Eureka

*The Magazine for Members of
The ARM Club*
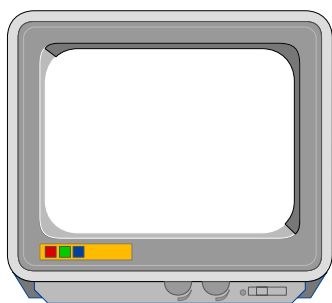
Editorial

When buying a piece of software or hardware, do you often wonder how long that item will last? How long will it be before a better model is brought out or before the product becomes outdated?

We are fortunate that as Acorn users we are shielded from these effects by the policies of companies such as Acorn; it has a policy of continuous improvement to its product range, and yet each new product it brings out is generally backwards compatible with what existed before it. The company's product range has remained remarkably stable, and software purchased today should work without any problems on a 1987 vintage A310. Such a machine can be upgraded to virtually the same specification as the latest A5000 computer, and when buying software, there is no need to worry about such things as what sort of video card you have fitted, or how much extended memory is required.

What of the future though? Most schools and users are very satisfied with the machines that they have, but in the six years or so since the Archimedes was launched, other technology has caught up and even overtaken the Archimedes in some respects. Should Acorn try to regain its technological advantage, possibly sacrificing some compatibility, or concentrate on building a wider and more stable market for its existing machines and technologies? Only time will tell.

Happy Computing,

Simon Burrows (Editor)

Ten Out Of Ten – Full Marks?

A look at the latest Educational Releases by Susan Bancroft

Buyers of educational software are a particularly demanding market. Schools must have one eye on the price of software, particularly as there is material available in the public domain. Programs may be written around the National Curriculum, but this is frequently subject to change. However children as young as 5 are expected to attain a level of competence, so there is a need for well written software. The Government guidelines state: "Pupils need to use Information Technology in school to enhance and extend learning; to gain confidence and the capability to use IT in later life".
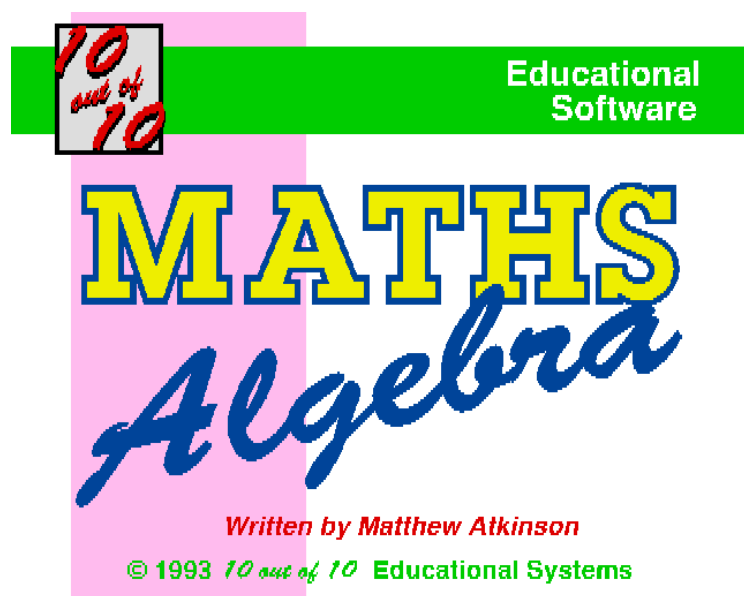
In the home market, I suspect it is parents rather than children who choose the educational software. Their offspring are quite happily fixated on small blue hedgehogs or Italian plumbers. Each party has different requirements: fun (for the otherwise contented gameplayers) and learning skills (for those who have to stump up the cash).

The **Ten out of Ten** approach is to present a broad range of educative skills that cover major areas of the National Curriculum. Each package contains 2 discs of 6 arcade-style games and is priced at £25.95. There is also an accompanying Player guide and Parent / Teacher guide for each pack.

The Early Essentials (3 - 7 years)

The cover design of this pack lists an impressive table of contents – shape & colour, numbers, alphabet, science, tables & bonds, logic, algebra, time, properties and words. It also features a unique marking system that allows up to 64 children to be individually assessed on a colour grid scheme. All games are easily accessed using the select mouse button, with "Play Game" consistently at the top of the information grid and "Clear Exit to Menu" at the bottom.

Two games that match moving coloured shapes are **Gnasher** and **Grab It**. The first uses scrolling vertical shapes which have to be matched with a coloured shape set in a box, under a static dog. The caret is a pair of jaws and the correct answer produces a barking sound, an incorrect one, a howl. "Grab It" works on the same principle, but this time the shapes are rapidly changing in set positions on the upper part of the screen. Featured animals are two bees, which bear no relation to the zapping sound.

Link up matches 16 static coloured shapes across a divided screen, joining them together with pins and string by clicking and holding down the mouse. **Stones** is a sequencing game, using stepping stones. I found this rather difficult, as it involves counting very small graphics to predict the next step.

Racer moves a racing car around a circuit,

using the mouse as an accelerator and brake. You have to run over graphics in answer to the question set at the bottom. "Drive over a push" means running over images of men with wheelbarrows and women with hoovers. Quite what this teaches on the moral front is another matter...

Artist is a very appealing painting package. A paintbrush can choose any colour from a palette by a simple mouse click and details of the design filled in the same way. Pictures include a house, a kite and a caterpillar.

English and Maths Number

These are separate packages for 6-16 year olds, however one Head of IT Department expressed some reservations about this. He felt that 6-16 was too wide a range of ages, advising a further division between Junior (7-11) and Secondary (11-16). Some staff may dismiss the package on this basis alone. At Secondary level, pupil year numbers run into hundreds, which could not be accommodated on the assessment grid system.

Sniper and **Carnival** use the same shoot-'em-up formula. The first, for matching sequences of letters and words, the second, numbers and mathematical equations. The **Cover up** game in both packages similarly matches words and mathematical sequences. In **Grab it**, the missing word from a nursery rhyme must be found in a swirl of words and graphics. This induces a feeling rather akin to being sea-sick. I also had to wait a long time for the right answer to scroll along.

Silicon Brain emulates a calculator and **Librarian** a filing system, while **Cheers** is a board style game with dice, too demanding for this addled brain. **Word Fit** is rather like

Scrabble, except you are given the words to fit horizontally and vertically. In **Big Bang** sums are set next to a thermometer and the aim of this cheery game is to delay the explosion for as long as possible.

Overall there is a good variety of games and the packages are good value for money. However, there could be a greater range of difficulty within each level. Just speeding everything up is not a learning skill. Consideration has to be made to the link between a highly flashing screen on eyesight and those prone to epilepsy. The shoot-'em-up formula does pall after a while, but the different games do cover a wide range of subject matter.

Reviewed by Susan Bancroft

Ten out of Ten have recently announced another addition to the range with the package "Ten Out of Ten Maths (Algebra)" for 6 - 16 year olds. This covers topics taken from the National Curriculum Attainment Target 3 (Algebra), with subjects and levels said to be of interest to all children on Key Stage 1 up to Key Stage 4. As with all the Ten Out of Ten packages, it costs £25.95 inc VAT.

Topographer

Andrew Black reviews this long heralded package from Clares

The manual begins by describing Topographer as *"...a combined 2D and 3D mapping package. It allows you to create a 2D map and convert it into a 3 dimensional view of the landscape"*.

The package comprises 2 applications, !Topo2D for creating maps, and !Topo3D for displaying them in 3D. Possible uses include geography lessons, improving map reading skills and illustrations for project work.

In writing this review, I have been assisted by test driver Matthew aged 10. He enjoyed it very much, but one of his favourite pastimes is looking at Ordnance survey maps.

Topo2D

This allows you to draw maps using methods not unlike !*Draw*. A whole host of Ordnance Survey (OS) symbols are provided – church with tower, station closed to passengers (ready for privatisation), tourist information, ancient monument...

A nice "Topographer features" menu provides pictures of all the symbols. When you click on a symbols, text at the bottom of the window reveals the meaning. This is of obvious educational use. Roads (and other line features such as rivers) are drawn by clicking at successive points with the mouse. Altenatively curves can be created by keeping

the select button down. I found this difficult to use – my mouse positioning is far too jerky. Regrettably there is no support for bezier curves that are well kown to every !*Draw* user; hairpin bends might be a bit hairy. There are features for making a neat junction between different roads, and for making roads and railways under/over bridges.

Contours are created in a similar way to roads. By default a contour is 10m high, but specific heights can be entered. A contour can be
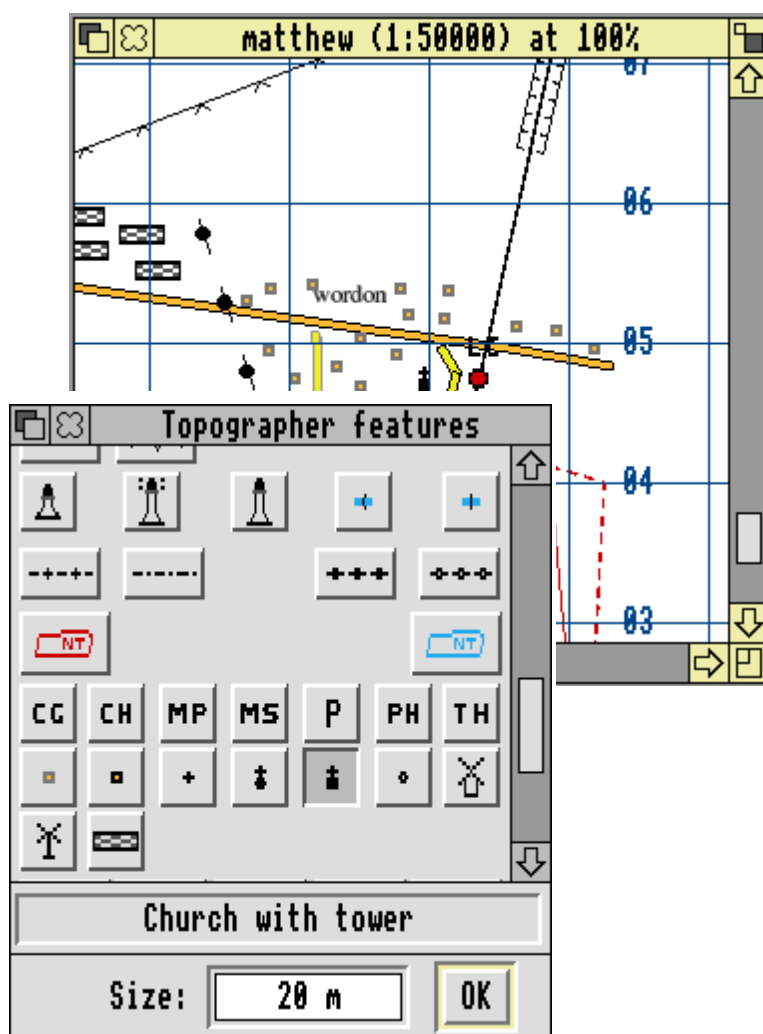
replicated - a dialogue box allows you to select the number of repeats and the separation of the contours. This enables you to produce hills rapidly, albeit with an artificially even profile. I would have hoped that the program could work out the height of successive contours itself; it doesn't and it is very easy to create nonsensical patterns such as all contours at 10m.

The map can have grid squares and you can select a box displaying the grid reference of the mouse pointer as it moves. This is useful for learning how the grid system works. You can select the size of grid (normally 1 km) and the number of figures (normally 3 in each direction). Some of the supplied maps are very large scale and have 5 figure grid references - disconcerting for people used to "normal" OS maps. You can select the scale of a map when creating it, and change it once drawn. This could be useful for understanding the difference between maps at various scales.

I do have a few niggles: editing lines is unlike !*Draw*; I discussed this with Clares and they felt their method is more suitable for children. Matthew agreed, but I still feel the !*Draw* method would give better control. Perhaps there is room for both? I would like to see a keyboard short cut and/or contol panel to take you between edit and select modes.

Topo3D

This is where Topographer becomes more than a map drawing package. Take a map and produce a 3D view of it; very useful for learning to visualise what a map looks like in reality - something many people find difficult.

It sounds very easy, but unfortunately takes a lot of getting used to. The supplied examples look very pretty; my ones did not. To produce a good view in a reasonable time you need to be very careful about the options you select; not too large an area, keep the scale large, not too many wooded area (trees look very dramatic, but take an age to draw). The colours used in the 3D pictures are very dark – darkest blue sky and dark green land – in fact for the first few days I thought

these were both black. I needed to adjust the monitor to full brightness before I could tell the sky from the ground!

The rendering process sometimes seemed to get stuck; I think this was caused if insufficient memory is available. Changing to a lower resolution mode seemed to get it out of the loop. I don't feel this is satisfactory; if it is running out of resources it ought to warn you.

I have given an example of 3D map and a view. I had to keep it simple as a more detailed map would not come out well in black and white. See the adverts for a better demonstration!

Relationship between 2D and 3D

The two applications can run at the same time, and there are options to transfer data between respective applications. I found it confusing that there were two separate programs. It is easy to have the program loaded into both at the same time, save from both and loose changes!

The two applications look very similar; both have maps, the menus are both entitled "Topographer". I found this very confusing - it is all too easy to forget which of the two programs you were using. Life would be a lot simpler if a combined program were provided for those with the memory to support it.

Documentation

The manual comprises 54 pages and includes installation instructions, a tutorial, detailed desription of both programs and finally a summary. The latter is *"a quick overview for those who don't read manuals"*. I come into this category, so I welcomed the summary. The tutorial provided a good introduction to the features of the package. Generally the booklet is well written, but it is a bit dense.

General comments

The outside cover stated that the package was *"1 megabyte friendly"*. The release notes gave complicated instructions for running it on a 1Mb machine – shot down 2D, only make views in single tasking mode, don't catalogue any discs... with friendliness like this, who needs enemies? If you have a 1Mb machine, I think you will find it worthwhile to upgrade. Clares even include a 10% discount on memory (so do they really support 1Mb machines!).

Summary

The 2 dimensional program was very usable and worthwhile, despite my minor grouses. The 3D application is a brilliant idea, but I don't think it quite comes off. There seems too much to get wrong! It can be used to produce good results, but it is hard work.

