use one of several pre-designed ones) that indicates where you want your posts to appear. When you want to publish something, you simply enter it in a form. When you're ready, you hit a "Publish" button that will automatically send your new page to your Web server. No muss. No fuss. Total control.

If you're more sophisticated, your template can even contain script, such as server-side includes, ASP, or Cold Fusion pages, and that script will still be processed after the Blogger content is inserted. Or, the Blogger file that is published can be an include file itself.

The basic Blogger service is completely free. The only "payment" required is that you include a link back to Blogger.com to help spread the word. There is also a subscription version of Blogger, called Blogger Pro. It offers advanced functionality, and you can upgrade at any time.

### Doing it for real

We went through the creation process for a blogger and it did indeed take only a few minutes to get to the message creation stage. At this point we did run into problems as, for some reason, Oregon 2 and the Blogger page did not seem to get on and we couldn't actually publish a page.

We are looking into this and hopefully the situation will be resolved soon.

Apart from creating your own blog (or blogs) you can become what might be called a blog-eur, someone who takes pleasure in reading about other people's private thoughts. (Mind you any one who wanted to keep their thoughts private would not be publishing them on the Web.)

If you do have your own blog why not contact us and let us know it's address. Blogs are for reading and we'll publish a list of them.

And hopefully by next issue we will have ironed out the problems between Oregon and Blogger and you'll be able to read our innermost Acorn User thoughts on the Web. Or maybe not.

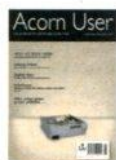
Happy blogging!

Rob Donaldson  
editor@acornuser.com





# Subscriptions



## Issue 261

July 2003

THE RISC OS TAKE OVER  
How the RISC PC can be used safely  
Artworks 2 arrives  
What Datapower can do for you



## Issue 260

June 2003

Virtual Call Centre  
Wakefield Show Review  
Digital Video for RISC OS  
S-Base: Final curtain  
Best in blogging



## Issue 259

May 2003

Wakefield Show Preview  
What's a Blog?  
RISC OS Academy reviewed  
MPEG3 Music player review



## Issue 258

April 2003

Wireless USB from STD  
SWShow report in full  
Fido Net more bite than bark  
S-Base gets into print



## Issue 257

March 2003

Re-issue issue  
Using modern printers  
Wireless LAN revealed  
Mini PC reviewed  
And even more besides



## Issue 256

February 2003

Aemulor, how it does what it does  
Sending spam? How to do it legally  
Using RISC OS to create websites  
USB how new devices are connected  
S-Base: Getting in touch with reality



## Issue 255

January 2002

The full Iyonix review  
Business Internet Connections  
USB Programming  
Iyonix and the future



## Issue 254

Christmas 2002

Iyonix PC - the Cook Report  
Viral marketing how you use it  
RISC OS vs Windows, more in the difference  
USB - Mike Cook on the programming



## Issue 253

December 2002

RISC OS 5 in detail  
Web marketing, how to really do it  
Web hosting, what it really means  
S-Base

Please subscribe me for:

Annual subscription (13 issues)

	New	Renewal	
UK	<input type="checkbox"/> AUN0308Y	<input type="checkbox"/> AUR0308Y	£45.99
EU	<input type="checkbox"/> AEN0308Y	<input type="checkbox"/> AER0308Y	£51.99
World	<input type="checkbox"/> AWN0308Y	<input type="checkbox"/> AWR0308Y	£63.99

8-issue subscription

	New	Renewal	
UK	<input type="checkbox"/> AUN03088	<input type="checkbox"/> AUR03088	£29.99
EU	<input type="checkbox"/> AEN03088	<input type="checkbox"/> AER03088	£34.99
World	<input type="checkbox"/> AWN03088	<input type="checkbox"/> AWR03088	£40.99

4-issue subscription

	New	Renewal	
UK	<input type="checkbox"/> AUN03084	<input type="checkbox"/> AUR03084	£15.99
EU	<input type="checkbox"/> AEN03084	<input type="checkbox"/> AER03084	£17.99
World	<input type="checkbox"/> AWN03084	<input type="checkbox"/> AWR03084	£20.99

I wish to pay by:

- ☐ Cheque (payable to Tau Press Ltd)
- ☐ Postal order (payable to Tau Press Ltd)

Non-UK subscribers can still use credit cards to subscribe.

- ☐ Please tick here if you require a receipt
- ☐ Please tick if you do not wish to receive mailings from other companies

Please send me the following issues:

<input type="checkbox"/> Issue 262, Jul 2003	£4.80	£5.30	£6.90
<input type="checkbox"/> Issue 261, Jun 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 260, May 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 259, May 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 258, Apr 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 257, Mar 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 256, Feb 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 255, Jan 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 253, Dec 2002	£4.20	£4.70	£6.30

NAME

ADDRESS

TELEPHONE NUMBER

E-MAIL

Post your completed Acorn User subscription/back issues form to:  
Acorn User, Tau Press, 28a Middle Hillgate, Stockport, Cheshire SK1 3AY  
Have a query? E-mail [ausubs@acornuser.com](mailto:ausubs@acornuser.com).



# Acorn User

THE ALTERNATIVE FOR POWER COMPUTING

WWW.ACORNUSER.COM

## RISC OS TAKE OVER

Everything about Cuda and RISC OS

## Battery Power

How a RISC OS can be used outdoors

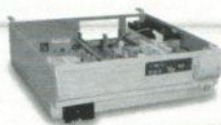
## Digital Video

Getting RISC OS into moving pictures

## DataPower

How to set up of what this database system can achieve for you

Plus even more great articles...



don't forget  
to subscribe  
to your  
next  
Acorn User  
Magazine

# Stop viruses and junk e-mail with REDshield

Junk e-mail is costing Internet users  
10 billion euros a year.

REDshield, our anti-spam and anti-virus  
filter can eliminate unwanted e-mail and  
stop malicious viruses attacking your  
network.

For further information about REDshield  
and REDNET, an Internet, Networking  
and Web solutions specialist, visit  
[www.red.net/acorn](http://www.red.net/acorn) or call  
0800 970 5000

**REDNET**  
Networking & Internet  
6 Cliveden Office Village, Lancaster Road  
High Wycombe, Bucks, HP12 3YZ

REDNET II SEMINAR II 2003



# More power to your data

**D**ataPower2 uses a separate but closely linked application to draw graphs. A set of data can be directly extracted from DataPower2 using a menu option. This opens a new window onto which the graph will be drawn. You have first to specify, via a drop-down menu, what is to be plotted and in what format.

The formats supported are pie charts, scatter diagrams, bar charts and line graphs. Each format has various options within it and all can be drawn as two or three dimensional form. There is also full control over font sizes, colours, title, and so on. Quite a comprehensive graphing facility although not as powerful as some stand-alone packages.

The graphs are not "active"; they do not reflect changes in the data in the database. Any changes made within the graph package itself, such as changing the title or colours, are not known about by DataPower2 itself and so if the graph has to be redrawn with new data these changes are lost. Graphs may be saved in either Draw or Graph format. In the Graph format some, but unfortunately not all, of the changes made to the graphs are retained. The examples overleaf show some of the types of graph you can produce.

## Scripts

DataPower2 includes a very power scripting language. Its syntax is similar to Basic but with a number of database specific facilities. Subroutines and functions are both supported.

A very simple example of a script, which is used in most databases, is one which switches between layouts when the user clicks on an element on the layout. The element may be any item but is usually a "button". The database designer has complete freedom to design the button's appearance. Having created the button the script is placed "behind" it.

The button is usually the standard RISC OS type of button; a "raised" area in grey with text or an image indicating what will happen when the button is clicked. You can see a typical layout with a set of buttons each of which will switch to a different layout when clicked.

The script "behind" each of these would be of the form:

```
On Clickleft Layout("LayoutName")
```

The first part "On ClickLeft" says "when the left mouse button is clicked over the button obey the instructions which follow". The rest of the line says "close the current layout and open the layout called LayoutName". Each button would, of course, have the "LayoutName" replaced by appropriate layout name.

The script language supports the use of variables which must be declared and their type specified before they can be used. There is a full set of control statements, if..then..else..endif, for..next, while..endwhile, repeat..until and try..except..endtry. This latter one enables the execution of statements which may fail without causing an error.

Scripts may call all the in-built functions which are listed above. In addition new functions and subroutines can be written; functions return a single value and subroutines do not return a value. Both functions and subroutine may have parameters. They can also be placed in a global area so that they can be accessed from anywhere within the database.

Many scripts will be written to manipulate the data in the database in some way. This requires the scripts to have access to this data. In some cases it is possible to refer directly to a database field by name when a query has already made it available. However, it is often necessary to extract the data entirely from within the script. As the only way to access database data is via a query, the scripting language includes a whole set of commands to do this. It is beyond the scope of this article to go into much detail but the following section of script should give you an indication of the power of this technique.

## Script to access database data

Suppose we have a database which has a table with a field called MyField and a query called "MyQuery" which returns all the records from that table. To get the value of this field in the first record of the set returned by the MyQuery query we could use the following script section (note that everything on a line after two forward slashes is considered as a comment).

```
// All variables that we use must
be defined before they are used

// I like to define them all
together at the beginning of the
script

// Here we define a variables for
the database, the query definition,
the

// set of records returned by the
query and a variable we shall use
to

// determine whether or not an
action has succeeded

Dim DB as Database, QD as QueryDef,
RS as RecordSet, b as Boolean

// More variable declarations: one
of type field which will used to
point to the

// required field and a text field
to hold the value in the field.
Note that

// we have assumed the database
field is a text field; if it were a
real field

// we would have to define a real
field to hold the returned value

Dim F as Field, T as Text

// The following line initialises
our database variable to point to
the current

// database, i.e. the one in which
the script resides.

DB=CurrentDB

// Initialise our query definition
variable to point to the specific
query. Note

// that we have to prefix the
command with DB as the query is
within the database

QD=DB.QueryDef("MyQuery")

// The next command runs the query
defined by QD and puts the
resulting record set
// into the record set variable
```



RS. Note, again, the use of QD as a prefix

```
RS=QD.OpenRecordSet
```

```
// Set the variable F of type field
to point to the field whose name is
MyField
```

```
// within the records returned by
the query MyQuery. Note the prefix
of RS to
```

```
// specify which record set is to
be used
```

```
F=RS.Field("MyField")
```

```
// The data in a record set can
only be retrieved from a single
record at a time.
```

```
// The particular record in
question is pointed to by a special
internal pointer.
```

```
// When a record set is first
retrieved and put into a record set
variable this
```

```
// pointer is not set so the first
thing that has to be done is to
initialise
```

```
// this pointer. This is done by a
command such as the following one.
In this
```

```
// case the pointer is set to
point to the first record in the
set
```

```
b=RS.MoveFirst
```

```
// In principle the attempt to set
the pointer could fail, there might
be no
```

```
// records in the set, for
instance. The next line checks
whether or not the
```

```
// action was successful. If so
the required value is retrieved
from the database
```

```
// field and placed in the
variable T; if not an error message
is generated
```

```
if b then T=F.GetValue else
error("Could not find record")
endif
```

Despite the length of the sample script there are only eight actual lines of code; the rest is explanatory comment. Also the "long code" version of the commands have been used to make it a little easier to describe. With practice script writing becomes fairly easy.

This example script section assumes that a suitable query exists but scripts can be used to create new temporary or permanent queries. In fact scripts can be used to manipulate both the data and the structure of a database. At this point it would be useful to examine the language used to do this.

So far all the scripts have been assumed to be within the database. However, script files are also supported. These are files of type *DPscript* which contain *DataPower2* scripts which can be executed. They require specific commands to identify the relevant database but otherwise include standard script commands. These add a very powerful facility to *DataPower2*.

## SQL

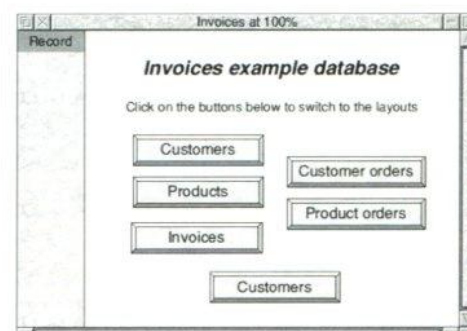
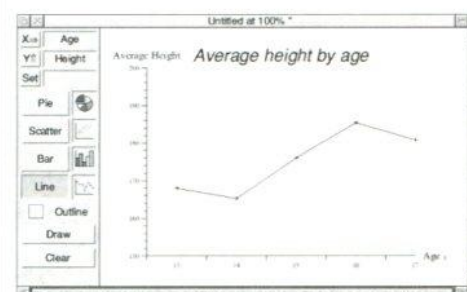
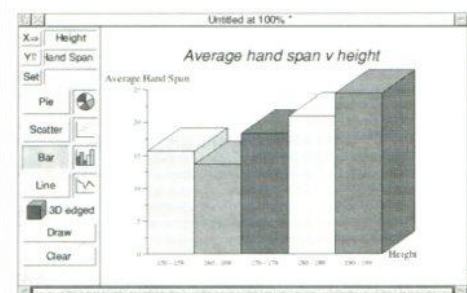
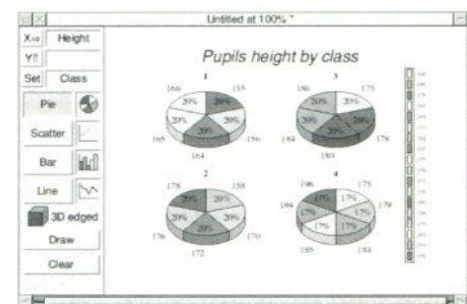
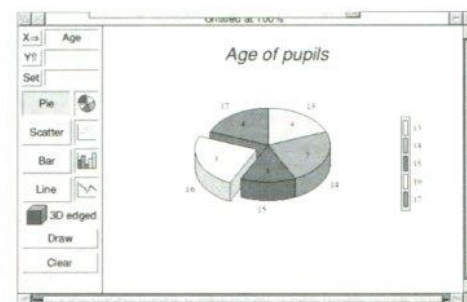
SQL (Structured Query Language) is a very specific language devised with the sole purpose of manipulating relational databases such as *DataPower2*. As with almost all implementations of SQL databases *DataPower2* does not stick precisely to ASCII SQL, nor does it implement the full set.

