

Developers' Newsletter

No 27 - October 1992

Contents:

General News

Acorn's announcement of a new product range
New Special Offers for Developers
Acorn Pocket Book
Developer Discount Scheme Price List
RISC OS 3 ROM upgrades
Developer Support in 1993
New telephone and fax numbers
Acorn Replay VideoClip Collection One
Software Protection Scheme
Acorn Product Directories

Technical News

!Reserve, !Request and !Alloc
New mode - please test
New modes for Games Developers
A reminder about screen mode independence
Window Manager fault - and workaround
Hints and tips for 'future-proofing' your applications
Notes for Hardware Developers
Technical Reference Manuals
Draft RISC OS 3 Programmer's Reference Manual
Replay
Acorn Universal Network - help for Developers

News from non-Acorn sources

Freelance programmers

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*Developer Support
Acorn Computers Ltd
Fulbourn Road
Cherry Hinton
Cambridge CB1 4JN*

*Developers' direct line: 0223 254248
Direct fax: 0223 254264*

Acorn 

General News

Acorn's announcement of a new product range

On 27 August, Acorn announced details of its exciting new product range for the autumn. All Registered Developers were invited to a meeting in Duxford on 26 August and those who attended were given details of the new products. Those Developers who were unable to attend were sent packs of information similar to the ones given to the meeting attendees. If you did not receive your pack, please contact us and we will send one.

New Special Offers for Developers

All Registered Developers should have received details of special offers on certain systems from the new range. Please contact us if you did not receive these. Special Offer details for the Acorn Pocket Book will follow. We had hoped to mail them with this Newsletter but one or two details still have to be finalised.

Acorn Pocket Book

If you are considering developing products to run on the Acorn Pocket Book, you will require, as a minimum, as well as your usual Acorn Archimedes computer, the following items: a PC, the parallel link, the Acorn Pocket Book itself and A-Link. You will also need a copy of Psion's C programming environment, SDK. We are discussing the most effective ways of making these available to you and will communicate further when we have more details.

Before embarking on development for the Acorn Pocket Book, you would probably find it useful to attend the Psion Series 3/Acorn Pocket Book Developers' Conference which is being held in London on 9 and 10 November. The conference is designed both for those just starting to develop for the Pocket Book or Series 3 and for the more experienced Series 3 programmers and will cover both technical and marketing issues. The fee for the conference is expected to be £100 exc VAT which includes the conference itself, lunch, tea and coffee on both days, plus dinner on the evening of 9 November. Accommodation, bar bills and travel are not included.

Psion will be writing to you to provide further details. If you intend to develop products for the Acorn Pocket Book, I hope you will make every attempt to attend or send a representative to the conference.

Developer Discount Scheme Price List

The Developer Discount Scheme Price List, with details of how to order, was enclosed with the Special Offer forms and details. Please ensure that you use this list - dated September 1992 - when ordering items under the scheme.

RISC OS 3 ROM upgrades

Developers who purchased RISC OS development sets of EPROMs should have received a letter giving details of how to upgrade to the released ROM upgrades. If you had

already upgraded to RISC OS 3 v 3.10 EPROMs via the Developer upgrade purchase scheme, please bear with us; we are sending packs out as quickly as we can. We hope to have everyone upgraded to ROM sets by the end of October.

Developer Support in 1993

We have listened to comments from Developers about the Developer Support Scheme and have revised the service we offer to take these into account. One of the principal things you will have noticed is that we now make special offers on new additions to the Acorn range to enable Developers to keep up-to-date with the latest equipment. We will shortly be sending you a copy of the revised leaflet describing Acorn's support for Developers.

Since subscriptions were introduced in 1991, we have managed to keep the rate unchanged. From January 1993, the subscription will be raised to £180 plus VAT. Developers joining the scheme from September 1992 will be asked to pay the new subscription.

Please note that subscriptions are due in January and invoices will be sent out then to Developers currently registered.

New telephone and fax numbers

From 5 October 1992, Acorn telephone and fax numbers will change. The main Acorn numbers, for both Fulbourn Road and Newmarket Road offices, will be:

- telephone (both offices) 0223 254254
- fax (Fulbourn Road) 0223 254262
- fax (Newmarket Road) 0223 254270

Direct dial numbers for Developer Support are as follows:

Telephone	0223 254248
Fax	0223 254264

Acorn Replay VideoClip Collection One

Acorn has recently released a Replay Sampler CD-ROM. We will be sending a copy to each of you, with our compliments, in the next couple of weeks. Details of minimum hardware requirements will be enclosed with the disc. Those who purchased the Developers' Special Offer (A540) System should already have received their copy of the Replay Sampler CD-ROM

Software Protection Scheme

Over the last few months, Acorn has been developing a Software Protection Scheme for use by developers. Whilst we would be happier if software was not protected at all, we realise that some Developers will wish to incorporate some form of protection in their products.