Andrew & Matthew Black
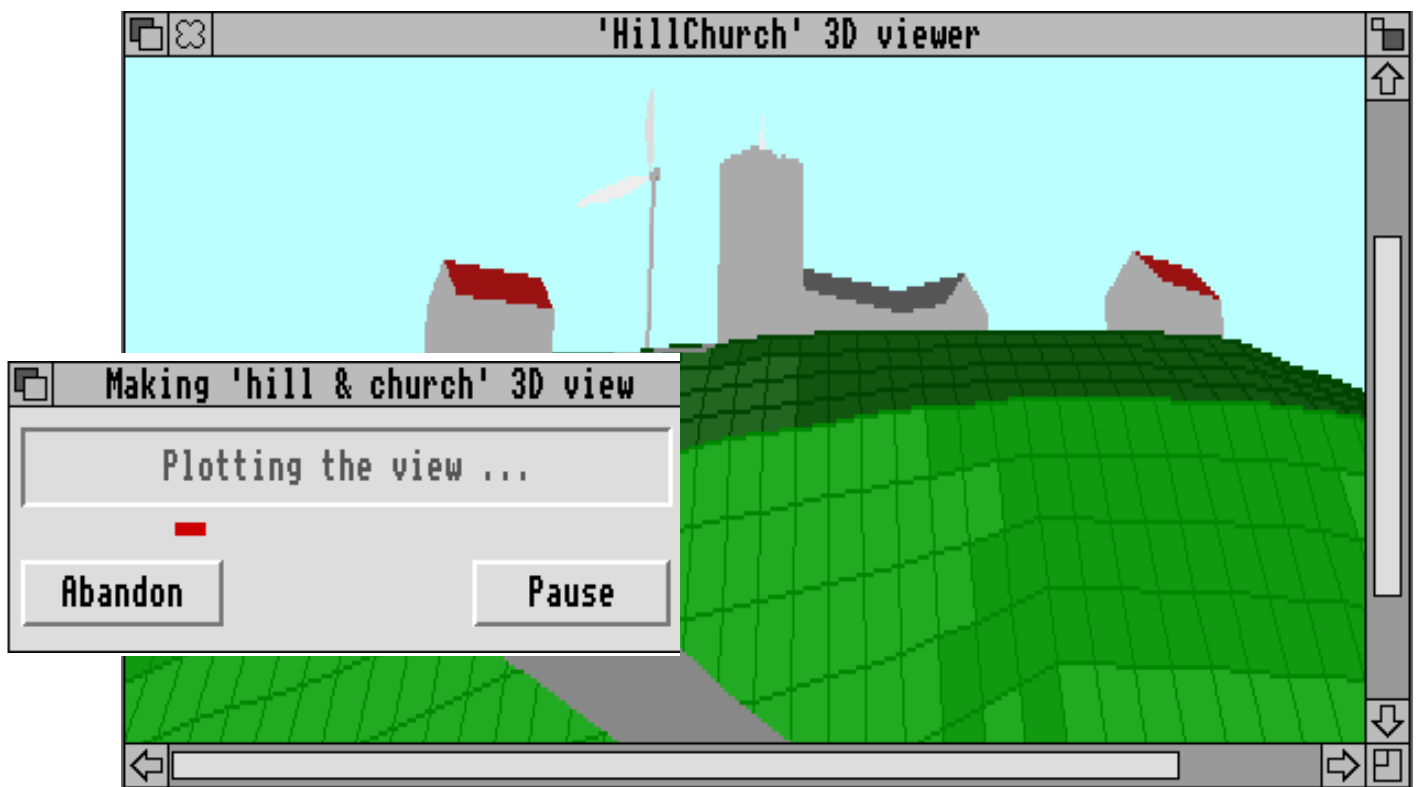
The program provides a large range of preference options; I regard this as both an asset and a liability. Many of the options have profound effect on the quality and speed of rendering of the images. To make good use of the software you need a teacher who has expended considerable effort to get suitable settings.

The box states that the package is *suitable for all ages from 6 onwards.* I feel it would be too complex for young children to use.

Topographer costs £79.95 inc VAT from Clares Micro Supplies. Primary site licences cost £240, and £400 for a Secondary Licence. The package is supplied on two floppy discs, along with the sprial bound manual. Software protection takes the form of installing the software with your name and organisation.

The release of Topographer was delayed by the death in tragic circumstances of the main programmer, Ricky Delarre, who was also one of the two people behind the game Karma.

The ARMEd Trust

At our Mill Hill Open Day last year, a small group of families and teachers started a special interest group within the Club that we have called The ARMEd Trust. The need sprang from the increasing number of non-technical folk who own Acorn RISC machines, mostly for home learning, and are finding the large triangular gap between the content-free packages, the games (mainly, sadly, zap games) and the mainstream educational packages like LOGO, Numerator, Genesis and Rhapsody.

We are hoping to publish a monthly disc, although initially it is being produced on a bi-monthly basis. It is intended for virtually free distribution, containing a mixture of things that might appeal to all members of our families: a 'good' game, some programs aimed for all ages, some clipart and potential project material, suggestions for parents, and anything else that might be useful to beginners.

The first disc was a useful exercise, but a bit lean. Luckily only a few people took it, but from them we have had good feedback. The second disc was more widely circulated, and we expect that the rising quality will let us charge the royal sum of £1 for the disc, partly so we can pay contributors, but mainly so that we can buy the next discs: we were given 100 discs by TDK (may the sun shine on their profit margins!) to get us off the ground. Our distribution method is elegant; on receipt of your SAE and £1, we store the SAE until the next disc is ready. We then fill it and pop it in the post. Complaints about non-arrival should be accompanied by an SAE.

Comments about the quality of the discs are welcome, as are suggestions and contributions. The editor is Gareth Jones, the Secretary Amit Majithia, and the troubleshooter is Bruce Dickson. All can be reached at St Augustines Cottage, High Street, Mill Hill, London NW7 1QY or telephone 081 959 3321.

The Trust's activities are not yet officially approved by your committee, but any future profit will be available for ARM Club projects.

Bruce Dickson

Members' Interests

Those of you who are long-standing members will know how keen we are to encourage Archimedes users to get in touch with one another, and share experiences and expertise. The best way of solving most problems is to share them with other people, and you get much more out of your computer by talking with like-minded people.

For this reason, from time to time we publish a list of members, their addresses and their interests in order to assist you in making contacts. A significant number of members have specified that they do not wish their details to be circulated, mainly for perceived security reasons.

An updated list will be circulated with the next issue of Eureka, so if you know that some of your details are incorrect, or you would like to be included, please write to the Membership Secretary, John Bancroft, at the usual Club address. If you have only joined the Club recently, your details will automatically be included unless you requested otherwise on your application form when joining.

Advance in Action

Acorn Advance has been the company's first new software release in quite a while, and follows in the footsteps of previous Acorn applications software such as First Word Plus, Acorn DTP and Logistix, the development of which involved third party developers as well as Acorn itself, just as with Advance. This new integrated software suite was announced at the BETT Education Show in January, and sensibly Acorn approached a small group of its leading key developers to adapt their existing proven software applications, rather than designing its own from scratch.

Acorn Advance is superbly presented and packaged. There are no other words for it. I do not believe that any third party product would ever be as well presented. It comes in a large, heavy and very sturdy white box, featuring some specially produced and very colourful graphics. Two manuals are supplied: one is the Advance User Guide, which is itself superbly produced, like so many recent Acorn manuals, and thankfully it is ring bound, about the thickness of the Acorn BBC BASIC Guide.

The second manual is a thinner Project Guide, which details the Acorn climatic project supplied as a tutorial. A wall poster is also supplied, along with release notes and registration card. The software is supplied on four floppy discs, contained in a very handy disc holder.

Advance consists of four constituent parts, the Wordprocessor, produced by Computer Concepts, the Spreadsheet, produced by Clares, the Database, produced by Iota, and the Graph package, produced by CRM. Each of these is not loaded separately from disc, instead there is a frontend which integrates the four parts together and allows the user to load whichever ones are required. Trying to use the software on a machine only fitted with a single 800k floppy drive would not be advisable, nor would its use on a 1Mb computer. Ideally you need a hard disc or a network to run it off, and at least 2Mb of RAM. Advance, like all new Acorn software, requires RISC OS 3.10 or later to be used.

Before use, the software must be registered. Advance uses Acorn's *Software Protection Scheme*, which installs the unique ID number contained in all recent RISC OS machines in the software, along with your name. If you attempt to load the software on another machine without the key disc, it will run but a large warning window will remain on screen informing you that the software may be being used illegally.
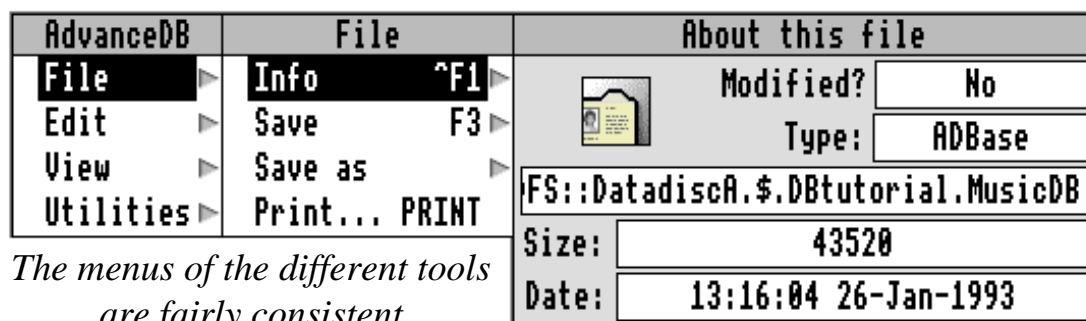
Advance WP

I will start by looking at the wordprocessor part of Advance. Upon loading it, the similarities with *Impression* are striking, however a more detailed examination reveals the differences. I expected AdvanceWP to be effectively a cut-down version of *Impression Junior*, without Computer Concepts' famous 3D user interface, but this is not so. It actually contains some important new functionality which I suspect could be seen in future versions of Impression. For example, if you save a document, it is stored as a single file, unlike current versions of Impression which store a document as an application directory. For the technically minded among you, it does

this very cleverly by opening a RISC OS 3 Image file, and then writes the separate files into this, giving the appearance to the user of a single file.

If you are familiar with Impression or particularly Impression Junior, using AdvanceWP will present no problems, and the manual coverage is very good. New users should also find it easy to use. As a serious user of *Impression II*, using it to produce this magazine, I constantly found myself trying to create frames in which to drop graphics, but that is not the way AdvanceWP works. It comes with a 60,000 dictionary, and also a very good mail merge facility, far superior (for most uses) to Impression's system using CC's Business Supplement package. It requires the use of CSV (Comma Separated Values) files, which can easily be generated by the other parts of Advance. I found this aspect of AdvanceWP extremely impressive. It has been designed as a wordprocessor rather than a desktop publisher, so it would not be suitable for production of major frame based documents such as this magazine, but would be ideal for typing letters, reports, short newsletters and so on. Draw and sprite files can be dropped into documents as illustrations, and since the different tools share the same clipboard, it is easy to transfer data between the parts.

AdvanceSH

The spreadsheet tool is based on Clares' Schema package, although it has undergone quite a bit of moulding to appear consistent with the other Advance tools. For example,

the main menu only contains four items, chosen so that the four tools have the most consistent menu structures possible. I would describe the spreadsheet tool as basic but adequate for most purposes. It does not offer advanced facilities such as a script language, fairly understandable I suppose considering the intended market for Advance. The manual is again excellent, styled as a tutorial and working through the example of a fictional music shop. he one snag with this approach is that it makes it more difficult to locate instructions for any particular command or problem.

An interesting feature of Advance is that you can customise the menus using a text editor, so for example a primary school could remove the more complicated features from view. AdvanceSH offers menus containing 55 functions, including algebraic, trigonometric, scientific, string, time, random and array, or create your own formulæ. Rather than having a built-in graph tool, as with the more expensive packages such as *Pipedream 4*, the Advance philosophy achieves this by transferring data into the Graph tool. The file saving facilities are impressive, a sheet (or part of one) can be saved in any of the following formats: CSV, TSV, Graph, Draw, Formulæ or text.
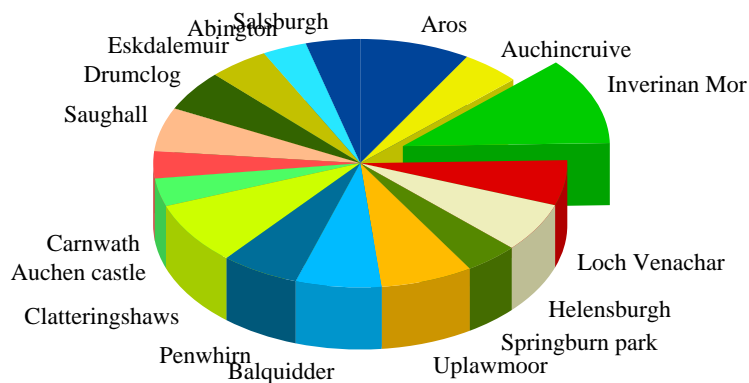
AdvanceDB

The database system bears significant similarities to Iota's *DataPower* package, but again, that is not at the expense of a uniform user interface across the range of tools. The manual starts right from the beginning, describing the use and creation of databases, but it offers all the usual features of this sort of form-based database management system. Creating a new database is simple, and the

The menus of the different tools are fairly consistent

manual tutorial goes through the process step by step. You can store large amounts of data, and then search and store it, as well as produce graphs by transferring the data to AdvanceGR. It has a very impressive Report Editor and Generator which can perform calculations on the data before presenting it, with many options to print the data just how you want it.

AdvanceGR

This part of Advance particularly impressed me, because it is so simple to use to create impressive looking graphs, pie charts, line graphs, scatter charts and so on, in outline, 2D or 3D. The options are quite flexible, for example the labelling and colours can be specified, and you can even choose if you want particular segments of a pie chart to be pulled out of the chart. Scaling can be either automatic or specified by the user. It is very quick and easy to obtain impressive looking results, with fine-tuning possible if needed.

