Eureka

The magazine for members of

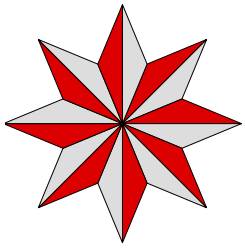
The ARM Club

The WimpBASIC way to program

Choosing your Internet Service Provider

Tackling PC Problems on the Risc PC

Using DrawAid3 when you can't sketch it freehand



How to be Bottom in Shakespeare's Dream world

Issue 23 — Autumn 1997

New Logo Costs £5,000,000

The Club's new logo has now been adopted and is gradually taking over as new documents are produced and stationery printed.

Graphic design doesn't come cheap and many people will think that five million pounds for a new logo is a little on the expensive side.

Fortunately, we are not talking about The ARM Club's logo here. The five million is the reported cost of the BBC's new logo.

The Club's design, like all the other services provided by the Committee who run The ARM Club on members' behalf, cost us nothing. We are extremely fortunate in having among our members a variety of skilled people who are generous with their time and talents.

This is most apparent in every issue of Eureka, which is filled with contributions from members offering the benefits of their own knowledge and experience, but there are many hours of work that go on behind the scenes to keep the Club running efficiently.

Everyone is welcome to take an active part in the Club's affairs. Eureka needs a constant supply of articles on all subjects, for readers at all levels of computing skills. Help for beginners and guidance for those venturing into more specialised areas are equally welcome.

Programmers can distribute their work through the Club's PD Library and members with more advanced computer knowledge can join the elite group who answer the problems posed for the Club's Technical Help Service.

Comments and suggestions on any aspect of the Club's activities will be carefully read and, if possible, acted upon. There is a list of addresses and phone numbers on our Contacts page at the back of the magazine.

Peter Jennings

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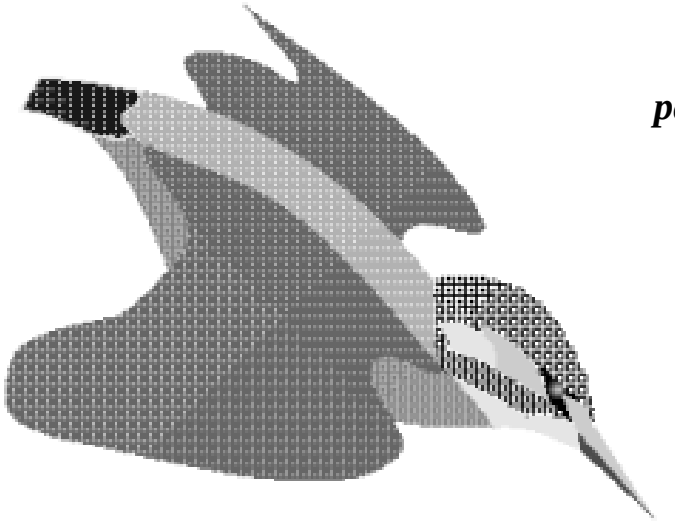

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How To Be Bottom

Rilla Paterson brushes up her Shakespeare and puts How to be Bottom top of the class, after a ticking off for some lapses in grammar and unfortunate apostrophes.

To many people, Shakespeare is an acquired taste and the way his plays are taught in the classroom may contribute to the way we view The Bard in adult life. It is therefore interesting to find a package whose aims are to open up the world of Shakespeare by giving children computer-based experiences linked to one of his plays — and what better choice than the time-honoured favourite *A Midsummer Night's Dream.*

I was instantly curious about this program. It had originally been designed to support a touring exhibition by the Royal Shakespeare Company and it is often surprising to see how involved junior children can become when confronted with the full force of a major cultural event when it is presented in an accessible and exciting way. But Shakespeare is complex and a full appreciation of the plot with all its petty jealousies and intrigues would be quite a challenge. To what extent would this program "open up the world of Shakespeare", if at all, or would it content itself with merely a brief exploration of life in Shakespeare' s time and a project or two about Puck and the love potion? This review attempts to find out.

The User Guide

The program comes from Topologika Software and the amusing title *How To Be Bottom* is guaranteed to put both teacher and pupil in a good mood as they approach the project for the first time. The short user-friendly guide is well-presented and colourful but I confess to having felt mild irritation at the programmer' s misuse of the humble apostrophe. The main title screen for the 'Design A Stage Set' is headed "A Midsummer Nights Dream". Whoops! Later on in the Guide, one of the loading instructions

reads: “Due to it’s length” ... Ouch! Still later we find the title appears as “A Midsummer Nights’ Dream”. Crikey — I thought this was an English lesson. Perhaps I am being fussy but I think educational material should be correct in every detail and a simple proof-reading would have put these right.

The package

The program is large, occupying seven discs, and some of the files need to be unsquashed but the instructions for this are very clear.

Discs one and two contain very large programs with associated files and the utilities needed to access them. I used an A5000 with the recommended 4MB. Getting started was rather a minefield and, because the files did not always behave as indicated, I had to resort to the Helpline, which proved very prompt and efficient. The discs revealed two principal programs but their icons are confusingly labelled. *Music in Shakespeare' s Time* is labelled *Shake* and can be accessed only by loading a utility called *!MagpiRead*. The second program, *Sound Box*, is labelled *!MusicBoxS*. This, too, has an associated program entitled *!MBShake* which is supposed to be used to create MusicBox files for playing on MusicBoxS, but it did nothing at all, presumably because the full MusicBox program — not supplied — is needed to run it. This part of the package proved to be an unusually difficult corner in an otherwise very lucid arrangement.

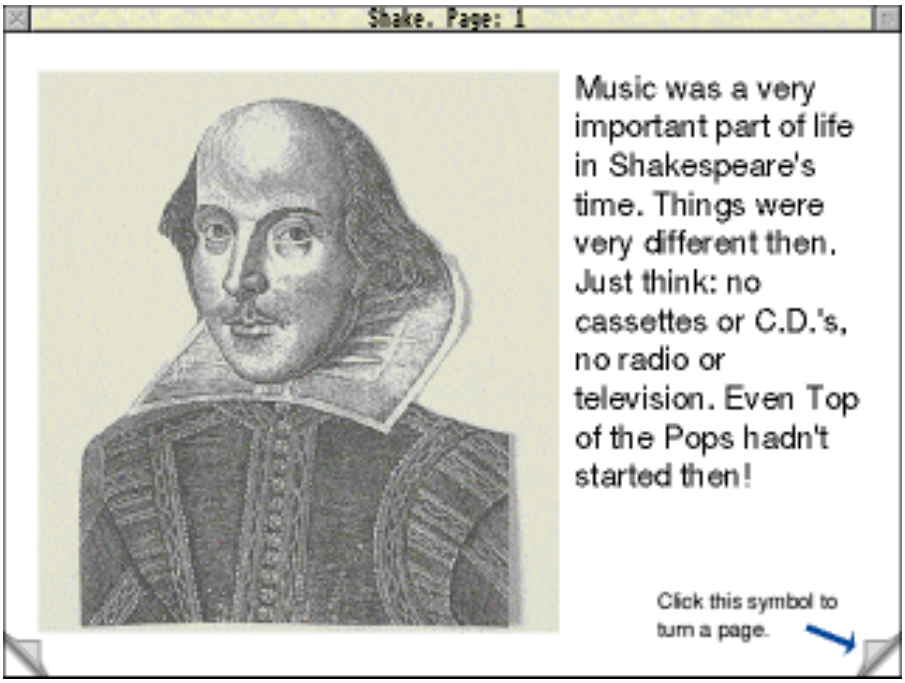
Discs three and four contain directories of files which can be used only with the cross-curricular program *My World*. This program is not supplied but the User Guide claims that many schools have it and

my enquiries bear this out. Accessing the *Sets* files enables designs to be built of all the sets for the play. Similarly, the child can create **Posters** and **Spells** from the relevant directories. There is also a wealth of ClipArt stored here.

The remaining discs are not directly concerned with the stated aims of the program, but they would be useful in other ways. Discs five and six contain 43 textfiles of almost the complete works —very useful for playbashing in the drama class —and the last disc contains a demonstration copy of 4Mation's *Betsi*, an adventure game.

Music in Shakespeare's Time

This is a very well-presented history, with attendant music, of four instruments of Shakespeare's time: the shawm, curtal, crumhorn and tabor. All the icons are self-explanatory. Full marks for ease of use and sampled sounds. Also featured is a convincing galliard, grinding away in that dreadful Elizabethan drone that makes me glad to live in the 20th century. The histories were accompanied by excellent pictures and it would have been useful to have them included in the huge number of clipart images supplied but, alas, they were not available as Draw files. The integration of Music with Language would be guaranteed to hold the attention in the classroom. Minus One Brownie Point for spelling "superseded" wrong in embarrassingly large letters; otherwise first-rate.



A page from Music in Shakespeare's Time

SoundBox

The four instruments mentioned previously are also featured in *SoundBox*. This is well-presented and very easy to use but I am slightly ambivalent about its inclusion. The four instruments appear in the form of columns of notes and the mouse is used to make them play. The sounds are very similar to one another and none of them is very convincing. Moreover the tabor is pitched — hardly an authentic feature. This is supposed to give the children the opportunity to compose using a simple 'notation system' but the extent of this is simply that the boxes at the top play higher notes than those below — in my view rather elementary. I also felt that the whole exercise was too remote, if only because the sound quality was disappointing compared to the excellent sampled sounds in *Music in Shakespeare' s Day*However, the notes all work and a series of icons similar to a cassette deck can be used to record and play the child' s own simple compositions. Moreover, the playback is very faithful in time and in tune, a feature not always apparent in junior music programs. There is also a repeat feature, a volume control and an engaging little metronome, controlled by an amusing graphic earplug.

The clip art files

There are 17 files of good quality and detailed clip art, each containing several images. They are logically grouped in directories and can be manipulated as completely independent Draw files but they are especially easy to use in the creation of street and woodland scenes to illustrate the pupil's various compositions within the associated framework of the My World program. The User Guide is clear on how to move these pictures around, and group them usefully. The clip art items are numbered rather than labelled, and I immediately set about re-naming them so I could find what I wanted.

Illustrations in My World

Here the package really comes into its own. Using the directories Set, Spell and Poster**,** the child has all the tools needed to create four scenes for the play, (street, interior, Athens from a distance and woodland), a magic spell and a poster in an infinite variety of ways. The wealth of clip art is

Write your own spells

dropped from a self-explanatory toolbox and can be dragged, scaled, inverted and erased. Text can be added and, that too, can be scaled. Using the Spell directory, the children can experiment with spell-creation by associating images with supplied text. They can also type their own words, and even scale them. The **full** screen can be reverted to the desktop for manipulation. The only difficulty I experienced with Poster was that my own !Fonts and some of the clip art were not available in the toolbox for some reason but, nevertheless, I managed to create some convincing artwork and it looked good when printed out. The other drawback is that the images take several seconds to re-draw each time they are scaled, and patience is required. This part of the package was a rewarding way to integrate language and design.

Betsi

The Betsi disc is a very short introductory demo of what is offered by the full program. It is an engaging story of an animated puppy who roams the streets of Shakespeare' s London in search of a good home, accompanied by music with an Elizabethan flavour. The adventure game style is accessible and foolproof and the authentic distressed-doggie sounds would appeal to juniors. The text appears in a box under the illustrations and the user clicks a forward arrow to proceed.

One of the scenes visited by the puppy is supposed to be the Globe Theatre but I never got there, even by careful scrutiny of the User Guide. Anyway, no doubt the full version has a happy ending. Betsi is not remotely connected with A Midsummer Night's Dream but would be valuable in developing reading skills.

Finding the right level

The package is advertised for both junior and secondary schools. This whole presentation was certainly very accessible and appealing to junior children and those with special needs. All the material is relevant to the tasks to which it might be put in the classroom, and the children's User Guides are as well-presented and easy to follow as those intended for the teacher.

It has its limitations, though. There are only three characters: Puck, Titania and Bottom. There still remains, therefore, the great quantum leap from sticking fairy clip art onto woodland posters to understanding why Titania was so reluctant to relinquish the Changeling Boy. Topologika have rather lost sight of their audience by including the mighty opus of the Complete Works. While the full text of the *Dream* would be an asset, it is unlikely that juniors would use the rest.

Still, one has to start somewhere and these discs contain a great wealth of material which could be immensely useful for all kinds of project work in the hands of a skilful teacher. The Elizabethan crowds that flocked to hear the Bard were the common people, not an elite. Present-day children can be stimulated to discover more about Shakespeare by becoming familiar with one or two aspects of the *Dream* and, coupled with a visit to the exhibition for which this package was designed, use of this program could do much to break down the barriers so often experienced nowadays. Anything that seeks to maintain the interest in such an important part of our heritage is to be applauded, and here Topologika have shown an unusual initiative.

How To Be Bottom requires a hard disc and RISC OS 3.1 with a minimum of 2MB.

How to be Bottom
Price: £35+VAT
Site licence: £70+VAT
Supplier: Topologika Software
Waterside House, Falmouth Road
Penryn, Cornwall, TR10 8BE
Tel: 01326 377771
Fax: 01326 376755
Email:
sales@topolgka.demon.co.uk

WimpBASIC

Experienced programmer Mark Smith looks at a new application designed to help the less skilled produce multitasking WIMP masterpieces of their own.

For a long time PC Windows programmers have had the likes of Visual BASIC and Borland Delphi for rapid development of simple multitasking software.

Now Clares have released a package which claims to allow reasonably small programs to be written without a knowledge of WIMP programming in the shortest possible time for RISC OS. So what is it like to use?

The package is supplied on two discs with an A4 sheet of instructions. The manual itself is supplied as a StrongHelp document. This has disadvantages in that it can be difficult to use an on-screen manual at the same time as developing an application, particularly if you have limited screen area. On the plus side, StrongHelp provides excellent point and click link facilities that you wouldn't get with a paper manual.

Installation

The installer will install a limited number of copies, two in the case of my review copy, onto hard disc. Installation is simply a case of dragging the application out of the installation window onto the hard disc.

Deinstallation is achieved by dragging the WimpBASIC application back to the installation window. This renders the installation unusable and recredits the master disc so that it can be installed elsewhere.

Getting started

Loading up the WimpBASIC application and clicking on the iconbar icon displays a screen showing a number of general parameters and a button for each item to design: Windows, Menus, Variables, Code, Sprites, Event handlers and General configuration.

Window Designer

Clicking on the Windows icon brings up a list of defined windows, initially none. From here there are facilities to create new windows, export windows for use in other applications or rename a window.

Creating a new window is rather reminiscent of using Acorn's window template editor, FormEd, although there are additional functions for specifying code procedures to be called in response to events and some nice features, such as border types being selected from a palette instead of having to experiment with numbers.

Those people used to using Acorn's Toolbox resources editor, ResEd, may be disappointed at the lack of predefined common dialogue boxes such as *Save As* and *Print*. Neither do you get the selection of predefined gadgets that the Toolbox supplies, although most are fairly simple and can be created easily from icons.

It does not appear to be possible to get a WimpBASIC application to open multiple instances of the same window. Therefore, WimpBASIC isn't suited for writing things like multi-document editors. However, given that the purpose of the package is for writing simple multitasking applications, that probably isn't a serious limitation.

Menu Designer

Clicking on the menu icon brings up a list of defined menus, again none are defined initially when you start a new project. Again, options are provide to create, rename and export menus. Clicking on the create option brings up a display showing an empty menu. Entries may be added to this menu and the selection of each entry may result in a procedure being called, or menus may be linked to other menus or windows. It is also possible to attach keyboard short-cuts to menu entries.

Curiously, I couldn't find any way of reducing the number of entries in a menu without recreating it from scratch.

Program Variables

This window allows you to define a selection of global variables. Variables are structured in groups which will help to structure the code.

Some special groups are provided which cannot be edited, although the manual points out that these are for writing low level functions and that most people won't need to use them.

Code Editor

The code editor allows you to create the procedures used in your design. The code editor itself is fairly similar to Edit with a few differences. One of those differences is that variables, keywords and so on are displayed in different colours, making the code easier to read. A list of supported keywords is provided in the manual and full details are given for those that differ from BBC BASIC.

In general, the additional keywords provided to manipulate the user interface are fairly straightforward to use. For example, the command to open a window is Open <Window name>.

Conclusion

WimpBASIC does what it aims to do —namely provide a programming environment for producing simple Wimp applications without needing to know anything about the RISC OS Window Manager (although a general overview of Wimp terminology certainly helps). The package has some limitations —the window and menu editors are not as user friendly as ResEd and the lack of any means to reduce the number of entries in a menu is odd to say the least.

WimpBASIC is not the RISC OS answer to Visual BASIC or any of the similar Windows products. To be fair to Clares, they have never claimed that it is and, at just under £50, it's also a lot cheaper.

So, for the average user who wants to produce some simple programs of their own, this package may well prove very useful.

WimpBASIC
Price: £49.95 including VAT
Site licence: £235 including VAT
Supplier: Clares Micro Supplies
98 Middlewich Road,
Northwich, Cheshire, CW9 7DA
Tel: 01606 48511
Fax: 01606 48512
Email:
sales@clares.demon.co.uk
Web: www.stcoll.ac.uk/clares

Web Page Design

My apologies for the delay in this next instalment of World Wide Web page design.

Last time I gave you an example of both a background image for the web page (a tiled backdrop) and an inset image. These both work perfectly well but what about a combination of the two?