However, it does support a very usable subset. In fact, internally, all database functions are performed using SQL within *DataPower2* but it also provides an alternative user interface which enable almost all of the supported functions to be performed without any knowledge of SQL.

The combination of the internal use of SQL and an alternative graphical user interface enables *DataPower2* to be a powerful but easy to use database management system.

Julian Fry  
julian.fry@acornuser.com

Product: *DataPower2*  
Price: £125 single user (£350 ten users; £500 for 100 users)  
Supplier: R-Comp, 22



Robert Moffat, High Legh, Knutsford,  
Cheshire WA16 6PS  
Tel: (+44) 01925 755043  
Fax: (+44) 01925 757377  
E-mail: rcomp@rcomp.co.uk



# freeish internet

broadband up to

# 40x

faster than a standard modem

# Internet in the fast lane

## ADSL Special Offers

Home ADSL - All our services are unrestricted and come with FREE ADSL Modem Worth over £50.00, unlimited email addresses and webspace.

	Home 512USB	Only £25.99 Inc VAT	Anti-virus and Firewall with control included
parental	Home 512SB-V	Only £29.99 Inc VAT	
	Home 1Mbps and 2Mbps Services Available CALL for Details		

Business ADSL - All our services are unrestricted and come with a FREE ADSL Router for networks worth over £100.00, Static IP Address and unlimited email addresses

£29.99	Business 512Lite Only	£25.99 + VAT	Hardware Firewall Option Only
£29.99	Business 512NET Only	£49.99 + VAT	Hardware Firewall Option Only

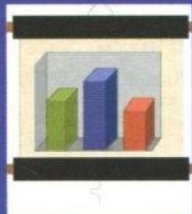
Why not let us host your website at the same time from only £4.00 + VAT  
Business 1Mbps and 2Mbps Services Available CALL for details.

## visit [www.freeish.net](http://www.freeish.net)

or email, [broadband@smesupplies.co.uk](mailto:broadband@smesupplies.co.uk)

call us on  
08707 532 140

## NOTICEBOARD



### PROFESSIONAL

A powerful program for creating and running stand-alone and user-controlled presentations on RISC OS computers. Slide shows or rolling display presentations can be easily created for school, home or business use. Graphics/text/photo pages are made up using scanned images, sprites, drawfiles, JPEGs and HTML material, etc. Sound can be added using a wide range of sources. Programs run on-screen automatically or user-controlled. Large-screen digital projection is another useful option.

Single user **£32.00** Site licence **£96.00**

32 bit versions  
now  
available



### PICTURE BOOK 2

The six Picture Book programs offer a range of work and play activities with setting options that can be set to match the child's ability. With Picture Book 2 reading, spelling and counting become easy and enjoyable for pre-school and primary school children and those with learning difficulties.

Single user **£25.00** Site licence **£75.00**

### KIDS KEYS

The handy, flexible plastic keyboard overlay with large lower case letters in the 'qwerty' key-board layout for use with any computer. Easy to fix and remove.

Singles **£2.50** School Pack (10) **£20.00**

**CONTACT RGSC FOR UPGRADE DETAILS**

## REALLY GOOD SOFTWARE COMPANY

8 Hawthorn Close, Harpenden, Herts, AL5 1HN United Kingdom Tel/Fax: 01582 761 395

E-mail: [sales.rgsc@argonet.co.uk](mailto:sales.rgsc@argonet.co.uk)

Post/packing add UK & Europe £1.50 Other countries £5.00.

No VAT. Cheque with order please. Official orders welcome.



32bit Iyonix-compatible upgrades  
now available - please phone!

All products are compatible with StrongARM and RISC OS 4  
Some products are enhanced for RISC OS 4  
All prices include VAT and UK carriage (where applicable)



# HERE IS THE NEWS...

22 Robert Moffat, High Legh, Knutsford, Cheshire WA16 6PS • Tel 01925 755043 • Fax 01925 757377 • <http://www.rcomp.co.uk/>

Please note - All prices include VAT and UK carriage

**Rcomp**

[rcomp@rcomp.co.uk](mailto:rcomp@rcomp.co.uk)

## DataPower 2

We have taken over development of the leading DTP-style, relational, RISC OS database - **DataPower 2**. An extended CD release has been produced (removing the old credit-based protection system) and a brand new 32bit version. The CD includes the latest release, plus an online manual in various formats, as well as tutorial and "Using DataPower 2" materials.

**DataPower 2 CD version . . . . . £99**

**DataPower 2 CD + printed manual . . . £125**

**Upgrade to CD for existing DP2 user . . £25**

**32bit upgrade for existing v2 owners . . £40**

**Image Outliner (26/32bit) . . . . . £17.50**

### Web Authoring

**HTMLEdit 5 Studio (Whole Suite) . . . £115**

HTMLEdit Studio contains:

**HTMLEdit V5 . . . . . £55**

**WebsterXL . . . . . £30**

**Web Designer's Toolkit v2+ . . . . . £30**

**WebSpell (HTML-aware spelling checker) . . . £15**

**Also Available:**

**SiteMaster 2+ . . . . . £35**

### Internet Utilities

**R-Comp Internet Suite . . . . . £75**

*First class software to get you online!*

Consists of DialUp 2, Messenger Pro 2 & WebsterXL (described below).

Available with a 56k Modem and Account for **£115**.



**DialUp v2 . . . . . £25**

*Internet connection software*

NB. £20 to MPro owners, or £15 if you own WXL



**Upgrade from DialUp v 1 for . . . £12**



**Messenger Pro 2 . . . . . £37**

- Easy to set up and use,
- Flexible view options
- Offline and Network (£45) and Server (£100)



**WebsterXL . . . . . £30**

- Support for advanced Web technologies
- Support for frames, tables, CSS and JavaScript
- Includes 128-bit SSL —shop with confidence!
- Uses plug-ins to support Java, Flash etc.



**Grapevine**

*The definitive Internet chat software  
to communicate via MSN and IRC.*

**£25**

22 Robert Moffat, High Legh, Knutsford, Cheshire WA16 6PS • Tel 01925 755043 • Fax 01925 757377 • <http://www.rcomp.co.uk/>

**Interactive Rcomp**

[rci@rcomp.co.uk](mailto:rci@rcomp.co.uk)

### Network-in-a-Box

**New Product!**

**Network-in-a-Box** gives you all you need to network up RISC OS and Windows computers, and share printers/internet. Containing 2 network cards, cables, the Internet/Print sharing box, software and **5 printed, step-by-step manuals** covering both RISC OS and Windows. **£260**

### ADSL-in-a-Box

**New Product!**

Similar to above, but for ADSL and without the shared printing. Everything you need to network a RISC PC/A7000 and Windows PC for ADSL **£230**

**More Cable broadband and ADSL  
kits available at new lower prices!**

<http://www.rcomp.co.uk/>

### 100Mbit Network Card

**High speed 10 and 100Mbit card . . . . £89**

### UniPrint NEW - out now!

**"Universal" Network Printer Driver . . . £40**

The software allows your RISC OS machine to print to any printer connected (and working) to a WindowsPC on your network. That £50 USB inkjet or expensive **Photo Printer**? No problem. UniPrint solves your RISC OS printing problems.

**UP VAcorn/PCcard & UP Deluxe . . £25/£50**

The Virtual Acorn version allows VA to print (and the Alpha portable), and allows printing via PC card. "Deluxe" includes both standard UniPrint and the VA version, plus Sprite printing.

**TEK**

THE REALTIME STRATEGY GAME

**£30**

TEK is available now!



## Battery power

As part of the development process for the computer systems supporting the Virtual Call Centre (Acorn User, June 2003), I realised it would be worthwhile doing a couple of things to improve the basic hardware set-up. One was to make everything quieter (the systems live in my house), the other is to employ battery back-up so that systems could survive power failure, whether that be accidental or as a result of needing to move systems and turn power off for refits.

The Vcc system uses a Risc PC running its central control software, so this was naturally the place to start. And once the circuitry for that was understood, it could easily be adapted to support the hardware to run the individual access lines which are R7500-based. So this isn't a fully developed commercial design yet, but it is a fully tested and working prototype.

### Power considerations

To design any power system you clearly need to know how much power you have to be able to deliver, and to decide how long you need to deliver it for. Most UPS (uninterruptable power supply) systems are designed for PCs and boast of being able to keep your system running for several minutes, just time for a clean shut down. But I'm after maybe two hours of operation from one small battery. Happily two things work in our favour here.

I'm not trying to provide power for many ancillaries or a monitor. And I'm working with ARM hardware. There's a big difference. PC power supplies are usually rated at 250Watts or more, even though Windoze PCs don't use this unless loaded with extras. But a low power mobile AMD is still rated at 35Watts! Thankfully ARM systems use very little power. But how much?

The Risc PC used a 103W psu, though early supplies were lower rated. But this has to be enough to power extra hardware, drives, CDs and so on. So I dismantled a Risc PC and had a look at the actual power usage. The main board with little extra connected (no podules) uses around 8 Watts and requires 5V and +/- 12V supplies, the 5V supply being the biggest drain at just over an amp. It may be of interest here to note

that switching between ARM 710 and StrongARM made no clear difference, and the current drain was almost identical whether the machine was idling or processing. Both tests used 16MByte RAM and 2MByte VRAM, but as I wanted to keep this base spec, there was no point in checking lower spec variations. I suspect it would make no real difference anyway.

Of course we still have the drives to consider. A regular hard drive uses as much power again and is noisy (usually). It is impossible to be exact as they differ considerably, not just in power usage but also in the respective demands on the +5V and +12V supplies. CD ROM drives also use both power rails and also differ considerably.

For example:

Quantum Fireball 30G:

5V at 700mA      12V at 800mA

Philips CDRW

5V 1.6A      12V 400mA

As you can see this particular hard drive uses around 13 Watts, the CDRW uses almost as much. They each use notably more than the motherboard! So how to cut demand?

If we rely on network connections, we can dispense with floppy and CD, but we still need a hard drive. Fortunately there are two possible solutions to reduce power needs and extend battery life. If you really need a hard drive, a 2.5in drive, designed for laptops, is more frugal and supports powerdown mode. So when not running it uses next to no power, when running it uses as little as around a Watt, again the drives vary substantially. They also only use the 5V supply which may prove useful. Last but not least in my view, they are quieter, markedly so on average. (They are also slower, but on ADFS, you won't notice.)

The problem is that the connectors are different. However Maplin now do an adapter for this purpose (as do many others) which allow you to connect a 2.5in drive to a standard IDE port and power line designed for 3.5in drives.

There is another alternative: Compact Flash. (I understand other flash storage

systems can also work but as I have no direct experience I will ignore them). Simtec's R7500 board (and I believe their IDE podule) are designed to support Compact Flash. In fact the standard ADFS will see, format and use Compact Flash as though it were a hard drive.

Compact Flash uses virtually no power. That may be a major benefit, but there are problems. First the size limit is currently I think 1Gb, though they are getting larger. Second, the cost is considerably higher per byte and you will also need to buy an adapter card. Third, there is a theoretical limit to how many read/write cycles Compact Flash will tolerate. This would rule the technology out for Windoze (except CE) which not only needs huge amounts of disc space it also writes constantly to disc: but it is not a problem for RISC OS.

*!Scrap*, however, can make frequent disc writes. So I modified *!Boot* to copy *!Scrap* to a RAM disc and then run it from there. I'm not certain this is truly necessary though. I talked to the specialists at Kingston who acknowledged the theoretical limits to Compact Flash but assured me that their tests suggest the technology is very robust in practice.

Whether Compact Flash will suit your needs depends upon your requirements. One such requirement is size. My almost unaltered RISC OS4 *!Boot* occupies less than 10MBytes. My old 3.7 *!Boot* uses over 100MBytes of disc space, though that is well loaded with extras and probably a fair deal of outdated rubbish, but is useful as a guide to what it might accumulate. (There's also an issue of disc size and LFAU which probably expands my 3.7 *!Boot* considerably.)

So my system, though it currently uses a 2.5in hard drive, will be adapted shortly to run a 512MByte Compact Flash. And ultimately the slave units will each be R7500 boards running 10Gb laptop drives as these must have decent amounts of hard drive storage for the audio files they will carry. My design should deliver sufficient power to run these, although it is unlikely anyone else will want this configuration.

However the extra power allowance will offer the option to include CDRW drives as well. You can also get half height CDRW drives which are intended for



laptop use and also have lower power demands. For regular drives, take care they don't use too much current especially from the +12V rail.

### The circuit design

My first thought was to retain the power supply unit, and implement something like the standard UPS system. An off-the-shelf UPS is an external box which trickle charges a battery, then when needed it generates synthetic mains using the battery to supply power. To my mind that is a design based upon the idea that it is an aftermarket product.

An intrinsically better idea is to generate an intermediate DC voltage and use that to charge the battery, then to use either mains derived DC or battery power (when needed) to power a DC to DC converter. This is also more efficient and quieter. So the internal PSU went to the spares cupboard.