An example piechart

Conclusion

Unfortunately in such limited space it is impossible to describe Advance in sufficient detail. Each of its four parts would normally justify a review the size of this. All I can really do is report my overall findings, and if you need to know whether it is capable of doing something in particular, either ask your local Acorn dealer, or else write to the Club and ask. Clearly many thousands of man-hours have gone into this software, although a lot of that time would have been dedicated to the "full"

versions of each part sold by the respective companies. Acorn have cleverly tapped into this expertise and come up with a very competent package; you might expect that the companies concerned would produce very cut-down versions of their existing full packages, in order to protect their own markets, but this does not appear to be the case.

I have been impressed by Acorn Advance. As with all major packages, there are some aspects which I think could be improved or done differently, and there are a few bugs. Nevertheless, I would be happy to recommend Advance to anybody who expects to need two or more of the tools which comprise it. If, for example, you only needed a wordprocessor and none of the other packages, then I would recommend that you look at a package like *Wordz*, but what makes Advance very pleasing to use is the way in which the separate parts work together. Often you find that such packages are a compromise, frequently with inadequate attention to detail and documentation, but Acorn has done a very good job here, both for home and school use.

I have only two reservations, and both concern the fact that it is being marketed by Acorn itself. Firstly, does Acorn intend to advertise and promote Advance properly? In the past it has never placed much advertising for its own software. Secondly, Acorn is not well-known for releasing bug-fixed and upgraded versions of its software to the public in a sensible timescale. If Acorn can change its ways and give Advance the promotion which it deserves, it should be very successful.

Simon Burrows

Acorn Advance costs £99+VAT for single users, generous site licence terms are also available. It is available from all Acorn dealers, who will also have a full specification.

Computers in the Home

Written by Mark Smith

Most people think of 'the computer' as the thing which sits in the corner of the room for the children to play games on, and perhaps to do a bit of word processing or to do the accounts using a spreadsheet. However you probably have far more computers in your home than you realise.

From The Collins Gem Dictionary of Computing: "Computer, a device which will manipulate data..." There are two main types of computers – analogue and the more common digital. A modern digital computer will usually consist of a microprocessor chip, with some amount of storage (RAM) and read only ROM or EPROM to hold a program and any permanent data and some means of communicating with input & output devices. In the case of a home computer or games console, the input & output devices will usually include a TV or monitor and a control pad, joystick or keyboard, but with computers generally this is not necessarily the case.

A good example of a device which most of us now own, but would not usually think of as being a computer is a Compact Disc player. This will typically consist of a microprocessor, some memory to hold track numbers that the listener wants to hear, a program for the microprocessor to follow which will be held in a ROM and input / output devices which will include the sensor which detects LASER light reflected from the disc, a control panel, an LCD display showing the current track number, playing time etc. and a pair of Digital to Analogue convertors which output the music to the amplifier.

Other examples of devices which may include computers are: some HiFi amplifiers, videos, some televisions and radios, some cars (e.g. engine management systems), microwave ovens, some washing machines, dryers and dish washers – even a particular brand of pop up toaster!

There are many advantages to using a microprocessor based computer system over dedicated digital electronics. Firstly, there can be a large space saving in using a microprocessor chip, a RAM chip, a ROM chip and a small clock crystal in place of a large selection of counters, timers, logic gates.... all of which need to be connected by tracks on the Printed Circuit Board requiring a larger PCB.

Secondly, there can be a substantial cost saving in using the microprocessor solution, particularly for large production runs where the ROM chips can be made economically. For smaller production runs, EPROM chips can be bought off-the-shelf and programmed using an EPROM programmer. As well as there being fewer chips to buy, there is a considerable saving in cost by using smaller PCBs.

Thirdly, if it is necessary to alter the working of a system, it will often only mean a reprogramming of an EPROM where they are used. If ROM chips are being used it will mean producing a new mask for production of new ROM chips (expensive and time consuming), but where dedicated electronics are used it will often mean a complete redesign (very expensive and very time consuming). An example of this can be seen in operating system upgrades from Arthur to RISC OS 2 and from RISC OS 2 to RISC OS 3, which in

StrongED

The new commercial version of this popular editor gets the once-over by Tim Browse

StrongED 2.50 from Stallion Software is an upgraded version of the popular programmer's editor written by Guttorm Vik. Until recently, StrongED 2 was a Shareware program, and while existing registered users can continue to use it, new users must purchase the commercial version (StrongED 1 is public domain and so can still be used by anyone). This review was conducted using a pre-release version of the software, even though it declared itself as version 2.50. StrongED 2.50 competes head on with Risc Developments' *DeskEdit*, and Dominic Symes' public domain editor *Zap*. StrongED only works on RISC OS 3.10 or later.

A quick perusal of the menus and features by someone familiar with the Shareware version of the program will give the impression that nothing much has changed. On the other hand, a number of useful features have been added to what was already a good editor. One of the main advantages of StrongED is that, like *Zap*, it is fast - anyone used to !Edit or !SrcEdit's speed of screen update can breathe a sigh of relief because it is so much faster.
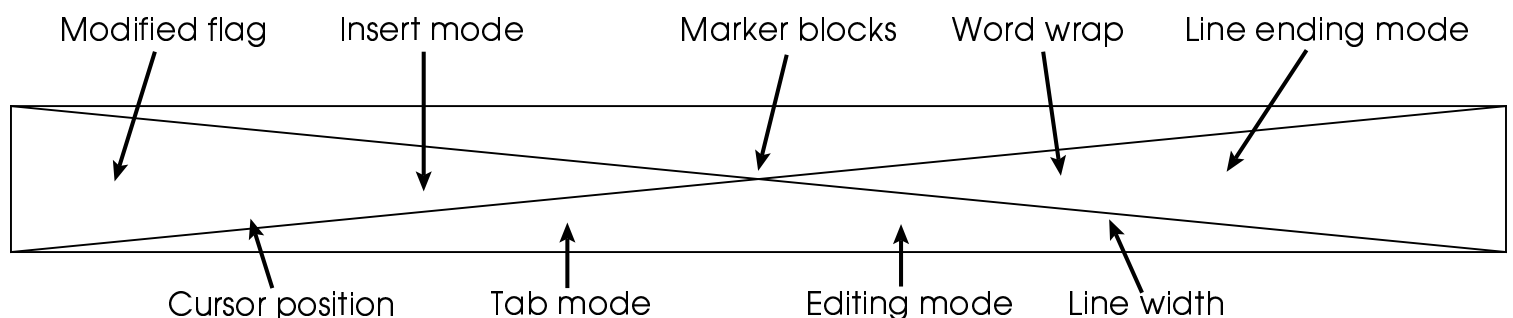
Registering a complaint is always a good way to start, and this one concerns the interactive help program supplied with the editor - 'StrongHlp'. This is a neat and compact help utility with hypertext links between topics. However, the help provided by this program for StrongED itself is, at best, minimal. These seems a bizarre omission, but perhaps it is deliberate on behalf of the publishers to encourage people to buy rather than pirate the software. However, StrongHlp is a nice help system, and also supports the standard interactive help (as used by Acorn's !Help application).

StrongED has a set of 'modes' which determine how it behaves. These include key-bindings, and certain language-specific features, and this allows the editor to be tailored for the job in hand. For example, when programming in BASIC, the program can be run by pressing F10. When programming in C, pressing F10 will cause the program to be compiled. Modes also exist to support the Pascal and Modula-2 languages, and various other special modes. The only problem is, the manual doesn't really explain what these modes do nor how to use them.

Documentation

The manual Stallion sent me was in the form of an Impression document, and was described as a 'draft' version. However, at the same

Modified flag   Insert mode   Marker blocks   Word wrap   Line ending mode

Cursor position   Tab mode   Editing mode   Line width

time, Stallion also told me they were waiting for the manuals to be printed, so I would imagine that there won't be much difference, if any, between the version I was given and the final printed copy. In general, the manual is poorly written (it mixes the second and third person constantly) and the layout is often unclear, but most of the features of StrongED are descibed somewhere within its covers. Sadly, the manual comes across as too terse in some places and too simplistic in others. For example, initially it repeatedly refers to the cursor as 'the red block' - most programmers will know what a cursor is, surely?

StrongED in use

When editing, the window with input focus has a small pane window attached to the bottom. This displays various useful information, and is shown opposite.

The marker blocks provide a convenient way to create 'bookmarks' - they may be set, unset, and jumped to simply by using the mouse. The word-wrap facility is very useful, and StrongED will also 'unwrap' lines for you. This means that it inserts hard return characters into your text, so that when it is loaded into an editor without word-wrap, it is still readable. The line ending mode is another useful StrongED facility - it can handle files with different line ending codes to standard RISC OS files - this means text files from many sources (DOS, Unix, etc.) can be read easily using StrongED.

User Interface

In use, StrongED is marred by a poor user interface, but the features it provides for programmers will usually more than make up for this. Features such as bracket

matching (which highlights pairs of opening/closing brackets or braces), and the ability to swap case are often required by programmers, but just as often seem to be missing from editors, causing frustration.

There's nothing radically new about StrongED – I've seen all its features on other editors somewhere before, but it's not often I see them on editors for the Archimedes. A good example of this is StrongED's interactive search, which has been 'borrowed' from EMACS. Interactive serach means that as you type into the search dialogue box, the cursor is dynamically positioned at the first match in the file - conversely, as you delete characters, the search moves back to the previous match it found. This idea is simple in concept, but very useful in practice, and is a great time-saver.

Another time saver is StrongED's 'list-of-found' facility, which will perform a search, and then display all the matching lines in a separate window. When you click on the line you want, the cursor is moved to that line in the main window so you can start editing it. This would be very useful in itself, but StrongED extends this idea with one of the few documented features of StrongED's 'modes'. When in BASIC or C modes, a list of all functions/procedures can be compiled at the press of a function key, and then displayed as a list in another window, like a normal search. This makes navigating programs much easier, and is one of those features that you never want to do without, once you've used it for a while (about 20 seconds in my case). My only complaint about list-of-found is that when you do a search, it only displays the lines starting at the match, rather than the whole line in which the match was found.

Throwback Support

StrongED also supports a similar system known as 'throwback', which will be familiar to anyone who has used Acorn's Desktop Assembler, C or Pascal systems. Throwback allows assemblers and compilers to report errors via Wimp messages directly to editors which support throwback. The editor can then display the list of errors in a window, and when you click on an error, the correct file is opened and the cursor is positioned at the offending line. StrongED's throwback handling is fast (much faster than !*SrcEdit*), but sadly it would appear to be another case of an editor written by someone who knows how throwback works, but who never actually uses it. StrongED provides a different window for each file which has throwback messages associated with it. This causes problems when, for example, using Acorn's !*Find* utility, which uses throwback to report matches found when searching a list of files. This can result in about 10 different throwback windows being opened, which is less than useful. StrongED can be configured to use only one throwback window, but it justs throws away existing messages/errors whenever ones for a different file arrive – even less useful! This also shows a serious misunderstanding of throwback. It's quite possible for a compilation of a single C file to generate errors/warnings about more than one file – StrongED throws away some of these almost before you get to see them.

RISC OS Compliance

The manual claims StrongED is now RISC OS compliant – this is a rather dubious assertion. StrongED suffers from, amongst other things, sub-menus which don't open but are not greyed-out, non-standard hot-key display in menus (c-X instead of ^X), save-as boxes which appear when you try to close an modified buffer, and so on. A pleasant surprise is that StrongED gets the 'adjust-close' protocol right, which is quite rare.

There are lots of options in StrongED, but not a dialogue box in sight to set them with – they're all 'tickable' menu items, which makes things very tedious. Interactive help is copious rather than useful – messages like 'move the pointer right to open the search/replace dbox' are rather superfluous, but once you actually open a dialogue box, the interactive help nearly always falls silent. The word 'exasperating' comes to mind.

Conclusion

In conclusion, it may seem that I've been a bit harsh on StrongED, but remember that it is no longer a shareware product – it is commercial. There are many features of StrongED not mentioned in this review – in particular, I'm biased towards programming in C, but BASIC and assembler programmers tell me it is equally useful for their work. Existing users of StrongED will find little to write home about in the commercial version. On the other hand, StrongED has a history of regular improvement, and I hope this will continue for the commercial version. In short, StrongED contains too many useful features to ignore, and if you can get Stallion to promise to tidy up the user interface and write a decent manual, it's worth a look. Me? I'll be satisfied when I find a RISC OS editor that does syntax colouring. Until then, I'll probably stick with StrongED. If you're not sure about buying an editor, check out *Zap* first, which has many of the features mentioned in this review, and it's free.

Tim Browse

StrongED costs £28.20 inc VAT, plus £2 postage direct from Stallion. Tim is a professional C programmer & author of several Freeware programs like !Glazier.

Discounts Scheme

Many of you have used our Discounts Scheme, and taken advantage of your Club membership combined with the generosity of many companies to obtain major savings on the cost of software and hardware.

It is many months since we last did an update of the scheme, so here are the latest details. If you are interested in a product from a particular company, you should contact them and confirm exactly what discount (if any) is available on that item. Please remember that all discounts are offered in good faith, but the companies reserve the right to withdraw or alter the terms of the discounts at any time. In this case, please let us know so that our records can be updated.

Ace Computing
Please refer to the company for details

Arxe Systems
Please contact the company for details

Colton Software
10% off Pipedream4 and Wordz. Other products contact Colton.

Atomwide
10% off RRP on all products

Design Concept
20% off all Archimedes products

Ground Control
10% off RRP on all Archimedes products

IFEL
10% off Archimedes products

Minerva Software
10% off RRP when ordered through the Club. Please contact our Secretary.

Morley Electronics
10% off RRP on many products. Please ask Morley for exact details.

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10% off Karma Flight Trainer

Simis
15% off Flight Sim Toolkit.