The Acorn Software Protection Scheme, although based around the presence of the unique ID chip fitted to recent products, is not intended ever to lock the user out of using a software product. The approach taken, when the software is run on a machine with a different (or no) ID chip, is to provide, on the screen, a very visible warning which cannot be removed.

The beta release of the Protection Scheme software and documentation is now available. Please contact Developer Support if you would like a copy.

If you follow this scheme explicitly, you can use the Acorn Protection Scheme logo. Note that this scheme has been discussed extensively with Developers, with LEAs and with users to gain their support.

Acorn Product Directories

We have recently audited a good selection of products from our library against the RISC OS class criteria sent to us by the producer for entry into the Product Directory database. We have been disappointed by the number of titles which claim to be RISC OS Compliant but that, in practice, do not reasonably meet the RISC OS Style Guide criteria.

To enable those Developers with RISC OS Compliant

product to benefit from their investment, we reserve the right to re-class product entries in any published Directory if the appropriate criteria are not reasonably met.

It is envisaged that The Acorn Education Directory Issue 4 will provide full entries for RISC OS Compliant and Compatible Software which has a 'Archimedes look and feel' and that RISC OS Co-existent software, software with an '8-bit look and feel' and software which requires an emulator will be listed without a full description.

If you feel that you need guidance on any aspect of the Style Guide content or advice on any area not currently covered, we will do our best to assist.

Please note that the Style Guide is a constantly evolving document. We are working on a new version and through this newsletter we will bring you news of updates.

Technical News

!Reserve, !Request and !Alloc

We apologise to all developers who have encountered problems using !Reserve and !Request as sent out with Newsletter 26. There were faults in the software which have now been fixed. Thank you to those of you who alerted us to the problem.

We will shortly mail to you Developers' Disc 27 which will include the fixed programs. When you receive them, you should update your master versions of the applications with those supplied on the disc 27. !Request has been enhanced and has a slight functionality change to allow the input of a product description. !Reserve now allows the reservation of scrap directory names.

A new application called !Alloc has been developed to allow the electronic request of items such as SWI Chunks. !Alloc allows the allocation requests of the following items:

- Error blocks
- SWI chunks
- Module/Manufacturer IDs
- DrawFile tag and object blocks
- Printer driver related allocations
- Device Claim Protocol allocations
- Filing systems

!Alloc is currently in Beta form. We will ship the application to you on the Developer Disc for you to use when requesting allocations. We have checked it in-house but there is nothing like real use for finding bugs! We would be grateful if you could give us feedback on using the application, along with details of any bugs you encounter.

Electronic templates such as Reserve, Request and Alloc help us to speed up our response and to provide you with a better service. Please assist us by using them to submit your requests.

New mode - please test

As a result of Acorn's continued support of the growing Special Needs market, a new screen mode, mode 22, has been introduced into RISC OS 3, version 3.10. This mode gives visually impaired users larger icons, text etc. It is supported on monitor types 0 and 1. Developers who wish to ensure that their software will benefit in this growing market are advised to check their products in this mode, with particular respect to the size of dialogue boxes, menus, etc.

New modes for Games Developers

Two new screen modes have been introduced to assist games developers, in particular, to produce software that will work on a computer with a VGA monitor whilst using a minimum of memory. It may also help in moving bit-mapped graphics from other platforms onto RISC OS based machines.

The soft-loadable screen modes 47 and 48 are based around 320 x 400 resolution in 16 and 256 colours respectively. The horizontal and vertical scan rates have been chosen to match those of a VGA monitor; in particular this means 60 Hz vertical refresh.

If you want a copy of this screen mode module, please contact Developer Support.

A reminder about screen mode independence

Please may we give another reminder to all software developers of the need to produce screen mode independent software wherever possible? The industry is increasingly moving towards VGA/SuperVGA displays and beyond, and monitors based on these standards will become increasingly common. Note that our Canadian office has indicated again to us that monitors, and hence software, based only around PAL TV 50Hz screen displays, are not acceptable in Canada owing to the 50Hz screen flicker. Although 50Hz display update rates are more acceptable in Europe currently due to the PAL TV standard, research shows that tolerance to flicker varies greatly between individuals and the 100Hz TVs, now becoming available, will set new standards for users. It is accepted that the trend away from TV-based display standards within the computing world does have an impact

on those hardware developers supporting Video connectivity; currently there is no easy, low-cost solution to this problem!

Window Manager fault - and work-around

Please note that there is a fault in the Window Manager for RISC OS 3 v3.10 which concerns 3D slabbed icons in windows. If you use the 3D slabbing, and as a result of clicking on a slabbed icon your application quits, then the machine may crash in some random manner.

The workaround for this is to wait, once the icon has been clicked, until the mouse buttons have been released and then quit the application. The workaround code should be loop calling OS_Mouse and then Wimp_Poll (with an event mask of zero) until OS_Mouse returns the buttons as being released. It will then be safe for your application to exit.