It is easier to show how a transparency works with the two pictures below.

The picture on the left shows the background and foreground images together, while that on the right shows the images when the foreground has had the transparency effect used, looking much more pleasing to the eye.

Just when you thought it was safe to get back on the Web, Andi Flower resumes his series on WWW page design with some details you just need to know.

The effect of using transparency is probably one of the most useful tools in Web page design, allowing images to be overlaid with backdrops and improving the overall look of the page both significantly and easily.

The non-transparent logo, hides the background tile and looks untidy.

The transparent image allows the background tile to show through.

The best way in which to achieve transparency depends on the type of images you are using for the creation of your Web page. In general, the two most common types are native RISC OS Sprites and GIF images.

In the case of sprites you should simply use the mask method in Paint to create masked areas in the foreground image where you wish the background to show through.

For GIF images, I would recommend a package such as !WebGif (available from the Club PD library) which will allow you to specify any particular colour as the one which you wish to become transparent.

It is possible to use an image as a link to somewhere. As in the previous article, links of the form:

```
<a href = "..."> link </a>
```

may enclose an image tag. For example:

```
<a rehf = "http://www.armclub.org
.uk"><img src = "Images/ClubLog
o"></a>
```

This would allow you to provide an image of The ARM Club's logo and when someone browsing on your site clicks on this image, they will immediately be taken to The Club's home page.

Another important factor that you should take into consideration when you are designing your Web page is the fact that some people are going to be quite concerned about the cost of their phone bill while connected to the Internet. In order to keep these people happy and to ensure that they still get the same value and information from your page, you should include an alternative to the graphics you are using.

The HTML language provides a ready made method of doing this:

```
<img src = "Images/ClubLogo"
ALT ="The ARM Club">
```

This command will allow users to stop their Web browser loading images (thus saving download time) and yet they will still receive the title "The ARM Club" as specified by the ALTernative tag entered in the command.

Here is an example: Obviously, with the delay image flag set on the browser, the user will not see the background image either.

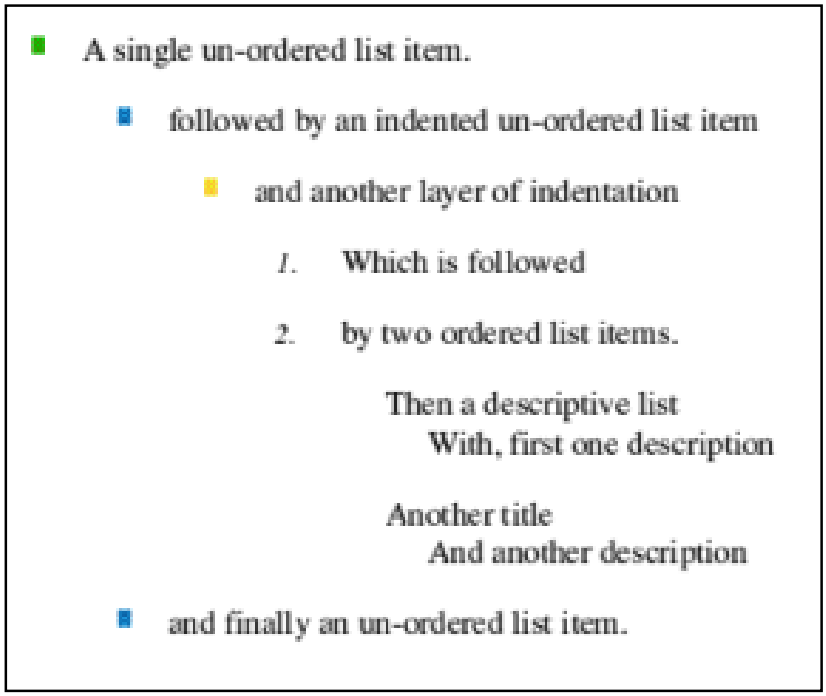
The one problem here is that the text looks a little odd because of its size. This is easily rectified by adding the following lines:

```
<h1>
 <img src = “Images/ClubLogo” ALT =”The ARM Club”>
 </h1>
```

and this will produce the image shown here:

That’s enough on images for now. It should be plenty to keep you occupied for some time. After all, you have to design the images first!

Next time around I’ll show you some more complicated uses of lists. In the meantime, see if you can manage to create a list that looks like the one shown to the right:



DrawAid3

A little BASIC programming skill can make up for a lack of freehand drawing ability on screen with the underrated DrawAid program, as Roger Price explains.

One of the penalties of progress in the Acorn world and the change to a windows based environment is the demise of the small BASIC program. We all appreciate the higher screen resolutions, ease of use and quality output of the RISC computers but the letters pages of the magazines often publish the plaintive cry of the frustrated programmer. Help is at hand, you can have your cake and eat it too, using your BASIC skills to produce high quality Draw files.

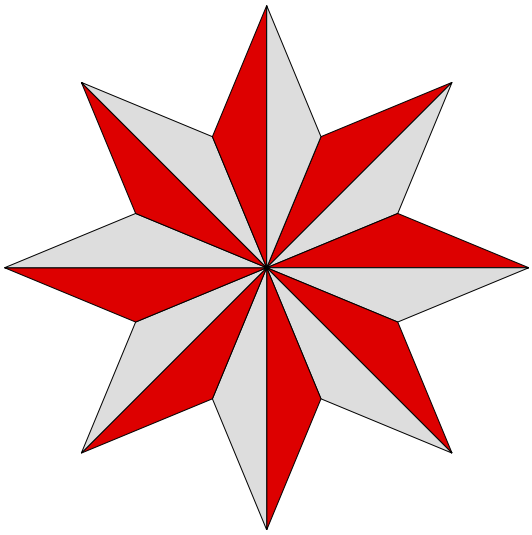
Over the years, I have developed a number of BASIC programs (originally for the BBC but now running on A5000s) to support the teaching of biochemistry. By their nature these programs included numerous formulae and diagrams which were potentially useful for handouts and publications. However, grabbing the screens and printing out the sprite files (even from high resolution modes) rarely produced acceptable quality. I turned to 'Draw' and the quality was fine, but for many purposes the freehand approach was not precise enough and there remained the irritating fact that I had already done all the work in producing the diagrams anyway.

At this point, enter DrawAid. For those readers who haven't encountered the program, DrawAid is a library of BASIC procedures that can be called from a conventional BASIC program to produce a Draw file as an end result. The outcome is that the programmer can utilise the accuracy of the computer's calculations to align objects in Draw. In practice the accuracy is likely to be limited only by the performance of the printer or other output device. Thus if you have ever programmed a diagram in BASIC, you are only a small step from converting your masterpiece to a Draw file. Better than that, the Draw file can still be edited, so you can take the programming as far as is expedient

and finish the job in Draw or in programs such as *Hatchback.*

By way of a non-chemical example, I have written a simple BASIC program to draw a star (on the Eureka disc as *stars*), as these are very easy to construct but very difficult to draw freehand in Draw. Running the program will produce a star on screen but if you grab the screen the printed output will be very 'jaggy'.

The program *dr_star* uses almost identical code but the product is a Draw file and prints out well, as well as taking only about one per cent of the memory used by a MODE 20 Sprite file (see *drawfiles star5l*).

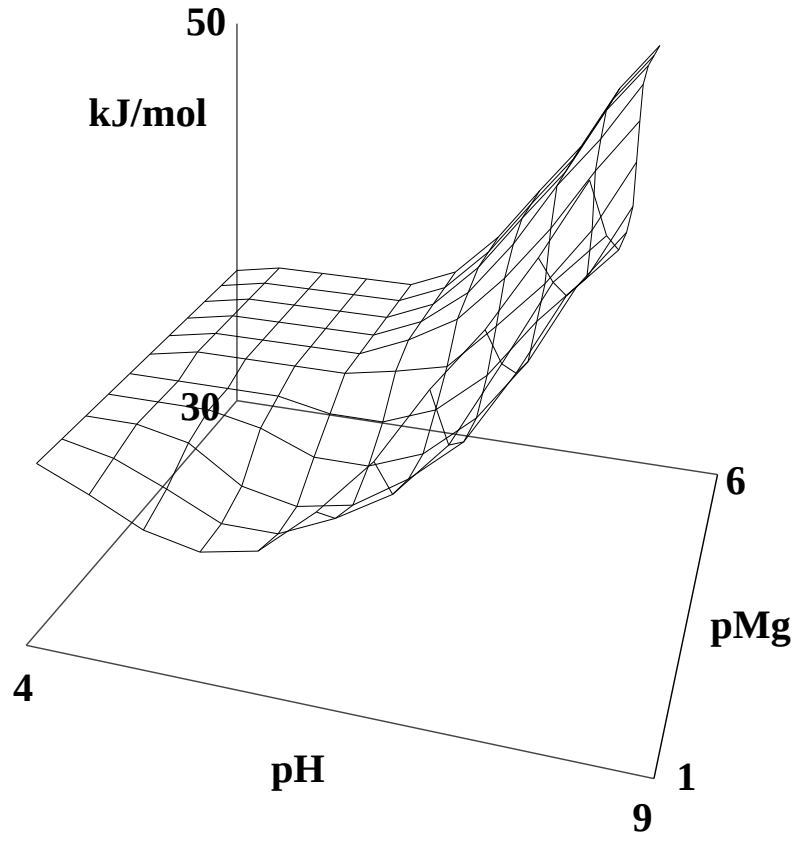


Difficult to draw freehand.

The program *all_star* develops the idea a little further and the computer calculates the equations of the lines and points of intersection in the star and then uses various fill devices to produce a variety of effects. Some sample Draw files are included in the *drawfile*s directory. Inspection of the program will show a simple structure and the ease with which BASIC interfaces with the DrawAid procedures.

DrawAid is now in its third edition, DrawAid3, and this version has a desktop look and feel about it. Loading the program is standard and the icon installs on the icon bar in the usual way. Thereafter things are different as clicking on the icon merely gives access to the DrawAid facilities within the directory. To use DrawAid you must double click on a BASIC program or drag the program icon to the DrawAid icon. Once the program is running, a message box appears to keep you abreast of developments and the Draw file produced is displayed and saved to a Draw file directory. Programs under development are conveniently written in Edit (or other editor) and so the entire process from writing the program to displaying the file can be seen on screen. This provides a more 'user-friendly' interface than earlier versions of DrawAid.

Features available in DrawAid3 are similar to those in earlier versions and comprise:



A pseudo 3D graph illustrating the hydrolysis of ATP.

• Procedures to draw standard objects such as triangles, polygons, circles etc with full control of line width and colour, fill colour and angle of rotation.

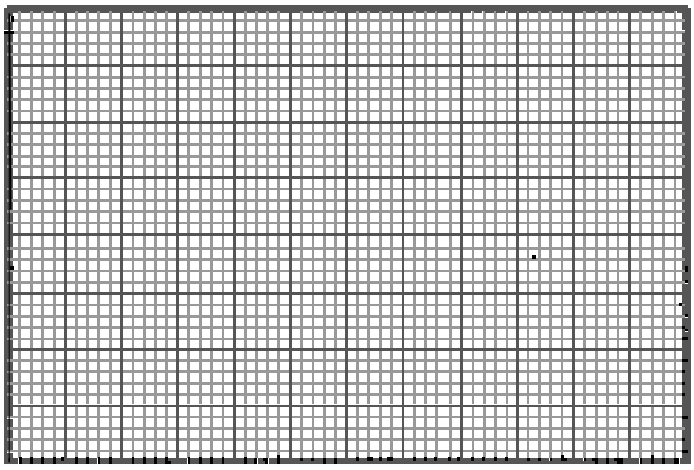
• Path objects which allow objects to be built up as they would be in Draw, or by relative plotting in BASIC. As with Draw, such objects can scaled, rotated etc.

• Text objects which allow text as outline fonts, system font or a supplied vector font to be incorporated into diagrams. A useful new feature is the support for the rotation of outline fonts.

In addition to these major features, DrawAid supports CSV file import, sprite import and manipulation and, although defaulting to 16 colours, will support extended greyscales and colours using the familiar RGB conventions. The latest version has a selection of symbols built in to the library and has enhanced curve plotting features. The program disc comes with a well produced 64 page manual and a number of illustrated examples, many of which have an engineering air about them.

Although engineers will appreciate the precision of Draw files produced this way, the usefulness of the program extends far beyond engineering. As I explained above, I have used the program to produce structural formulae, calendars, family trees and various graphs and some examples are included on the disc. I have tried to supply some which illustrate the facilities of DrawAid3 so the formulae demonstrate the use of path objects,

the tree files the use of rotated text and so on. I have found graph drawing useful as 'graph paper' can be produced to any size or pattern and the program *all_graph* shows a useful program packed into 1200 bytes with a sample Draw file saved as *120×80*. Pseudo 3-D graphs are possible by applying simple transforms and one simple example (illustrating a question from the University of London P2 A level maths paper 6/96) and another, more complex, example (illustrating the hydrolysis of ATP) are also on the disc.



DIY graph paper

Problems? Well none really; the program appears bug-free and all crashes and disasters have been of my own making, but there are some points to watch out for:

• DrawAid3 makes more than one pass through the program. A certain amount of extra care is needed if you use DIM or RESTORE commands.

• The program defaults to mm and degrees rather than OS units and radians so if you forget, there are some bizarre results to be had!

• Despite the relatively compact nature of Draw files, small programs can produce large Draw files. If you remember, this is an advantage as you save memory by just saving the program; but if you forget, the 800K floppies do fill up rather quickly. As an example the *all_yr* calendar program is 4K but the Draw file produced is typically 45K.

• The last point to watch is one well known to BASIC programmers, DrawAid3 does become addictive!

DrawAid3
Price: £15 (post free) no VAT
Upgrade from DrawAid2: £10
Site licence: Usually a nominal sum, by negotiation.
Supplier: Carvic Manufacturing, Moray Park, Findhorn Road, Forres, Moray, IV36 0TP
Tel: 01309 672793
Fax: 01309 671272
Email: bill@carvic.demon.co.uk

Part 1: Under The Icon Bar

Ever knocked F12 and wondered what that little flashing cursor is? Well, that little cursor can give you all kinds of control over your computer, and allow you to customize it and configure it in ways you never dreamed possible. OK, it's just the command line, but it can do wonders for your desktop.

In the first part of his new series, Darren Grant gives the lowdown on system variables, macros and aliases on that useful Command Line under the icon bar.

Basic control

This method of communicating with your computer is called the CLI — Command Line Interpreter, also known variously as the Command Line, Star Commands, Command Prompt, Star Prompt or the Supervisor. All the commands are prefixed by a '*', but this is put in there automatically in normal situations.

Getting to the Command Line

There are many different ways to get to the Command Line, all are suitable for use in different situations. Probably the easiest and most common, is simply to hit F12. A little * prompt will appear under the iconbar and you can get back to the Desktop simply by pressing Return on a blank line.

To fully quit out of the desktop, go to the Switcher icon (the green Acorn or Archimedes symbol) and choose 'Exit' from the menu.

Another way is to press Ctrl-Shift-F12 twice. You can restart the desktop with the command 'Desktop' but it's probably easier just to use Ctrl-Break.

To open a task window, choose the 'Task Window' option in the Switcher menu, or press Ctrl-F12. This is best for commands which you need to use in conjunction with other things on the desktop, as you can manipulate the task window (move it, etc) as much as you like.

To type in a single command, try the 'New task' sub-menu in the Switcher menu. This is not normally very much use, except for a single command which you need to execute more than once in a row —the text will remain in the writable menu item even after you press Return/Click in the window.

Finally, for entering more than one command at a time, without fear of accidentally knocking Return and losing everything on the screen as the desktop re-appears, you can use the command 'Gos' (Go Supervisor), after first pressing F12.

This is just like pressing F12, except to get out, you have to type Quit. This will, in fact, only take you back to the 'F12' prompt —so press Return again to get back to the desktop.

All CLI commands are case-insensitive. This means they can be typed like 'this' or like 'tHiS' - it doesn't make any difference.

For clarity, all CLI commands in this article will be written in a font like this.

What are they?

System variables are best considered as jam jars on a shelf. They each have a label on the jar, which is the name of the variable. They also have a content —something inside the jar, which is the value. To get a list of all variables present in the computer and their values, simply hit F12 and type Show. To examine a particular variable, type Show Variable, where Variable is the name of the variable you want to examine. For basic control over system variables, Set Name Value will set a Value to the variable Name. If the variable does not exists, it is created, and if it already exists, it is re-initialised with the new value. Variables can be removed by using Unset Name, but you will not generally need to bother with removing variables; they take up little memory, and they are all cleared after a reset anyway.

As you might have guessed, a number of variables are created during start-up - this can be either from the ROM, or from the Boot sequence (especially so in a Risc PC). Many more variables are also created by third party applications; notably in their !Run and !Boot files.

Aliases

If you look at the variables present in the system, you will find a number of them begin with Alias$ This means that they are actually creating a new command. For instance, the variable Alias$. Cat (displayed as Alias$. : Cat) means that the command '.' is substituted for the command Cat, which catalogues the current directory. Try it and see. So, to catalogue a directory, you can type either Cat or . at the Command Prompt.

Let's make our own command to create a rectangle. To do this, we use VDU commands. VDU commands are simply numbers that allow us to access various low-level routines from the safety of the CLI. In fact, VDU commands are no more than characters with ASCII codes less than 32, so they can therefore be printed out with a simple output command, Echo, in this case. The Echo command will take any number of parameters, and will simply print them out, so, Echo Hello World will output the text 'Hello World' to the screen. You can use this to put a little welcome message on you screen when the boot file is run, should you wish. (I have gone a whole stage further; on start-up on my computer, an entire sprite is loaded to the screen for a second!)