There are still choices to make: How do you convert mains to DC at low voltage? You could use a commercial power supply to do the job. That would be small, light, and about the same cost as the alternative, a transformer-based supply. But it is also less efficient. Now the argument here isn't about efficiency per se (the power wasted isn't much) but about heat and noise. Energy loss generates extra heat which has to be vented, and that might mean a fan which creates noise. I'd rather reduce both where possible. So I opted for a transformer. Sure it's heavy, but as we will be fitting a substantial battery anyway, who cares? This isn't a portable.

(A friend asked aren't switch mode supplies more efficient? In some circumstances, they are as transformer supplies often need power dumping of some sort to provide regulation. But as you will see, the use of a DC-DC switch mode converter later in the power chain obviates this problem.)

It turns out a Yuarta 7AHr 12V battery fits the power space of the Risc PC nicely (see picture). These batteries are sealed and designed for this

sort of work so are ideal. I then trawled through the DC-DC power supply packages and found the FDC40-12T0512 which uses an input in the 9 to 18V range to generate 5V at 4A and +/- 12V at up to 800mA, which is 40W in all, with an efficiency of typically 85%. Not bad, but not cheap at around £100.

I then obtained and tested a suitable transformer, a 80VA toroidal device from RS components rated at 12V output. Now in theory, this gives  $12 \times 1.414$  V rectified output, just under 17V. That is inside the spec of the FDC40. But a word of warning: Off load it will give more, in fact this one produced almost exactly 18V. It's tight, but OK. However cheaper transformers may not be as well behaved, off load, bad designs have a tendency to float higher, delivering the rated voltage only on load. This design has to be able to survive both on and off load, so the transformer must not float too high.

Next we need a decent bridge rectifier and a capacitor: the function of the capacitor is to store charge from the peaks of the rectified waveform and keep the voltage up during the troughs, so it has to be big enough to do this. I used a 30000 microfarad capacitor and checking with the scope confirmed my rough calculations, it's more than enough.

Now we need, minimally, two more things: a charger circuit and a way to switch between mains derived power and battery power. Take the latter first, and consider the block diagram of Figure I. You can see the mains input, switched and fused. Next the transformer, the bridge rectifier and the capacitor. From the rectified low voltage two feeds are taken, one goes via a diode to the DC-DC converter, the other, via another diode to the charge circuit. The battery is also connected to the DC-DC converter

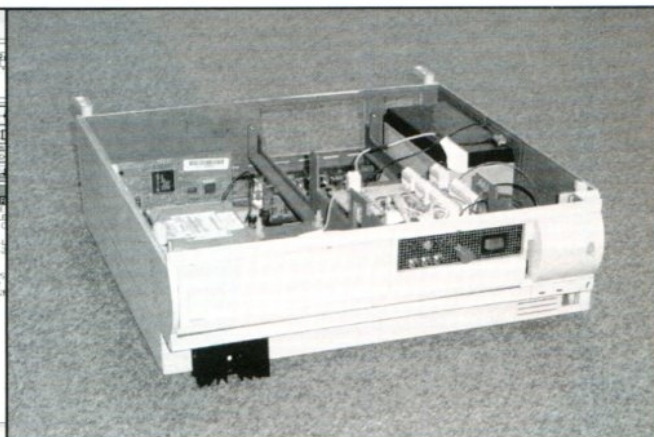
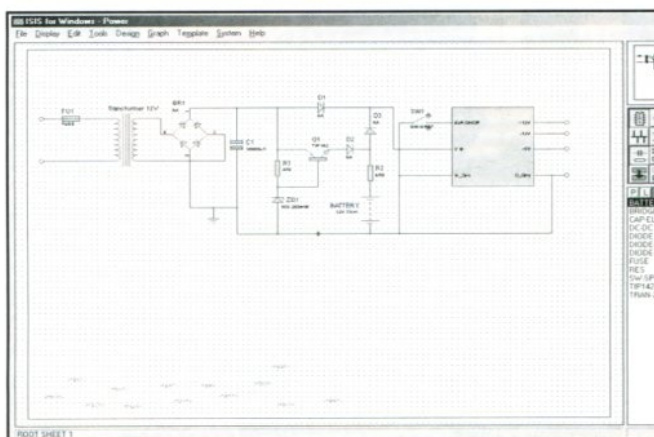
via a third diode.

This provides for a very simple and entirely seamless switch between mains derived power and battery power. The DC output from the transformer is around 17 Volts, while the battery is at no more than 13.6 volts. So with mains available, the power flow through D1 and D3 will be reverse biased. If the power fails, power will flow from the battery instead. The voltage delivered to the DC-DC converter changes, of course, but as it can handle anything from 9V to 18V that is not a problem.

Now for the charger circuit. Lead Acid cells can be charged at different rates according to need. For this application we don't need a rapid recharge, one assumes power failures will be rare and isolated. So a slow recharge rate will do fine. Maximum charge rate for the cell type I chose has to be no more than 20% of the AmpHr rating, so a 7AHr battery should not be subject to a charging current of more than  $7 \times 0.2 = 1.4$  Amps.

And the battery should be limited to no more than 13.8 Volts, any more would damage the cell. So the simplest circuit would be one that delivers 1.4 Amps when the battery is at its lowest, say 8 Volts, but which tops out at 13.8V or marginally less. The battery itself will limit the current flow. This sort of circuit is easy.

In Figure II, R1 and ZD1 generate a stable 15 Volts from the incoming 17V supply rail. That 15V is fed to the base of the Darlington transistor TR1, so its emitter voltage is around 15-1.2V or 13.8V. However at very low charge currents it will rise higher as the 0.6V per transistor junction rule of thumb breaks down. And there is a danger that current might flow the wrong way through TR1 when mains power fails and the collector





# how is your business?

**QCC is a commercial consultancy that adds value to your business by;**

- Helping you get Investment
- Improving your infrastructure
- Arresting decline and turning businesses around without taking away your control

## **1. Start Up or Growth.**

You may require finance. The fundamental truth is that investment brokers will not normally look twice at any proposal they receive. Therefore your business plans must be fully developed so that they can stand up to the most severe scrutiny and enable you to obtain the finance you need.

### **Our Service.**

We work closely with Investment Brokers and Banks. We fully understand their needs and ensure that your business plan complies. More importantly we guarantee that the plan will truly reflect your business and will flush out any major stumbling blocks that you are going to encounter before you run into them.

## **2. Suffering from growing pains?**

When an organisation grows quickly it often creates an imbalance between product volumes and the administration required to deliver them. The truth of this situation is that sales will suffer if you don't put the administration in place, but net profits will suffer if it is done wastefully.

### **Our Service.**

With your help, we implement an organisation structure which guarantees that all your resources are 100% aligned to deliver your Valuable Final Product. This puts you back in control, it highlights where your administrative gaps are and how to fill them, and even gives you an understanding of which roles you need to fill first as your organisation grows.

## **3. Do you know why performance is declining?**

The truth is that the answer is always simple and can always be fixed, and to fix it at this stage before the situation gets worse means that you can hang on to control of your company.

If you wait too long, you may not.

### **Our Service.**

We operate a straightforward, understandable set of steps which result in a fully recovered business which wastes no resource, knows exactly why it went into decline and knows how to avoid any future decline and to grow successfully.



QUEST COMMERCIAL CONSULTANTS

### **Birmingham**

215 Gristhorpe Road Selly Oak Birmingham B29 7SP  
Tel: 0121 472 0684

### **Manchester**

28a Middle Hillgate Stockport Cheshire SK1 3AY  
Tel: 0161 429 8902 Fax: 0161 429 0685

e-mail: [nickb@questdp.co.uk](mailto:nickb@questdp.co.uk)



# www.thepcmanuk.com

## ASUS TERMINATOR XP2200+ BASE UNIT

Good things come in small packages! The legendary ASUS Terminator is here! Very Stylish

- > ASUS Terminator Mini Case
- > AMD Athlon XP2200+ CPU
- > 256Mb DDR333
- > 40Gb Hard Drive
- > 1.44 Floppy Drive
- > 52x CDROM
- > Onboard Sound
- > Onboard Graphics
- > 10/100 LAN
- > Built in Compact Flash Reader

Base unit only. No monitor, Keyboard, Speakers or Operating system supplied

NO MODEM SUPPLIED

> **FREE 12 Month**  
Return On-site  
Warranty

**£269.07**  
inc VAT

## ATHLON XP E2200B

2200+ BASE 256MB  
40GB HDD CDROM

Entry Level price, great value  
performance

- > AMD Athlon XP2200+ CPU
- > 256Mb DDR RAM
- > 40Gb Hard Drive
- > 1.44 Floppy Drive
- > 52x CDROM
- > Onboard Sound
- > Onboard Graphics
- > 10/100 LAN
- > 4x USB ports

All disks and manuals supplied

Base units are NOT supplied with  
operating system, Monitor,  
keyboard, Mouse or Speakers

NO MODEM SUPPLIED

> **NOW with 12**  
Month On-site  
Warranty

**£235.00**  
inc VAT

## ATHLON XP M2400B

2400+ BASE 512MB DDR  
80GB HDD CDRW

Quality base Unit fast  
XP 2440+ CPU

- > AMD Athlon XP2400+ CPU
- > 512Mb DDR333 RAM
- > 80Gb Hard Drive
- > 1.44 Floppy Drive
- > 52x CDRW
- > Onboard Audio
- > 10/100 LAN
- > 128Mb GeForce FX5200 DDR Graphics

Base unit only

NO MODEM SUPPLIED

> **NOW with 12**  
Month On-site  
Warranty

**£386.57**  
inc VAT

## ATHLON XP H330B

BASE UNIT 1GB DDR  
120GB CDRW DVD

Super fast Athlon 3000+ XP base  
unit. Ideal for the power user

- > 300w ATX Mid Case
- > AMD Athlon XP3000+ CPU
- > 1Gb DDR333 Kingston RAM
- > 120Gb 7200rpm Hard Drive
- > 1.44 Floppy Drive
- > 52x CDRW > 16x DVD
- > Onboard Audio
- > 128Mb GeForce FX5200 DDR graphics
- > 10/100 LAN
- > 4x USB 2.0

All drivers/motherboard disks supplied plus  
Files & PowerDVD

NO Monitor, Operating system, keyboard,  
Mouse or Speakers inc  
NO MODEM SUPPLIED

> **NOW with 12**  
Month On-site  
Warranty

**£656.82**  
inc VAT

contact> [sales@thepcmanuk.com](mailto:sales@thepcmanuk.com)

tel> **01750 505090** fax> **01750 505091**

Quote Ref: **MM25** when placing an order and receive a free copy of Microsoft Works 6.0 plus Money 2001.

**thePCman**

Unit 5 Etrick Riverside, Dunsdale Road  
Selkirk, Selkirkshire TD7 5EB

## The complete, professional internet company for a reliable service and peace of mind

Merula offers a comprehensive range of services to  
business and home users, giving you the options you need  
for reliable and secure internet access and maintenance.

We provide a range of specialist services, including:

- ADSL (broadband)
- Virus filtered email
- Spam filtering
- Dial-up accounts
- Website hosting
- Website filtering

If you are interested in any of our services or require further information  
about costs, set-up requirements and the availability of Broadband in your  
area, we are more than happy to help.

for details simply visit our website at [www.merula.net](http://www.merula.net),  
email us at [netsales@merula.net](mailto:netsales@merula.net) or call us on 0800 298 2375



MERULA



of TR1 is effectively grounded.

So the addition of D3 both reduces the output voltage slightly and avoids any possibility of discharge through the transistor. Finally R2 limits the current flowing through the battery to less than 1.4Amps when the battery voltage is around 8V. R2 has to be of sufficient power rating to dissipate the heat it generates (max approx 6Watts) and TR1 must be mounted on a heatsink, it must dissipate several watts too.