Software 42
Please contact the company for details Normally 15% discount on direct orders

Spacetech
10% off all software products

Stallion Software
See special feature elsewhere in this issue

Superior Software
10% discount on one item, 20% on two items, 30% on three or more items

The ARM Club PD Library
Regular special offers for members

The Data Store
10% off software, 5% off hardware

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£3 discount per item

Topologika
10% off one item, 15% if two or more purchased together. Discount not applicable if items to be used in schools

Remember that you are buying direct from the company, not through a third party, and so are likely to receive speedy service and the best support. If other companies would like to participate, please contact our Discounts Coordinator c/o the Club Office or by fax.

Arnold's Observations

Steve Arnold becomes a philosopher for the day

The time is 1:59 in the morning and this article is to be sent to the editor TODAY! – yes it is way past the eleventh hour and nothing done.. What do I do now? Panic? (*Hurry up!..Ed*) You're damned right I panic... Arrrgh.... ?!*$%£!! That's better – it must be the lack of sleep; there's a fine line between madness and inspiration. Carrying on with no sleep is a quick way to madness. So why this late? I didn't like a thing I wrote in my first effort at an article, so I started again... what a fool I am!

My observations this time are more in the way of my personal predictions for technological progress in the future. A mental (you said it!) journey, a brief look at the future..

Progress

What is progress? Well the concise Oxford dictionary defines it as...

1. forward or onward movement towards a destination.
2. advance or development towards completion, betterment, etc.; improvement (has made little progress this term; the progress of civilization).
3. British archaic; a State journey or official tour, esp. by royalty.

So when people discuss progress, see if what they describe actually fits in to any of the above definitions. I think a lot of what is covered in terms of Progress is in fact only change, some of it maybe for the better, some of it for the worse.

You ain't seen nothing yet!

As we head towards the turn of the century. We will be totally dependent on Technology, with only a small elite really understanding how it all functions. Ask yourself this question:

"*Do I understand the operation and function of a Video Recorder?*"

Some of you may answer "*yes*" but think about it, *do you really?* You can make the thing work. It performs the way you expect it to. This is the general key to the way modern society works, we all understand the basics, but we take the technology for granted. We trust it! If the power station ceases to deliver the electricity to your world/home, to power all the wondrous gadgets that exist in most homes in the UK, what can you do? Not a lot, except complain! You are totally dependant on that commodity being available to you. Without it you are really &?#@*! It appears to me that all technology is based on layers of assumption. Everyone assumes it will work, and most of the time it does, but what happens when it doesn't?

Computers: Friend or Foe? Part 1

Computers and mankind have a complex inter-relationship and dependency. Every area in society uses computers and more importantly is totally dependent on them. All aspects of modern life depend on the function and performance of pieces of silicon. This involvement can only increase. Expect to see super smart cards become part of your life: these will detail every piece of electronic information about you, including the ability to identify you, to allocate funds to you, to debit your accounts, to access & update your medical records, your family history, your current location, your home address and any other matter of personal trivia related to you.

This will become the personal identity tag. This could make Big Brother in George Orwell's *1984* look like a "school bully". We will live in a society where information & knowledge will be power. It would be folly to allow such events to progress, without some measure of control. So remember I've warned you!
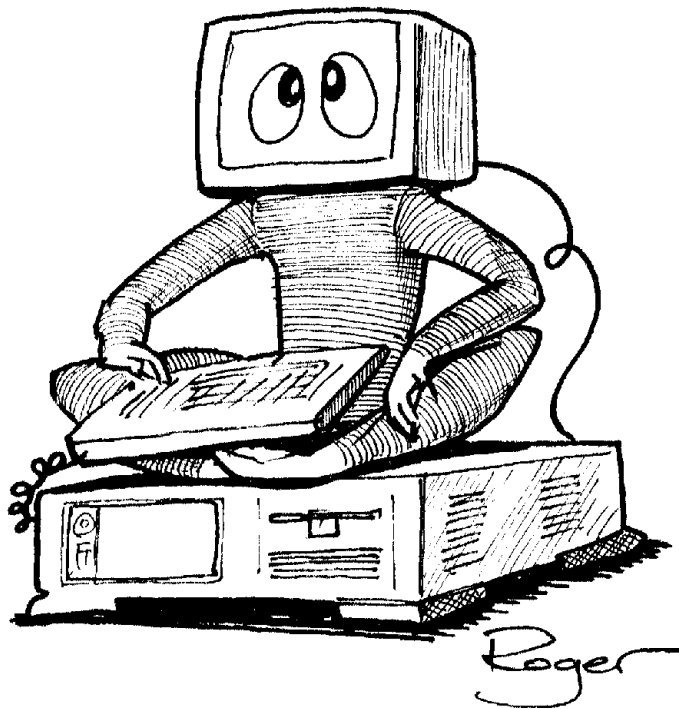
Man and machine?

Computers: Friend or Foe? Part 2

The next scenario fringes on the border of science fiction. This will be the interface of man's mind with computers – the so called *Cybertech* World; a synthesis of man and his creation.

A bit far fetched? Well yes, but take Virtual Reality as an example – computer models of the real world. Imagine trying to explaining this to the Victorians. You would find yourself on a one way ticket to the funny farm. As computers grow in power & sophistication, so there will be a need for additional stimulus and someone, somewhere will want to see this prophecy fulfilled. (*It's not life as we know it Jim!*).

Over the next hundred years, there will be problems to be solved on a global nature, I'm actually optimistic that mankind (I think this should be personkind, but it sounds naff!) will finally develop new approaches and attitudes for a more harmonious unity between Technology and Nature.

This is only a quick look at the future as this article would soon expand to fill a book (*don't worry, we have doubled in size this issue! Ed*). It has been more in the way of a self indulgent snapshot of a possible technological future. I hope it jogs a few thoughts and opinions in your head about way ahead in the future. I finally leave you with a tongue in cheek event calendar up to the year 2000.

1994: EEC is to fund a joint venture between Amstrad (THFC) & Philips (PSV) for the development of a Personal Digital Assistant (PDA) called the OSSIE. Terry Venables to sue..

1995: Intel sues Microsoft for infringement of intellectual rights. This takes 12 years to settle, with the outcome going in favour of Microsoft. Talks of a merger between the two companies begin immediately. Everyone in the computer industry goes on strike in protest.

1996: The first British designed full Silicon Drives hit the market. These are instantly outdated by the release of a sub-miniature version from several major Japanese companies.

1997: A major breathrough in the first 8 bit organic computer based on Protein chains which react with different frequencies of light. (And yes, it's bio-degradable!)

1998: A new approach in the area of Software Learning is theorised. This allows the

Serenade

Mike Williams considers the latest MIDI package from Clares.

Introduction

Serenade is a MIDI sequencer package. Let's get some jargon out of the way before we start. MIDI stands for "Musical Instrument Digital Interface". It is a standard for connecting together such devices as electronic keyboards, sound sources, and drum machines. Provided your computer has a MIDI interface (not standard on Acorn computers but can be added at fairly low cost) then it too can send and receive information to and from these devices.

A sequencer is a package (or a stand alone hardware device) which can store and manipulate sequences of MIDI data, such as which notes to play, using which instrument, how loud and so on. So in order to make effective use of Serenade you need a MIDI interface and a MIDI compatible sound source such as one of the many electronic keyboards on the market. Serenade will then allow you to use the computer as a kind of tape recorder which can capture in real time whatever you play on the keyboard. As I shall now explain in more detail, Serenade is a relatively intuitive and easy to use package which uses most effectively the Archimedes' graphical interface and its multitasking abilities to manipulate, edit, store and play back the "recorded" material.

## Outline

Serenade comes as a single disc with an 80 page manual. After initialising the disc (the only copy protection used) the disc can be backed up and/ or transferred to hard disc. Its icon can then be installed on the icon bar in the usual way. This icon can be clicked with Select to open the Main Window, or clicked with Menu to allow various parameters to be set up. The manual starts by taking you fairly gently, in a "Getting Started" section, through the process of recording and playing back a single track. This section also shows you how to load in and do some editing on a pre-recorded piano piece.

There is a useful MIDI jargon buster appendix for those new to the jargon infested world of MIDI. Although this does help, if you are new to MIDI you definitely need more assistance than is given here. The manual is a Serenade manual and you will benefit greatly by reading introductory books or magazine articles on MIDI as well as the manual which would have come with your keyboard (impenetrable though these often are!).

Serenade's Main Window has over thirty small icons, a vertically arranged piano keyboard and a long horizontally scrolling grid on which the musical "notes" will appear rather like the slots on an old-fashioned paper piano roll. Three larger icons switch the operation into one of the three main modes: Play and Record, Editing Notes &Cut and Paste.
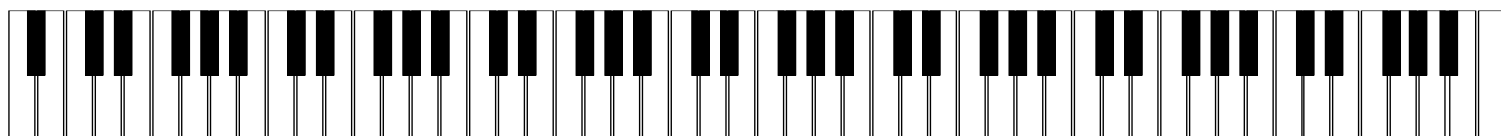
Play and Record

When in this mode a set of tape-recorder-like icons is presented. Recording can take place on one of sixteen different tracks and there is an easy to use metronome to keep you in time.

Editing Notes

This allows notes to be entered by clicking on the piano-roll grid or using a keyboard one note at a time. Individual notes or groups of notes can be shifted around, erased, have their lengths changed (so called quantisation, another MIDI concept) so that any sloppiness in your playing can be magically corrected.
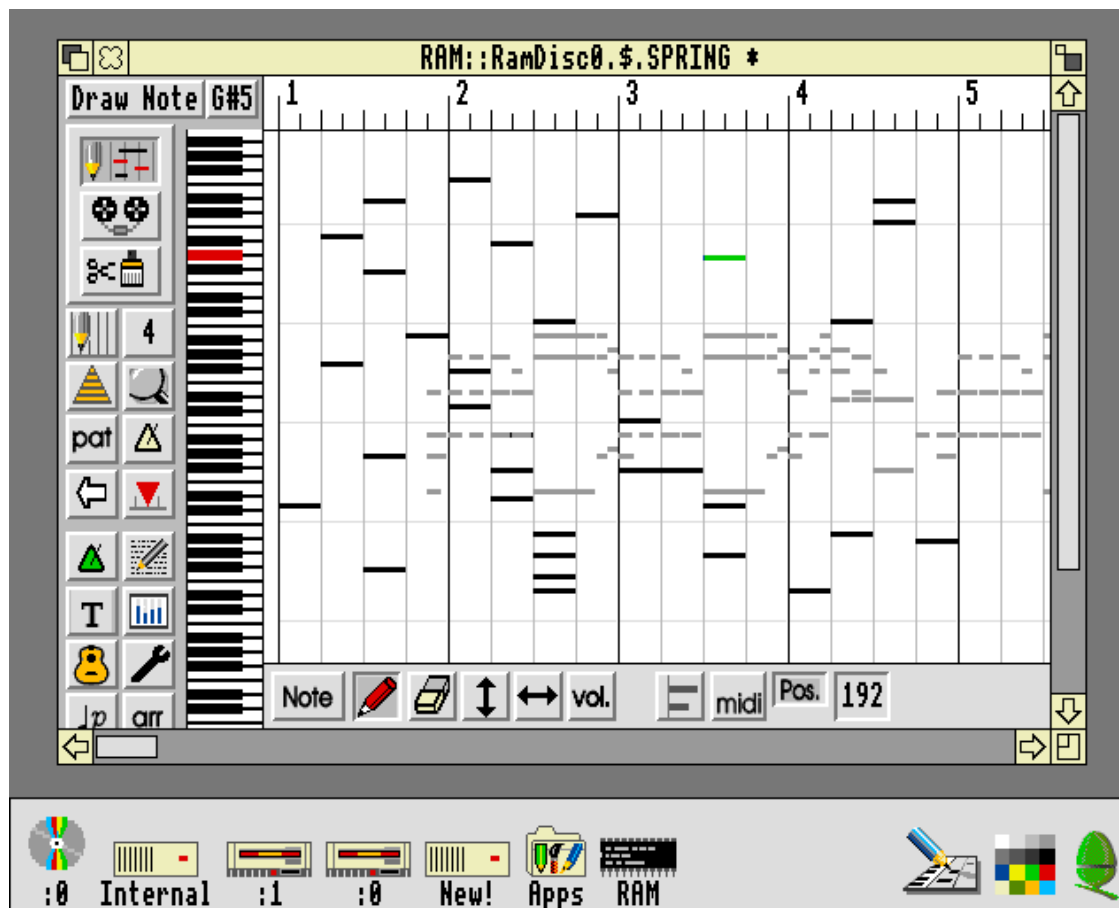
Cut and Paste

A clipboard facility is provided so that whole sections of your recording can be moved, deleted, merged or copied.

Special Features

Audition

After making alter-ations (such as the quantisation referred to above) you can be hear both the original and the edited versions and can decide which to keep. This is in effect an undo facility and it operates most effectively.

Guitar Chords

I am a guitar playing jazzer and am more at home with chords than with keyboards and musical notation. Serenade has a most ingenious guitar window which allows chord finger positions to be input and also provides a wide selection of named chords. A "strum" facility enables you to hear the chords as well.

Verdict

The above is a very brief overview of Serenade's facilities. The thirty icons that I mentioned earlier all do useful things: raw

MIDI data can be edited, tracks named and manipulated, tempos set, patterns arranged and so on. These are all things that a sequncer should do and Serenade does them in a largely intuitive way. No standard musical notation (score) window is provided; however the Serenade files are in Standard Midi format and can be loaded into Rhapsody (also from Clares) for editing and viewing. Similarly links are provided with Rhythm-Bed which is a better package for creating rhythm patterns.

I used Serenade with my Yamaha QY10. This device allows chords to be entered and it then

provides a full piano, bass and drums accompaniment for me to noodle away with on my guitar. It was a simple matter to connect the QY10 to the ARC, start Serenade recording and have a complete song transferred. This was then demixed and could be played back through my QY10 but with Serenade in control of the tempo and even the instruments used. Some difficulty was experienced here with Serenade apparently having trouble keeping up with the QY10. It could be that ARM3 would cope better but I'm still saving up for that!