But, if VDU commands are characters with ASCII codes less than 32, how do we print them? (Printable ASCII codes lie in the range 32 to 255). Well, Echo simply passes it's parameters to GSTrans. The details of this are not important, but GSTrans allows you all kinds of sophisticated parameter substitution and control-character output. This is done using angle brackets, < and >. enclosing a number within these will print out the character belonging to that ASCII code; so, to print out ASCII 12, we use Echo <12> Note also, that to print out 'A' without using 'A' in the command, we simply use Echo <65> as 65 is the ASCII code for 'A'. It's that simple!

VDU command 25 does a number of graphics plotting actions. Command 96 will print make a rectangle, and 4 will move the graphics cursor to the absolute coordinates that follow. So, use

Echo <25><4><10><0><50><0>

to move to the coordinates (10,50) on

the screen. This can be followed with the command to print a rectangle. This is 96, with two coordinates for the size of the rectangle. You probably were wondering what the two <0>s were for, well, each coordinate has to be followed by ASCII 0, but that comes under the realm of programming, not the CLI. The number 2 can also be added to 96, to make the colour the inverse of whatever lies on the screen, and also make the coordinates *relative* to where the current graphics pointer is. So, Echo <25><98><10><0><20><0> will make a rectangle 10 units wide, and 20 across appear on your screen at the position of the current graphics pointer.

However, we have not made our own command yet. To do this, we use Alias$ followed by the command name, with the actual command following that. So, to make a new command, Rectangle, we use Alias$Rectangle followed by the command to execute, as shown earlier. In our case, this would be two commands; the first Echo command, and the second Echo command. However, as they are simply text strings that are being output, we can just concatenate the two. This leads to: Alias$Rectangle Echo <25><4><10><0><50><0><25><98><10><0><20><0> However, there is one more thing; to force the '<' characters not to be evaluated when the alias is first entered, then have to be prefixed with a vertical bar symbol: | (lower-left on a Risc PC style keyboard, somewhere towards the top-right on others). So, to print the control character <25>, use |<25>. The CLI command to set the whole lot up is: Set Alias$Rectangle Echo |<25>|<4>|<10>|<0>|<50>|<0>|<25>|<98>|<10>|<0>|<20>|<0>

Parameters

Look at most start commands, and they nearly always take at least one parameter. A parameter is something that is added after the main command to change exactly what it does. For instance, Dir takes one parameter, a pathname, to which the current directory is set. So, to set the current directory to ADFS::HDisc4.Apps, you simply use Dir ADFS::HDisc4.Apps

To reference a parameter in an alias, use %x, where x is replaced with the parameter number, starting at 0, the

first parameter. So, to make our Rectangle command take four parameters; the x and y coordinate, and the width and height of the rectangle, the parameters are put into the variable like this: Set Alias$Rectangle Echo |<25>|<4>|<%0>|<0>|<%1>|<0>|<25>|<98>|<%2>|<0>|<%3>|<0> Now you can make a long, thin rectangle using Rectangle 60 10 200 10 For technical reasons values more than 255 can't be used (as one byte equals 255).

Of course, this is but a trivial example, but the principles shown here can be used in any number of situations from Set Alias$Mode |<22>|<%0> that will change the mode to the specified parameter, to Set Alias$Warning Echo |<7>%0|<13> to print out a message with a beep and carriage return at the end.

Macros

If a variable is declared using SetMacro, it will be evaluated at run-time. For instance, Set Result <Sys$Time> will set Result to '18:05:33' if that is the time when you enter in the command. This same value will be returned every time you reference the variable Result, but if you use SetMacro Result <Sys$Time> the current time will always be returned. This is not a good example, of course, as you are simply setting Result to do what Sys$Time does, but the principle applies.

Another good example of a Macro is changing the command prompt. This is * by default, but if the variable CLI$Prompt is present, that will be used instead. So, SetMacro CLI$Prompt <Sys$Time> will make the current time be printed out instead of a *, but this can be made far more elegant with constructions such as SetMacro CLI$Prompt <Sys$Time> * —note the space at the end.

Evaluating a variable

The command SetEval will evaluate an expression when you *assign* it to a variable, eg SetEval Result 5 + 2 will put the number 7 into the variable Result, where Set Result 5 + 2 will put the string '5 + 2' into Result. Note that the SetEval command is not the same as Set. It will attempt to *evaluate* the expression, and if it can't do that it will report an error. So,

attempting to evaluate Hello will return an error; Hello = nothing, whereas 5 + 2 = 7, so 5 + 2 will work. For more information on evaluating expressions, type Help Eval at the Command Prompt.

Dir and Path

There is just one final point I want to cover. You will notice that many system variables end with $Dir or $Path These are normally set by third party applications in their !Run and !Boot files, and contain paths to be of use to the application when it is running (so you should never alter them).

Variables ending with $Dir are simply paths to application directories, but those ending $Path are treated slightly differently. They always contain a path, but the path will end with '.'; Set AppRes$Path <Obey$Dir>.Resources. for instance, which sets AppRes$Path to point to the directory 'Resources' within the application directory. This is referenced using AppRes: so use AppRes:Data to reference the file 'Data' within 'Resources'. Incidentally, <Obey$Dir> is set to the path of the last Obey file executed.

Conclusion

There are many other ways in which system variables can be used; this is just a brief summary of how to use them. As always, if you want to find more, the best place to go is the reference manuals. The Programmer's Reference Manual contains a lot but the RISC OS User Guide that came with your machine has got in it nearly everything you will need. Of course, the CLI Help command is available. To get help on a command, just use Help Whatever, or just Help on it's own for general help. Help . will give every help text available in the machine. Try the command Help . { > RAM::RamDisc0.$.HelpFile } to create a manual in the root of the RAM drive!

Next month I will look at how to alter the Risc PC boot-up sequence, and put to use some of the techniques shown in this article.

As always, if you need help on a particular problem don't hesitate to contact me, either direct or through the Club's technical help service.
Email: dgrant@dial.pipex.com or support@armclub.org.uk.

Well I Never Knew That

"To learn or not to learn, that is the question. Whether you can be nobler in the mind to suffer the 'Hints and Tips' and 'Outrageous Suggestions' of this, the page to find out what you didn't know about your Acorn computer."
(With apologies to William Shakespeare).

It's that man Shakespeare again. This time, updated by Geoff Lane who quotes what the Bard would have said it he'd been using an Acorn instead of a quill.

Here's a couple sent in by readers although I couldn't recreate the errors mentioned, probably because of different machines with different memory etc.

John Barker, who has an A3010 with OS 3.1 and 2MB of RAM, states that when he tried to de-archive the Eureka 21 disc and a couple of magazine discs he sometimes got the following error message:

'ArcFS cannot claim enough free memory to do this, increase free memory and try again.'

John found that increasing free memory never worked but increasing the 'Module area' did. To do this, click on the task manager icon (bottom right of screen) to get the Tasks window. Scroll this down to 'System memory allocation' and then drag the red bar to the right of 'Module area' to increase the memory. John found the increase necessary was between 32K to 96K. He has now set this to 32K by pressing F12 and typing:

*Configure RMASize 32K

Oddly enough an earlier version of ArcFS gave the message to increase the size of the module area.
[That's because it applied to earlier machines. This will not work on Risc PCs or A7000s. Ed]

John, I'm sure that'll stop some members tearing their hair out.

Paul Harris, who has a Risc PC, has found a way to quit most if not all error loops from programs when they go wrong. Hold down the Alt key and press Break, which should then present you with a box saying 'Press Stop to terminate xxx' with xxx being a program name. Click on Stop if you want to do so or Next Task to be offered a different program to quit. Thanks for that one Paul.

I think one of the worst problems to get is the one where when explained to someone else they reply "That's funny, mine doesn't do that." This leads one to think there is a problem with the computer but our members have machines ranging from Beebs to Risc PCs and, as previously mentioned, one of the strange things about computers is that they sometimes react differently. Almost human aren't they ?

Bob de Jong, a previous contributor to this page, has sent in a couple of tips via Email. To use his own words:

The first carries on from the RAM disc hints. If you want a RAM disc for a particular program but do not want it to remain when you have finished do this by including ChangeDynamicArea to set it up and then zeroise it in your program's !Run file. For example:

```
|Run for MyProg
WimpSlot -min 100K -max 100K
Set MyProg$Dir <Obey$Dir>
ChangeDynamicArea - RamFsSize
512K
Run MyProg
ChangeDynamicArea - RamFsSize 0
```

The second hint relates to copying in Command mode or in BASIC mode on a Risc PC. Older machines with Acorn keyboards had a 'copy' key which doubled as the 'End' key. Newer machines do not have 'Copy' written on the key but it still works. If in Command/BASIC mode you wish to copy some text: move the cursor to the text to be copied, using the arrow keys, and then press 'End' repeatedly until you have copied what you wish. Hope at least one of these is of use.

They sure will be Bob. Thanks.

Well, that's it folks for this issue. Don't forget, it's your page, keep 'em coming and keep 'em simple. Send to Eureka or email direct to Geoff Lane: online@digibank.demon.co.uk

PC Problems on the Risc PC

Greg Sharpe, responding to Darren Grant's recent article on moving PC partitions, explains his way and the "correct" method of getting the DOS system files onto a new partition.

If you have a Risc PC with an x86 second processor then it is quite possible to set up multiple PC configurations, each with their own RISC OS icon and using different hard disc partitions (files of type DOSDisc) if required.

The PC partition files may reside anywhere that you have enough room. I have a parallel port Zip drive with one ADFS format Zip disc with a !PC directory on it and a partition file containing a bootable Windows 3.1 system. I have another Zip disc which has five PC systems on it, each with their own small DOS partition file of between 5MB and 15MB.

Each of these DOS systems has just one game installed in it and so can be customised as required for that game, with any tweaks to the config.sys and autoexec.bat files needed, and with the game started automatically from the autoexec.bat file.

All the following is based on my experience with Aleph One's x86 software (v2.03). If you are using a different version of the software (such as Acorn's PC486) then this may need some adjustment. In any case you would be wise to ensure that you have a backup of your original PC system before trying any of the following.

Once you are fully conversant with the process it is entirely safe and fairly simple to make these changes, but until then please, please, be careful with your data!

The !PC directory contains a text file called 'Config' that has configuration details to be used by the PC system, including the RAM allocation and the location of the PC partition to use. It is this file that !PCconfig modifies. Unfortunately if we create multiple PC systems it becomes difficult to use !PCconfig to make the changes as it

uses the config file in the PC directory whose !boot file was run last (it uses the path in the system variable Diva$Dir). I generally find it safest to modify the config files directly using a text editor.

Here are some examples which I hope cover the sort of things most users might want to do.

To set up a new PC system that uses the existing hard disc partition but has a different RAM allocation:

Copy the !PC directory to !PC_New (or whatever name you choose). Open the '!PC_New' directory (by double clicking on it while holding down the shift key). Load the Config file from that directory into a text editor. Find the line near the top that contains the text 'PCRAM'.

The value after 'PCRAM' is the MB of RAM to be allocated to the PC; change this as required.

Note that only certain PCRAM values are accepted (1-8, 10, 12, 14, 16, 20, 24, 28 and 32), any other values will be rounded down to the nearest valid one.

To set up a new PC system that uses a different hard disc partition:

Copy !PC to !PC_New. Edit the file !PC_New.Config. The filename following 'HD0-File-Name' is the PC's 'C' drive partition. If there is a line for 'HD1-File-Name' then this is the PC's 'D' drive and can be removed if you don't require this (lines in the Config file may be commented out by putting '#' at the start of the line). Change the file description following 'HD0-File-Name' to be the path of the partition file to be used. This partition must already exist (or see the following).

To create a new bootable PC disc partition:

Locate the !PCconfig program. Open the !PCconfig directory (by double clicking on it while holding down the shift key). Open the 'resources' directory and run the '!PCformat' program that is in there. Enter the full path of the new partition file in the 'File name' field.

The next few steps will destroy the

contents of this partition file so be very careful to ensure that you are not using the name of an existing file that you want to keep.

Tick the 'Initialise ready for use' box. Adjust the size to the number of megabytes required. Press the 'Create' button.

The new partition file will be created and formatted to appear as a DOS disc, but will not be bootable yet. To make it bootable follow the instructions below.

To copy a DOS system from an existing partition into a new partition:

Double click on the newly created and formatted partition file so that it opens a viewer window. Do the same on the old partition. Copy the DOS directory from the old partition to the new one (by dragging the icon from one to the other). Once the files have all been copied, close both directory viewers. Start up the original PC system as usual. Put an empty PC format floppy into the floppy drive. At the DOS command prompt type 'sys a:', this command makes 'a:' (i.e. the floppy disc) into a 'system' disc by copying the necessary files to the floppy to make it bootable. Copy the file 'sys.com' from your DOS directory to the floppy (i.e. type 'copy c:\dos\sys.com a:\' at the DOS prompt or do this from RISC OS after you have shut down the PC system). This is the DOS 'sys' program that we have just used to move the system files to the floppy. We will need it shortly to move the system onto the new partition.

Close down the PC system completely. Leaving the floppy disc in the drive, start up using the new PC partition (by either running a new PC system associated with it, or replacing the original PC partition file with the new one). The PC will boot up from the floppy. Once at the DOS prompt, type 'sys c:' to make c: (which is the new partition) into a system disc. Once the files have been copied, remove the floppy disc and reboot the PC using CTRL+ALT+DEL. If all has gone well then it will now boot from the new partition. The bootable floppy disc can be labelled and kept for future use if you think that you're going to repeat this process often.

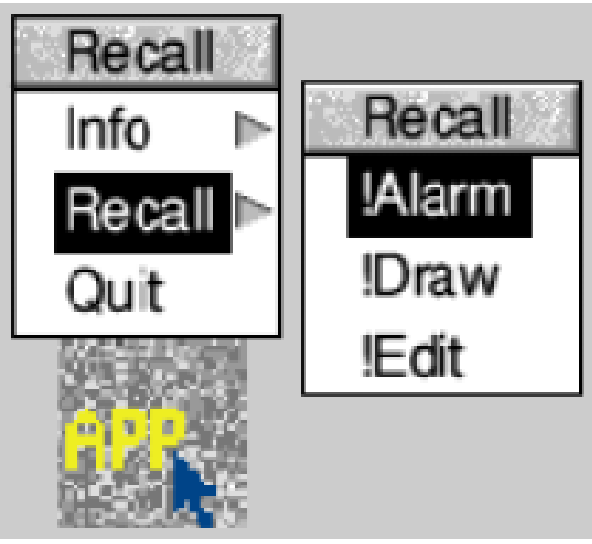
More Cherisha Cheapies

I have been using two more programs from Cherisha Software and here is my impression of them.

Recall is a simple and useful program that enables you to reload any applications that have been quit.

Cherisha Software have issued some more of their useful low price applications to add to those reviewed in Eureka 21. Geoff Lane has again been trying them out.

Double clicking loads it on to the icon bar from where pressing the menu (middle) mouse button over the icon gives you three options, including info and quit, which are self explanatory. Sliding along the 'Recall' option will list any previously loaded applications but *only* if the applications have been quit. Clicking on the application name will reload it.



Applications which have been quit can be listed and recalled.

The price is only £4 for this useful little program but I would prefer BoardMenu, also from Cherisha, which I reviewed previously. BoardMenu can do almost the same and more for the same price. Need I say more?

RamDisc+ is a management utility for the RAM disc.

The instructions are easy to follow and double clicking will load the RamDisc+ icon on to the left side of the icon bar.

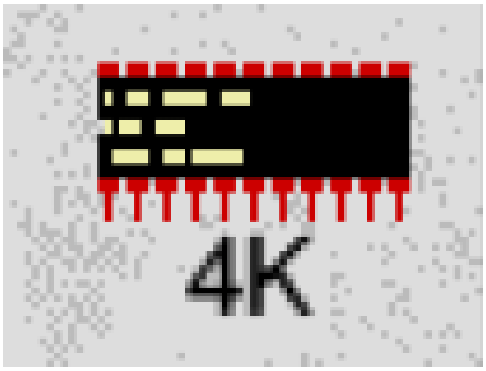
Cherisha state that the normal RAM disc icon will not appear

automatically but mine did. Two RAM disc icons. That's useful! The size of the created RAM will depend on your machine but this can be altered.

The 'new' RAM disc icon has a red outline and displays the 'Free Space' below it. Clicking on it has exactly the same effect as on the normal RAM disc.

Clicking the menu button over the RamDisc+ icon opens a sub menu giving Info, Options, Set size, Files, Share, Free and Quit. Free, Quit and Info need no explanation (I hope) and Share relates to networks so I will deal with the remainder.