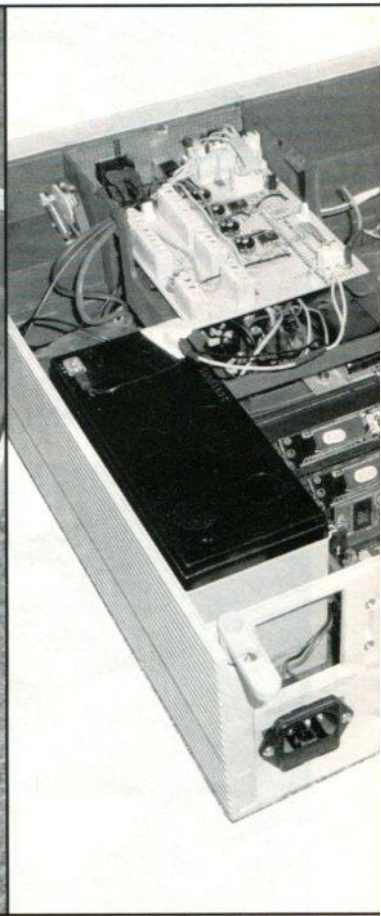
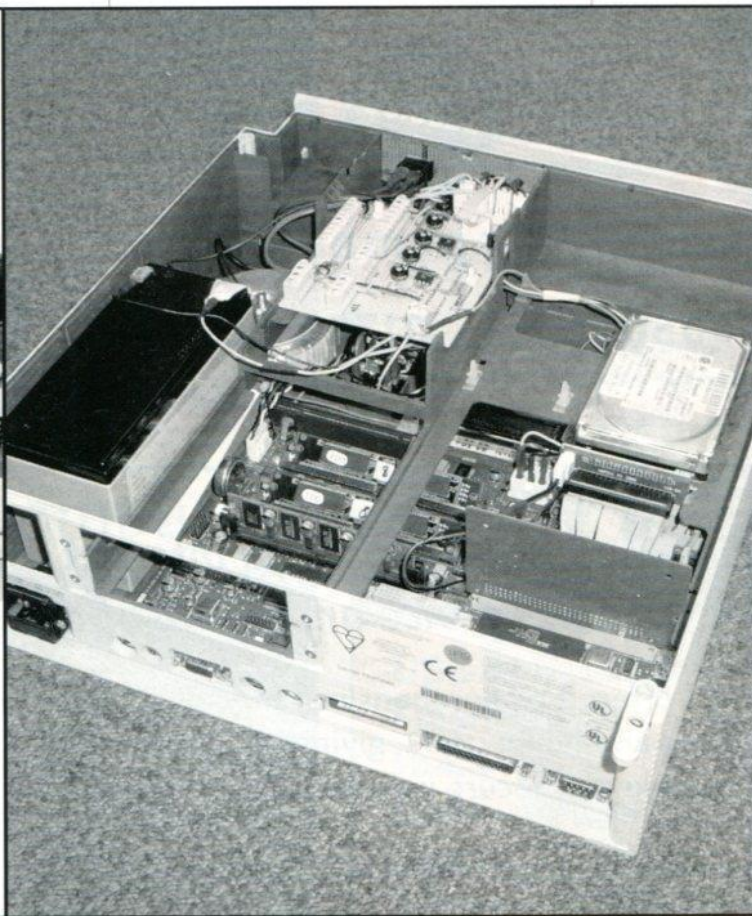
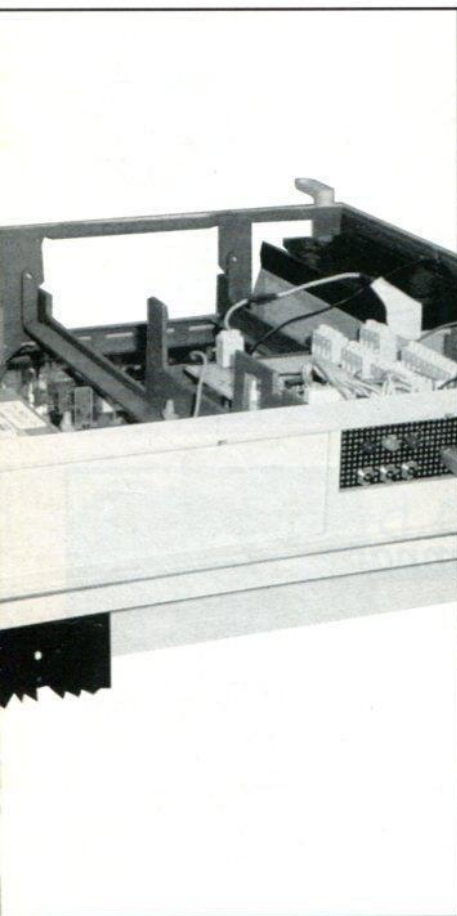
Of course you could get more sophisticated than this: using an op-amp

the Voltage exceeds the float charge levels of about 13.8 Volts, which will therefore indicate an open circuit caused either by a battery failure or a wiring fault.

Finally I have provided a simple fan power control which works from a temperature sensor and uses the fourth comparator. When cool, the system delivers around 9 Volts to the fans (a triple fan unit which mounts in a 5in drive bay, sourced from Maplin) simply by slugging the power line with resistors. This ensures the fans are normally slowed down and very quiet. If the

Several points are worth making though.

The first is that in common with many units, the FDC 40 has a remote on/off control pin. On the FDC40 this is simply grounded to earth to turn the unit off, so I fitted a push-push switch to provide a power on/off control. I also fitted three reset buttons to the front panel, one for the Risc PC, the other for the R7500 slaves. To add a front panel reset for a Risc PC board means soldering two wires to the underside of the main pcb, it's simple enough but only do this if you are confident you know what you are



perhaps with a current sense resistor to increase the charge rate and optimise battery charge, but in practice I didn't see the need. I have however added a couple of refinements.

The first is a simple battery condition monitor. My circuit uses three comparators to monitor battery level. The first switches an LED on if the voltage drops below about 10 Volts, which should indicate a shorted battery cell when the system is under charge. The second comes on if the voltage rises above 9 Volts and indicates the system is broadly OK, provided neither of the other LEDs is on. The last comes on if

temperature sensor gets warm enough, the slug resistors are short-circuited by a transistor and full power is delivered to the fan unit. If you need circuit diagrams for these, e-mail me at the address provided.

So far I have said little about the FDC40 DC-DC power unit. This is a commercially available switch mode supply delivering adequate 5V and 12V power rails for my use. If you want different power levels or, for example need higher current 12V rails and so on, you will have to search for a more suitable unit (or combination of units) for you. But in principle they are all very similar.

doing. You don't have to remove the existing reset switch as this shorts the pins when pushed in, so the front switch can be a push-to-make (not latching) simply connected in parallel.

Second, by removing the old PSU, the case is now no longer properly grounded. For safety you must earth your power circuit ground and the incoming mains ground to the case. One way to do this is to use either the old hard drive fixing screw stud or the old psu screw fixing stud as the ground point. You must also provide a mains fuse. I did this by fitting an IEC type mains chassis plug on the back which



has a fuseholder included. You should also provide a mains switch. As I couldn't see a way to use the old switch which is built into the old psu, I used a double pole illuminated rocker mounted on the panel fitted into the unused floppy drive bay. The advantage is I also get an obvious indication of mains power status.

### The circuit in use

So how does it perform in practice? Well the first observation is that the change-over between mains and battery power is absolutely seamless. And the whole

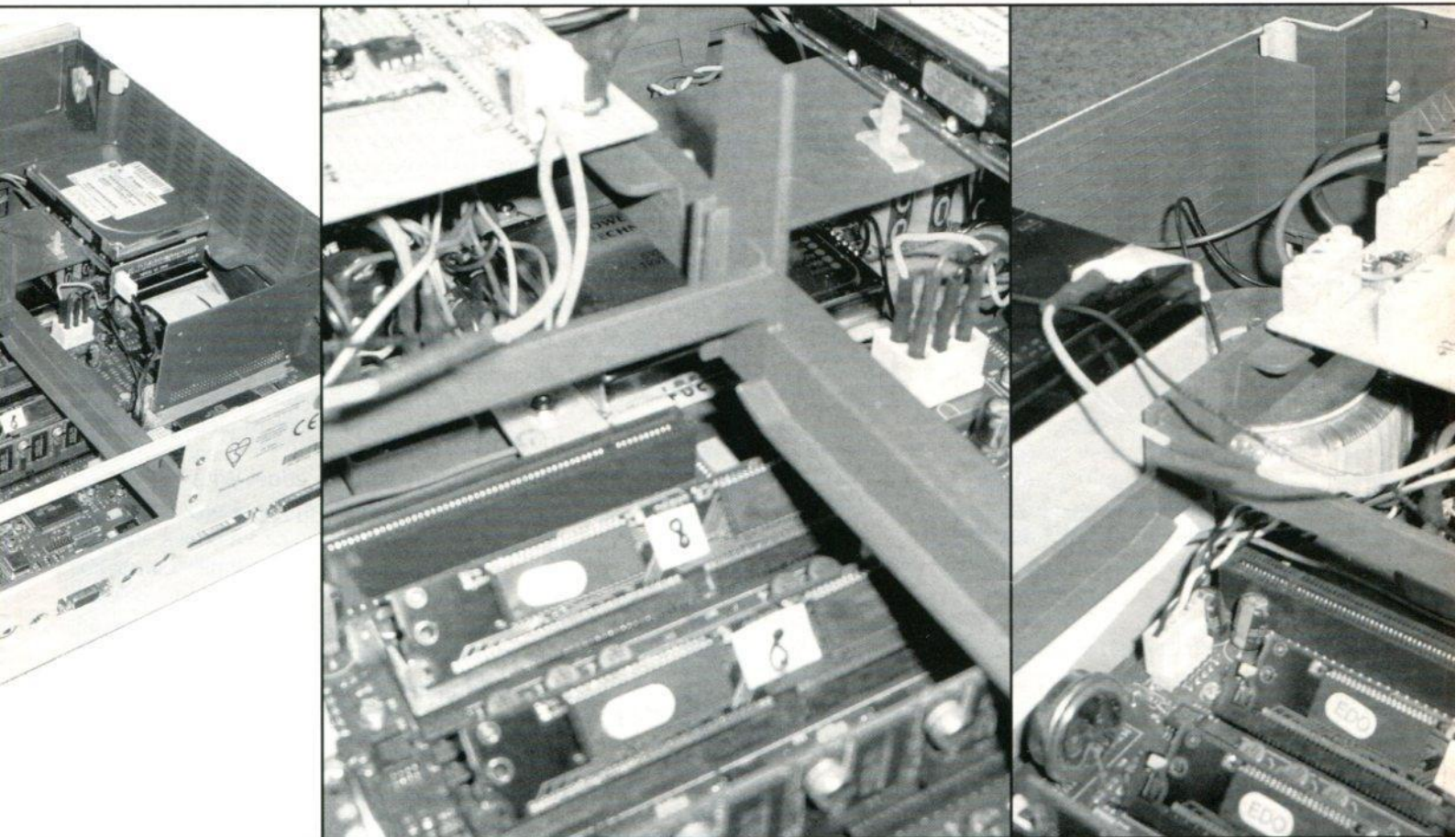
Risc PC, the 2.5in hard drive running permanently, keyboard and mouse, it provides almost seven hours backup. Without the hard drive, (power down is turned on with: SYS "ADFS\_PowerControlin',1,4,1) the system lasts maybe 20% longer.

Not bad, seven hours is three times as long as the time the electricity suppliers regard as a maximum allowable power outage. Of course on rare occasions power may be out for longer. But if that is a serious consideration, there's no reason why the circuitry couldn't be adapted to draw power from a bigger

panel.

### Final thoughts

Only you know if you are competent to try this for yourself. Remember this requires reworking mains supplies and altering the systems that support your hardware. Getting it wrong could be serious, not just for your computer but for you too. Having said that, you can e-mail me with questions.



system is indeed very quiet, the hard drive is almost inaudible and with the Compact Flash instead the only sound would be from the cooling fans. I was surprised at how hot the DC-DC converter got, but some calculations suggested that this is normal as the rated power losses in the circuit would inevitably lead to the device heating up given that it has no heatsink. It's not actually dissipating much power, it is just ill-equipped to do it and stay cool. If it bothers you, stick on a heatsink.

Crucially, the question of how long the system remains working. With just the

battery though naturally that would

require beefing up the charger side. With capacities up to fifteen times my chosen battery readily available, it's neither too hard nor too expensive to provide battery backup for almost any likely eventuality.

Finally, by arranging the power supplies this way, the option of using DC power from other sources (a car power socket) becomes almost trivial, and given that LCD displays are usually powered by an external psu, it wouldn't be too hard to add circuits to support your particular

Julian Coleman has been working in the RISC OS market for many years and has developed many applications for RISC OS. His most recent creation is the Virtual Call Centre covered in the June issue of Acorn User.

Julian Coleman  
cas@argonet.co.uk



# CREATIVITY. INNOVATION. DESIGN.

**Design**

**Corporate ID**

**Brochures**

**Packaging**

**Point of Sale**

**New Media**

Whatever your goals and aspirations our unique results-driven attitude will ensure that you meet your strategic targets.

Not just a design agency, we can offer many other services from design to authoring and editing, from concept to website design and PR.

The question is: is your current image communicating the exact message that you want it to communicate?

If not you have to ask yourself how much of the market place is being driven off and is unavailable to you.

With today's fast moving commercial pace, Quest can give you the edge. With all services under one roof you can save on lead times and briefing time.

In a world where creating the right image is key, all your design and corporate issues can be created, coordinated and integrated under one roof.

You will find us friendly and easy to work with. We work within your parameters and get results.

Please feel free to call on 0161 429 8902 or e-mail us at: [sales@questdp.co.uk](mailto:sales@questdp.co.uk)

**Quest Design & Publishing Ltd**

**28a Middle Hillgate  
Stockport Cheshire  
SKI 3AY**

**T] 0161 429 890**

**F] 0161 429 0685**

**E] [sales@questdp.co.uk](mailto:sales@questdp.co.uk)**

**[www.questdp.co.uk](http://www.questdp.co.uk)**

The Quest logo features the word "Quest" in a bold, white, sans-serif font. A large, white, stylized letter "Q" is positioned to the left of the word, with its tail curving around the "Q" and extending upwards.