There were a few other occasions when Serenade crashed or threw up obscure errors. Very early versions of Serenade were far from robust. Version 1.05 which I am now using has had many of the bugs ironed out but I am sure that some remain. However, Clares and the author of the software are very keen to sort out the problems and hopefully they will have done so by the time this review appears.

Apart from those niggles however, Serenade is well worth considering if you are new to MIDI and are not looking for all the bells and whistles which more advanced packages can provide. There is an ad for British Gas running at the moment which has as its punchline: "Don't you just love being in control?". My key criterion for any piece of software is: does it give me the feeling that I am in control of what is happening. Serenade passes this test with flying colours. I am a relative newcomer to MIDI and so far Serenade has done almost everything that I wanted it to do. Recommended.

Reviewed by Mike Williams

Serenade costs £135 inc VAT from Clares.
A free demo disc is available on request.

The BBC Acorn User Spring Show

The Acorn User Show this year was held in Harrogate, as you all probably know, but for those of you who were unable to be there, I hope this report will give you some insight into what went on. Unfortunately there is not enough room here to comment on all of them so I can only list a few.

The first stand that I saw was that of the newly formed TBA Software. They were showing off their latest game, AXIS, which I have reviewed on page 41.

The ICS stand was selling their latest IDE drive filing system, WIZZO. This allows you to partition a standard IDE drive into several drives. However this does take up an extra 74K per partition which is a little extreme if you only have a small hard disc.

Software 42 were at the Show offering all of their range of software including ArcFS, ClipArt collections, Ixion, Cycloids and their latest game, FRED. This is based on "bouncing" lasers off mirrors to get them from the gun at the start, into a target. This description does not really do justice to the game and to find out just exactly how good it is you'll have to buy it!

Some of you may have been interested in the possibility of using a RISC OS 2/3 switcher board to enable you to use the old RISC OS 2 operating system for certain applications. Well, apart from showing their full range of other upgrades, IFEL said that they are prepared to send out the instructions for how to build one of these boards. This does not mean that they will build a board for you and, of course, if you fit it to your machine then you invalidate your Acorn guarantees. For the information about this board send a stamped addressed envelope to IFEL.

As ever, the most noticeable crowds formed regularly around the EMR stand. This time they had a new piece of hardware to show off to the audience. Soon to be unleashed for general sale is the new "Hello! Music!" package which has been put together with the help of Yamaha. This package will offer the ultimate in Midi expansion set-ups and is hoped to cost around £300.

Another familiar stand was that of Krisalis, who produce high quality conversions of 16 bit games on the Archimedes. They were displaying their latest show release, Sim City. This is one of those games which has infinite variety and looks likely to sell very well.

Simtec were showing off their new 4Mb Turbo upgrade kit which allows you to get a full 10 mips (million instructions per second) out of your Arc. (Effectively an ARM 275!) They also had on display, an ARM 3 upgrade for the A3010, but only if your machine is fitted with a so-called "Mezzanine" board. There is also one other problem, the HCCS multi podule will not fit inside your machine if you have the ARM 3 installed.

The Colton stand was showing off the combination of Wordz and Resultz, their new database package. I didn't really have a chance to look at in depth but it did look very impressive with features such as fully

formatted text and live charts within the spreadsheets. Resultz has the same, easy to use, interface as the Wordz word processor and some very powerful features. It looks like this could be a cut above the rest of the other spreadsheets on the market.

Vertical Twist & Leading Edge were showing off all of their latest products amongst which were the newly released Desktop Tracker and Games Wizard. Desktop Tracker is a huge improvement on the old Tracker. The code has apparently been completely re-written and the features have been increased as well as improved no end. On a similar note, Oregan Software were showing off the latest version of Digital Symphony, with some exceedingly good (not to mention loud) music.

Dabhand computing had their latest development on demonstration. This is the Archimedes Visual Backup program, also reviewed in this issue of Eureka.

For those of you who are in to comms, Silicon Village was at the show and I was informed that they are hoping to have connections to Internet before to long. This will mean a much wider area of the country will be accessible to all of you who have access to the Silicon Village.

Stallion software had reduced prices on their software range for the show and the titles available included the new Almanac, old favourites Imagery and Spheres of Chaos, as well as the editor package StrongEd.

There were two "special" visitors to the show over the weekend. On Friday Dominik Diamond arrived and travelled around the stands playing various games. The main feature of the day for Dominik was his challenge to several of the visitors, to race him at the Acorn stand, on Lotus Turbo Challenge 2. On Saturday it was the turn of Dennis the Menace

to put in an appearance and brighten up the show for some of the younger visitors.

The different exhibitors were competing to see who could have the new game *Zool* on display first. Acorn Computing magazine revealed their scoop in getting a demo version on their cover disc. This game has been hailed on the Amiga as one of the best games ever released. Its idea was to be a similar type platform game to Sonic the Hedgehog on the Sega. It succeeded and surpassed the original Sonic in both graphics and gameplay.

I have mentioned many companies but what about Acorn. We couldn't really leave them out could we? We could! Oh well, okay then, we will. Uniqueway were displaying their Empire software to interface with the new Acorn Replay system. One of the best features of this new software is the fact that you can edit sample files direct from disc. There is no longer any need to have the restrictions of memory placed on your sample editing as the disc is used as a kind of virtual memory.

Acorn (you didn't honestly think that we could leave them out) were showing their latest expedition into the software market, Acorn Advance. You guessed it, Advance is looked at elsewhere in this issue!

Written by Andrew Flower

The Harrogate Show attracted 5000 visitors over the three days, and on the Club stand we were almost run off our feet, meeting people, distributing leaflets, selling discs & sample packs, as well as recruiting new members.

Special thanks must go to all our helpers. These shows provide an excellent time to meet members and get your feedback about the Club. Roll on the next one! Next year there are likely to be even more shows.

Almanac

A review of the ultimate yuppie software package?

You remember the Filofax, the bulging ring bound pack of information carried by every self-respecting yuppie in the 80s? Of course you do. Remember how they had all the possible add-ons: rulers, calculators, diaries, address books, thermos flasks etc. Almanac, the latest program from Stallion Software, takes the Filofax to new heights, breaking out of the rings, and into your friendly neighbourhood Archimedes.

Almanac has a very powerful diary feature, which can be considered as "!Alarm with go-faster stripes". Apart from the usual message and repeat functions, diary events can be set to "last" for a certain amount of time (say 30 minutes for a meeting) so that your day can be planned better.

Diary

Special diary events of a different variety can be created under the title of Anniversaries, and this offers a slightly more specialised version of the above, with the repeat functions being replaced with a slot for the original date of the event (birth, marriage etc) from which the computer can calculate the age of the person, or which anniversary it will be and so on. This inclusion adds a little shine to the diary function, as traditional anniversaries don't really fit into the normal diary format, as details such as age would not be updated. The use of normal diary records and anniversaries caters for all of the events that you are likely to come across.

To Do Lists

Almanac offers a third type of pseudo-diary event, under the name of "ToDo". These are for noting all those little tasks that you must remember to do, but somehow never manage to. ToDo events have both a start and end date, so that you can easily remind yourself to get on with a task for several days before it is due. This is a little gem of a feature, and I found it to be very useful, Almanac would have been very poor without it.

Reports

The Diary, Anniversary and ToDo events for a specified day, week or year can be called up, and viewed

in one large screen. This function is very useful for gaining a larger view of the current day, and is one of the areas where the versatility of a computer diary is more powerful than a standard printed one. 'Filters' can easily be set up to remove certain diary entries from clogging up your screen.

Weekly Diary Report

Each diary event displayed on the screen can be opened by simply double clicking on it's icon, and the details can be altered. Selecting one entry caused by a repeating event, such as my dog walking in the example screen shot, will cause all the icons created by this entry to be highlighted. Numerous weekly / daily / yearly reports can be specified to appear from the Almanac "Contents" page, so that you can set up different reports with different filters. A picture speaks a thousand words.

Apart from the default icons depicting diary and anniversary events all diary events can be specified as having a specific category. Having sorted out what exact category your diary event comes under (selected from a well organized menu) a suitable sprite appears in your diary event window and in the reports, quickly showing what kind of event this is. If you look back at my included screenshot, you can quickly spot what each event is likely to be, from simply the sprite, and the one word of text given with the sprite. This selection of sprites can be expanded by the user.

Address Book

Two address books are included in Almanac, a people address book, for records sorted by person, and a company address book, with the added feature that it can locate all the staff of the given company from the people address book, and all the correspondence involving them. (These must be linked to the company, see later).

There are a few small presentational probems with the address book, which annoyed me and a few other experienced Arc users. Whilst they do not alter the basic function of the address book, I do hope that they are cleared up in future versions.

Correspondence

Almanac has a useful feature to allow you to log details of letters, phone calls, faxes etc that you send and receive, rather like diary events. These can be assigned not only a category (as per usual) but also a type (of corres-pondence) from the list of Letter, Phone, Fax & Email. These records can be logged as either IN or OUT, and can also be flagged as "Needing Reply",

Another useful feature is that the computer file of this correspondence (if one exists) can be dragged onto the Almanac window for easy future reference. This stores the pathname and type of the file, and double clicking on the icon in the Almanac window will run the file (and its editor) from its hidden position on your filing system. This is very convenient.

Sticky Labels

Almanac also allows you to group together collections of files on a "Sticky" note. In the

same way as the files in the correspondence record, these are only images of the files, which can be accessed from their place of storage via Almanac. OK. so it's a glorified address book and versatile diary. Why not use a paper Filofax?

Linking

Almanac allows you to do something to your data that you couldn't possibly do to paper information. Link it together. Appearing on each Almanac window is a sprite, usually containing a small sprite of two chain links. This can be dragged into any other open Almanac window to form a quick link between the two (dragging is as for file saving from the Save As dialogue box). The Chain icon on the source window changes to an icon depicting the type of record (diary, address etc) that it is linked to, and simply clicking on this opens the linked window.

This linking is certainly the feature that makes Almanac fabulous. The ability to quickly go to associated details at the press of a button is incredibly useful, and worth its weight in gold.

Of Privacy & Passwords

As the intelligent amongst you will have spotted, each Almanac event / address can be flagged as "Private" with a blue star option icon. This is linked with the password feature that can be accessed when you load your file. Those knowing the password can access all records, others can only access those records not identified as Private. Setting a password is not compulsory, in which case all those who can get at the file have access to all data.

Should everybody have a copy?

Essentially Almanac is a useful and versatile software tool if you can see yourself using it. It does, however, require the commitment to

ensuring that the data is kept up to date and correct. To be perfectly honest, I cannot see it changing the ways of a disorganised person, but for those who already plan their days carefully, and keep an appointments diary or similar, then Almanac will be of great help. Those who currently use a paper Filofax will find Almanac ideally suited to their needs.

However, there is one minor problem with a computerized Filofax program: the computer. since it is slightly too large to slip into your pocket. However, those who use an Acorn machine for their work could easily use it, and those with an A4 are even better equipped to take all the advantages of Almanac.

Apart from the minor presentational problems, which I am sure could be easily dealt with, Almanac achieves its aims in a very pleasant and useful way. The manual is, unfortunately, totally pathetic (comprising of two sections; a reference section which does not tell you how to use the package but only what each bit does, and a tutorial, which does not teach).

Fortunately a quick read of the manual and the standard knowledge of any Archimedes user will allow all to learn how to use the package. The manual comes in an attractive FiloFax, with a load of filofax sheets as well. Whilst this is very nice and very flash (and very annoying when you have to send your review copy back) I fail to see the point of a Filofax to those who have Almanac, as the software makes the paper version rather redundant!

Reviewed by Toby Smith

Almanac is available from Stallion Software and costs £60 + VAT + £2 P&P. However we have arranged a special offer for Club members, see the Stallion feature page elsewhere in this issue of Eureka for more information on this.

Graphics Enhancer Cards

Mike Curnow of the Archimedes Fractal Group discusses the two leading products for improving your graphics capability

There are two graphics enhancer boards currently available, one from Computer Concepts and the other from the State Machine. They provide similar facilities which are increased screen resolutions, full 256 and 32768 colour modes, and improved speed. I have been using the CC board for 6 months and have been very pleased with it.

The improved performance is produced by updating the screen at 12.5 or 25 frames per screen, instead of 50 or more. This allows the computer to spend more time executing instructions. Note however that the screen itself is refreshed at 60-80Hz instead of the standard 50Hz, which makes for a much steadier display, easier on the eyes.

You need a SVGA or Multisync monitor to make the most of the boards. SVGA monitors are the cheapest but do not handle low resolution modes (eg. 12 and 15) as well as a Multisync monitor. I use a Eizo 9060s (14") which provides 800x600 in 16 or 256 colours. Taxan 795 or similar monitors allow 1152x848 in 16 colours but you really need a 15" monitor to see text clearly at this size. I find 800x600 provides a lot larger desktop area allowing full width editing at A4 size within Impression.

The boards also provide modes such as 1600x600 which allow 2 full A4 pages to be seen, though you really need a monitor of 17" or more to use such modes effectively since the text is too small to read on normal monitors.

Both boards allow the 256 palette to be chosen from any of 16 million colours. With the CC card new modes are provided for this which provides full compatibility with games. The most obvious use is a 256 grey-scale palette, but other combinations can be used to good effect. One omission is a decent 256 colour palette editor. I supply !EditPal, a copy of which is on my !Fractal PD disc. EditPal allows new palettes to be set up quickly and dragged straight into sprites.

The 32768 colour modes have limited RiscOS support and can only be used to preview 24-bit colour images such as Clear files or Artworks preview. Resolution is limited by the VIDC limit of 480k memory to 576x424 or 800x304, but results are very impressive.

Software Support

Both boards require RiscOS 3.1 and you should ensure that your graphics software supports high resolution modes and full colour sprites. Many sprite painting packages for instance only support Mode 13 or 15 which gives low quality output. High resolution modes allow effective use of dithering, great for shaded fills. Also many packages do not support sprites that have a redefined 256 colour palette. Therefore I advise you contact your software supplier to see if a more up to date version is available.