Options gives three options; Set fixed disc *should* allow you to set a directory for copying or moving the files to from the RAM disc. The instructions state that to alter this to your own choice of directory merely click on the 'Set fixed disc' option which will open a further window onto which you drag and drop your chosen destination directory. When I tried this the default path disappeared and nothing was displayed. I then got error messages when I tried to move



RamDisc+ displays free space

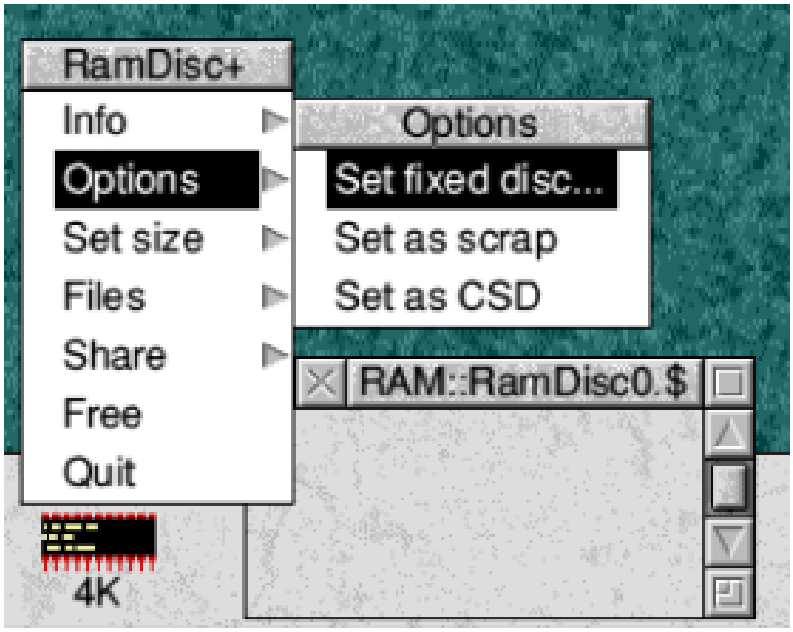
or copy files. The only way I could get the 'Copy' or 'Move' functions to work was to create a directory with the default path (to the Cherisha disc) shown in the window.

The other two options are to set the RAM disc as the destination for scrap files and to set it as the CSD (Currently Selected Directory).

Sliding along the 'Files' option then allows you to close or delete all files within the RAM disc; useful when programming. It also allows you to move or copy files to your chosen directory —if it works.

Sliding along 'Set size' gives all the popular disc sizes to choose from but this function can only be used if the RAM is empty.

If the program is able to move files from the RAM to a selected directory this would empty the RAM. Why not allow it to change the size and move the files back again, Now that would be useful! Seems simple; but then I'm not an experienced programmer.



RamDisc+ options

The price ? A tenner. Would I buy it ? No, the facility for transferring files to a directory need sorting and without being able to alter the size regardless of it having been emptied makes me wonder what it really offers.

To summarise

Recall: Good value and useful but consider BoardMenu instead. RamDisc+: Needs improving before it's worth £10.

Cherisha Software offer a variation of useful programs and they will refund in full within 14 days if you are not entirely satisfied; a good guarantee which takes the gamble out of buying a program.

Recall
Price: £4 Site licence: £12

RamDisc+
Price £10 Site licence: £45

(No VAT on either product)
Supplier: Cherisha Software
16 Woodside Drive, Wilmington,
Dartford, Kent DA2 7NG
Tel: 01322 553953
Fax: 01322 400883
Email:
cherisha@katech.zynet.co.uk
Web:
www.zynet.co.uk/gold/katech/

Hatch ArtWorks Module

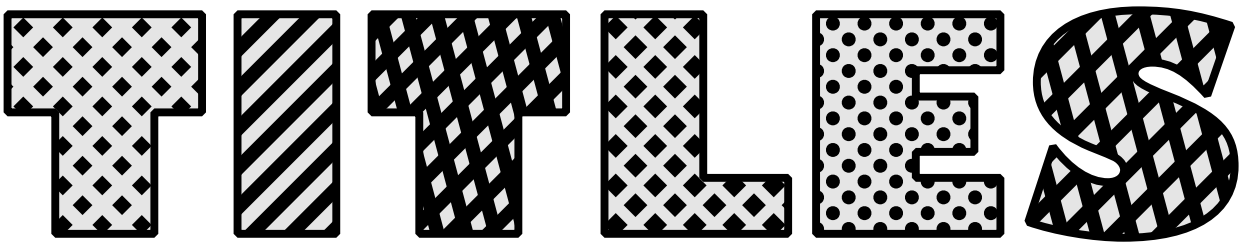
Christopher Jarman enthuses about Martin Würthner's plug-in module for ArtWorks.

To be honest, I had some difficulty in appreciating how I might use the Hatch tool when I first saw it.

Oh yes, I grant you it is clever, but what would I want to do with it? I asked myself. I am actually pretty happy with ArtWorks the way it is. Apart from a transparency option (which I gather we are never going to get) I had always felt that ArtWorks suited me without any extra modules.

But like Martin Würthner's other add-ons, I did not know what I was missing until I tried them out!

My problem, I think, was that I work almost entirely in colour; and cross hatching and spots etc. are not as effective as blends and shades of colour. But once you find you have to do a job in black and white, then the hatching options come into their own. Pattern provides the substitute for colour. Then, having found that out, it is but a small step to wanting to get back to coloured hatching and patterns and there you have it..... a convert!



The illustration above shows a typical set of the conventional hatches which can be given to any shapes, including of course, letters. Not only can the size of spots or squares be changed, but also their distance apart and the angle of the hatch lines —cool heh?

The tool is controlled by two bars.

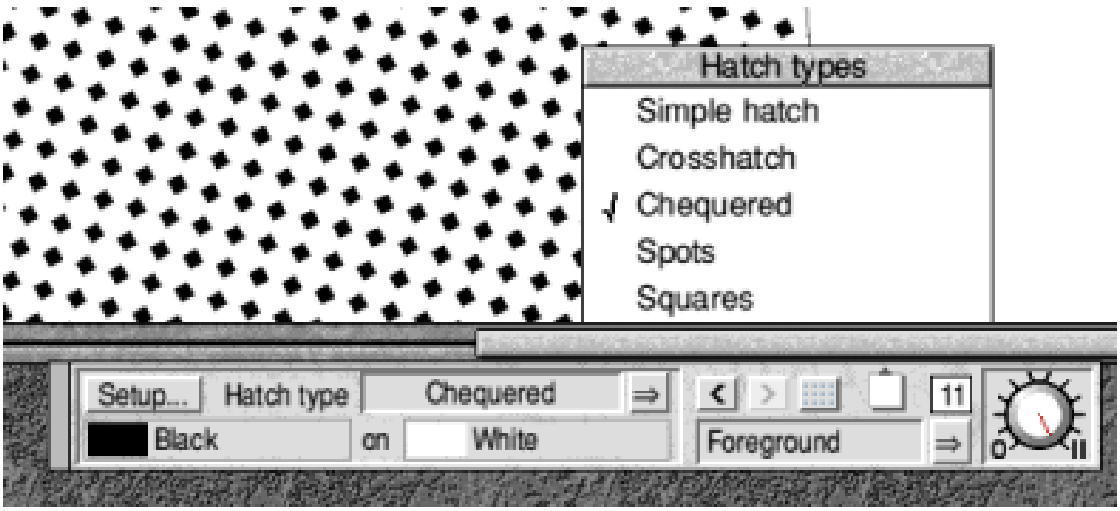
The first is shown above and gives the choices of offsets for the hatches, angles and width of the patterns.

The other bar (below), called Setup, enables you to choose between five sorts of hatch and to select the two colours that you want to make them with. For Eureka I have selected black and white, but you have the complete ArtWorks palette to go for.

As I received the Hatch module the same week as Mike Williams asked me to design another cover for Acorn Publisher, I thought it would be interesting to try using it. I had already decided to make a graphic representation of a Victorian Sampler so Hatch proved superb for pretend stitches!

I already had a picture of a kingfisher which I took and altered all the areas into hatchwork *(see page 3)*. In the end I did not use it for the cover but it made a pleasant-looking bit of patchwork quilt!

The point to bear in mind though is that with these hatch picture files whether in ArtWorks or saved out as Drawfiles, each tiny hatch is an object in its own right so that re-draw times can be horrendously long, particularly if you are working on a hatched background. In ArtWorks this can be assisted by putting each hatched shape into a different layer and switching it off while working on the others. Even so, without StrongARM I would not recommend making huge



Design for an Acorn Publisher cover, courtesy Akalat Publishing

hatched areas. You could be waiting a very long time to see the results!

Part of the Cover design above was a good example. I would not have had the patience to complete it if I had not been able to put the background sampler cloth onto a separate layer in ArtWorks, and switch it off until finally required to send to Mike.

Altogether, I think that the hatch add-on is a marvellous piece of work. Registered users of Martin Würthner's Polygon module can get it from him at a reduced price. Few Acorn programmers have done so much for the artists and designers in our community as Martin has. He deserves a vote of thanks. Contact him by email for preference. It is one of the most difficult email addresses I know so be careful!

Hatch

Price: £23.50 inc. VAT
Supplier: Computer Concepts Ltd
Gaddesden Place,
Hemel Hempstead, Herts, HP2 6EX
Tel: 01442 351000
Fax: 01442 351010
Email: info@CConcepts.co.uk
Email Martin Würthner:
wuerthne@trick.informatik.uni-stuttgart.de

The CALL statement in BASIC

Darren Grant describes how to call a useful BASIC routine, even when you are programming in Assembler.

There's one reason why I can program today —Acorn took a very nice decision and provided the BBC BASIC programming language with their BBC Microcomputers. Even nicer, they decided to throw in an Assembler with it! How nice of them, and to think that if they hadn't done this, we'd probably have half as many programs to use, and half as many programmers in the world.

Well, a slight exaggeration, perhaps, but the principle applies. Take an example; one of the programmers of the dtp package I am writing this article on learned to program on a BBC, and the database program I used to find the article with that information in it was programmed in BBC BASIC Assembler.

All of these programs might not have existed were it not for the BASIC language supplied with Acorn computers, and, more importantly, perhaps, the assembler within this language.

So, what makes an assembler so powerful? Probably the immense speed at which instructions are carried out, compared to, say, an interpreted language (such as BBC BASIC).

An assembled program is even faster, normally, than a compiled program, as the programmer knows exactly what he wants to achieve, and the best way to do it in. An assembler is also the biggest cause of headaches known.

This is because it is a nightmare to debug. In my article in Eureka 22 (*One-Line Wonders),* I provided a small routine to help with the debugging of BASIC assembler programs, but a simple register output program is not enough to help debug a piece of code which you do not actually know how to code in

assembler. What is needed is a technique to call BASIC functions from assembler. Amazingly, one exists! Even better, it's built in! Yes, all you need to do is to call a built in routine of BASIC's. It works as follows:

Calling a routine

CALL is normally used to execute a machine code subroutine that the programmer has programmed him/herself. However, the CALL statement also provides the means to branch to some of BASIC's internal routines, such as those to create variables, evaluate expressions and the like. When the routine is called, the ARM's registers are set up as shown in Table 1 (below).

R14 (LR from now on) is also set up to point to the start of a few useful routines or values (ie an offset of 0 shows you the way back to BASIC, but further offsets are pointers to other routines). Some of these are shown in Table 2 (on page XX).

So, now you have twenty-odd addresses available, but how do you actually access them? Well, it's simply a case of giving R15 (PC from now on) these addresses. The procedure is as follows:

1. Push LR in a stack.
2. Make another copy of LR for reference
3. Put into LR an address for the calling routine to jump back to
4. Put into PC the value of LR added to the address offset of the routine (ie branch)

Table 1

Register	**Description**
R0-R7	A%-H%
R8	Pointer to BASIC's workspace (ARGP)
R9	Pointer to list of l-values of the parameters
R10	Number of parameters
R11	Pointer to BASIC's string accumulator (STRACC)
R12	BASIC's LINE pointer (pointer to current statement)
R13	Pointer to BASIC's full, descending stack
R14	Link back to BASIC

Table 2

Address	Name	Description
&00	RETURN	Back to good old BASIC
&04	STRACC	String accumulator (256 bytes)
&08	PAGE	Current program PAGE (address of start of program)
&0C	TOP	Current program TOP (address of end of program)
&10	LOMEM	Start of variable storage
&14	HIMEM	Current stack end (highest stack location)
&18	MEMLIMIT	Limit of available memory
&1C	FSA	Free space start (end of variables/stack limit)
&20	TALLY	Value of COUNT (chars printed since last newline)
&2C	WIDTHLOC	Value of WIDTH-1 (width of output)
&44	EXPR	Analyse and evaluate a string
&48	MATCH	Tokenise a string
&4C	TOKENADDR	De-tokenise a string

5. Pop the LR (into PC to exit to BASIC as well)

This can be implemented as follows (in BASIC Assembler):

```
STMFD R13!,{R14}        ;push LR
MOV R10, R14            ;take a
copy for reference to branches
ADR R14, return_point
        ;return address to this program
;set registers up here, as needed
ADD PC,R10,#offset
        ;branch to new address
LDMFD R13!,{PC}         ;jump back
to BASIC
```

So, to call a BASIC function from Assembler, we simply have to call the routine to call a BASIC function. Hold on! I hear you cry —there isn't such a routine. Well, in actually fact there is; EXPR will evaluate a string, so all we have to do is evaluate the string "FNwhatever" and that function will be called. Any procedure, of course, can be turned into a function; just return 0, or a blank string, or whatever. The important thing is that the code in the function will be executed.

So, EXPR enters with R11 pointing to the string to be evaluated. (As well as

R8, R12 and R13 as indicated above.)
The values returned are as follows:

R0 to R3 as the value
For floating point values:
R0 equals the 32 bit mantissa (normalised, so bit 31 = 1)
R1 holds the exponent in excess-128 form
R2 is not defined
R3 contains 0 for positive value, &80000000 for negative sign
R9 holds the type of the value returned:
0 for a string, which is held in STRACC (R2 points to end, so [R2]-STRACC will give you the length)
&40000000 for an integer, held in R0
&80000000 for a real, held in R0 to R3, as detailed above
R10 is the first character after the expression
R11 is the character after R10

The flags are set on exit as follows:
Z set: string expression
Z clear: number, with N set for floating point, N clear for an integer

There is one complication: the string has to be tokenised. This can be done using MATCH, or, as we are probably only going to be using this routine to call a function, the token for FN is &A4, or the character ñ ('n' with a squiggle above it).

Compiling

Some of you will be wondering what happens to the code if it is saved into an Absolute file. Well, there is no special handling of this circumstance, and you will end up with the file containing only the Assembler code; all references to the CALL statement will be removed. Therefore, when your program tries to call the routine at R14 + offset, you will end up with a data abort, or some other such amazingly informative error.

This is, of course, because there isn't any CALL statement in this file; the computer will start executing straight off at &8000 —ie the start of the file, and R14 will not contain the address back to BASIC, nor will it contain any addresses to routines to evaluate expressions, or whatever. So, you'll just have to stick with keeping your Assembler code within a BASIC program, but you'll probably end up converting your BASIC routine into Assembler eventually, anyway.

Other routines

There are two other routines which I have found quite interesting to use. These are MATCH, to tokenise a string (useful also for tokenising line numbers) and TOKENADDR which will do the opposite: de-tokenise a string.

The entry to MATCH is with the following register setup:
The string to pass to MATCH is pointed to by R1 (terminated with ASCII 13)
R2 points to the destination string (ie a blank string that will be filled with the new string)
R3 = MODE
R4 = CONSTA
R13 = stack pointer (as per normal)

MODE is 0 for 'xxx =' and 1 for '= xxx' (ie 0 for left-side-of-equals, and 1 for right-side-of-equals). CONSTA is set if you want to tokenise line numbers —encoded numbers are used at the start of a line, and in GOTO/SUB RESTORE, THEN and ELSE keywords. MODE and CONSTA are summarised as follows:

MODE	CONSTA	Meaning
0	0	Tokenise a statement
1	0	Tokenise an expression
1	&8D	Tokenside an expression after GOTO etc.
0	&8D	Read line number at start of line

On exit, R1 and R2 point to one byte after the terminating CR of the strings.
R5 contains error information:
Greater than &1000 means there were mismatched brackets
If bit 8 is set, means the line number was too large
If R5 AND 255 are equal to 1, then mismatched string quotes were found

To de-tokenise a string; ie take a token value, and return a keyword, use TOKENADDR. This takes in R0 the value, and, in the case of a two-byte token, R12 points to the next byte of the token string. The routine returns with R1 pointing to the start of the string, terminated by &7F or greater. If a two-byte token has been used, R12 is incremented by 1. R0 will point to the start of the token table.

Conclusion

There is a lot of information in this article, and not very much tutorial, so

I have included many example programs, all fully commented and explained, on the Eureka disc.

However, there are many, many more routines available through the CALL statement, and I have experienced only a few, so the best place to turn for help would be the BBC BASIC Guide available from Acorn, which includes details of all 31 routines/values available from CALL.

If anybody has any problems, don't hesitate to contact me (via Technical Help or my email address: dgrant@dial.pipex.com).

JARGON BUSTER

Doubtful about discs? Don't know the difference between HD and DD? Here, in the first of a new series of Jargon Busters, is a simple explanation of the floppies used in Acorn machines. You may find it helpful to check this before you read the announcement, on page 55, about future issues of the Eureka disc.

• High Density Disc — aka HD, 1.6MB, F format.
Identifiable by having two square holes at the top of the disc (one of which is the write protect switch) and an HD logo embossed on the upper side on the disc.

Can be used in A3010, A3020, A4, A4000, A5000, A7000 and Risc PC machines. Older machines (A3000, A300 and A400 series) can't read them without a disc drive upgrade.

• Double Density Disc — aka DD, 800K, E format.
Can be used in any Acorn machine (except the Pocket Book).