## Ink-Jet Photo Paper Specials!

THE UK'S WIDEST RANGE OF  
INKJET MEDIA

100 A4 Sheets 140gsm  
**Matt Photo Paper**  
**£4.99**

25 Sheets 210gsm  
**A4 Canvas Grain**  
**£3.99**

25 Sheets 210gsm  
**A4 Watercolour**  
**£3.99**

100 Sheets 140gsm  
**A4 Photo-Gloss**  
**£14.99**

25 A5/A6 Matt Inkjet  
**Greeting Cards &  
Envelopes, £2.99**

10 A4 Sheets  
**Weatherproof Outdoor  
Inkjet Stickers £10.59**

## More Ink Jet Photo Papers

100 Sheets, 100gsm photo matt,	£3.29
50 Sheets, 160gsm, coated both Sides	£4.15
200 Sheets, Linen effect paper, 130gsm,	£13.59
200 Sheets, Hammer effect paper,	£13.59
Photo Satin, 150gsm, 20 sheets,	£4.93
20 sheets, 210gsm heavyweight Gloss	£5.64
5 sheets Slide-off photo decal paper	£9.39
5 sheets Passport Photo Cards 20/A4 sheet	£8.67
Inkjet Jigsaw Puzzle Kit, 30pcs, A4, inc S/W	£6.82
Photo Stickers, 5 sheets, 20 mixed/sheet	£8.67
10 A4 sheets Inkjet Window Film	£5.82
10 Sheets Silver or Gold Inkjet Paper	£7.53

**SPECIAL TOP BRAND GLOSSY, Boxed 50s**  
**FOLEX Photo-Gloss 150gsm,** £8.99

### Inkjet T Shirt Transfer Paper

Pack of 10, for white/light garments	£5.99
Pack of 10, for black/dark garments	£6.19
Glow-In-Dark T Shirt Transfers, 2 sheets	£5.36

## CD Labelling & Storage



Single Jewel Case, black tray, 50	£6.99
Double Jewel Case, black tray, 50	£7.99
Ultra Slimline Jewel Cases, pack of 50	£6.99
CD Clamshells, clear, per 10	£3.40
CD Clamshells, colours, per 10	£3.90
CD Ejector Case, Slimline, per 10	£2.90
Black DVD Cases, with clear sleeves, 10	£1.90
Clear DVD Case, with clear sleeve, 10	£1.90
Jewel Case for 8cm CDR, 100	£3.29
Jewel Case for Business Card CD, 100	£3.20
Clear Plastic CD Sleeve, with flap, 100	£3.70
Clear Plastic CD Sleeve, double, 100	£15.78
Clear Plastic Sleeve, holds 4CD/DVD, 100	£22.21
Clear Plastic Sleeves for use with ring binder: (version holds 1 CD/DVD), per 100	£11.59
(version holds 2 CD/DVD), per 10	£3.29
Clear Plastic wallet for 8cm mini CD, 100	£6.17
CD Calendar Case, 8cm, per 10	£2.10

### PRESSIT CD Labelling Kit

Applicator, Software & sample labels	£8.99
CD Labels, photo gloss, 25 sheets, 2/sheet	£6.39
CD Labels, photo matt, 25 sheets, 2/sheet	£2.99
CD Labels, Gold or Silver Metallic, pack 10	£10.22
CD Labels, Transparent, 10 sheets, 2/sheet	£5.82
Jewel Case Inserts, photo gloss, 25	£5.99
Jewel Case Inserts, photo matt, 25,	£3.52
CD Case Booklets, 4 pages, pack	£4.86
DVD Case Inserts, photo matt, 20,	£4.19

## Ink Jet Cards & Labels

### Inkjet Business Cards

#### Smooth Edges, Photo Quality

All supplied on A4 backing sheets, 10 cards  
to a sheet. Card size 85x55mm approx.

White Photo Matt, 195gsm, 10 sheets	£3.91
White Photo Glossy, 200gsm, 5 sheets	£4.51
Photo linen effect, 200gsm, 10 sheets	£3.47
Magnetic Photo Glossy, 2 sheets	£10.29
Photo Glossy, Self-Laminating, 2 sheets	£4.97
Transparent Business Cards, 5 sheets	£4.51
Transparent photo Glossy, 5 sheets	£7.20

### Print Your Own "Credit" Cards

Pack includes: 16 plastic cards + 2 sheets  
pre-cut inkjet film, Price per pack £9.99

#### Greeting Cards

25 A5/A6 Gloss Cards + Envelopes	£5.55
25 A4/A5 Photo Matt Cards + Envelopes	£6.99
25 A5/A6 Photo Matt Cards + Envelopes	£2.99
15 A4/A5 Photo Matt Metallic Embossed "Happy Birthday", with envelopes	£2.99
Inkjet Postcards Gloss 10 4/sheet	£7.99
Inkjet address labels, Various sizes, 25	£7.58
Inkjet Circular Labels, 32mm, 10 sheets	£7.58
Inkjet Gold or Silver Labels, 10 sheets	£9.00

## CD Media



CALL 0114 201 1880  
FOR LATEST OFFERS

**White-Topped**  
**80min 48x CDR**  
100 Pack £16.99  
25 Pack £5.49

**Silver/Silver**  
**80min 48x CDR**  
50 Pack £8.99  
100 Pack £16.99

**Inkjet Printable**  
**80min 48x CDR**  
100 Pack £38.19  
25 Pack £9.99

**TRAXDATA**  
**16x 80min**  
**Black/Black**  
Pack 25 £10.99

**Intenso**  
**80min 48x CDR**  
In Jewel Cases  
10 Pack £3.79

**Intenso**  
**80min 12x CDRW**  
In Jewel Cases  
10 Pack £8.49

8cm 250mb CDR, plastic sleeves, 10.....£3.49  
50Mb Business Card CDR with sleeves.....£5.75  
80Min Digital Audio, 25 in cake tub, .....£9.59

## Ink Cartridges & Refills

### Black Cartridges for most EPSON Unchipped models, including:

C20 C40 480 580 880 740 760 640  
660 670 750 1200 440 460 800 850  
1520 400 600 700 820 200 900 980

Price, each	£2.29
3 Pack,	£6.49
6 Pack	£12.29

### Colour Cartridges for above models:

Price, each	£4.69
3 Pack,	£13.29
6 Pack	£25.29

### Combi-Packs

1 Black, 1 Colour	£6.59
2 Black, 1 Colour	£8.99
4 Black, 2 Colour	£17.49

### Black Cartridges for most EPSON

#### Chipped models, including:

C42 C60 C62 810 830 680 685 777 790 870 875  
890 895 925

Price, each	£4.25
3 Pack,	£11.99
6 Pack	£22.95

### Colour Cartridges for above models

Price, each	£5.29
3 Pack,	£14.99
6 Pack	£28.59

### Combi-Packs

1 Black, 1 Colour	£8.99
2 Black, 1 Colour	£12.99
4 Black, 2 Colour	£24.89

### C70, C80, C82

Black, each	£8.59
Colours, each,	£5.29
Full Set, Black + 3 colours	£21.99

### Epson 300 (Combined Black/Colour)

Singles	£4.25
Tri-Pack	£11.99



## Re-Manufactured Cartridges For HP & Lexmark Printers

Save £££s and reduce waste with  
this range of factory refurbished  
cartridges.

Black, from, £10.49  
Colour, from, £13.29

Call with your printer model details for a quote.

## INKTEC Ink Cartridge Refill Kits

Don't throw your used cartridges away, re-fill  
them and use them again! This saves you LOTS  
of cash and it's very eco-friendly.

These kits are carefully matched to the  
printer for which they are made so  
please be sure to **state your  
Printer Make & Model when  
ordering**. Each kit includes a specially  
designed filling tool making the process  
simple and clean.



### Black refill kit

80ml, for HP 26, 29, 45, 27, 56	£6.99
40ml for Lexmark 12A1970, 17G050, 10N0016, 18L0032	£6.99

### Colour Refill Kit,

20ml x 3 for HP 25, 49, 16, 23, 78	£8.99
20ml x 3 for Lexmark 10N0026, 12A1980	£8.99
Universal Colour Kit	£8.99
Universal Black Kit	£4.99

**This advertisement shows a small selection of our VAST Range!**

Call us today on **0114 201 1880** or visit **www.m-techdirect.co.uk** to  
see more or request our full catalogue. Lines open 10am - 6pm Mon-Fri (10 - 1pm Sat).  
M-TECH Direct Ltd, 29 Orgreave Drive, Dore House Industrial Estate, Handsworth, Sheffield. S139NR.

**ALL PRICES INCLUDE VAT**  
Carriage charged extra according to weight &  
buyer's location.

Full downloadable pricelist at:  
**www.m-techdirect.co.uk**



# Free Adverts

• Available at no cost, Greater Manchester, A3000 monitor, dot matrix printer and steel stand. Call Peter on 01706 646769 after 6pm.

• RISC Palmtop, 8mb Machine hardly used with manual. £39 + P&P, Telephone 020 8318 5155 (Ask for Frank)

• RISC600, Original Box, All manuals, Easiwriter Professional, Draw Extra Turbo, Lemmings and some Clipart installed. Plus loads of fonts. reasonable offers. 07786 802256

• Acorn items for sale:  
[1] Single slice Risc PC. ARM610; 6MB RAM; 1MB VRAM; 420MB HD; Cumana CD-ROM; RISC OS 3.50. Original mouse, keyboard, manuals and boxes.

(2) Two slice Risc PC. StrongARM SA-110; 64MB RAM; 2MB VRAM; 2GB HD; 24-speed CD-ROM; RISC OS 3.70. Original Mouse, keyboard, manuals and boxes.

(3) Psion Series 3c PDA. 2MB RAM; Mains adaptor; Leather Case; PsiRisc Acorn link software. All original boxes and manuals.

(4) Cumana SCSI2 Podule.

(5) CJE 5x86 PC second processor card for RiscPC. 133MHz, 512k cache. Comes with PCPro software.

(6) Computer Concepts LaserDirect4 laser printer plus podule. All software and original manuals.

(7) Epson GT9000 A4 flatbed SCSI scanner. Original boxes and manuals.

(8) Software (all boxed with manuals and bits): Artworks; Eureka v3; Ovation Pro; Impression 2; Fireworkz Pro; Mr Clippy; ImageFS 2; SparkFS; Keystroke; PCSound Professional; Win95FS; WMF IT; Clip IT; ImageMaster; ANT Internet Suite 2; Compression; ArcFax; Virtualise; Font Directory 2; Touch Type; PublishArt; PublishArt 2. Any reasonable offers for all items (or combination of items) above. P&P charged at cost or available to collect.  
Contact Jon Aylwin 029 2041 0678 or jon@aylwin.org.uk

• Two Master 128s, 3 disc drives, 1 Cub Monitor, 2 mice, software, £50 buyer collects. East Kent Coast. Phone 01303 87364.

• Eagle M2 multimedia card; replay video production, HQ video stills, digital stereo sound sampler, full MIDI IN/OUT/THRU facilities, RISCPC compatible. Offers around £160. Multimedia software; Midiworks, Prosound, Cineworks (includes AppleFS) and Genesis Professional £35 each plus postage or £120 for all three. Eagle M2 plus all four packages £250 plus postage. Enquires or offers 0151 547 3993 or email aokai@tiscali.co.uk

• A two foot stack of Acorn User magazines for sale, complete with cover discs, from Sept 1994 to end 2001. Also other Acorn magazines and discs. Best offer secures this 12kg pile. Tel. Coventry, 02476 319519

• Wanted: All Acorn A3000s, A3010s, A3020s, A4000s, A5000s, A4s, Risc PC 600 & 700s, StrongARM Risc PC's, Kinetic Risc PCs. Anything considered. Can travel. 07930 507815 or 07775 776217.

• Acorn A5000 including monitor etc plus additional software including Advance suite. Any sensible offer considered. Contact Robert on 0191 5191231 or at robertvardill@beeb.net

## Acorn User Free Ads Service

Your name: ..... Your phone number: .....

Why not take advantage of our free reader ad service? Fill in your details on this coupon (24 words maximum, one word per box below) and send it to Free Ads, Acorn User, 28a Middle Hillgate, Stockport SK1 3AY or by e-mail to: aufreeads@acornuser.com. Only one ad per reader please, private sales or wanted only.

Although we try to publish every ad we receive, we can make no guarantees; publication is entirely dependent on space and time constraints.

Please fill in your name and telephone number below – these will not be published but enable us to contact you in case of any queries. Make sure you include your own town/county in your ad to help potential buyers with their purchasing decision.

.....

.....

.....

.....

.....

.....



# Getting into Special Needs

The shrewdest teaching professionals have been wise to the value of a day out at Special Needs London for the past 30 years. But major changes have taken place and there are now more than twice as many reasons to visit this hugely popular event in 2003. Last year's Special Needs London was full to capacity but more exhibitors wanted to get on board and something had to change.

The result was a switch to the National Hall at Olympia where the extra space allows the launch of Education Show London alongside the well-established event. Sister show to its namesake held annually at Birmingham's NEC, it will operate under the same roof as Special Needs London from September 25 to 27. And Emap, working in partnership with the British Educational Suppliers Association and the Publishers Association, are confident this radical move will give teaching professionals a far more comprehensive service. Ruth Stuart-Moore of the Publishers Association explained further: "The two events will run side by side in 2003 because every teacher is now a teacher of Special Needs."

"Combining the events offers teachers the opportunity to share in a much greater amount of knowledge, experience and information. "This sharing takes place between all different types of school, teachers with all different levels of experience: from experienced SENCOs to less experienced mainstream teachers, and with our many exhibitors.

"By bringing the two shows under one roof, we are confident that all teaching professionals will benefit enormously from a visit to Olympia."

Education Show London targets all ages from early years and primary education through to sixth form, providing the perfect platform for education resource suppliers to meet buyers face to face.

The new concept has already won the backing from two of the biggest hitters in education in the capital, the Commissioner for London Schools, Professor Tim Brighouse and Stephen Twigg, Parliamentary Under Secretary with particular focus on raising teaching standards in London.

Mr Twigg, who will open the exhibition, said: "Education Show London brings with it an opportunity to celebrate the contribution teachers make to learning in the capital and to explore how we can attract the very best teachers here to help drive forward our radical reform. "Along with Special Needs London, this event brings together all those involved in education in the capital to improve what goes on in the classroom."

Professor Brighouse predicted the event becoming one that "nobody in the London education system wants to miss".

"In future years we hope to surround it with celebrations of the achievement of the young talent which is being unlocked by London's teachers," he added.

London Challenge has also backed the event by providing a fleet of buses to transport groups of visitors from all 33 boroughs free of charge. Once inside, visiting teaching professionals can wander the aisles in between attending any of more than 70 not-to-be-missed seminars on offer. Professor Brighouse will himself speak on many of the issues surrounding schools in the capital when he delivers one of the keynote addresses.