Besides providing me with a bigger screen for word processing, I use the CC board for 256 colour fractal graphics and running the PC emulator in VGA modes (you need version 1.8). My !Fractal application (available from the PD Library) makes full use of any 256 colour mode and redefinable palettes. Some of Fractal's facilities can be applied to any 256 colour sprite, such as the colour cycling facility and 3d transformations. There is also a random palette generator which can provide

interesting effects.

Programming The Boards

The full graphics facilities are easily programmed from BASIC, though you will find that you need to use the ColourTrans SWIs to get the best results. The little program below shows how to set up and use a 256 grey-scale palette.

```
REM Grey Scale Program For CC Board
MODE 103:REM 800x600 256 colours
FOR C%=0 TO 255
  VDU19,C%,16,C%,C%,C%
NEXT
FOR C%=0 TO 255
  RGB%=(C%<<24)+(C%<<16)+(C%<<08)
SYS"ColourTrans_SetGCOL",RGB%,,,256
  RECTANGLEFILL 64+C%*6,0,6,1200
NEXT
```

The VDU 19 programs the palette with the Red, Green and Blue values. The ColourTrans SYS command sets the appropriate GCOL colour prior to drawing 256 shades of grey across the screen. Note that the colour numbers when setting the palette are different than the GCOL numbers, hence the use of the ColourTrans call.

by Mike Curnow

Mike is Administrator of AFG and author of some excellent fractal creation programs.

Hints on using BBC BASIC 1.05

The version of BASIC supplied with RISC OS 3.1 comes with several enhancements over the RISC OS 2 version. This article briefly covers some of the more useful facilities. Use HELP "command" when in BASIC to get further information.

The variable @% used to control formatting of numbers can be set in numerous ways instead of the esoteric hex format previously used. Use HELP @% to see the full format, and LVAR to see the current setting printed as a string. @% can be set using a string, eg. @%="G10.9" which sets general format, width 10, 9 digits. Partial formats can be set:- @%="10" would change the field format, @%=".5" would set the precision, @%="E" would switch to exponent format.

CRUNCH <number> can be used to remove the spaces and REMs in a program, useful to speed up programs and reduce their size. It is followed by a bit string to determine what to crunch, CRUNCH 31 giving the fullest compression.

OVERLAY <string_array> allows the use of program overlays to reduce storage requirements. Each element of the array is set to the file name of the overlay to load. BASIC will look in overlays for unknown PROCs and FNs.

ARRAYS may be initialised as A()=1,3,6,,8.. instead of multiple commands. SUMLEN(A$()) gives the total length of all the strings in A$.

TRACE TO "filename" allows programs to be traced without interfering with screen output - useful for Wimp programs. Use TRACE CLOSE to end. BPUT#TRACE,"..." can be used to write other debugging information.

TEXTLOAD and TEXTSAVE allow BASIC programs to be loaded and saved in TEXT format, useful for when you want to print out BASIC programs. TEXTSAVE can use LISTO formatting.
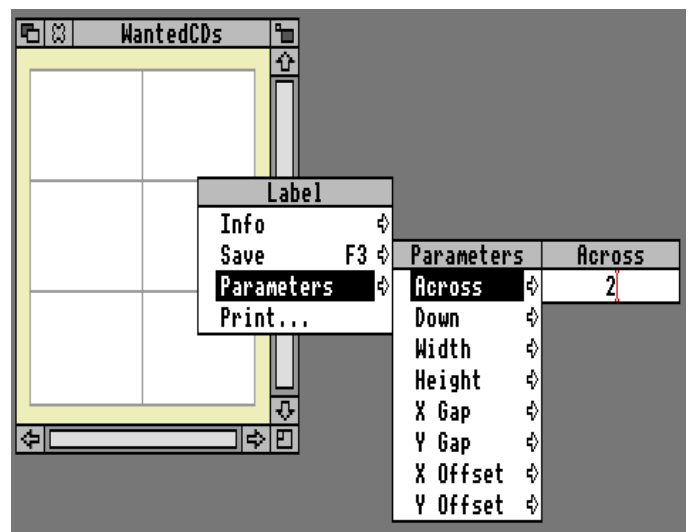
Mike Curnow

LABEL PRINTER

A utility from Software 42 reviewed by Steve Arnold

One of the most common operations performed on a printer is label printing. There are several label printer programs on the market. These span from Public domain programs to full commercial products. This is a commercial one called *Label Printer*, produced by Software 42 and priced at around the £15 mark.

Here's what you get for your money: you get a single floppy with a natty label.. (*yeah, produced by Label Printer.. no less*), but no manual! A quick inspection of the disc contents and one discovers a text file manual - This allows the user to view it using any text editor or wordprocessor. On one hand this is environmentally friendly by saving paper, but on the other hand it is rather annoying because most of the time people like to read from paper or at least generally browse through it away from the computer. The manual details all the necessary information on the program's operation and functions. There are a number of example files to view/use, and also some clip art (some of which was used to create the examples I have used).

On launching the application you get a large *Software 42* banner on the screen for a few seconds (I do hope this banner business goes out of fashion soon). When the banner disappears a rather vague almost primitive icon appears on the icon bar. I'm not sure, but I think it is supposed to represent labels. In my humble opinion some graphic design improvement is required as this is rather *tacky* (excuse the pun!).

I then double-clicked on an example file.. guess what? It loaded another copy of the application on the icon bar. Oh dear! On re-reading the manual, it actually states this will happen! Why? This could be avoided by some fairly simple software checking to see if the application is already on the icon bar.

Venturing forth, two windows pop up on screen. These are described in the manual as the **Page Layout** & **Label Design** Windows. These perform the following:
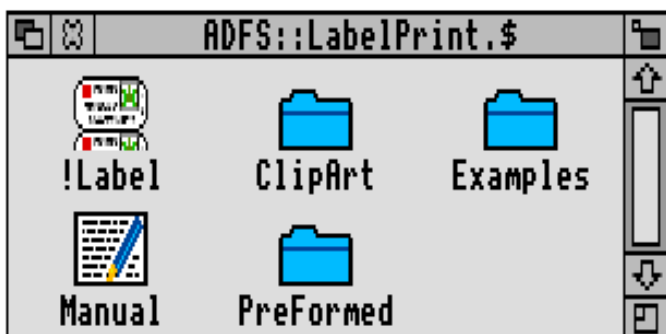
The page layout window gives you a visual overview of your label sheet definition and layout. It has a menu option for every parameter associated with the label size and layout. The window also shows you the defined print border for your printer (if loaded). Any item inside the border will be

printed. If the item is outside it won't.

The label design window is used for creating the contents of your labels. It displays one correctly sized label (as per your label definition). It functions like a cut-down version of *!Draw*, it allows you to import Draw files but not to edit them, you can however scale them with a variety of standard scale functions. Text is entered directly into Label. This is performed by entering the text in <Enter Text> box on the label menu and pressing return. You can then move it to the desired area on the label

Example from Label Printer

window or select other menu options to adjust the size, font and other bits and pieces.

So off I went, busily setting-up for label size and page layout and then to designing my new labels. All this was so simple, basically because I grabbed the picture elements I wanted from my previously created draw files ("*Here's some I made earlier*"!). I dragged them into the design window, added and styled the text I wanted and finally printed labels out. Ever so simple.

After playing with Label Printer I found the following were areas for improvement:

• the incorporation of *Task already loaded*

coding • the improvement of Label's icon sprite • the number of examples should be increased with a better variety of label types • the inclusion of a serial number option with number increments when printing (if required) • the inclusion of an import text function or merge function (necessary for mail merge from wordprocessor/databases) • the inclusion of a window viewer that has a Zoom option • the inclusion of a user default/configuration file.

Despite my criticisms the application did function without any problems. It produced my labels without introducing any skewing errors and I managed to print them out on a variety of different printers satisfactorily (Canon LPB8, JP150 & KP1081P).

In conclusion this product can be described as being robust. It has many attributes that I consider superior to other label generation programs, especially the simplicity of layout, its use of scaling and in size setting. It offers users who are familiar with !Draw an easily understood method for creating labels.

I would advise any person who is interested in producing quality graphic labels quickly to consider using *Label Printer*. It represents reasonable value for money. I'm hoping that Software 42 will continue to improve and support this product. It needs to incorporate some of the above suggestions and requires a general "touch of polish" that is lacking in some areas of the application for it to become the best label printing program available.

——————— **Steve Arnold** ———————

Label Printer is available from Software 42 priced £15. Club discount (15%) available.

ARM Coding - Part 1

Mark Smith shares his programming expertise in this first part of a new series

Many of you will have some experience of programming in BASIC. BASIC is a relatively easy language to program in, but it does have some disadvantages. For example, if you wish to write a program to do real-time rotation of a solid 3D object, BASIC simply isn't fast enough, even on an ARM 3 machine. Also if you wish to write programs such as background Tracker player or a filing system (like ADFS), so called operating system extensions, then it is not possible to write them in BASIC.

One solution to the above problems is to use a programming language such as 'C'. However, as with any computer system, to get your programs running at the fastest possible speed, you can program the processor directly in machine code. In the case of your 32 bit Acorn machine, that machine code is called 'ARM Code'.

Incidentally, ARM originally stood for 'Acorn RISC Machine' (RISC being a type of processor with a reduced instruction set to simplify and speed up the decoding of instructions). However, since the formation of a new company owned jointly by Acorn, Apple (of Macintosh fame) and VLSI (manufacturer of the ARM chip set), which took over development of the ARM chip set from Acorn, ARM now stands for 'Advanced RISC Machine'.

ARM Code is simply a series of 32 bit words (numbers which can be represented in 32 binary digits), each of which instruct the ARM processor to perform one small operation such as adding two integer numbers, or storing a number in memory. To make it very much easier to program, we use an assembler, and it just so happens that there is an assembler built into the BASIC on your machine. Although other assemblers are available, it is the BBC BASIC assembler that we will be using in this series since everyone has it in their machine and it is quite suitable for writing small programs.

The ARM processor contains 27 registers (each 32 bit). You can think of these registers as being just like integer variables in BASIC. Of the 27 registers, 16 are available for use at any one time. These 16 registers are, logically enough, labelled R0 through to R15. Three (R13, R14 & R15) are used for special purposes, leaving 13 registers on which you can perform the elementary machine code operations and use to pass parameters to and from operating system routines.

For example:

```
MOV R0,#ASC"A"
SWI "OS_WriteC"
```

This segment of code uses R0 to pass the ASCII code of A to the operating system routine which will print a character on the screen.

Program 'ARMCode1a'

You now need to start BASIC. If you are currently looking at the Risc OS desktop, you can do this by pressing F12 and entering 'BASIC'. Now for the first ARM Code program - enter the program 'ARMCode1a' and run it. Don't worry about having entered the right number of spaces, since most of these are there to make the program more readable rather than being necessary to make the program work.

Assuming that the program has been entered correctly, it should display the message 'This

is the first ARM Code program' on the screen'. O.K., so this is nothing spectacular, but it does illustrate how to use the BASIC assembler.

```
REM > ARMCode1a
REM By M. Smith for Eureka
:
DIM Code% &400
:
P%=Code%
[OPT 2
.start
    SWI     "OS_WriteS"
      EQUS     "This is the first
ARM Code Program"+CHR$0
    ALIGN
    MOV     PC,R14
]
:
CALL start
```

Firstly we need to reserve some memory to store the assembled program in. This is done in line 40 with the DIM statement. In this case we have reserved &400 bytes (where the & symbol denotes hexadecimal), which is 1 Kbyte. That is far more than enough for this program. Line 60 tells the assembler to put the assembled code into the reserved memory and Line 70 indicates that everything up to the ']' is to be assembled. The OPT 2 tells the assembler not to display everything it assembles. Try replacing it with OPT 3 and see what happens.

The next line is a label, in this case a label called 'start'. This label could be used elsewhere in the program, to refer to this position in the code. In this case it is used to run the program after it has been assembled. The next two lines use the operating system routine 'OS_WriteS' to display the text. This will display all the following text up to a null character (CHR$0), and will then continue to execute the rest of the program which follows the text. Note that it is important to get the case of the letters in 'OS_WriteS' exactly as written, otherwise the program will not assemble. Because all ARM Code instructions must be at an address which is divisible by four, and the length of the string may not be a multiple of four characters long, the ALIGN instruction will ensure that what follows is put at the next address which is divisible by four. The final instruction makes the computer return to whatever it was doing before, i.e. it is a return instruction.

The return instruction needs a little more explanation. Remember I said that registers R13, R14 and R15 had special uses. Well, the return instruction uses two of them. Anyone who has programmed machine code on other computers may recognize PC as the Program Counter. This holds the address in memory of the next instruction that the processor should get and decode. Normally this will automatically be incremented by the processor so that it will execute instructions held in consecutive memory locations. However when we want the machine to return to what it was doing before it executed our program, we need to alter the program counter so that it points at the next instruction to execute. When our program is called (in this case from BASIC), it will be called with R14 holding the address of that instruction. Because this enables the processor to link back to what it was doing before, R14 is called the 'link register'. The program counter is held in R15, and hence, we can use either R15 or PC - they both mean the same. So all we need to do is to copy the contents of R14 into R15, which is done with a MOV PC,R14 or MOV R15,R14 instruction.

Program 'ARMCode1b'
Program ARMCode1b will also display a line of text, this time by a slightly different method. A branch (B) instruction causes the processor

to skip over the text. The ADR instruction then loads the address of the text into R0 and the operating system routine 'OS_Write0' (note the number zero, not the letter O) is used to display the text pointed to by R0.

```
REM > ARMCode1b
REM By M. Smith for Eureka
:
DIM Code% &400
:
P%=Code%
[OPT 2
.start
    B      skiptext
.text
    EQUS   "And this is the second
ARM code Program"+CHR$0
    ALIGN
.skiptext
    ADR    R0,text
    SWI    "OS_Write0"
    MOV    PC,R14
]
:
CALL start
```

Try entering program and running it. Before you start trying to find your mistake, I'd better point out that it won't work in its current form, and a little investigation will reveal why. The assembler will start off by setting label start to the first memory location of the program, and will then try to execute the next line. This instruction is a branch, and will cause the processor to jump to the label skiptext. However, since the assembler has not yet reached label skiptext, it has no record of it and stops with the error 'Unknown or missing variable at line 100'. We have a problem that, with the program in its current form, prevents us from referring to labels that come later in the program.