XStitch2

My first impression of a program entitled XStitch immediately conjured up the image of a lady of the leisured classes, sedately embroidering kneeling mats for the local parish of a bygone age. This was, however, rapidly dispelled after only an hour or two, and I had to admit that this is a first-rate aid to the modern-day needleworker.

Rilla Paterson dispels images of a lady of leisure, embroidering kneelers for the parish church, and gets stitching some of her own designs.

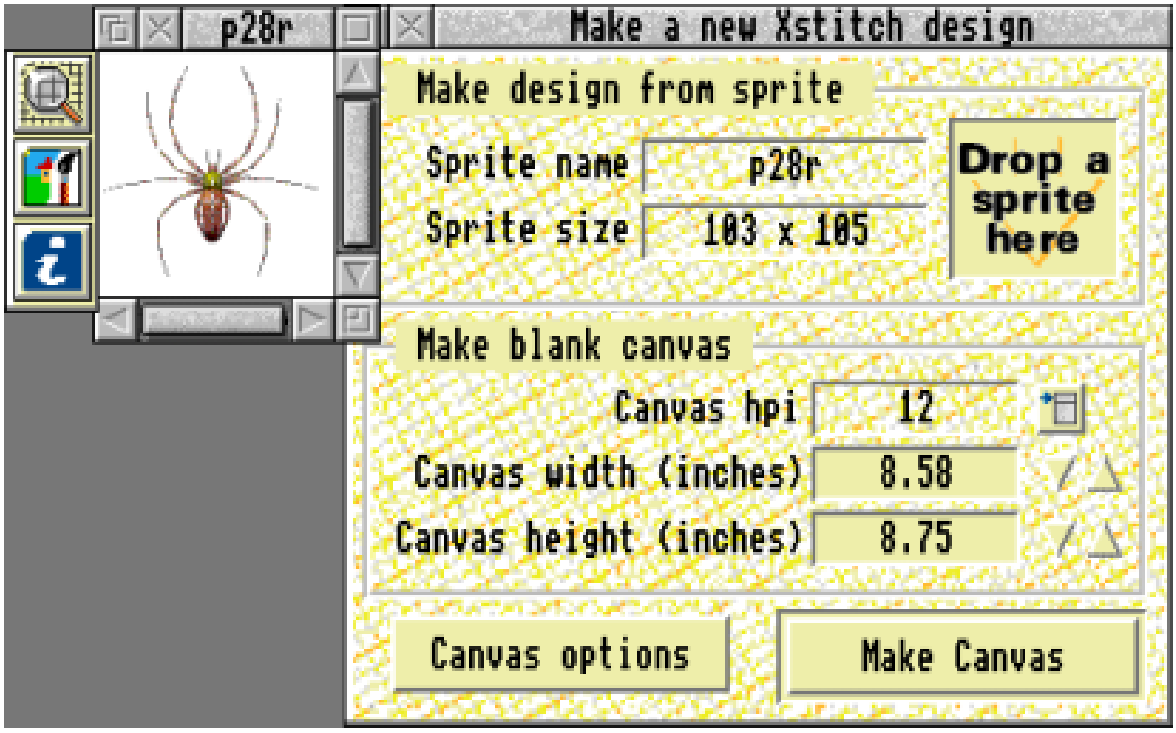
In short, I could hardly find any fault of any kind with this program.

The first XStitch program, with which I am not familiar, was probably fairly limited, but the new features of this second version have created a program which not only lives up to its aims — to create cross-stitch canvases —but exceeds the user's expectations. It will convert sprites and other bitmap files such as JPEG, GIFF, TIFF and Windows into canvases ready for cross-stitching, and these can be edited by the user in a host of ways, and scaled so that they exactly fit the required canvas. Users can also create their own designs from scratch, visualise them in full colour on the computer screen, and either print them in colour, or translate them into black-and-white symbols for monochrome printing, or both.

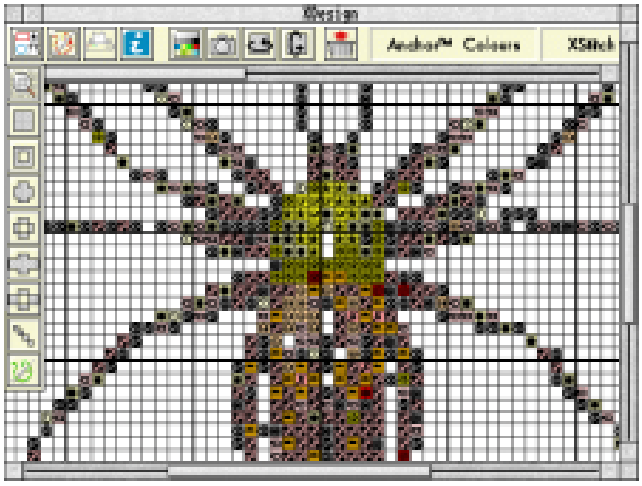
Getting started

XStitch2 requires RISC OS 3.1 or later, and 2MB of RAM. It also uses !ChangeFSI for some sprite processing effects, and a special font supplied with the program disc which needs running first. It can be operated quite easily from floppy, or installed on a hard drive; it works very fast from either.

There is an excellent User Guide which can be printed out, its only disadvantage being that the font size is so large that it runs to 26 pages,



Drop in a sprite to make a new design...



...and it's ready to embroider.

where it would probably fit quite comfortably onto about six or seven. It does make the diagrams very clear, though, and full marks for clarity of instructions.

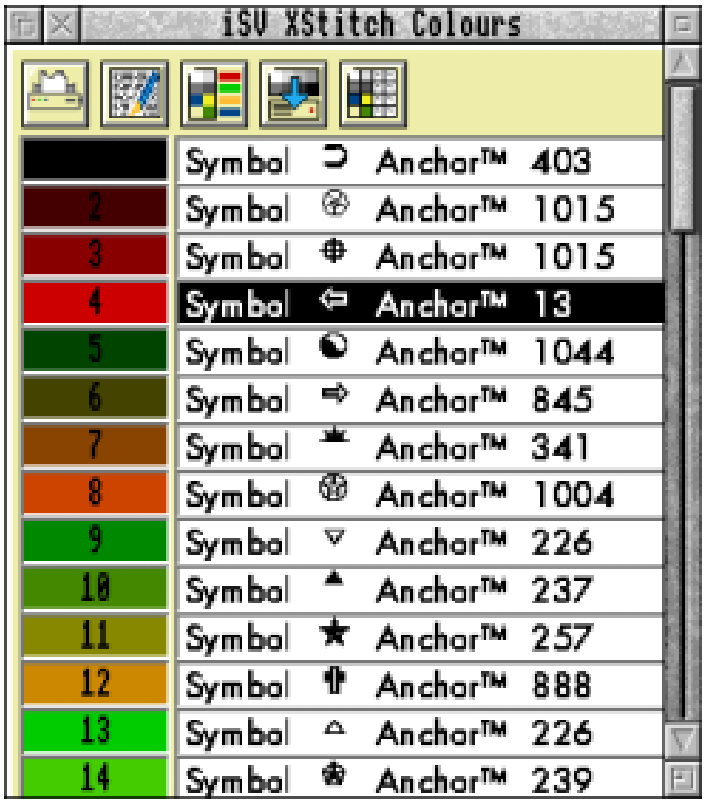
Making a canvas in seconds

Clicking on the program icon brings up a window containing two fundamental areas, one entitled "Drop a sprite here" and the other "Make Canvas". Even the most inexperienced computer operator can get somewhere with these tools. Dropping a sprite such as the ready-made spider into the first window, followed by clicking on "Make Canvas" creates a new window with the spider ready to embroider. All the user need do is print it out and start stitching the cushion. And if you don' t want to sit on a two-foot spider you can scale it down to whatever size you

like. If, on the other hand, you are into arachnids in a big way, you can make it into a mega-mural, and use a crafty "Overlap" option to print one leg at a time.

Starting from scratch

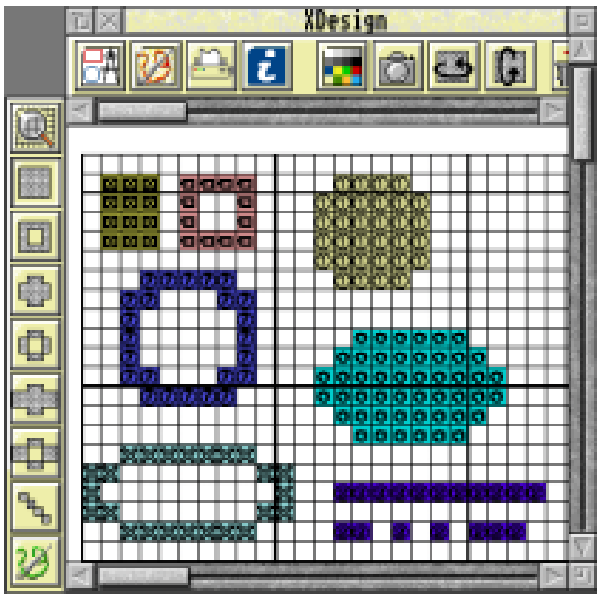
The real fun begins when the user is familiar with how to edit paint files. Here, of course, the possibilities are endless. Moreover, the user can create a blank canvas and paint it up from scratch, setting the number of holes per inch and the canvas size at the outset. The Canvas Options allow a choice to display the finished article as coloured squares, or as symbols for monochrome printing, or both.



Symbols can replace colours for printing in black and white

This latter feature is very useful, because the user can derive the full benefit of colour creativity, and then remove the colours just before printing, so that the instructions to the embroiderer appear as symbols. Colour printing is ideal, of course, but not everyone has this facility. Regarding the use of colours and symbols, the programmer has incorporated standards used by Anchor and DMC, the most commonly used embroidery threads. A menu button toggles between the two, and can be set by default.

There are many other refinements too numerous to list, but these include adding or removing bold guidelines from the grid, changing the background colour or removing the grid altogether. An idiot-proof drawing toolbox allows very easy addition of rectangles, circles, ellipses, both hollow and solid, and



A variety of designs from scratch

lines to make a design of the user' s choice. A further toolbox, called a "Button Bar", is very useful for large operations such as copying blocks, or flipping them either vertically or horizontally. There is also an "Undo" facility, but this only removes the last operation, so it is not really much use.

I was curious to see how the program would behave with sprites from other sources. My 15-year-old son decided to immortalise himself in cross-stitch, so we imported one of his mug-shots and it took no time at all to convert it to glorious technicolor tapestry. All I need to do now is to start embroidering, and then I can sit on his face with absolute satisfaction.

The majority of us probably do not think of ourselves as being artistic; we are frequently so handicapped by the limitations of knowing how to handle with speed the pen or paintbrush that any spark of creativity that we might have tends to be smothered by sheer ineptitude. But now with the ease of use and instant rewards that the computer brings us, possibilities for ordinary mortals have opened up as never before. Just as with music, DTP and computer graphic art programs, a tool like this in the hands of someone with intrinsic artistic skills expands these even further. It is universally recognised that creativity is good for the human soul, and this value-for-money program can be enjoyed not only by the enthusiastic cross-stitch worker, but by anyone who likes to experiment with graphic design.

XStitch2
Price: £35 inc. VAT + £1.50 p&p
Upgrade from earlier version: £15
Supplier: iSV Products
86 Turnberry, Home Farm, Bracknell, Berks, RG12 8ZH
Tel: 01344 55769
Email: atimbrell@aol.com

The Psion Series 5

Psion, the volume leader in handheld computing, have at last launched the replacement for the Psion 3A/C/Pocket Book. Ralph Sillett asks Father Christmas.

Welcome the Psion Series 5 which uses an ARM 7100 processor to give 32bit power to a palmtop machine.

Combining innovative design and new technology, the Series 5 incorporates a full VGA width backlit screen, a pen for navigation and a patented touch-type keyboard. The 32 bit Series 5 features a Windows style interface (good or bad?) office software applications and harnesses Microsoft Explorer to provide total integration and compatibility with office and home computers.

Most of the programs are not compatible with current machines although with PsiWin 2.0 included I can't see it as too much of a problem to convert your files.

The screen, the largest available on a palmtop, is a full 640 x 240 pixels. Also it is touch sensitive so you can either use the supplied pen, tucked away inside the case, or your finger to access menus, run programs and even draw (using Sketch) without touching the keyboard.

Overall the Series 5 is only slightly larger than the Series 3 weighing in at 12.5ozs or 354g including batteries.

The Five supports C++ and will support JAVA. It uses the powerful 32 bit operating system called EPOC32. The ARM 7100 processor provides the high level of processing power while preserving battery life of up to 35 hours on two AA batteries. This compares favourably with the current models.

Communication applications will be available for use with wired and wireless comms. Internet and fax will be available later in the year.

With the increase in screen size, touch sensitive screen and processing power, the look of the System screen and the applications on the Series 5 is radically different to the Series 3a/3c. The overall concept is very much like a desktop PC running the latest software but with the added flexibility that the touch screen gives. The office applications have the look and feel of similar applications on the PC. The integration capabilities are excellent between them. Compatibility with the PC is a crucial requirement for mobile office users. With PsionWin 2.0 this gives the Series 5 effortless connection to the PC and seamless integration as the Psion appears as another computer in Windows Explorer. Is there anyone who could write a similar program for the Acorn RISC machines? It should be possible (should it not?). Now that's what I call a challenge.

The serial connection is at 115.2kbits/s (similar to the RISC PC. The applications are Data, Agenda, Sheet, Time, Calc, Sketch (Draw), Word, Record, Communications, Spell checker, Psion Print and a Bombs game.

The Series 5 has only one drive bay for the 'Series 5 Memory Disk', but this uses the smaller Compact Flash standard which is a new type of storage technology. There are three doors on the machine which give access to Infra red comms port, the battery compartment (two AA size), backup battery and the storage disc slot.

I am looking forward to getting my hands on one to try, but may have to wait awhile. The Series 5 is more expensive than the current 3C but with the inclusion of PC connectivity software and in 4MB & 8MB internal memory options it is much better value for money. Most of the programs such as Autoroute, Berlitz Phrasebook and Monopoly will be available later in the year. Also watch out for the PD software.

If anyone purchases one of these new machines I would like to hear their views. The only comment I can make at this time is why has Xemplar gone for plugging the Apple eMate 300 which weighs in at a massive 1.8kg as opposed to 354g and with a battery life of 24 hours maximum and costing £450 with 3MB of memory. You can't

Technical Specifications

Dimensions:	170 x 90 x 23mm (6.7” x 3.5” x 0.9”)
Weight:	354g (12.5oz) with batteries
Screen/Display:	640 x 240 pixels, touch Sensitive backlit screen, 16 shades of grey, multiple zoom sizes.
Keyboard:	53 keys
External:	Three button control for voice notes (record, Play/Stop, Rewind). Omni directional microphone and speaker. DC power input. RS232 Serial port. Infrared transmitter/receiver (IrDA compatible). Stylus pen slot (pen included)
Memory:	4MB or 8MB RAM; 6MB ROM. Memory expansion via CompactFlash card slot.
Power:	2 AA batteries (35 hours life) 3v Lithium backup battery AC adaptor
Operating System:	EPOC32 (32 bit multitasking)
Processor:	18MHz ARM 7100 RISC CPU
Communications:	Standard RS232 (at 115kBps) and IrDA compliant

fit it in your inside pocket at that weight. Albeit the eMate is ARM powered.

I am glad that I didn’t upgrade to a 3c. I hope to purchase one of these new machines in the near future. My current Pocket Book II is in use more than my Risc PC. Maybe Father Christmas will look on me favourably as I never have any luck on the National Lottery.

Psion Series 5

Price: 4MB £439.95
8MB £499.95 (inc VAT)

Supplier: Psion UK plc
Alexander House
85 Frampton Street
London NW8 8NQ
Tel: 0171 262 5580
Fax: 0171 258 7342
Web: www.psion.com

Part 2

Using The Toolbox From BASIC

The second part of Mark Smith's new series continues work on a desktop diary, written in BASIC using Acorn's Toolbox to produce a multitasking application.

The next task in the design of the diary application is to produce the dialogue box to edit a diary event. My design for this window is shown in figure 1, and was designed in much the same way as the main window.

This time, we're using a few new gadgets:

• Option button —This is used for the 'Indefinitely' repeat option.