He is to be joined by other well-known names like Professor Gervase Phinn, who tackles putting Children at the Centre and Doug Brown of the DfES who will talk on Achieving With IT. More ICT issues will be tackled by Martin Ripley of QCA, who will speak about the Computer's Role in Pupil Assessment, while Philippa Lee from BECTA will talk on how ICT can help school leadership.

The new-look event will also see the launch of the first ever scheme designed specifically to celebrate the very best in SEN resources. The Teachers' Poll gives professionals the opportunity to vote for those products that help get the job done in the classroom day-in day-out. Votes can be cast at [www.specialneeds-london.com](http://www.specialneeds-london.com) and anyone who takes part is entered into a draw to win £1,000 worth of equipment for their school. The Poll will reward the best book, software and equipment currently in use for children with special needs as well as an all-time favourite classroom resource.

All this, plus the best in all manner of resources from computer software to furniture makes Special Needs London and Education Show London a must-see package for all teaching professionals.

You can register now for free entry at [www.specialneeds-london.com](http://www.specialneeds-london.com) or by calling the ticket hotline on 0870 429 4334.



THE EDUCATION SHOW  
L O N D O N



Special Needs London

Pam Turnbull  
[Education@acornuser.com](mailto:Education@acornuser.com)



# More on the Driving Licence

Since we first mentioned the ECDL (European Computer Driving Licence) we have discussed it further with the British Computer Society and learned quite a few more interesting things.

It is very common in the RISC OS world to be quite dismissive of the ECDL, because it is based on Microsoft applications. Well, it turns out that, if you actually choose to look into the subject, you'll find that originally, yes it was. But as time has gone on and different versions of it have been released (we're now up to version 4) there has been less and less dependence on specific operating systems and applications.

In fact getting tested and having the various modules of the ECDL signed off takes place at approved testing centres, and there is a dedicated RISC OS one with an approved RISC OS version. Although the changes needed for this version are now less than they used to be.

ECDL is not a bad thing at all. A look at the syllabus demonstrates that it covers a very wide range of computer subject areas and getting an ECDL qualification requires a reasonable, but not daunting, amount of study and the tests are, well ... testing, but not vicious.

In fact the basic idea is a good one, a decent general understanding of computing let's you talk sensibly about the subject and let's you use them more effectively. It's the difference between being able to rigidly following a cooking recipe and being able to produce a passable result; and being a decent cook who knows how to substitute and change ingredients to produce a good result.

And perhaps the difference between a barely competent driver and a good one. There is also an advanced ECDL but we haven't looked at that yet.

## The Rules

The European Computer Driving Licence (ECDL) is the European-wide qualification which enables people to demonstrate their competence in computer skills. It is designed specifically for those who want to gain a basic

qualification in computing to help them with their current job, develop their IT skills and enhance their career prospects.

The ECDL syllabus is designed to cover the key concepts of computing, its practical applications and their use in the workplace and society in general. It is broken down into seven modules, each of which must be passed before the ECDL certificate is awarded.

Candidates obtain, usually from a test centre, a logbook listing all the modules. As they pass each module, the accredited testing body will sign the logbook. The modules may be taken in any order and over any period of time (up to three years, or even all at once) for maximum flexibility. When all the modules have been successfully completed, the logbook is exchanged for a certificate.

The seven modules that make up the ECDL are:

- Basic concepts of IT
- Using the computer and managing files
- Word processing
- Spreadsheets
- Database
- Presentation
- Information and Communication

The qualification is designed to help people at work and at home. It will confirm to potential employers that the person has a professionally recognised, relevant and up-to-date qualification and it will assist in raising familiarity with the technology and its uses.

ECDL is fast becoming the most widely recognised qualification in the field of work-related computer use, because it is targeted at the full spectrum of the population, and because of the support and monitoring of the organisations behind it.

The British Computer Society (BCS) manages and promotes the ECDL in the UK on behalf of the ECDL Foundation. More information about the ECDL Foundation is available on the Web site at [www.ecdl.com](http://www.ecdl.com) and more information about the British Computer Society is available at [www.bcs.org.uk](http://www.bcs.org.uk)

As a candidate for the ECDL you obtain a Log Book before taking the first test, or you may be given one by the sponsoring organisation.

A Log Book is an official document which is used to record the accreditation for each test successfully completed. As you pass each test, the Log Book is updated. When all seven tests have been passed, the you (or the test centre) send the Log Book to the local ECDL office (BCS in UK) where it is exchanged for a European Computer Driving Licence.

The test can differ in form between countries, but they still have the same Syllabus and so show the same level of competence in computing.

Normally all tests are completed within three years of starting and may be taken at any accredited Centre in Europe and they don't have to be taken at the same Centre.

The tests may be based on software from any supplier. Some of the tests may have options depending on the facilities available at the Test Centre. Some of the modules may be taken together using integrated software where this is available.

The education and examination methods can differ between countries, but the people responsible appreciate the need for a valid and well-defined examination process. They are responsible to ensure that test centres reliably operate the process. The testing must be reliable and only those who prove to be skilled and with the right level of knowledge will pass the tests.

## Conclusion

It is important not to be short-sighted. Since the ECDL can be applied to any appropriate software from any supplier, it must therefore not be limited to hardware either: Mac OS only runs on Macs.

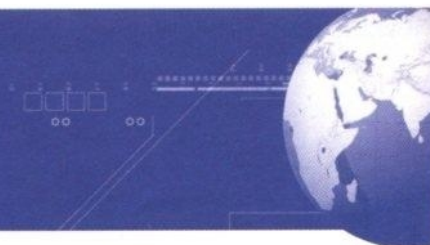
What's important is that the student learns a good range of basics of computing. Acorn always used to be about education and there's no reason why it should stop now.

Rob Donaldson  
editor@acornuser.com





European Computer Driving Licence®



# The Largest IT Skills Qualification



Are your employees a part of **IT**?

LOGBOOK • CERTIFICATION • LICENCE

Tel: 01793 417530

e-mail: [ecdlenq@hq.bcs.org.uk](mailto:ecdlenq@hq.bcs.org.uk)



MTG/AD/682/0903

[www.ecdl.co.uk/au](http://www.ecdl.co.uk/au)



# ICT computers

ICT GCSE ([www.ictgcse.org.co](http://www.ictgcse.org.co)) is run by Messrs Phillips, Motley and Kirkton who come from diverse backgrounds but the site does what it says on the tin. Phillips is responsible for the content and is an ICT and Business Studies teacher. The site is set out in sections aptly named: Project Guides, General Tips, Theory, Downloads and Exercises, Quiz, and finally Adam's Animations. So let's dive in ...

## Project Guides

These are split into spreadsheets, word processing (although this is really desktop publishing), databases, web design and presentation. There are not a huge number of projects but good ones to start on if you are new to the subject or you want to set homework which children and parents can deal with at home. I'd actually argue that these are not really challenging and most Year 6 children could cope with these. However, if you have a child who lacks experience or confidence with ICT these make an excellent start.

So for spreadsheets you can experiment with fantasy league football, cinema or school play seating, or the most recent addition, a small business spreadsheet. Word processing provides a user guide to MS Paint for children, a school magazine and mail merge or how about a database for a dentist or football team? The Web design section provides information on how to create a Web page. While presentation is limited to making a PowerPoint presentation.

Each project is split into sections and this makes it a text heavy page to read, although you are encouraged to print this out and the text is explained by large images from screen shots, to flow charts and tables.

Taking the example of creating a magazine it is split into tabbed sections which identify, analyse, design, use/implement and evaluate the project.

This is clearly written and as all the projects are presented in the same manner it imposes a good design regime on students starting by simply outlining the problem that needs solving, deciding why an electronic solution is the best one and so on before evaluating which

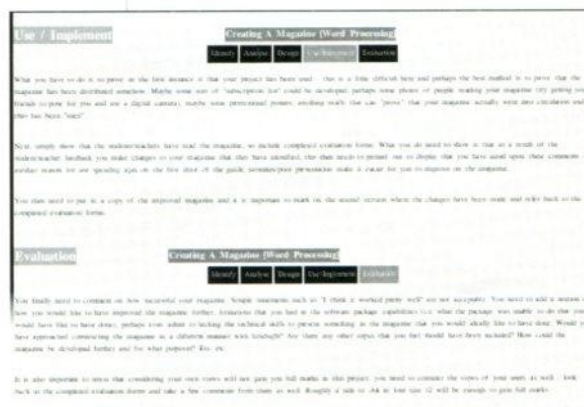
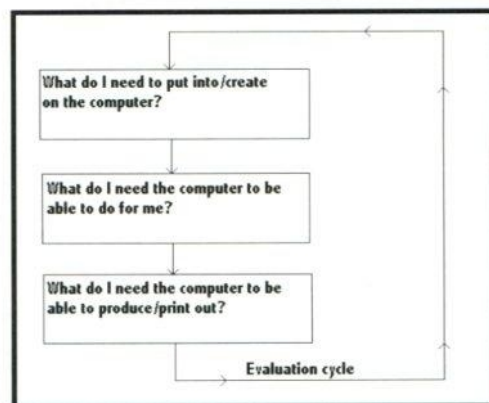
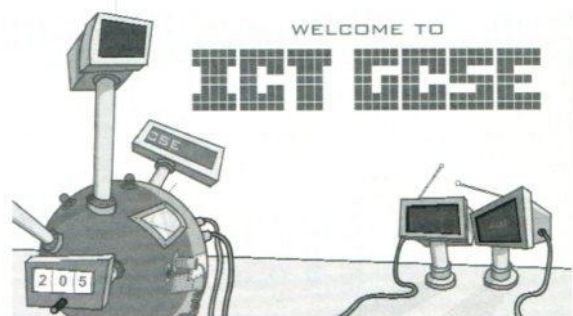
type of application is the best to use and why.

The elements here are not format or package specific and there are some good thought-provoking points in here despite the typos, spelling and punctuation errors! These are not immediate projects but long-term ones where research is expected and data collected so you can justify choices and decisions. In addition to the design, distribution is touched upon as is marketing. All elements which will lead to maximum marks.

Or how about a database? You could try your hand at a simple flat file database before mail merging to a standard letter, in this instance where a few members of the local football team have fallen behind with their dues... Again the same design stages are gone through step by step but although you're given good advice, the work is certainly not done for you! You'll also find yourself referred to the General Tips and Theory sections which we'll cover later and is especially to those for whom 'field', 'validation' and 'forms' are a foreign language.

## General tips

Useful for anyone using computers, they are designed for AS-Level and GCSE coursework students summarising the stages you must go through from outlining who the system is for and why you are doing it, to a list of quantitative and qualitative objectives and so on. Add to this what you need and where the data will come from and how as well as what do you need the computer to be able to do for you to provide the outputs that you require not forgetting to acknowledge the principle of feedback. Basically how you



Theory QuickLinks		
Hardware	Software	General Theory
Basic Computer Processes	Applications	System Unit
Win, Mac & Linux	• Data Validation (Form)	File & Print
Cloud Technology	• 'V' - Validation (Form)	How Computers & Networks Work
File Lengths	• Network (Web)	Network & Internet
Data Storage	File Protection	Networking (Network Theory)
Network Protocols	Database Design	Networking
Process Theory	Web Design	Networks (Networking)
		The Internet





need to write up your project and what it is vital to include.

## Theory

Laid out simply as a series of Quicklinks split into three sections, hardware, software and general theory. This allows for quick access to Basic Computer processes, Bits Bytes and ASCII, Control technology, Datalogging, Data storing, Network topologies, printers, data validation, IF statements, spinners, databases (including relational databases), mail merging, computer laws, data capture, data information and knowledge, health and safety, network security, teleworking, systems flowcharting and the Internet.

In essence, this explains the basics and gives advice on how to use specific tools and features such as Excel's spinners. This is simply a couple of arrows that when you press them up and down, the number in a particular cell will change. Explained simply and illustrated by screenshots the approach works well explaining the benefits, such as with spinners whereby setting the spinner you can stop people from inputting data that can not be right, if we set it from £0 to £5 then people won't be able to type in £7 by mistake. Good clear tutorial instructions and screenshots allow you to follow along making the process as painless as possible.

## Downloads and exercises

Still under development this is the place to come to see just how good your computer general knowledge is. Users are encouraged to add to this are of the site. The only criteria is that the exercises here must be different, challenging and written with students in mind not just a duplication of what is in textbooks.

I particularly liked the crosswords, cryptic, ordinary and a word processing crossword. Just click on the numbers to see the clues and type the answer in. Clicking the check button runs your answer through the computer which will delete any incorrect letters and give you a running percentage. You can download some PowerPoint demos and a file on Excel techniques. There are only two exercises up at present but the quality is good.

As well as a basic introduction to spreadsheets, there is a text and picture setting exercise. Here you are presented with all the text and graphics you need for a news item. It's up to you to change the sizes, fonts, layout and so on to make it stand out. When you think you're finished compare it to the finished thing. An excellent exercise, more like this please.

## Quiz time

Never the same twice, you are presented with a random selection of ten questions from a present database of 182. A multiple choice quiz, some questions are easier than others. There is an immediate response when you've finished and you're told the right answer too! Do you know which of the following is a natural language? Machine code, BASIC, C or C+?

## Animations

These Flash animations will definitely come in useful for the teacher, especially those with an interactive whiteboard. Explanatory animations could also be built into a presentation covering key areas of: datalogging, control technology, ring networks, star networks and how emails work.

## Bottom line?

A very useful site for primary and secondary teachers, as well as GCSE students. There are some very good ideas and principles covered here and I hope it continues in the same vein.



This symbol is for a manual operation - this does not involve the computer at all.