Two pass assembly

The solution is to assemble the program twice. The first time all the labels will be assigned addresses, so that they can then be used to assemble the program in the second pass. This can be achieved by making the following alterations to program ARMCode1b:

```
60 FOR Pass%=0 TO 2 STEP 2
80 [OPT Pass%
180 ]:
```

This has the effect of causing the program to be assembled twice, the first time with option 0 and the second time with option 2. We use option 0 to suppress errors in the first pass which could be the result of the assembler finding a reference to a label it has not yet seen and option 2 in the second pass to allow errors to be reported.

Summary of assembler options

OPT Effect

0 No errors reported, no listing produced.
1 No errors reported, listing produced.
2 Errors reported, no listing produced.
3 Errors reported, listing produced.

There are others, but the these are the important ones for the moment.

Mark Smith

Mark will continue his look at ARM code programming next time. Mark is the author of the famous ArcFS program, which is written entirely in ARM code. If you have any programming problems in BASIC, C or ARM Assembler, don't forget the Club's Technical Help Service available by Freepost letter, phone or fax. Alternatively, why not look on the Members' Interests list for somebody with an interest in programming?

Clipart

A look at some recent offerings by Nick Evans

Clipart is usually described as illustrations in sprite or draw format which are small enough to be added to DTP documents, multimedia databases etc. and this definition serves us well.

Clipart may have a copyright attached to the file itself but must have no restrictions on its being used in documents and the subsequent distribution of the documents. A concept such as this may seem obvious but I have come across some commercial clipart which states in the accompanying copyright notice that it may not be published!

This was not very useful and ensured that the discs were returned post haste to the suppliers as being of no value for use as clipart. An interesting problem also arises when the documents produced are distributed as, for instance, Magpie or Impression files, where the clipart can be extracted from the disc file.

There is now a reasonably good range of clipart available for the Archimedes from commercial sources. Some of the clipart is well drawn, but some images do make me think (perhaps uncharitably) that they have been included as padding.

The discs that I have seen for the purposes of this review are from Software42 (ClipArt discs 1 to 4 costing £8.50 or discs 2,3 and 4 in a pack for £20.00) and Smart DTP (BudgetArt - 5 discs costing £17.95). All the clipart is in the form of Drawfiles and I shall be dealing with the Software42 discs first.

Electronics - ClipArt Disc1 from Software42 and produced by Club member Stephen Orme, contains files in Components (16 files), Diagrams (10 files), Misc (5 files) and Symbols (28 files) categories taking 683K of disc space space. This disc contains a selection of electronic symbols, batteries etc. of varying usefulness, maturity and complexity, however there are many notable omissions which I would have found useful such as various sockets for cabling diagrams etc. I would also like to have seen all the symbols produced to the same scale to help when drawing a circuit.
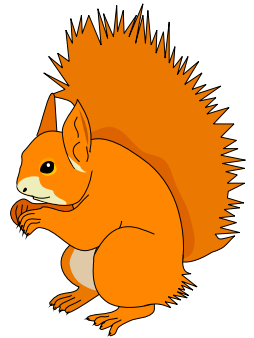
Animals - ClipArt Disc2 from Software42 and produced by Club member Richard Stubbs, contains files in Birds (14), Cartoon (12) and Misc (51) categories taking 788K of disc space. On the whole these are a varied set of nicely coloured files also with a few monochromic ones.

People - ClipArt Disc3 from

Software42 and produced by Richard Stubbs, contains files in Fictitious (7), General (12), Hobbies (12), Nationalit (8), Occupation (15), Pop (10) and Xpressions (12) categories taking up 789K of disc space. Again these files are, in the main, good quality, coloured files. My only comment would be that they are nearly all cartoon type characters and so have a more limited use than more realistic images would have.

Fantasy and Fairyland is ClipArt Disc4 again from Software42 and produced by Richard Stubbs. The files on this disc are compressed using ArcFS and when decompressed occupy 1336K of disc space. They are contained within Creature (17) Fairy (18) and Scenes (3) directories. The latest ArcFS reader is supplied to decompress the archives. The clipart on this disc is of an extremely high quality, with good characterisation and coloration

The Smart DTP clipart consisted of the 5 discs of the BudgetArt package and the drawfiles are compressed using Compression from Computer Concepts. The latest version of CFSReader (1.17) is supplied on each disc which themselves are arranged in themes such as animals, plants, geography(ish) and human activities.
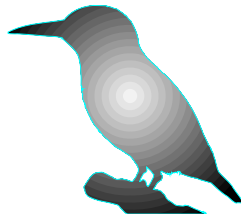
Disc1 contains 1757K of drawfiles in Anatomy (8 of which 3 were silhouettes), Fun (27 including 2 silhouettes) Misc (27), Music (17 - 9 being silhouettes), Occupation (3 - 2 silhouettes) and People (16 - 4 silhouettes). I feel that the number of silhouettes on this disc was too high. A good opportunity was missed to include some detailed, and to my mind, more useful clipart. It would have been nice to see a proper tuba or trombone for instance.

Disc2 contains 1244K of files in categories Animals (43 - 36 sihouettes), Insects (29 - 27 silhouttes), More (4 - 1 silhouette and 3 with inappropriately graded fills), Pondlife (9 - 8 silhouettes) and Sea-Animals (8 - 7 sil-houettes). The files within the *More* directory contain duplicated clipart which has had a graduated fill and an outline applied. However, a graduated fill starting in the middle of a fish appears to be of somewhat dubious benefit and usefulness.
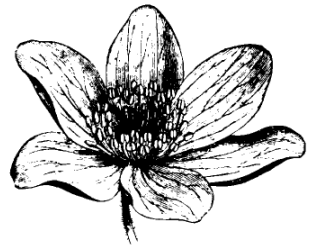
Disc3 contains 2029K of drawfiles in Flowers (30 - 10 silhouettes) Heads (10) and Misc (11 - 6 silhouettes) directories. The quality of some of the blooms was excellent, but I it is a pity that they were all non-vector monochrome images.

Disc4 contains 1322K of drawfiles in Currency (8) History (2) MapsFlags (19) Politics (3) and Symbols (5) directories. The flags here (the European Community, United Nations and Union Jack come waving, flat, as pennants or even on crossed flag-poles. A most useful way of displaying them.

Disc5 contains 1199K of drawfiles in Activities (3) Equipment (5) and Sports (35 - 12 silhouettes) directories. The illustrations

have been drawn heavily from the sports scene in the United States.

The Smart DTP discs contained many scanned objects and sprites which have been placed in a Draw frame and also files which have been ported across from other machines (why else would a piggybank collect dollars in British clipart?). Some of the sprites have been converted into draw files using a program such as Trace or Outliner. I found the high number of silhouettes on these discs irritating, surely their use is very limited as DTP, databases and multimedia presentations would all be enhanced by using colour, not just monochrome, illustrations. Even for DTP use a solid black shape only prints satisfactorily on a laser printer, and on any other printer (even with a bubblejet) banding becomes apparent and detracts from the printed page. This is more marked with silhouettes than either coloured or monochromic images.

There is, however, a problem with printing many colour images on a monochrome printer and this loss of detail can be seen in some of the examples from the Software42 clipart. A possible solution would be for these illustrations to be duplicated without the colour enhancement for printing purposes. This would not take long and all the files could be included on archived discs. Colour images do look considerably better on the screen eg in Magpie documents, databases etc. There are very few coloured images on the discs from Smart DTP.

The cliparts supplied for review show that both the quality and the usefulness is variable. It was nice to see the discs being arranged in themes as I find that discs of miscellany are least helpful when trying to find an illustration on a particular topic. I would find it very hard to suggest buying discs of miscellaneous clipart without first having seen a printout of the files to make sure that there were some that I wanted. I usually look for the clipart to fit in with the document and not the other way round and this means that my clipart files are stored in a highly structured filing system. Hence my miscellaneous directory contains less than 1% of the total number of my files.

Some of the clipart contained in these discs is very good and examples of these have been included in this article. However some of the clipart is very 'run of the mill' and offer nothing new on previous collections or even over what is available from some PD sources.

For those interested in obtaining commercial clipart I have enclosed a file called CLIPDoc on this issue's magazine disc. This file, in Edit format, comprises a list of some of the commercially available Clipart along with the approximate price and the name and address of the suppliers where known. This looks best if printed out in condensed printing mode if you have an 80 column printer, or ordinary print with a 132 column printer.

Nick Evans

The clipart prices are as specified in the article. The Smart clipart reviewed is part of the 5 disc BudgetArt Collection, available from Smart DTP, 36 Park Road, Duffield, Belper DE56 4GR. Tel (0332) 842803. Please add £1 P&P.

The Software 42 clipart is available from Software 42, 109 Ferry Road, Hullbridge, Essex, SS5 6EL. Postage & packing free.

REVIEWS

Welcome to the Games Zone

The Games scene has been fairly active recently, with some hit conversions including Zool and Sim City, as well as home-grown games like Axis, Technodream and Virtual Golf. What are they really like? You can read what professional reviewers have to say in any magazine, here Club members say what they **really** think about some of the latest games releases.

If you agree or disagree with what they think, why not write in and say so? If you've got hints and tips, cheats or even amazing high scores, we'd like to hear from you. Perhaps you'd even like to write a review of a commercial game? If so, drop a line to the Editor saying why you think the game is worth a mention. Don't forget that we have some top games to give away as prizes for the best articles.

In this issue we look at three of the latest releases, Axis, Virtual Golf and Cycloids, as well as the much hyped Black Angel from the Fourth Dimension. Don't forget the great discounts on games available to members from the well-known companies, and also from TMJ Software whose prices are always discounted.

• The Games Zone • FREEPOST ND6573 •
• London • N12 0BR •

Virtual Golf

Golf – it seems to be becoming a national pastime to go out and hit a ball as far as possible, so having the option to play golf inside in the warm makes a change, if it wasn't with all those other golf games already on the market.

Having played *Holed Out*, Gordon Key's previous golf offering, I wasn't really expecting too much of this game, and viewed the whole

thing with a touch of scepticism. Would this golf game really be much better than the previous one?

As is now usual with 4D games, it can be installed onto your Hard disc, and uses the key disc method of protection. After about 30 seconds, the game boots up, and sits on your icon bar ready for your golfing skills. Alternatively it can be run from the two floppy discs supplied.

The game allows up to 4 players, and has 6 tournaments into which you can enter, depending on you handicap. The usual method of starting something that sits on your icon bar is to click on it, and this puts you at the first hole of your game. A much better idea, is to return to the desktop, and have a practise. You have got the option of practising a hole, or on a driving range, and the latter allows you to 'master' that swing.

The swing is the hardest part to get right, as any golfer would tell you. This equally applies to Virtual Golf, as the mouse controls the head of the club, and this hooks and slices depending on which way you move the mouse up and down. If you keep it in a straight line right to left, you get a clean stroke and the ball travels straight. The faster you move the mouse, the faster the head of the club moves, and you produce more power, and the further the ball goes.

Once you feel that you have got the swing down, and have got very frustrated with your mouse as it slips across your mouse mat for the umpteenth time, you are ready to go and practise a hole.

The course supplied is Wentworth, and the attention to course detail is of a high quality. More courses are promised.

The game itself has some nice features, with optional full screen view when you are about to play a stroke, and the option of an action replay. It also supports all the types of golf play, match-play, stroke-play, handicap and tournaments. You can save a game at any time that you are standing by the ball, by returning to the desktop. This is allowed in any match situation, but not during handicap play, which makes sense, otherwise a 'replay each hole until you get it right' situation could develop. You can also play in any season that you wish, and so let the weather have its different effects on the ball.

As with a normal game of golf, you can view the course from any position, so you can try and get those lines right for your putts. This is where the game is let down. Virtual Golf does suffer from the usual computer golf problem, of representing a 3D image on a 2D screen. For me, it fails again at its task of representing this, but you can admittedly see some of the slopes, they never seem to give the representation you would expect for that gradient of slope. It is only on the steep slopes, that you can really tell where they are and which way they are going.

The screen redraw is quite good in general, but on an ARM2, it does detract from the game

play a little. It is not as bad as *MicroDrive* for slow redraws, but still takes a fair time to redraw the screen. Now on an ARM3 machine, the extra speed really does help, and the screen is redrawn much more effectively, and you can get right into the game, as you don't have to wait. The general graphics though are of a good quality, with most attention having been paid to the trees. These do tend to look like trees, and not just shapes, as they were in Holed Out. Your golfer has also had attention played to him, with his swing nicely animated.

The gameplay is as would be expected from a golf game – repetitive, but if you like golf, this makes no difference as you can just play the game whenever you want. The sound system does its job effectively, and makes hardly any sound at all; you just get the swishing of the club, the ball contact, and the holing out. There are a few other sound effects, but they are sparse. The occasional sound of wildlife might have been a nice little feature.

I have only been playing Virtual Golf for a few days, but can now manage to hit the ball fairly well, however it really does depend on having a good mouse to play the game on.

The overall feel of the game when you are playing it is good, but there are a few niggles which do give the game an amateurish feel, which is a shame; in places it gives the feeling of having been thrown together to get it released on time.

The game costs £34.95, so it is one of the more expensive games that Fourth Dimension release. I cannot really see that this price is justified for a game that is just another golf game, but considering the amount of detail that is in the game, mainly on the course, maybe I am just being a bit hash.

Comparing it to the other golf games, this is definitely the best golf game so far on the Arc, and is certainly worth purchasing, if you enjoy golf. It would have been nice to have had another course, but as Wentworth took a very large proportion of an 800k disc, it would have meant that the game would have required a third disc. Overall though, I am impressed by the game, and it is only slightly let down by the front end. Recommended.

Review written by Tim Warner

The latest game from Software 42 comes under the spotlight

Cycloids is a new game from Software 42. It claims to be the most addictive and original platform game ever. It falls quite squarely in the "Comical Scenario" genre, the plot being that balloons are invading Earth, turning the inhabitants into cartoon characters, and only you, a circus clown on a unicycle, can save the planet (now there's a novelty!).