• Radio buttons — These are used for the other repeat options. You need to ensure that these form a mutually exclusive group by selecting all of them and doing menu, Edit, Make radio group (or Ctrl R)

• Number ranges — These are complex gadgets used to specify the start and end dates. Figure 2 shows the setup for the start day. The month ranges are similar except that the maximum value is 12 instead of 31 and the year ranges go from 1900 to 2100 (to ensure that it is within the range of dates that RISC OS can cope

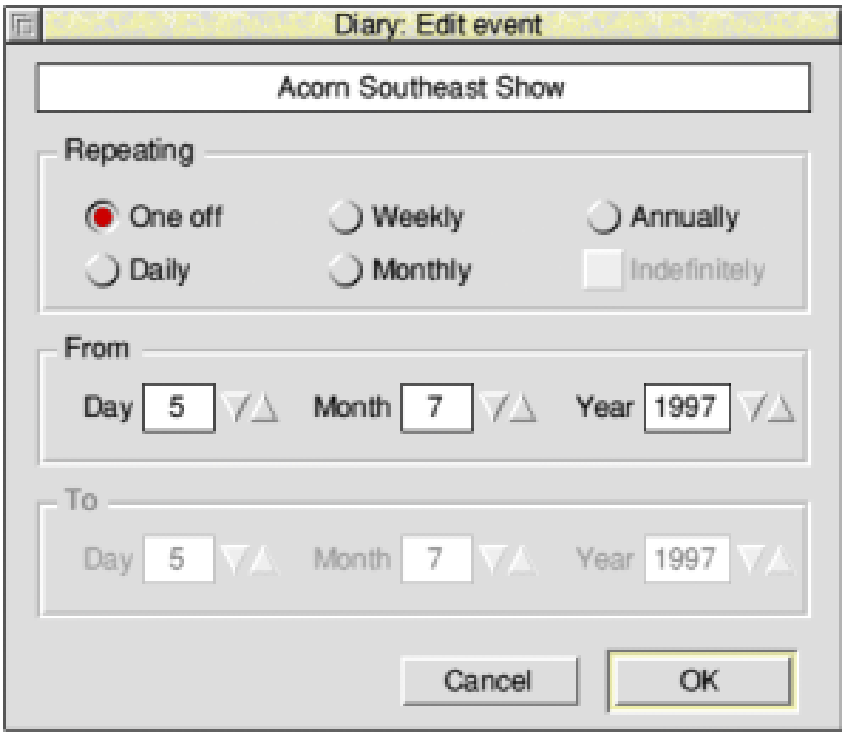


Figure 1

with).

The name of the window is Edit and should have the auto-create and shared flags set. Notice also that because this is a dialogue box, it doesn't have a close icon. This is removed by unselecting the Close option in the Main properties dialogue box.

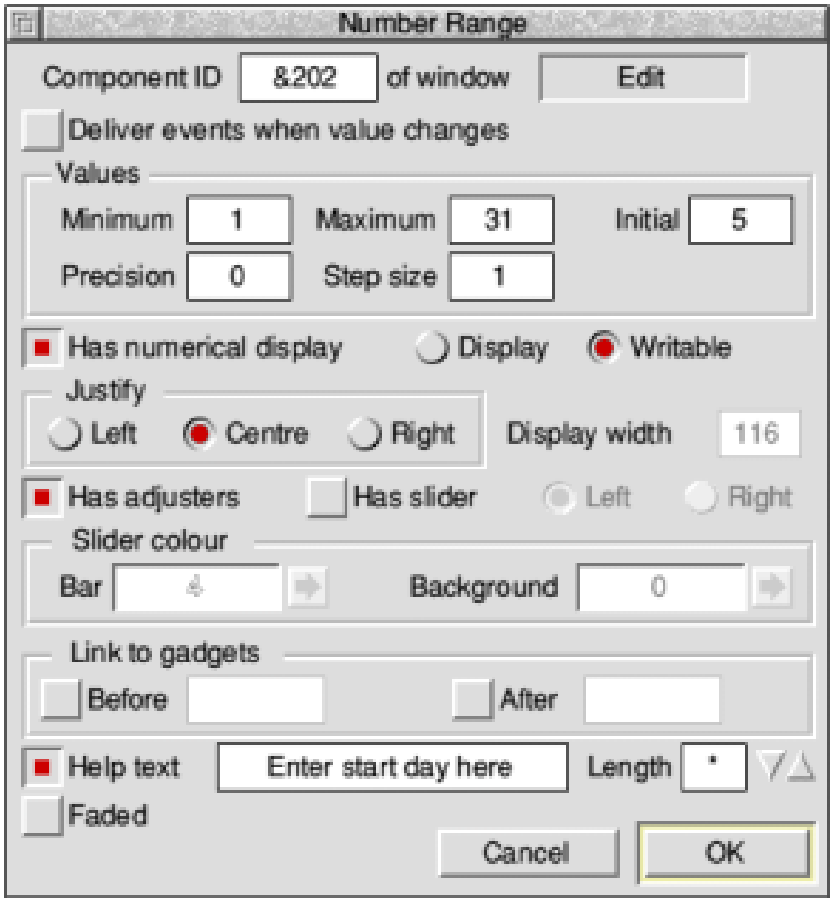


Figure 2

If you now go back to the main Diary window, you can link the Edit and New buttons to this new window, by setting the Show object option and dragging the Edit window over the writable icon to the right of it, or typing Edit into the writable icon. Figure 3 shows the setup for the New button.

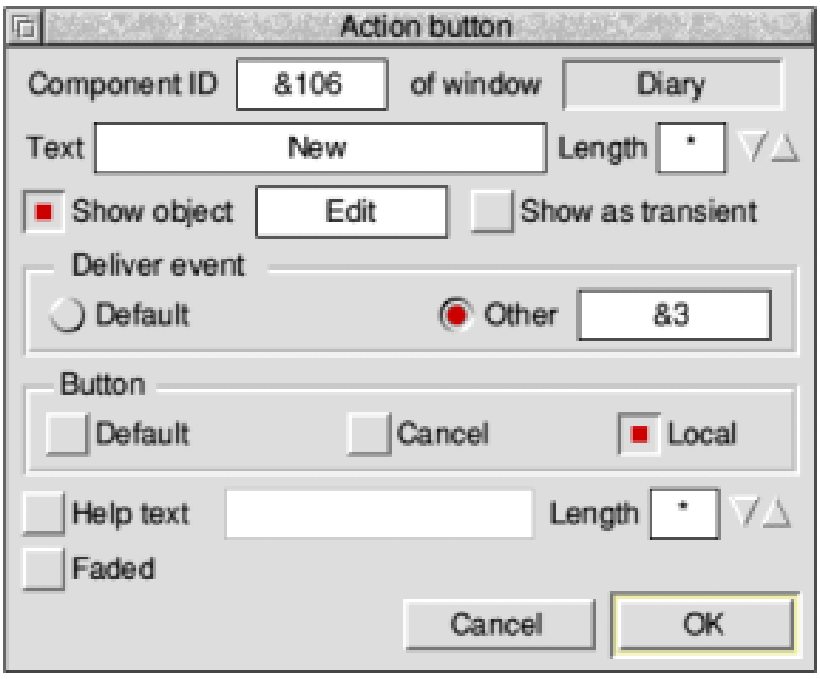


Figure 3

Having saved the updated set of resources we're now ready to test them. To do this, load up a copy of ResTest and

drag the resources file to it. The diary icon should appear on the icon bar. Click on it to display the main diary window and on the Edit or New buttons to display the edit dialogue box. That's all you can do so far, but we can make things a bit more interesting by introducing our own program.

Toolbox Shell

To make things a bit easier, I've written a generic toolbox shell program in BASIC, which is on the Eureka disc. We will need to amend it for the Diary application, but it provides a good starting point. The !Diary application in the NoMenu directory on this issue's disc contains the shell with a !Run file as well as the sprites files from the first part, the resources file (Res) and a messages file (Messages). The messages file contains any text that is displayed to the user that isn't included in the resources file.

This makes it easy to produce non-English versions of the software simply by converting the text in the two files without touching the program at all. All Toolbox applications must have a messages file which, at a minimum, contains the name of the application in a line which reads:

_TaskName:<Name>

where <Name> is the name of the application. In the case of our Diary application, it contains one line which reads:

_TaskName:Diary

The copy of the Toolbox Shell inside the application (renamed as !RunImage) has also had the line at the start which sets the name of the application directory to be <Diary$Dir>. Diary$Dir is an environment variable, set up in the !Run file, to be the full pathname of the application. This allows the application to be moved and run from anywhere on any filing system.

If you run the application now, you should see much the same as you get with ResTest. We don't yet have an iconbar menu, so the only way to quit is to click on the Task Manager (Acorn) icon, go to the Diary Application task entry at the top and click menu over it, then choose Quit.

Figure 4

Adding an Iconbar menu

This is a bit of a pain, so we'll add a menu to the resources. To do this, we need to load them back into ResEd and drag the Menu from the Object prototypes window into our objects window. Rename the object to be IcMenu and double click on it.

You should see a window similar to that shown in Figure 4.

Double click on the 'New Menu' title bar to show the menu properties window. Change the title to Diary and, if you wish, add some help text before clicking on OK. For the moment, we're going to have one menu entry which is Quit, so double click on the 'Menu Entry' that is already there to alter it.

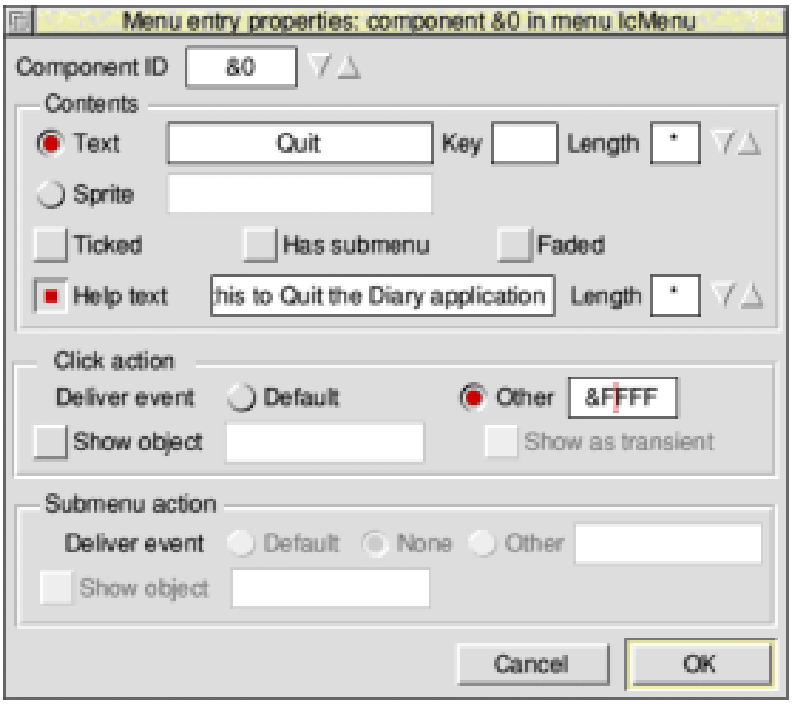
The first thing to so is to change the text to Quit. Now we need to decide how the program is going to find out how the user has clicked on the entry. There are two ways of doing this:

1) Make the click action deliver the default menu selection event. The program will need to work out which menu option was clicked by looking at the object and component IDs of the menu entry.

2) Make the click action deliver a user defined event associated with quitting the application.

In this situation, option 2 wins hands down because it's far more flexible and much easier to program. By defining a quit event, it doesn't matter whether you've clicked on Quit option anywhere in any menu, or even clicked on a Quit option button in a window or dialogue box —anything that can generate an event that ResEd allows you to define can quit the application without any change to the program. All it has to do is quit when that event is raised —it doesn't need to check object and component IDs.

The programmer is allowed to allocate any event in the range 1 to &FFFF for their own use. I personally



The one remaining action is to change the iconbar icon setup so that it shows the menu when you click the menu button over it. Double click on the Iconbar object, select Menu button and type IcMenu into the writable icon (or drag the menu object to it). Now save the resources into the application directory and try it.

Figure 5

use &FFFF downwards for non-application specific events and 1 upwards for anything particular to the application I'm working on and it just so happens that &FFFF is already used by the Toolbox shell as a quit event. So all we need to do in the menu entry properties window is to select the click action as Deliver event Other and type &FFFF into the writable icon (see Figure 5).

Click on OK to set the entry properties and close the menu editor window. Change the object flags to make it auto-create and shared.

A copy of the application with the iconbar menu is on the disc in the Menu directory.

In the next issue, I'll start adding some functions to the toolbox shell which are specific to the diary application.

This will allow us to create, edit and display diary events.

In the meantime, why not read through the Toolbox Shell on the accompanying Eureka disc? It's fully commented, so should be fairly easy to follow.

Eureka Cover Discs —The Future

Looking through the membership database it is apparent that the majority of members have machines capable of reading High Density (1.6MB) floppy discs. So the committee have decided that it would benefit members to move towards using High Density discs with the magazine. This means that we can put twice as much onto the cover disc for precisely the same price to you!

However, we are well aware that many of you have DD only machines that are still perfectly usable. The Club exists to provide help and information for *all* Acorn users, so those with older machines aren't going to be ditched but will get special treatment. So, from the next issue of the magazine, we will supply either an HD or DD disc depending on your machine type.

•If your record in the Membership Database shows ownership of a High Density compatible machine then you will receive a 1.6MB HD disc.

•If your record doesn't show a High Density compatible machine, you'll receive a Double Density 800K disc.

•If your record doesn't show any machine, we'll default to Double Density as any machine can read them so no-one should receive a disc they can't use.

There are, naturally, going to be cases where this doesn't work. People who can read HD discs may get DD if their records don't show the newer machine. If this happens there will be the chance to write/email your new details to change format. Can I please ask that you do this only *if* and *when* you get the wrong format. Our poor overworked Membership Secretary (that's me!) can't cope with thousands of people checking their records if there is no problem!

These details will appear again in the next issue of the magazine, and precise 'disc upgrading' details will be provided on the DD disc!

Toby Smith

Acorn World 97

The ARM Club is to have a spacious 5x5½ metre stand on a prominent site at the big Acorn World Show, which is returning to the Wembley Exhibition Centre again this year. As at previous shows, the Club will act as hosts to smaller Acorn user clubs as well as offering its own services and products.

The big event of the Acorn year is now just a few weeks away. The ARM Club will be there. Join us at Wembley from Friday October 31 to Sunday November 2.

The Club is also supporting an advance ticket promotion which is offering prizes worth about £2,000 in a competition open only to those who pay for their admission in advance. That's in addition to a hefty discount on the tickets. *[See the information box at the end of this article for prices.]* The star prize is an Acorn NetStation network computer and a six-month Internet subscription with Argonet. All you have to do is answer some easy questions on a competition form then hand it in at the Show or post it off afterwards.

The biggest attraction at the Show is certain to be Acorn's launch of the powerful new Risc PC II StrongARM computer. There will be at least one prototype on show and a cinema on the stand will demonstrate the wide-ranging upgrades to the new machine.

A much improved development prototype of the new Acorn portable computer will also be there and details on price and availability may be announced during the Show.

A revitalised Acornsoft will be launching its eagerly awaited tables and frames Web browser (available from dealers at the Show) and

featuring its RISC OS 3.7 upgrade, Multitasking Replay and Java.

There will be daily presentations in the theatre by Peter Bondar (now Vice President Engineering), who will be giving details of Acorn's new technical developments, and Chris Cox who will cover the latest range of hardware and software products.

On Friday, the theatre will be dedicated to education, with presentations covering primary, secondary and special needs.

Saturday will have seminars on DTP, Design and Graphics, featuring Beebug with OvationPro, Spacetech with Photodesk2, Tony Tolver of T-J Reproductions and Clive Semmens of the Journal of Physiology, among others. There will be Business Applications with Quentin Pain of Apricote Studios; Music featuring Sibelius Software and Oregan with ProSound, and some guest users. Peter Bondar and Chris Cox will present the ART of Future Gazing.

On Sunday, the Internet and Video will be featured, along with Software Development with, among others, Julian Smith of DeskLib and Dr Smith's C Development Toolkit fame. The dynamic duo of Bondar and Cox will also appear.

All seminars will run for about 90 minutes, apart from DTP, Design and Graphics which will be about two hours.

More than 50 exhibitors have already confirmed their appearance at the Show, with more bookings still being made.

Acorn World 97
Venue: Hall 3
Wembley Exhibition and
Conference Centre, London.
Dates: Friday 31 October
to Sunday 2 November 1997
Hours: 10am - 6pm
Ticket prices:
Adult £9.50 (£6 in advance)
Minors: £7 (£5 in advance)
Families £22 (£16 in advance)
Advance ticket hotline:
0181 982 6500
Web:
www.argonet.co.uk/acornworld97/

Pocket Book Corner

I, my friends, have tragic news to impart. It would appear that I've dropped my Pocket Book one too many times and I'm now suffering from the traditional broken hinge syndrome. In fact, the trip to Book and I covered about 1500 miles together. Again I can report that the Pocket Book is the ultimate travellers friend, happily waking me every morning in strange hotels (who needs a wake-up call?) recording details of

Toby Smith yet again has the whole world in his hands after letting his travelling friend slip through his fingers.

Organiser Repair land probably explains the brevity of this article.

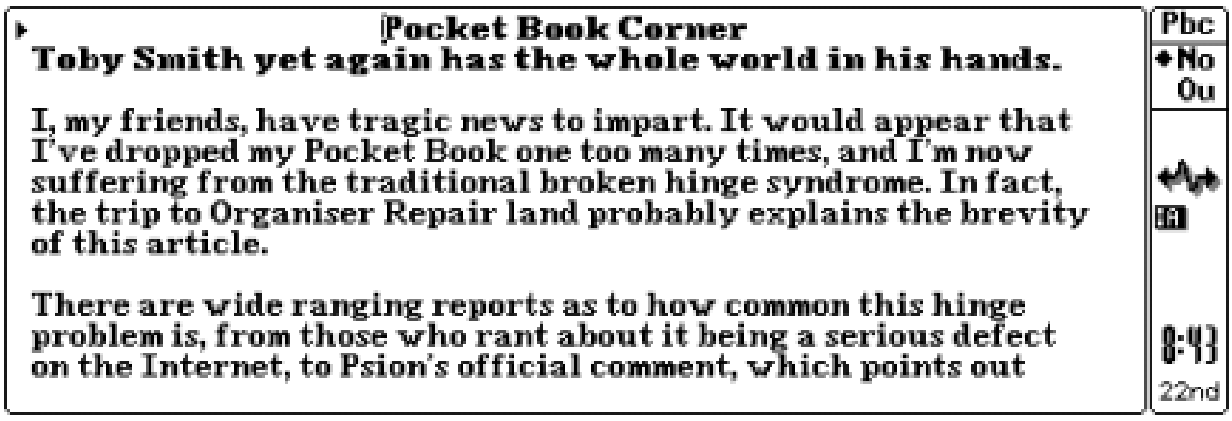
There are wide ranging reports as to how common this hinge problem is, from those who rant about it being a serious defect on the Internet, to Psion's official comment, which points out that only about 3% of their *returns* have the problem. Some reckon the data port may lead to an inherent weakness, but most, like me, blame too many drops —perhaps it is a case of badly designed pockets, not Psions!