This symbol is a "keyboard operation" - in other words simply typing something in



This symbol is a computer process like making something bold or taking a screenshot

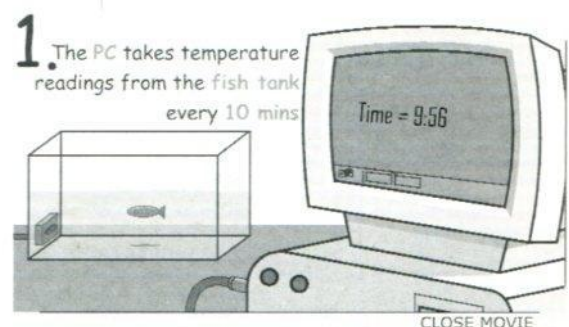
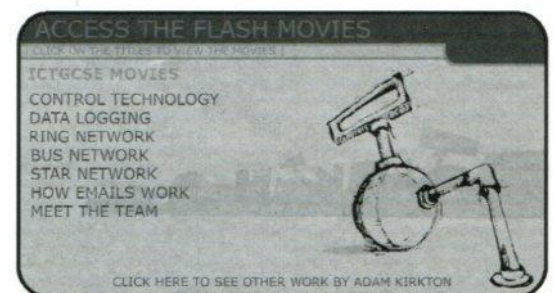


This symbol is called "document" in other words simply printing something out

Don't forget that this quiz is Randomly Generated - the more you go you'll have different questions -

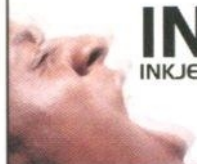
There are currently 182 questions in our database

No.	Question	Answers
1	A standard letter that will be created on the basis that a word image is defined as a...	<input type="radio"/> A document <input type="radio"/> A keyboard <input type="radio"/> A manual <input type="radio"/> A process
2	A quick temporary change to a page that returns a log to a?	<input type="radio"/> Quick <input type="radio"/> Temp <input type="radio"/> Log <input type="radio"/> Quick
3	A student who is not permitted standard letters to 10 children aged 10-14 who have not had a B2C10 question. The data handling person which will be used as a?	<input type="radio"/> printing and scanning <input type="radio"/> scanning and printing <input type="radio"/> printing and up <input type="radio"/> scanning and printing
4	Which of the following types of printer should give the best reproduction?	<input type="radio"/> Ink jet <input type="radio"/> Laser <input type="radio"/> Bubble jet <input type="radio"/> Laser
5	2 numbers taken together produce a...	<input type="radio"/> Data transfer <input type="radio"/> Data transfer <input type="radio"/> Advanced database <input type="radio"/> Advanced database



Pam Turnbull  
 aueduc@acornuser.com





# INKCYCLE

INKJET PRICES TO SHOUT OUT!

100% GUARANTEED  
100% FULL OF INK  
100% RECYCLED BY US

- VAT Included
- Free Delivery
- Same Day Dispatch
- No Minimum Order
- UK's Lowest Prices
- Money Back Guarantee

## ORDER HOTLINE

### 0800 652 7086

## Six of the best!

### Compatible Cartridges...

#### For Epson printers

6 x T013	black	£8.50
6 x T014	colour	£15.00
6 x T019	black	£8.50
6 x T020	colour	£15.00
6 x T026	black	£23.50
6 x T027	photo	£26.00
6 x T028	black	£23.50
6 x T029	colour	£26.00
6 x T036	black	£23.50
6 x T037	colour	£26.00
6 x T040	black	£23.50
6 x T041	colour	£26.00
6 x T0321	black	£29.50
6 x T0322	cyan	£26.00
6 x T0323	mag.	£26.00
6 x T0324	yellow	£26.00
6 x T0422	cyan	£26.00
6 x T0423	mag.	£26.00
6 x T0424	yellow	£26.00

#### For Canon printers

6 x BC121Bk	black	£8.50
6 x BC121C	colour	£10.00
6 x BC124Bk	black	£12.00
6 x BC124C	colour	£17.00
6 x BC13Bk	black	£17.25
6 x BC13C	cyan	£17.25
6 x BC13M	mag.	£17.25
6 x BC13Y	yellow	£17.25

C6615\*\* 42ml



Now only  
**£11.40**

New T036 black  
for Epson C42



Less than  
**£3.92**

C6625\*\* 42ml



Now only  
**£14.92**

for Epson C82



Less than  
**£4.34**

### WIN 6 DIGITAL CAMERAS



We're giving away 6  
OLYMPUS digital cameras  
**WORTH OVER £1,000**  
to celebrate the launch of  
our brand new website.  
Enter our free prize draw.  
[www.inkcycle.co.uk](http://www.inkcycle.co.uk)

## The floppy is dead



## long live usbee

Replaces up to 352 floppies\*  
No power supply needed  
Plugs straight in to your USB port  
Massive storage capacity  
PC or Mac compatible  
Stores MP3 files  
Stores Sound, Movie or Photos  
Handles ANY data file  
Fit it to your keyring  
Weighs only 13 grams  
Smaller than a cigarette lighter!

32Mb	£15.95
64Mb	£19.95
128Mb	£28.95
256Mb	£48.95
512Mb	£88.95
only 18p per Mb*	

\*512Mb version

### Recycled Cartridges

#### for Lexmark printers

12A1970	black	£13.35
12A1975	black	£14.50
12A1980	colour	£14.75
12A1985	colour	£15.25
12A1990	photo	£16.50
13619HC	colour	£14.75
13400HC	black	£13.30
15M0120	colour	£15.70
15M0125	colour	£16.70
17G0050	black	£13.35
17G0060	colour	£14.75

#### for Hewlett Packard printers

51625	colour	£12.35
51626	black	£9.70
51629	black	£9.87
51633	black	£9.70
51641**	colour	£12.95
51645	black	£9.25
51649	colour	£14.25
C1816	photo	£15.94
C1823**	colour	£13.92
C4844	black	£14.95
C6614	black	£10.22
C6615**	black	£11.40
C6578**	colour	£15.92
C6625**	colour	£14.92

#### for Canon printers

BC-01	black	£8.80
BC-02	black	£8.80
BC-05	colour	£12.20
BC-20	black	£10.49
BC-23	black	£10.55
BX-3	black	£9.47

\*\*Denotes Maxfill® production method. Cartridges contain up to 300% more ink!  
See website for details.



Visit [www.inkcycle.co.uk](http://www.inkcycle.co.uk) for your up to the minute prices and details of our 'Double-for-your-Trouble' lowest Price Guarantee



# onestopapple

where everything is for sale - one stop for new and preowned computers



## Macintosh G4

**PowerMac G4/1Ghz Single Processor 256Mb 60Gb DVD/C**  
**PowerMac G4/1Ghz Single Processor 256Mb 60Gb DVD/CDRW**

Price: £895.00 inc VAT: £1,051.63

### PowerMac G4 1Ghz & 17

The new Power Mac G4 combines rock-solid engineering reflective of the full-throttle Xserve

Price: £1,350.00 inc VAT: £1,586.25

### PowerMac G4 1Ghz & 20

**PowerMac G4 1Ghz & 20" Apple Cinema Display Bundle**

Price: £1,790.00 inc VAT: £2,103.25

**PowerMac G4/1.25Ghz Dual Processor 256Mb 80Gb DVD/**

**PowerMac G4/1.25Ghz Dual Processor 256Mb 80Gb DVD/CDRW**

Price: £1,400.00 inc VAT: £1,645.00

**PowerMac G4/1.42Ghz Dual Processor 512Mb 120Gb Sup**

**PowerMac G4/1.42Ghz Dual Processor 512Mb 120Gb Superdrive**

Price: £1,749.00 inc VAT: £2,055.08

## Memory

256MB DDR PC2700 333MHz SODIMM FOR POWERBOOK 17"

Price: £37.00 inc VAT: £43.48

512MB DDR PC2700 333MHz SODIMM FOR POWERBOOK 17"

Price: £99.00 inc VAT: £116.33

256MB DDR PC2100 266MHz SODIMM FOR POWERBOOK 12"

Price: £37.00 inc VAT: £43.48

256MB DDR PC2100 266MHz SODIMM

Price: £37.00 inc VAT: £43.48

256MB DDR PC2100 266MHz -DDR Memory for G4 Dual

Processor- With Mirror Bay

Price: £23.00 inc VAT: £27.03

256MB DDR PC2700 333MHz -DDR Memory for G4 Dual

Processor- With Mirror Bay

Price: £20.00 inc VAT: £23.50

256MB PC133 SDRAM (For G4MT/G3MTB&W/iMac Slot Loading)

Price: £20.00 inc VAT: £23.50

128MB PC100 SDRAM-For Blue&White G3MT, G4MT, iMac G3

Price: £25.00 inc VAT: £29.38

256MB PC100 SDRAM-For Blue&White G3MT, G4MT, iMac G3

Price: £40.00 inc VAT: £47.00

512MB 133MHz SODIMM-133MHz SODIMM -For

iBook/PowerBook G4/iMac G4

Price: £99.00 inc VAT: £116.33

## iMac / iBook / iPod

**iMac G4/1000 256Mb 80Gb Superdrive 17**

iMac G4/1000 256Mb 80Gb Superdrive 17" TFT Screen

Price: £1,200.00 inc VAT: £1,410.00

**iMac G4/800 256Mb 60Gb DVD/CDRW 15**

iMac G4/800 256Mb 60Gb DVD/CDRW 15" TFT Screen

Price: £829.00 inc VAT: £974.08

**iBook G3 800MHz 128Mb 30Gb CD 12.1**

iBook G3 800MHz 128Mb 30Gb CD 12.1"

Price: £680.00 inc VAT: £799.00

**iBook G3 900MHz 128Mb 40Gb DVD/CDRW Drive 12.1**

iBook G3 900MHz 128Mb 40Gb DVD/CDRW Drive 12.1"

Price: £889.00 inc VAT: £1,044.58

**iBook G3 900MHz 256Mb 40Gb DVD/CDRW 14**

iBook G3 900MHz 256Mb 40Gb DVD/CDRW 14" Screen

Price: £1,000.00 inc VAT: £1,175.00

**iPod 10Gb MP3 Player 60MW AMP FireWire Mac & PC**

iPod 10Gb MP3 Player 60MW AMP FireWire Mac & PC

Price: £230.00 inc VAT: £270.25

**iPod 15Gb FireWire for both Mac and PC**

iPod 15Gb FireWire for both Mac and PC

Price: £265.00 inc VAT: £311.38

**iPod 30Gb FireWire for both Mac and PC**

iPod 30Gb FireWire for both Mac and PC

Price: £350.00 inc VAT: £411.25

## iBook G3 from

**£680.00** excl.VAT

## Remote Control and Earphone for iPod

Price: £25.00 Inc VAT: £29.38

## Airport Extreme Wireless Card 54Mbps 803639

Price: £65.00 Inc VAT: £76.38

## Canon Digital Camera Powershot S45 4Mega Pixels 32

Price: £320.00  
Inc VAT: £376.00

**we won't be beaten on price!!  
we will either match or beat any advertised price!!**

Gasteiner Technologies Limited, 18 - 22 Sterling Way, London, N18 2XZ  
Tel : 0208 345 6000 sales@onestopapple.com

Showroom open Monday - Friday 9am until 6pm

# www.onestopapple.com

Terms & Conditions. Prices & Descriptions are correct at time of going to press E&O but are subject to change without notice, prices do not include VAT.  
Products and Packaging may differ from that advertised. Sales subject to our standard terms and conditions of sale, copy available on request.





78 Brighton Road  
Worthing  
West Sussex  
BN11 2EN



The Fourth Dimension

\* Hardware

\* Software

\* Repairs

\* Upgrades

Tel: 01903 523222  
Fax: 01903 523679

Open Mon - Sat,  
9.00am - 5.30pm

\* Games

\* Upgrades

\* Refurbished  
Hardware

sales@cjemicsos.co.uk

http://www.cjemicros.co.uk/

# Not 'Arf

mice • connectors • leads • keyboards • advice



**Stuart Tyrrell Developments**  
PO Box 183, OLDHAM OL2 8FB  
Tel: 0845 458 8803 / 01706 848 600  
Fax: 0870 164 1604 (national rate)  
Email: Info@stdevel.demon.co.uk  
http://www.stdevel.demon.co.uk

Wardlaw

Surveys



Authorised Acorn Dealer; for all your needs  
from supply, service, repair and full after-sales

**Wardlaw House, Kirkhill, Inverness IV5 7NB**  
Tel/Fax: 01463 831 214

# Etc.

http://www.etcsystems.co.uk/

• P.O. Box 519 • Doncaster  
• South Yorkshire • DN4 0GE  
• sales@etcsystems.co.uk

TEL: 01302 337559

FAX: 01302 337564

## High Speed Computing

# Liquid Silicon

Supporting all RISC OS and Acorn users...

...around the world.



FREEPOST EH2725

Kirkcaldy, Fife, KY2 5BR  
United Kingdom

Tel: 01592 592265 Fax: 01592 596102

sales@liquid-silicon.com  
www.liquid-silicon.com

Andrews + Arnold	23
Accountz	14
BCS	43
Britink	19
Castle technology	OBC
CCL	03
CJE	04,48
Danemere	10
Datasnake	18
ETC Systems	18,48
Gasteiner	47
Gio	06
Hki sytems	23
Icon Tech	19
Ink cycle	46
Internet Engineering	22
Liquid Silicon	02,48
M - Tech	39
Merula	35
Microbits	14
Oregano	IBC
Photodesk	11
QCC	34
Quest	38
R - Comp	31
Rednet	27
RGSC	30
SME supplies	30
Spellings Computers	14
STD	07,48
The PC man	35
TMT	18
Vision - Internet	18
Wardlaw Surveys	48

# advertisers index



## Sens-E-tive mouse

**A** Mice are ten a penny, well not quite that cheap but they are definitely at the stage where you choose one according to style and interest rather than just utilitarian functionality.