We will include, on Developers' Disc 27, a C application that demonstrates how to work around the problem.

Hints and tips for 'future-proofing' your applications

Do not use the memory page size alone (as returned by OS_ReadMemMapInfo in R0) as an indicator of total memory size. The total memory size should be determined by issuing SWI OS_ReadMemMapInfo and then multiplying the value in R0 (the page size) by the value in R1 (the number of pages).

Some existing applications read the page size, and if it is less than or equal to 8K, they assume they are on a 1MByte machine.

Future hardware may have different memory management techniques allowing more memory pages. There could therefore be machines in the future with small memory pages (eg 4K) which have more than 1MByte of memory.

Notes for Hardware Developers

A3000 computers have a metal blanking plate screwed to the rear which is removed when an internal expansion modules (sometimes known as a mini-podule) is fitted. The screws are then used to fit the expansion card.

The new A3010, A3020 and A4000 machines have a plastic blanking panel which slots into the case. No screws are required to hold the panel in place and none are supplied with the computer.

When you supply internal expansion modules for the new A3010, A3020 and A4000 machines, you will need to supply two 2.5mm by 8mm fixing screws.

We apologise for the change and did consider including two screws with each computer. It was felt, however, that they would be easily mislaid and it would, therefore, be better if they were supplied with the upgrade for which they would be needed.

The new A30x0 machines, although using plastic cases, are inherently designed to meet the European EMC specification EN 55022. Although this specification is not

mandatory yet within Europe, the intention is to make the new products meet the specification early, wherever reasonably possible. Fitting a mini-Podule upgrade to an A30x0 machine requires a plastic insert to be removed and discarded together with a metal EMC shielding plate. A replacement metal plate that is suitable for a fitted mini-podule is currently under development and will be made available to developers in due course for shipping with hardware upgrades. We will keep you informed of developments on this item.

For those developers selling standard single-width expansion cards, you may wish to be reminded that Developer Support can supply T-pieces (for linking the expansion card to a single-width blank panel). These are sold in multiples of 100 at £70 plus VAT. As promised, we have also introduced the single-width blanking panel as an item that can be sold to Developers. The cost is £80 plus VAT per 100. Please send your order with a cheque, as usual, to Developer Support. Please do not include other items on orders for T-pieces and blanking panels as these are supplied direct from Developer Support whereas most items are supplied from our warehouse.

Technical Reference Manuals

Technical Reference Manuals for the recently introduced machines are currently being finished and will be available towards the year-end. There will be TRMs for the A4 and a combined one for the A30x0/4000 machines. A revised A5000 TRM is also being finalised which incorporates details of the more recent A5000 configurations. Prices and product codes are given in the Developers' Discount Scheme Price List. If you have an urgent need for specific parts of these TRMs, please ask Developer Support; some draft content may be available.

Draft RISC OS 3 Programmer's Reference Manual

The latest (September) draft of the RISC OS 3 Programmer's Reference Manual (PRM) will shortly be available. This draft represents virtually the final textual content, but does not yet include an index. If you require a copy of this, please send a cheque for £95 plus VAT to Developer Support. Please note that the section on printing has been substantially revised and expanded.

Replay

A document presenting an overview of the Replay Compression process is enclosed with this newsletter. If you wish to have a licence for the compression code for your own use and you believe you have the capability to produce frames of a suitable quality as described in the document, please discuss this with the people named on the document.

If you need a licence to provide ARMoview with your software, please write, on official headed notepaper, formally to request one. This is the easiest way for you to provide your company details which are required for the legal agreements to be drawn up. The licence fee for the right to distribute ARMoview is £100 plus VAT.

Acorn Universal Network - help for Developers

There will soon be available an AUN developers' disc which will enable a third party to write a device driver module to work with AUN software from Acorn, and then to create an AUN client ROM for a third party network interface card. The main contents of the disc are:

A specification of the Driver Control Interface (DCI) - the interface between a device driver module and the rest of the AUN software;

Sources of an existing device driver (Acorn Ethernet 2) written to conform to the DCI spec - for reference only;

Acorn AUN modules to be included with a third party device driver module to form an AUN client ROM for a third party network interface device. These AUN modules (currently) are:

InternetA	version 1.05
Net	version 1.04
Netmsgs	version 0.01
BootNet	version 0.81

News from non-Acorn sources

Freelance programmers

There are probably, among you, programmers who work on a freelance basis or companies who offer programming services. It has been suggested to me that it might be useful if Developer Support had a database of people whose

names could be given to anyone requiring programming work done on a contract basis.

If you are interested in putting your name forward, please write in giving details of the languages/programming environment(s) you are familiar with, what sort of work interests you, contact details, etc.

The database may take some time to compile, as it will be only a background activity, and we may come back to you for more details if we need them. If you provide your name for inclusion, we will assume that you have no objection to us providing it and relevant details to enquirers.

Enclosures:

Acorn Replay Compression Process Overview