Travels

An unfortunately brief article this time, mainly due to my recent time on the road. During one week my Pocket expenses and contact names, playing games during the lulls (sorry, writing Eureka articles, honest, Mr Editor, sir). I'd have been lost without it. (Despite being lost with it in Essex — but that would have been solved if I'd had AutoRoute...)

Pocket Book Futures

Many people have asked me whether we are going to see the new flurry of Psion machines, like the 3c and Sienna *(and the new Psion 5 — see page 47)* in Acorn badged version. It would appear that Pocket Book clone versions are probably not going to appear. The theory goes that in the days of the Pocket Book 1 and 2 the Acorn 'branding' was very active in Education Sales and hence the re-



Writing for Eureka on the road (when not being used for playing games)

badging of the Psion 3 and 3a. As Education Sales are now done by Xemplar, with much less branding (they sell Acorn and Apple kit, as well as a few other things) then there is less need to re-badge the new Psion machines —they can be sold to education directly as Psions.

However, the only problem with using a Psion 3c, 5 or Sienna alongside an Acorn is that the transfer software, PocketFS, doesn't support the new cable used by the newer machines. It would appear that an update is unlikely, at least in the short run. The only current option is to use PsiWin, the Windows equivalent on a PC card, or RCOM, the DOS command line version, running on a PC card or emulator. (RCOM is freeware and available from all your usual Pocket Book software sources.) Having said which, interest in producing new cable compatible Pocket Book transfer software has been expressed by some Acorn software producers. Watch this space!

Acorn-1

(Which is the key-press to turn a Pocket Book off, for the non-owners out there!)

As usual keep the letters, stories and queries flowing into the traditional places: the Club's FREEPOST address or by email to pbc@armclub.org.uk I'll leave you with just one thought. Many of you may have seen Acorn's prototype portable for the 'technology customer' on show at Wakefield and subsequent shows. Look carefully at the casing —Is this in fact an overgrown Pocket Book?

Around The Shows

Wakefield

Reporter: Chris Hughes

The Wakefield Acorn Computer (User) Group, held the second Spring Show over the weekend of 17/18 May, attracting around 3,000 visitors in the two days.

There has been no shortage of Acorn-interest computer shows to visit in the last few months. Acorn has been present at some to unveil a few of its coming attractions.

We had some 82 stands with 88 actual companies or organisations present, but we still ended up turning exhibitors away!

Centre of attention was of course the Acorn stand, right in the middle of the show, with its four towers and flashing lights on the top. Acorn unveiled the new A7000+, showed off its latest NC and had an intriguing Portable in disguise.

Argo had the second largest stand and it took the shape of a ship! Well I think it was, but the stand was under constant repair, with Andrew Foyle going round the stand using a mallet to knock it back together again!

There were so many new things either launched at the show or on show as prototypes for the first time — something in the region of 30 products.

We had things like RiScript Pro launched by Uniqueway, HTML Edit 3 by R-Comp, the Tony Nash Collection on Gold CD by the Datafile, the ARM Club had their new PD CD-ROM, Webmaster from IMS, Webspider from Dalriada, and so on.

A number of new games were launched or on show for the first time, these included Drifter by 4th Dimension and BHP by TBA Software, which was showing in a rather smoke effect filled tent. Werewolf took the opportunity to launch their new game Shuggy.

So what happened in the 100+ seater show theatre then, I'll let ***Ruth Gunstone*** our theatre manager, tell you her impressions.

David Jackson — Clares

Wouldn't it be nice to be able to use the tools from your word processor package, on the text in your email program, without having to switch applications. Wouldn't it be nice to be able to use the tools from one graphics package, on the image in another package?

This is the principle behind the PCA (Plug-in Compliant Application) protocol from Clares.

By creating an environment where all applications can share each other's tools, the flexibility and productivity of the computer is enhanced to a remarkable degree.

Mike Cook — Acorn User

This one was on the subject of JAVA. No, nothing to do with coffee, it's a very high-level programming language, which is designed for creating/running 'Applets' (small applications) over a network (including the Internet). The general idea being that there is no need for the client computer to have all the software on-board, the individual applets are down-loaded when needed, and compiled at run-time by the client computer. The down-side is that anything less than a Pentium-class, or StrongARM processor, wouldn't be viable.

Marshal Anderson — Consultant

The Internet terrifies governments! Marshal cited the case of the email server that was capable of acting as an anonymous go-between, so that people could communicate with each other in privacy.

The Samaritans were using this server to allow people to contact them anonymously. Unfortunately, a few paedophiles were also using the server to pass data around, and when the powers that be discovered this, they closed down the service! As Marshall said, this was like closing the Post Office because some paedophiles were writing to each other!

Oh. and did you know that Bill Gates invented the internet? No? Neither did I, but apparently he thinks so!

Marshall also raised the question of how long it would be before 'big business' takes-over the Internet. Look at the amount of Subscriber-Only areas that are springing up, such as the Microsoft Network, AOL area. How long before the likes of Rupert Murdoch get their greedy little hands on the reins?

Chris Cox —Acorn

An absolutely cram-packed audience were transfixed by Chris's news of Acorn's latest developments, which included the A7000+, which now has an enhanced processor which actually surpasses the performance of some Risc PCs! There was news about new designs and projects 'in the pipeline', and quite a few veiled (and otherwise) hints of what is to come in the desktop computer range, as well.

Peter Bondar —Acorn

"Acorn is safe!" was the message to another tightly-packed audience.

Acorn's 'embedded technology' deals (some public, some not so) mean that the R&D needed to create the next generation of desktop computers ("for us anoraks"), is actually being funded to a large degree by other corporations. They get what they want —new consumer products and better technology in existing or planned products —and, as a spin-off, the technological advancements are incorporated into our beloved desktops. Sounds great to me!

Acorn SouthEast

The Acorn SouthEast Show, held at Welwyn Garden City in Hertfordshire on Saturday 5th July, attracted between 500-600 visitors —enough to cause some good-natured complaints about overcrowding!

The Show, which was sponsored by The ARM Club, was organised by the Welwyn Hatfield Computer Club.

Acorn did a repeat showing on their stand of the wonders to come, which had been revealed at Wakefield, and there was the first look at the new StrongARM fast NC that an unnamed Acorn source said was faster then the DEC StrongARM seen at the northern show.

Revelation '97, the first UK demo party was held at the Show and

attracted a high standard of entries for both the demo and music competitions. The winning demo was Nutters —Fluero demo, which won a Casio QV10 digital camera with software, donated by Acorn, and the music prize went to Tony Gill, who received a copy of ReMidi and a year's subscription to Acorn User.

Kent IT Show

Reporter: Chris Price

Every year I attend the Kent IT Show, at the Great Danes Hotel just outside Maidstone. This is an event sponsored by Kent County Council for teachers and educational software and hardware producers.

The first stall I encountered was the Dorling Kindersley one. While I have to concede that they produce some excellent material, in book format and CD-ROM, they don't do much for the Acorn market. They have four or five titles with Acorn reader discs but, if you want to use their stuff, then it's generally going to be a case of buying a PC card or finding a friend who uses a PC.

On to YITM (Yorkshire International Thompson Multimedia, if you must know!). They produce a wide variety of CDs for all platforms, both at the primary and senior level (KS1-4). I saw one or two of these in action and they would definitely enhance some aspects of primary class work.

ERIC came next. Peter Worley was rude to me. Then again, he's rude to everybody (but his wife is lovely!). They were trailing two products: Bear Sheet, their primary spreadsheet package, and Applaunch, their new applications launcher. Both seem to have been very well produced and I can definitely see myself using the spreadsheet with our Years five and six.

I stopped at the COPS stand next. They produce software for the analysis of dyslexic needs. It is expensive and I am not sure that I like their licence agreement (which entitles you to use the software for five years whereupon you have to pay the same fee all over again). Usually once you've paid your money there is no further payment and the software is yours in perpetuity. Nonetheless, the product is good and I can see that it has a place in most schools.

Akalat Publishing were displaying the magazines they produce. They also had a CD of clip art on display which had been bought from a Canadian company. While these files were all PC based, I was advised that they were all either bitmapped or vectored and could be changed into sprites or drawfiles with the appropriate Acorn software.

Bouncing around

I moved on to CCS/Argo to see Ian Goodall, who was bouncing around with his usual enthusiasm. He was promoting the new Argo offer - a 'Get Online' pack for £99. This includes a 33.6K modem, full use of Argo's services for 3 months, stereo headset and the Voyager Internet suite along with all necessary cables and connectors.

It did seem like a very good offer to me. From August they are also going to be producing Internet/Intranet file servers with proxy fileserver capability, email and newsgroup server. Ian did point out that this will need a Risc PC with 16MB of RAM and that the modem in the bundled offer is not upgradeable.

Logotron are still producing good stuff but are hanging fire on anything for the Acorn market. (Do they know something we don't?) This is a shame as they have produced a lot of good software for us in the past.

LEGO came next. They have produced an excellent piece of control technology called 'The Intelligent House' packed with sensors, lights and other goodies. As this is the strand of IT that most schools are perceived as failing, then this really has to be near the top of your shopping list.

Cumana have been in the news recently because they have been in trouble. They are now part of Economatics with a much smaller workforce in the Guildford base.

They are producing a SyQuest removable drive as a competitor to the 100MB Zip drives, SyQuest comes with 230MB of memory and costs £175 ex the dreaded VAT. They have also produced SCSI2 software for DOS support. All their CD drives are now 12 speed and cost about £99. They have also signed an agreement with Casio to distribute their cameras.

Economatics were promoting their new Discovery Box, an all purpose datalogging package —for logging, sensing, timing —£299 ex VAT.

I visited the BT Campus World stand but didn't really come away any the wiser as to what they had. The request to show me something new was met with the rather unhelpful remark that there was "something new every day". This may have been factually correct but it didn't help.

The guy in charge also seemed to be having problems logging on and off (but, then again, it was a PC!!). Still, Campus World is a useful web site for teachers.

The last stand I visited was Atomwide's. I discovered that they are local to us and I hope that they will be coming to the Open Day here next March 1st. They certainly seemed willing. They are concentrating on problems of connectivity and now reckon that they can link up PCs, Macs and Acorns in any configuration. They are still perfecting this and have set up a sub-division called 01UK (Zero One UK) to do this.

Acorn Expo 97 (Holland)

Reporter: David Druck

The large Acorn community in Holland and the surrounding countries have been holding their own show for many years now, organised by The Big Ben Club, the Dutch equivalent of The ARM Club. When I joined the Committee earlier this year it had already been decided who would represent the Club on a stand at the show but a couple of people had to drop out unexpectedly. As the remaining two, Mark Smith and Martin Ebourne, wouldn't be allowed abroad without a grown-up, I volunteered my services.

The show was well represented with three major Dutch and German dealers, several British companies including RComp, Oregan, EFF and NCS, plus an official Acorn presence including our much loved product support manager, Kerri Davies.

The other large stands belonged to the organisers, The Big Ben Club and ourselves. While at the other end of the hall a large number of enthusiasts and their machines were demonstrating all the different uses

you can put your Acorn to; anything from genealogy to video editing. Several machines were available for people to surf the Internet and I even spotted one person browsing The ARM Club website.

Both my hobbies were catered for at the show, the computers obviously but also the noble art of drinking.

The Dutch dealer Desk had bottles of beer for sale. From a distance they looked like Heineken but on closer inspection the label revealed it was 'Acorn Risc PC Premium Quality Beer, 200MHz, Not for users of ordinary PC's or people that like watching paint dry'. It was very expensive at 15 guilders (£5) but I had to have one. To go with it German dealer ACE were selling 'STRONGARM' beer glasses, not a mock-up this time but from a genuine brewery in the north of England.

The ARM Club stand did good business despite at one point being in the middle of a war of the audio systems between Pro Sound from Oregan and the Sibelius system on the Desk stand, which made it a little difficult to hear the customers at times. Almost all of the visitors spoke good English and seemed to have pockets stuffed full of guilders.

Quite a few new memberships were sold as well as many renewals. This will please our membership secretary, Toby, as he gets to type in all the long Dutch names. Our new PD CD was selling well, StrongGuard was much sort after and even Toby's Typing Tutor sold a copy, so that's his consolation for the typing.

After all the excitement it seemed that the show was over in no time at all, and it was time to pack up. We still managed to sell one last CD half hour after closing. It wasn't as bad as in Wakefield where they announce any visitors present after 17:01 will be shot!

We talked to the organisers from the Big Ben Club and they were also pleased at how well the show went, congratulations all round and a firm booking for next year.

Internet Service Providers

The membership database now shows that around 20% of members now have an Internet connection.

For those that haven't and are interested, here's a run down on what to look for in an Internet Service Provider (ISP), how much it's likely to cost and some examples of popular ISPs.

You can't have failed to notice the ever increasing hype surrounding the Internet over the past few years. Mark Smith tell you all you need to know to join in.

Requirements for an Internet Connection

Before you sign up with a service provider, you'll need a piece of equipment called a modem. This connects your computer to the telephone line and allows it to talk to computers at the service provider. Modem technology has moved forward in leaps and bounds over recent years. For those people who just want to send and receive email messages, a 14.4 Kbits/second modem capable of transfering about 1.5K of text every second will probably be sufficient. If you are likely to want to download software and browse web sites on a regular basis, it's worth buying the fastest modem that you can.

Currently the fastest standard in use is 33.6 Kbits/second, although modems supporting one of the two proprietory standards that can receive data at up to 56 Kbits/second should be available as you read this. An independent 56K ITU standard is likely to follow and most 56K capable modems should be upgradable to this at a later date, either by a Flash software upgrade or with a replacement EPROM. It is likely that many people will not be able to receive data at the full 56 Kbits/s rate. The quality of the line to your local telephone exchange will have a major effect on this. You are also likely to find that most ISPs don't yet support

either standard, although Uunet Pipex (and hence Argonet) have pledged to support US Robotics's x2 protocol while Demon Internet have just started some trial provision for Motorola's K56Flex protocol.

Note that if you have a computer which pre-dates the Risc PC (i.e. an Archimedes badged machine, A30x0, A4000 or A5000), you'll need a serial port interface card to get the benefit from anything faster than a 14.4K modem. If you decide to use the standard serial port on an Archimedes or A3000, you'll need an Archimedes wired lead as opposed to the PC wired lead you'll get if the modem is supplied with one.

If you own an A3000, you'll also need to have the serial upgrade fitted if you wish to use the standard interface.

For those who really want a fast connection, other options include ISDN (64 Kbits/second each way at standard call cost, or 128 Kbits/second at double cost, but installation is currently expensive) and permanent leased lines (from £500 a month to Demon Internet).

You'll also need some Internet software, unless you subscribe to Argonet in which case the software comes as part of the package. Everyone else has two choices:

1) Purchase a copy of a commercial Internet software package such as ANT Internet Suite or Termite Internet. These know about a wide range of providers, so you probably won't need to type in all the details yourself, but they won't know about all the smaller local providers so if you want to use one of those, it may be wise to check. That said, the software should be able to communicate with any Internet Service Provider —you may just need to set it up manually.

2) Obtain some freeware software to do the job. The choices here include KA9Q and Freenet, although you can also use the Internet module supplied as standard in RISC OS 3.6 and 3.7. If you choose to follow this route, the software is free, but has the disadvantage that it takes some work to set them up and if you're really unsure and have no one knowledgeable enough to turn to, you may end up tearing you hair out!

Freenet is generally used with packages such as FreeSMTP, POP, FreeNews, NewsHound, FreeTime, Newsbase, Messenger and ArcWeb, to name just a few, and to get a full service working you have to set up a combination of them. Alternatively, you get them as a package called Acornet which includes a nice front end and should give you an easier base to work from. Once set up, the freeware software makes a very good solution —in some ways better than the commercial software. Newsbase in particular is a very powerful news and mail manager with which it is possible to do almost anything you're likely to want to.

Internet Services —A Basic Overview

All the ISPs provide the following core services:

Electronic Mail (Email) —The ISP will allocate you one or more email addresses to which other people can send you mail. If the account is for your own personal use, one email address may be sufficient. If the account is to be used for the whole family, or for business purposes, the ability to have many email addresses is likely to be very useful. Most ISPs will allow this, but some will charge for additional addresses. On some types of account, you set up email addresses yourself as you wish to use them.

Access to the World Wide Web —Many adverts and television programmes now give Universal Resource Locators (or URLs for short, sometimes incorrectly refered to as a 'web address') which you can type into a web browser to get pages of textual and graphical information, often with links to other related pages around the world. As an example, the URL http://www.armclub.org.uk/ is used to access the Club's web pages.