The options on function have changed too, you can have any number of buttons located around the body while the body shell itself is shaped in various ergonomic ways. You can have optical, a very definite improvement on mice with balls no matter how heavy and macho they are.

And you can have cordless. But for cordless you also have to have a receiver and batteries and that's inconvenient. Have you ever had a mouse stop working in the middle of the night because the battery has run down? I have, it's annoying.



So this issue we are looking at a compromise, it is a USB optical mouse and it has a cord. The power for the optical bit comes from the USB itself so no batteries are required. (I will admit that I really do prefer a cordless mouse for the lack of drag but you pay your money and you take your choice.)

Anyway we have the TekGia E-Sens Optical Mouse M5 obviously it has Windows and Mac on the label but it will also work with RISC OS using either the Simtec podule in any Risc PC, or on the Iyonix PC with its built-in USB. Both of these systems have standard mouse drivers and this is a standard USB mouse.

It has a snazzy orange look and it lights up with the optical drive light. As it is optical you don't really need a mouse mat but I have, in general, found it worth using one anyway, something with a nice distinct pattern, I prefer to have a surface I can clean easily.

The design is not as elegant as a Logitech mouse but they really are the Rolls-Royces of the mouse world. The TekGia mouse has the standard PC two

buttons but it's a wheel mouse and the central wheel (though currently without function in the RISC OS world) is clickable and becomes the Menu button. This mouse does have two other buttons on the side which have no function.

The cable length is a generous 1.7m which I did appreciate, so many cables are just too short especially if you want to stick the computer under the desk. If you don't have USB there is a PS2 adapter as well although for some machines you'd have to buy a PS2 to RISC OS adapter as well. Easier to get a USB card methinks.

**Product:** E-Sens Optical Mouse M5

**Price:** £14.99 inc VAT  
(uk postage £2.50)

**Supplier:** TekGia, The Triangle, Exchange Square, Manchester, M4 3TR

**Tel:** 08709 909 709  
**Fax:** 08709 909 749  
**E-mail:** info@tekgia.com  
**Web:** www.tekgia.com

## Camera recharge



As you may have spotted we still haven't been able to bring you our full series on Digital Video that we have been promising. This is unfortunately due to rather a lot of activity in the RISC OS market at this time.

Well this is a bit different. Semi-professional video is something that crops up from time to time, many extremely low budget films are made every year using professional crews. But keeping those cameras supplied with juice when you don't have the resources of Walden Media behind you, could be an issue.

If you are using any of the Sony V-Mount battery type, Hawk-Woods on V-Lok batteries; or using an adapter any NP1, Ni-Cad or Ni-Mh; Or an NP50/NP60 type Lithium battery. Then the Hawk-Woods VL-MR2 Multi-Resource Charger/PSU has been designed to provide that

recharging capability.

And it's versatile: It will take anything from 90v to 240v AC mains input at between 50-60Hz. Or you can use it from a car lighter though I think you'll be needing a fairly chunky battery and some solid wiring but then you are carrying your filming equipment round in a Discovery, aren't you?

The instructions for the VL-MR2 are careful to warn you about potential risks running from a car lighter socket and you can get a special stabiliser to help.

Finally you can use the VL-MR2 to directly power your cameras using the appropriate leads, and it will chuck out an impressive 60 watts at 14 volts. You can also use it for lighting but the recommended limit for that is just 50 watts.

Recharging of battery packs can take anything from 1 to 4 hours from complete discharge depending on the battery 32W for the lowest power up to 120W for the big ones. Some batteries (Ni-Cad and Ni-Mh specifically) should be thoroughly discharged before re-

charging. This is called revitalisation, the VL-MR2 will do that for you as well, safely, and then charge it up. This does add hugely to the time involved, a 50% discharged 32W Ni-Cad battery will take a good three hours to discharge.

All in all this is an excellent product and definitely worth it if you are using the right sort of batteries extensively.

**Product:** VL-MR2 Multi Resource Charger/PSU

**Price:** £POA

**Supplier:** Hawk-Woods Ltd, United House, 32 Brinkley Road, Worcester Park, Surrey KT4 8JF

**Tel:** +44 (0) 208 715 0999  
**Fax:** +44 (0) 208 330 5659  
**E-mail:** sales@hawkwoods.com  
**Web:** www.hawkwoods.com

Rob Donaldson  
editor@acornuser.com



## Subscriptions



## Issue 261

July 2003

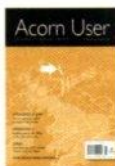
THE RISC OS TAKE OVER  
How the RISC PC can be used safely  
Artworks 2 arrives  
What Datapower can do for you



## Issue 260

June 2003

Virtual Call Centre  
Wakefield Show Review  
Digital Video for RISC OS  
S-Base: Final curtain  
Best in blogging



## Issue 259

May 2003

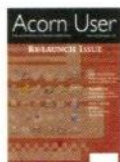
Wakefield Show Preview  
What's a Blog?  
RISC OS Academy reviewed  
MPEG3 Music player review



## Issue 258

April 2003

Wireless USB from STD  
SWShow report in full  
Fido Net more bite than bark  
S-Base gets into print



## Issue 257

March 2003

Re-issue issue  
Using modern printers  
Wireless LAN revealed  
Mini PC reviewed  
And even more besides



## Issue 256

February 2003

Aemulor, how it does what it does  
Sending spam? How to do it legally  
Using RISC OS to create websites  
USB how new devices are connected  
S-Base: Getting in touch with reality



## Issue 255

January 2002

The full Lyonix review  
Business Internet Connections  
USB Programming  
Lyonix and the future



## Issue 254

Christmas 2002

Lyonix PC - the Cook Report  
Viral marketing how you use it  
RISC OS vs Windows, more in the difference  
USB - Mike Cook on the programming



## Issue 253

December 2002

RISC OS 5 in detail  
Web marketing, how to really do it  
Web hosting, what it really means  
S-Base

Please subscribe me for:

Annual subscription (13 issues)

	New	Renewal	
UK	<input type="checkbox"/> AUN0308Y	<input type="checkbox"/> AUR0308Y	£45.99
EU	<input type="checkbox"/> AEN0308Y	<input type="checkbox"/> AER0308Y	£51.99
World	<input type="checkbox"/> AWN0308Y	<input type="checkbox"/> AWR0308Y	£63.99

8-issue subscription

	New	Renewal	
UK	<input type="checkbox"/> AUN03088	<input type="checkbox"/> AUR03088	£29.99
EU	<input type="checkbox"/> AEN03088	<input type="checkbox"/> AER03088	£34.99
World	<input type="checkbox"/> AWN03088	<input type="checkbox"/> AWR03088	£40.99

4-issue subscription

	New	Renewal	
UK	<input type="checkbox"/> AUN03084	<input type="checkbox"/> AUR03084	£15.99
EU	<input type="checkbox"/> AEN03084	<input type="checkbox"/> AER03084	£17.99
World	<input type="checkbox"/> AWN03084	<input type="checkbox"/> AWR03084	£20.99

I wish to pay by:

- ☐ Cheque (payable to Tau Press Ltd)
- ☐ Postal order (payable to Tau Press Ltd)

Non-UK subscribers can still use credit cards to subscribe.

- ☐ Please tick here if you require a receipt
- ☐ Please tick if you do not wish to receive mailings from other companies

Please send me the following issues:

<input type="checkbox"/> Issue 262, Jul 2003	£4.80	£5.30	£6.90
<input type="checkbox"/> Issue 261, Jun 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 260, May 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 259, May 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 258, Apr 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 257, Mar 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 256, Feb 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 255, Jan 2003	£4.20	£4.70	£6.30
<input type="checkbox"/> Issue 253, Dec 2002	£4.20	£4.70	£6.30

NAME

ADDRESS

TELEPHONE NUMBER

E-MAIL

Post your completed Acorn User subscription/back issues form to:  
Acorn User, Tau Press, 28a Middle Hillgate, Stockport, Cheshire SK1 3AY  
Have a query? E-mail [ausubs@acornuser.com](mailto:ausubs@acornuser.com).





CASTLE

**Gives  
you a  
taste  
for  
the  
web**

**Oregano<sup>2</sup>**

**The best RISC OS  
web browser.  
New version out now with  
great new features**



CASTLE

Download a FREE trial version from  
[www.castle.uk.co](http://www.castle.uk.co)

**or call 01728 723200  
Freefax 0800 783 9638**

**Order now!**

Castle Technology Ltd, Ore Trading Estate,  
Woodbridge Road, Framlingham, Suffolk IP13 9LL UK  
email: [sales@castle.uk.co](mailto:sales@castle.uk.co) [www.castle.uk.co](http://www.castle.uk.co)  
E&OE



# IYONIX



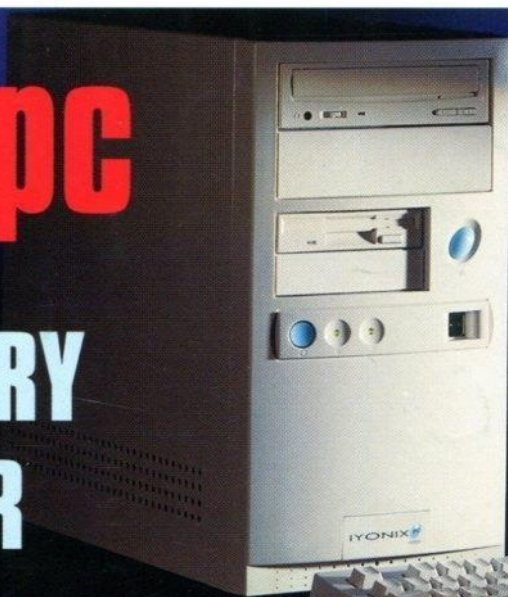
engineered from the inside **out**

# IYONIX pc

WITH **FREE**

## 6-IN-1 MEMORY CARD READER

(worth over £40)



**SPECIAL OFFER!**

Free card reader worth £40

From

# £1249

inc vat  
delivery £20

The IYONIX pc is the superb new RISC OS computer from Castle. It is a dream machine for leisure, business and creative RISC OS users. For a limited period we are offering **FREE** a 6-in-1 memory card reader. This makes transferring your photos, audio and media files amazingly quick and easy.

The IYONIX pc is available in 3 hi-spec versions:  
100GB HD/512MB DDR RAM/CDRW  
80GB HD/128MB DDR RAM/CDRW  
40GB HD/128MB DDR RAM/CD

All three models use an XScale processor and the ARM instruction set running at a breath-taking 600MHz. They have accelerated high resolution graphics of up to 2048 x 1536 pixels in 16 million colours, a UDMA100 hard drive and 200MHz DDR memory. IYONIX is the top choice RISC OS PC.

Order now! – special offer ends on 31st August 2003!

**Tel: 01728 723200**  
**www.iyonix.com**



There is also a wide range of monitors, printers, scanners and other peripherals. Call now for details!

### IYONIX PC SPECIFICATIONS

#### MEMORY/HD/CDRW SPECIFICATIONS

Hard drive	40GB or 80GB or 100GB (model dependent)
CD/CDRW	48-speed read (24-speed re-write, 48-speed write)
Floppy drive	Standard 3.5" supporting ADFS, DOS and Atari from 360K to 1.6MB
Memory	128MB or 512MB 64-bit 200MHz DDR RAM (model dependent)

#### CASE – MicroATX midi tower

2 x 5.25" bays	'Soft On' switch on front
3 x 3.5" bays (1 hidden)	'Reset' recessed on front
4 x PCI slots	
Dimensions(mm)	360H x 185W x 402D (must stand min 65mm from wall)

#### PSU

Input 115-230 volts 50-60Hz  
250Watt PSU with silent mode  
On/off switch

#### MOTHERBOARD FEATURES

Size	MicroATX
Processor	600MHz XScale 80321
Sound	CD quality AC97, 16bit soundblaster compatible
Unique ID	MAC address
PCI signalling	3.3v
Video	Resolutions of up to 2048 x 1536 pixels in 16 million colours

#### EXTERNAL PORTS

2 x RS232 Serial ports  
10/100/1000 base twisted pair networking port  
Audio in socket  
Microphone socket  
Audio out/Headphone socket  
Video  
4 x USB (2 front, 2 rear) – USB-to-parallel cable also available

#### INTERNAL CONNECTORS

2 x IDE connectors UDMA100 supporting 2 drives per connector (1 occupied)  
32-bit EASI module expansion socket (2 slot backplane required)  
FDD connector (occupied)  
DDR RAM socket (occupied)

#### PCI EXPANSION

2 x 64-bit; 2 x 32-bit  
(1 – nVidia Geforce 2 MX400 graphics card,  
1 – USB 1.1 expansion card USB,  
2 – unoccupied for customer use)

#### OPERATING SYSTEM

RISC OS 5 held in 4MB FLASHROM  
(field upgradeable)

#### KEYBOARD

UK 105 key, soft-touch, membrane USB keyboard

#### MOUSE

3 button USB mouse

#### SOFTWARE

Writer +	Fireworkz	Oregano 2
MessengerLITE	Dialer	CDBurn Lite
plus many other applications and demo software		

IYONIX, the IYONIX logo and RISC OS are trademarks of Castle Technology Ltd.  
XScale is a registered trademark of Intel Corporation.  
All other trademarks acknowledged. E&OE

**Other specifications available:  
call 01728 723200 or visit  
www.iyonix.com**



CASTLE

Castle Technology Ltd  
Ore Trading Estate  
Woodbridge Road  
Framlingham  
Suffolk IP13 9LL

Tel: 01728 723200  
Fax: 0800 783 9638  
E-mail: sales@iyonix.com  
Internet: www.iyonix.com