Personal Web Space —These days, most providers allow you to set up your own Web pages and make them available across the Internet. For private individuals, this is typically a 'Home Page' with as many personal details as you're happy to make available along with interests and links to other related pages. If you're running a small business, web space is likely to be particularly useful as a form of advertising.

Usenet News —Similar to email, but the messages that you write go into a newsgroup which is available to anyone with an interest in the subject area covered by that group. The majority of groups are used for text but some are used for so called binaries (which can cover anything from software to pictures to various movie formats). Binary groups can include very large items and are probably best avoided if you want to minimise your telephone bill. Some also contain material which is very much of an adult nature and, although you've got to know where to look, if you're worried about children getting hold of such material some providers don't carry them.

A Brief Look at some Providers

Before I cover the two most popular providers amongst Acorn owners, Argonet and Demon Internet, it's worth mentioning that there are a large number of other providers operating at both national and local levels. You may find that some local providers are connected to a cable network and that calls are cheaper or even free at certain times if you use the same cable provider. Before you sign up with anyone, it's worth shopping around. The specialist Internet magazines will often have a list of providers and where they operate, along with details such as recent reliability and support arrangements.

Argonet

Argonet is the only provider which specialises in serving users of Acorn computers. When you subscribe, you are provided with a copy of Argonet's own software package, Voyager,

which is set up and ready to run. For the first time Internet user particularly, this gives you a hassle free and cheap start. Argonet are resellers of Uunet Pipex which means that they use Pipex's dial-in facilities and Internet connections but are able to provide their own services in their Chichester offices.

Plus points:

- Acorn specialist provider.
- Cheap £99 starter package available.
- Local rate call nationwide.
- "Plug and Play" Software included with free upgrades.
- Software upgrades are performed automatically the next time you log on after they become available.
- Service is generally reliable.
- Free telephone support via an 0500 number.
- 5MB Web space provided free.
- Ideal for the private individual new to the Internet.

Negative points:

- Only five email addresses per account, although others may be purchased. This makes this type of account less attractive to larger families and businesses, although some still use them.
- Not a primary service provider — Argonet rely on UUnet Pipex to provide dial-in facilities and connectivity to the rest of the Internet.
- £12.50 + VAT monthly fee is more expensive than many competitors, although this does include software upgrades and free support.

Demon Internet

Demon Internet is the largest dial-up ISP in the UK with 115,000 subscribers and accounts for nearly 2% of all local rate calls made. For Dutch members, they also operate in Holland. The details of the services provided are similiar in both countries and it is possible to access UK accounts from Holland and vice-versa.

Demon also offer a 24 hour support service.

The service is generally very reliable, with planned maintenance carried out every Wednesday morning of which details and likely effects are notified in advance.

At one point, the company suffered from problems, due to the rate at which they were having to expand,

although they have developed modular expandable systems which enable them now to provide a very reliable service despite their growth rate.

Plus points:

• Infinite email addresses, set up by you required.
• Local call rate nationwide
• Static IP address allows you to run Internet Services while on line and arrange access to restricted access sites.
• 5MB Web space provided as standard.
• Full news feed.
• 24 hour support and planned maintainance.
• Direct provider with high bandwidth links to the London Internet Exchange (LINX) and transatlantic to America.
• Flat rate £10 plus VAT per month for either dial-up or ISDN access.
• Quarterly magazine keeps you up to date with major developments.

Negative points:

• No Acorn software provided.
• Not an Acorn specialist provider, although access from Acorn computers is supported.

Cost examples

ISPs normally charge a flat rate monthly fee to subscribers for unlimited usage of the service. In the case of Argonet this is £14.69 or for Demon Internet it's £11.75 inclusive of VAT. The only other ongoing costs are the call costs. In the case of Argonet and Demon, calls are charged at BT local rate from anywhere within the UK, but if you're using a cable telephone operator you need to check with them what they will charge for the calls. The other expense is the initial investment in the necessary hardware, software and signing up with the ISP you've chosen to use. Some providers may sell you a package, otherwise you'll have to purchase everything separately. ***See opposite.***

The Next Step

Now you have an idea of what to expect and how much it's going to cost. If you would like to join the rapidly growing net population, shop around for the best ISP for you and the best prices on all the necessities. Don't forget, the Club Committee members can all be contacted by email, which is by far the best way of contacting us if you wish to do so.

All prices include VAT and three months' initial access

Subscribing to Argonet at 33.6K:

Software, modem and three months' access	99.00
Phone socket doubler	10.00 (approx)
33.6K Argonet A7000(+)/Risc PC	109.00
Fast Serial Card for pre-Risc PC machines	79.00
33.6K Argonet A3000/A3xx/A4xx/A540/A5000	188.00

The following are price guides only. Shop around to get the best prices.

Subscribing to Demon Internet at 14.4K modem, using freeware software (budget option):

Second hand 14.4Kb/s modem	50.00 (approx)
Demon Setup plus three months' access	49.35
Phone socket doubler	10.00 (approx)
Second hand 14.4K Demon	109.35

Subscribing to Demon Internet at 33.6K (56K receive when available), using Freeware software:

K56Flex Modem (e.g. Hayes or Motorola)	160.00 (approx)
Demon Setup plus three months' access	49.35
Phone socket doubler	10.00 (approx)
33.6K Demon A7000(+)/Risc PC	219.35
Fast Serial Card for pre-Risc PC machines	79.00
33.6K Demon A3000/A3xx/A4xx/A540/A5000	298.35

Subscribing to Demon Internet at 33.6K (56K receive when available), using ANT Internet Suite:

33.6K Demon A7000(+)/Risc PC + ANT	300.00 (approx)
33.6K Demon A3000/A3xx/A4xx/A540/A5000 + ANT	380.00 (approx)

BookMaker DTP

The BookMaker DTP program for children causes some problems for teacher Chris Price when he reads the fine manual but he makes it in the end.

The first problem came with installation. The manual says to look for !DiscType on the program disc. This doesn't exist (or it didn't on my copy) and the modules you want are in DiscSetup.

This is not a problem for an experienced user who is used to searching these things out, but for a newcomer...?

Then I had problems installing the program to the icon bar. My machine informed me three times that it wanted the work disc installed before it would load onto the icon bar and also informed me unhelpfully that I could not load any of the available resources before I installed a 'Pictures directory' —this despite the fact that I had followed the manual's instructions on how to install to a hard drive to the letter.

Ten minutes in and I'm already very *under*whelmed by this program. Maybe it'll get better.

Next paragraph — 'Installing additional graphics libraries onto a hard disc.' Whoa! Hang on there boys! I haven't installed my first graphics library yet —leastways I don't think I have!

I followed the manual to install the Christmas library that Resource had supplied, and the process actually proved to be fairly simple.

Moving on, creating text boxes and editing them seemed easy enough and word deletion and replacement by single keystrokes (function keys) is a deft touch by the programmer.

Selecting, moving, re-sizing boxes, copying and deleting them are all performed by clicking on various

icons at the side of the screen. This all seemed fairly straightforward and now I'm getting more confident and not feeling quite so violent towards the programmer as I initially did.

A doddle

Changing text styles is a doddle too. The text frame option (to put a speech bubble round words instead of a box) seems fairly simple and there is a neat option to colour in both the edge of the bubble and the bubble itself (though how useful this is, I can't say).

There is a very useful word store that accompanies this and, intelligently, when printing in the dialogue box it places a space after each word (which means that you would not be forever reminding a younger user about 'finger spaces'.)

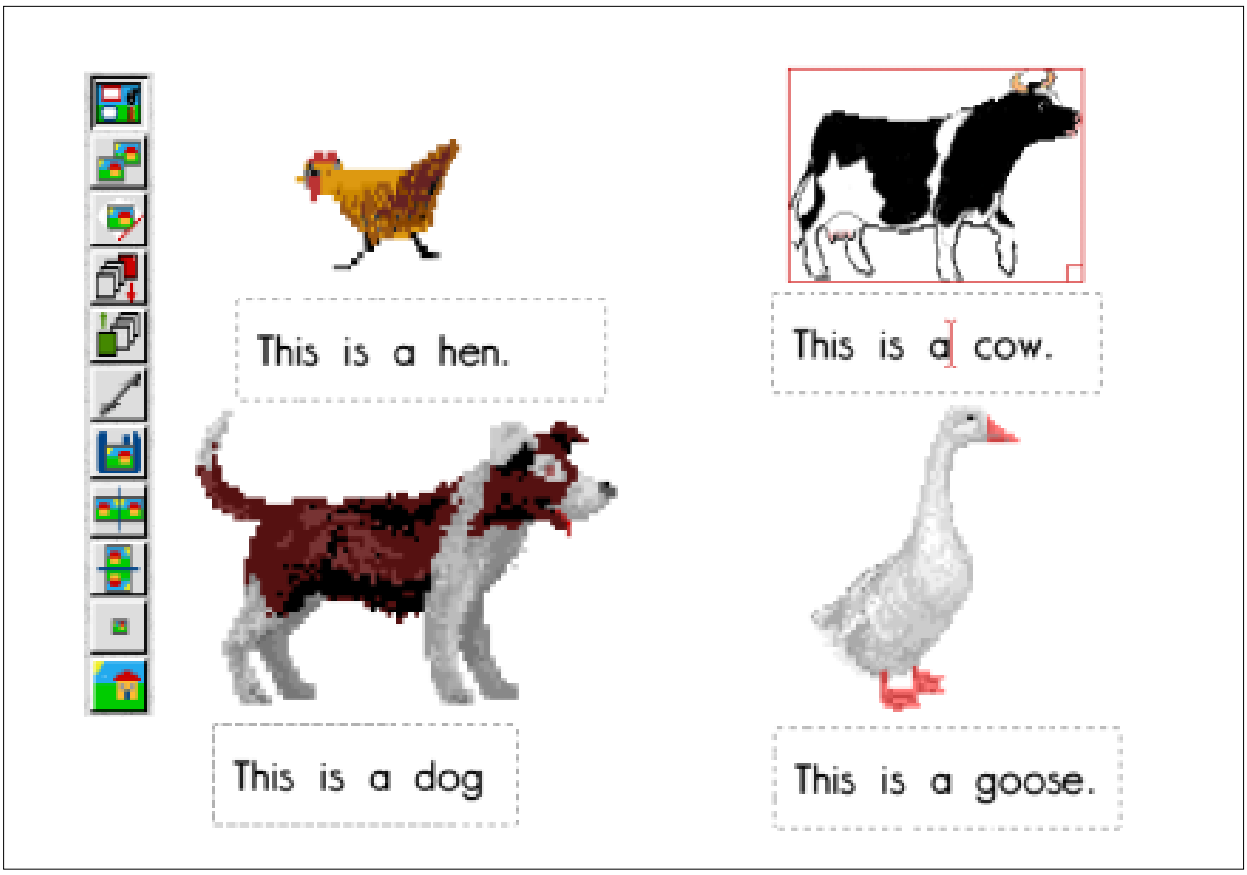
The next section is entitled 'The Picture tool' only you've first got to find it and, on this, the manual is not very helpful. Luckily I found it by accident by clicking on the text icon which takes you out to the main screen. Another click on what looks like an altered version of a sprite icon brought me to the screen I *actually* needed. As I said, *not* very helpful.

Having got to this point the manual then comes into its own again. The instructions on how to find your picture resources, place them, re-size and so on are again very good and easy to follow.

It is worth noting that the delete icon on all screens is a diamond with the appropriate icon (text or picture) superimposed on it). I say this because, from a child's point of view, I think this kind of uniformity prevents confusion.

Major snafu

Unfortunately, then I hit my first major snafu. I tried to move an object from foreground to background canvas and the machine almost seized up on me. By a mixture of trial and error (mainly error!) I managed to get control back but I don't know how. While I was trying to regain control it did strike me that this package seems to use sprites which, of course, tend to look poor when expanded too much. I don't know if the package is capable of taking drawfiles but I think it would be an advantage.



Copying pages is easy and you are given the options of either selecting a particular page to copy to, or to copy to the next, or to after the last page.

The 'Wipe page' function is neat and, sensibly, gives you the choice of whether to wipe out foreground, background or both. Moving pages, either to a specific page or the previous, is also extremely easy being, again, simply icon driven. Saving pages proved to be problematic as, initially, I got the same idiotic message coming up that came when I first loaded. Finally, I did manage to install the page in the required directory. I checked this procedure by deleting the page several times and re-saving it and it seemed to work satisfactorily.

There is a facility for printing out work which results in an A5 printout half way down a portrait-oriented A4 page. I've been badgering people to sort this one out so that we can get decent pictures in A4 landscape (like you actually see on the screen) but to no avail so far. The printout also shows you how bad the pixellation problem is. Oh for some vectored graphics!

The Book Tool allows you to: return to the main toolbox (referred to, for some reason, as the 'top level' toolbox). Again I can see this causing concern to newcomers. This is simple enough to use, as are the other tools: to clear a book, save one and print one.

It is at this point that you are told how to print in landscape orientation. By opening up the main menu you are given an option to print which throws up a dialogue box which allows you to choose which orientation to choose. *Now* they tell me!

The last pages concentrate on brief (but explicit and helpful) tutorials on how to create cards, animated books and text manipulation.

Again the only comment I would make here is that BookMaker will not allow you to rotate text. This has to be done either in Draw (by converting to path) or by using a proprietary package like FontFX. It would have been a useful touch to have this facility as not everyone is familiar with the routine of converting a text object to path.

There is also no way of adding sound modules which would have been useful too.

My comments about the manual notwithstanding —though I feel that these should be addressed —are that this is a reasonable package for use in school, although he problem of proper installation to hard disc needs to be sorted out and the ability to access directories caused me a headache. There are no recommendations as to what age group should use it but I would guess it would be best in the hands of top juniors or maybe early years secondary school (Years 5-8).

BookMaker
Price: £49.95 +VAT and postage
Site licence: Two and a half times the single user price.
Supplier:
The RESOURCE Centre
51 High Street, Kegworth,
Derbyshire, DE74 2DA
Tel: 01509 672222
Fax: 01509 672267
Email: info@resourcekt.co.uk

Can You Help?

Lost hard disc

I have an Acorn A3000 computer with RISC OS 3.1.and Stallion Software's Almanac program(version 3.06).

I 'lost' the hard disc when I attempted to close an Impression Style program.

An error message appeared, advising that not all the data would be saved and, on restarting the computer, the following appeared:

Internal error; branch through zero at &03182CA4

The following are the entries and results from using the command line:

```
*SCSI
*.
FileCore in use

*SCSI
*.
Internal error: branch through zero at &03812CA4
*SCSI.
Syntax: *SCSIBlock Addr AccessKey DeviceID Byte...
```

Is there any way of regaining use of the hard disc or are the contents irretrievably lost?

The disaster of a crashed hard disc and problems with Almanac and the PC Emulator urgently need solutions.

Almanac

If my understanding of the Almanac is correct, Anniversaries that are coming up or recently past are highlighted in red until completed, when they are displayed in gray (sic). For some unknown reason all the anniversaries for the whole year suddenly became highlighted in red, although they revert to grey 20 days after the date of the anniversary.

I have tried reinstalling the program and details of all the anniversaries but the outcome is the same.

A further fault occurs when attempting to select the month by using the menu button in the Monthly

Planner, Weekly Diary and Day Diary sections when the month displayed is always the month following the one selected (for example April is displayed when March is selected).

As, alas, Stallion Software are no more, does anyone know where I might obtain a Manual as I am having immense difficulty in understanding how the program works.

D J Nunn
Little Woodend, Dymock,
Gloucestershire GL18 2AA

For Sale

An A3000 1-2MB upgrade £20
RISC OS 3.6 ROMs £25
100 double density discs (mostly only used once) £22
100 capacity disc box offered to buyer of discs only (if wanted) £6

A3000 with 2MB (upgradable to 4MB), 60MB hard disc, RISC OS 3.1, serial upgrade, user and analogue ports and a Philips monitor.
Sensible offers please.

Steven Rowe
10 Poppyfield Close
Leigh-on-Sea
Essex SS9 5PJ

PC Emulator problems

Now I have a StrongARM Risc PC, SRP16, I thought I would see whether Acorn's PC Emulator (v. 1.82) would work at an acceptable speed as it didn't on my A5000.

It fails when I click on the PCem icon bar icon with the message: Internal Error 'Illegal XDPI or YDPI in sprite.'

I have tried various screen modes but get the same message.

Does anyone have PCem working on a StrongARM and, if not, is anyone trying to upgrade it? Is there any technical reason why there is no 486 emulator?

Alan J Munday
44 Rosedale Gardens,
Southampton, Hants SO17 1QG

For sale
US Robotics Sportster 28,800 Fax Modem, with Acorn cables. £75

Micro User/Acorn Computing Volumes 5 to 12. Nearly 100 copies comprising all RISC OS issues. £35
Collect St Albans or post extra.
Peter Jennings 01727 861835
email: jennings@argonet.co.uk

Coming in Eureka 24

In our pre Acorn World edition, we give you the latest details of what you can see at the big show, browse nostalgically through the Spectrum CD, look at what the Task Force Canadian clip art collection offers and the Secret Life of the Guardian of The ARM Club Gold, Treasurer Simon Burrows, is revealed.

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The ARM Club

• The Club's magazine, 'Eureka', written by members, published and sent four times a year to members with a supporting disc.

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