Cute comic graphics, what about the game?

There are 30 levels of play each containing numerous balloons and enemies, touching the balloons sends them off into space, whereas touching an enemy is deadly. Controls are simple left, right, jump and fire (you can't fire until you collect a special comical nose). There are also other items around for you to collect for bonus points, these include diamonds, bananas and treasure chests. There are also pairs of shades which serve no useful purpose other than making you look cool.

The game is supplied on a single floppy disc, but running the game from floppy can be a bit painful. For example it will take about 50 seconds to load the game, then a further 25 seconds before you can start playing. There are also delays when it loads new levels (20 seconds) and at least 15 seconds delay after you lose your last life. These sort of delays, particularly when a game requires just one disc, are not really acceptable. Luckily you can install the game on a hard disc, using the original disc as a key disc.

When I first came to use Cycloids it refused to run on my machine, citing memory problems as the cause. This is in fact not entirely true, the game was complaining about the existence of a module I load up in my boot sequence. This 'moan' can be entirely attributed to the games protection system being over zealous about what it will allow to be present in the computer (it also refuses to load if *The Hacker* is loaded).

Given the scenario detailed in the instructions, you'd be forgiven for thinking that you were, in some way, required to send all (or at least most) of the invading balloons back to where they came from. This, however, would not appear to be the case. It appears that all that is required is to reach the

door to the next level, so you can happily leave the balloons to pull faces at you as you cycle past..

In general terms the graphics, being of cartoon style, are of a good quality. Some of the enemies are a little basic in design, others fairly good. Enemies range from flying pink elephants to one comprising of just a pair of gloves and a pair of glasses. All the enemies (apart from the odd frog) follow defined actions, which involve walking (or flying) backwards and forwards. The skill of the game, given the lack of the need to pay any attention to the invading balloons, rests in avoiding the enemies. This can sometimes be fairly hard, especially on later levels. Timing is very important, as it is all too easy to clip an enemy as you jump over it.

Don't slip on that ice, it could be nasty!

As you progress through each level there are a few marker flags, which mean that when you lose a life you return to the last marker flag's position rather than the start of the level, this can be quite a relief. Some levels have areas of icy ground which only make life more complex as you don't stop as quickly as would otherwise be the case, and most levels contain areas of sloping ground which you can not stop on (due to the fact that your unicycle has no brakes).

Rather than having passwords to allow you to skip levels, the approach adopted is as follows. Every time you reach one of levels 5, 10, 15 or 20 an extra door is placed on level 1 which will take you directly to that level. This information is saved back to disc, ensuring that you can quit the game without having to start again at level 1. I assume on reason for using this method is to stop magazines publishing lists of passwords, however it doesn't take a great deal of effort to locate where this information is saved on disc.

From looking at the files it would appear that Cycloids is supposed to save the high score table when it quits, although it doesn't appear to do this. Another thing it does when quitting is that it resets the system character set to the wrong one (it appears to set it to BFont, an obsolete set dating from the days of the BBC Master).

Now to my final impressions of the game. As far as it goes, Cycloids is fine, it's just that Cycloids doesn't go very far. As for its claim to be the most addictive and original platform game ever I would have to disagree. It is certainly playable, and it has a few nice touches, and the graphics and sound effects are fairly good. It's just that, in my opinion, there are better games in the platform area for a similar price.

Ian Palmer

Ian is an accomplished software author in his own right, having written such masterpieces as the excellent Shareware package !WordHound.

Cycloids costs £25 fully inclusive from Software 42, 109 Ferry Road, Hullbridge, Essex SS5 6EL. Club discount available on request. Cycloids was written by prolific games author Tom Cooper of Ixion and 2067BC fame.

Magazine Matters

This magazine exists to publish material written by members for members, articles which may be of interest to other Archimedes owners and users. It can only be as good as the material available to be published, so we need your help to improve it. Do you use your computer for anything noteworthy? Could you write an original article for us? If so, not only will your article be published, but you will also receive some software in return.

If you are interested in writing reviews, write to the Editor saying so, giving details of any relevant experience (not essential), and also what sort of software you would be interested in reviewing. Generally speaking, we will give you a free copy of the software in question, in return for which you will write a review. A set of fairly strict guidelines is issued to each reviewer, so it is certainly not a case of getting something for nothing.

A brief message to companies: thank you very much for your support, we are happy to receive news of your latest products and also review copies of software, in return for which we will arrange for the software to be reviewed, subject to space limitations. Please note that any requests for review software will be made on official letterheaded paper, and all items should be sent to the Editor in the first instance for allocation to a reviewer.

We don't just need articles and reviews to make the magazine interesting, but also hints and tips, cheats for games, high scores and so on. If you are organising an event of any sort, please let us know so that we can publicise it. This issue of the magazine is bigger than ever before, and we hope it will continue growing.

Simon Burrows, Editor

Axis

Reviewed by Andi Flower

Until now the only game that we have seen from TBA software is DragonBall, which is a bat 'n' ball, breakout style game. Now they have released a new game called AXIS.

There is a simple scenario to the game, whereby you must work your way through several levels of action (or is it mayhem?) in order to reach the core field generator. On loading you are presented with two good looking loading screens and then the title screen for the game. From the title screen you can use the function keys F1-F7 to choose between the seven, yes seven, pre-defined methods of control or define your own keys. You can also enter passwords in order to gain access to later levels.

When you start each level you are dropped into the section from above and the ground scrolls smoothly up to meet you. It is not until you move your craft for the first time that you realise just how well this game is written. The whole screen rotates about your craft, moving all of the objects on screen around you in one of the best graphics routines that I have ever seen.

The resolution of the screen drops a little as you rotate but for all of you lucky enough to have an ARM 3 this is not the case. The game has a built in ARM 3 version which checks the speed of your machine and improves the quality of the graphics if you have the faster processor!

The backdrops and enemies themselves are very well drawn and complement the rotation routine perfectly. You move around shooting the enemies (who explode satisfactorily and occasionally leave behind bonus pods which you can collect) looking for the end of the level. This is generally protected by a set of large guns of some kind and indicated by a set of four arrows all pointing to one central point. You also find large guns blocking your movement from one stage to another. Until you have destroyed all of the main targets in the area, you will not be able to leave.

> **All in all Axis is, undoubtedly, one of the best games that I have ever seen..**

The game has superb graphics, very good sound effects and is one of the most addictive that I have ever played. I say that sitting here at 11:45 pm after having just stopped playing!

If what I have said so far does not persuade you that AXIS is good then maybe this will. I played Sim City on my original 8-bit machine for 4 years and thought that nothing could beat it. I have just purchased it for my Archimedes and having received it two days ago, have not played it once because of my constant playing of AXIS.

All in all AXIS is, undoubtedly, one of the best games that I have ever seen and in my opinion, should be amongst the collection of every Archimedes game player. For your copy of AXIS just contact TBA at: TBA Software, 24 Eastgate, Aberystwyth, Dyfed, SY23 2AR. Tel (0970) 626785. Price: £24.99 inc.

Apologies for the lack of a screenshot, the protection on Axis prevents one being made.
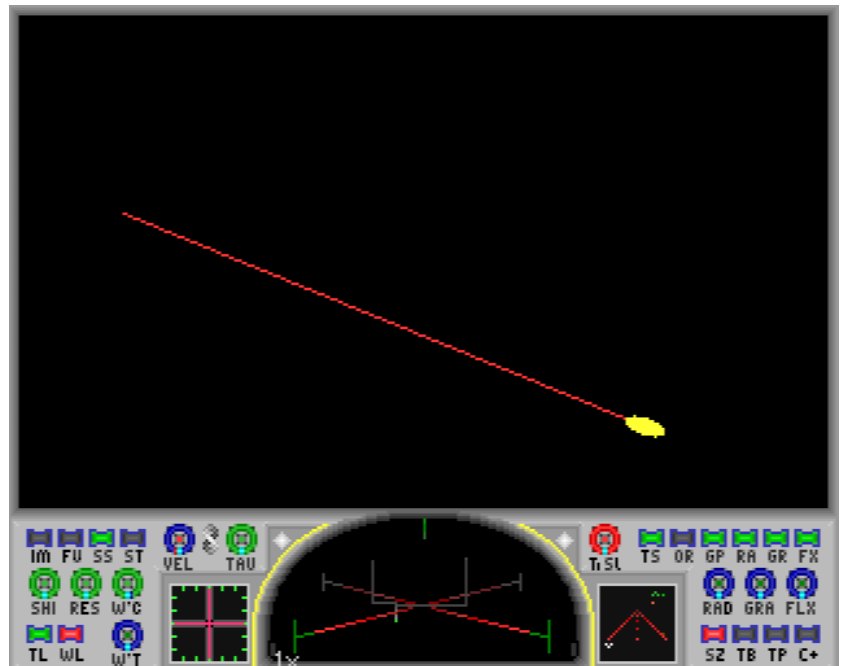
BlackAngel

Review by Duncan Millard

Black Angel; proclaimed as the greatest Gordon Key game from the 4th Dimension. What we have here is a 3D space adventure, which the adverts proudly announce as being a "huge brand new innovative adventure", featuring "fully ordered multi-concave surface objects". Aside from winning the "Biggest waffle in an advert" award, what does the latter actually mean? It basically means that the 3D graphics in this game are without a doubt the most stunning I have seen in a game of this genre on any Acorn machine ; gigantic space stations and animation are plentiful and the speed is very impressive no matter what machine you are playing on.

The actual plot is relatively simple. You must recover several segments of a 'key' which has been spread out across the galaxy. The key, when complete, forms a gigantic computer program which will give you access to the full power of the Gates of Carrion. These Gates manifest themselves in the game as large black warps (which bear an uncanny resemblance to the sun) and by flying through these you may reach any other destination in the galaxy once the relevant fee has been spent on a 'gate pass'.

To guide you on your way in your quest, clues are given as to the location of the next key segment. If these (very cryptic) clues are not sufficient, 4D have thoughtfully provided an application called !Cheat (originality and imagination; that's what I like to see in a game!) which will give further help.

Once you have located the key segment, all you have to do is activate your tractor beam and hey presto. Except that you don't actually have a tractor beam when you start the game and so of course, as with all games of this type, you must earn yourself a living and make a profit in order to upgrade your ship.

There's not much to see in the darkness of space!

Unlike Elite, where money is made by trading, Black Angel allows you to seek employment with the various planets that you may encounter. It is here that the main fault of the game manifests itself.

The jobs on offer are invariably of the following variety: jettison a dodgy cargo into the sun, fly to planet A and then planet B (ie to deliver a parcel or escort a ship), or destroy some other ships. And that's it. Just three basic types of 'mission' upon which the whole game revolves. This may not sound so bad, because in Elite there was only one basic set of items with which you could trade, yet that game was a phenomenal success. The difference comes

when you try to upgrade your ship. In Elite you could make enough money to buy, say, an ECM in 6 or 7 trips. With Black Angel however, at the beginning of the game you could only make 1000 credits for a job. A tractor beam costs in the region of 115,000 credits. The alternative, quicker way to make money, is to become a mercenary, carrying out hunt and destroy jobs – a successful sortie could earn you about 10,000 credits, Unfortunately the odds on completing such a mission are slim.The problem here is that you get put up against 6 or 7 other ships which invariably demolish you before you have a chance to complete your job, even if you have managed to purchase a more powerful weapon.

Building up to a position where you can begin to complete the game is therefore very lengthy. I have been playing the game for over one month, and were it not for the fact that I had to review the game for the magazine, I would have given up after a week or two through sheer boredom. This is a real disappointment because my first impressions of the game were very favourable. At first, I needed about an hour to get used to all of the (many) controls, but once I had done I found the game easy to play. The 3D graphics, as I have already said, are simply stunning in their detail, and although they are not as fast and smooth as something like *Saloon Cars*, they create a realistic (sic) atmosphere. Unfortunately, as is the fault with many games in the Acorn scene, little attention has been paid to the other graphics. The control panel is bland and confusing - I still have trouble finding certain information. One only has to look at games such as *Starglider 2* to see what can be done. The trading screens are presented in a garish orange coloured font – the same one as is used for *Superpool and Break 147*; you

simply would never see anything like that on the Amiga. Once nice touch however is the log screen, where a log is kept of all of the craft you have encountered. These may be scanned through, and the ship apears on the screen, rotating in all its glory.

In conclusion, were this game available for £25 it could be considered quite a good buy, however the asking price of £34.95 makes it very difficult for me to recommend ; a pretty game with some nice touches, but unfortunately lacking in long term appeal.

Duncan Millard

Computers in the Home..

... most cases simply meant plugging in a new set of ROM chips.

Although the trend in home computers and games consoles is to go for ever faster and more powerful microprocessors, most control applications are suitable for microprocessors long since abandoned by the home computer market. A popular microprocessor for control applications is the Zilog Z80, used by Clive Sinclair in his ZX80, ZX81 and ZX Spectrum computers at the beginning of the 1980s. This processor, originally designed the 1970s, is cheap and powerful enough for a lot of control applications where using the latest ARM 600/ 700 or Intel Pentium chips would be like putting a 3 litre engine in a moped!

One thing that is almost certain, is that with home appliances and entertainment systems becoming increasingly more complex, computers will be used more as part of those systems. So just think - next time you go to play a CD, you're really using a computer in disguise!

Written by Mark Smith

Virtuality ARM Code disc review

For those who've never heard of it, Virtuality is one of the ever growing selection of disc based magazines available for 32 bit Acorn Machines. From back issues of their magazines they have produced two compilation discs, a WIMP Programming compilation disc and an ARM Code compilation disc. Both discs consist of articles in the form of a Magpie multimedia document and a directory of example programs. A copy of !MagpiRead is supplied to read the articles.

On loading up the Magpie document and choosing the ARM Code option, you are presented with a menu of the available articles which range from an Introduction through using the Risc OS SWI calls, arithmetical and logic instructions, using memory load and store instructions, subroutines, saving executable code and finally to string handling. There is also a short section on problem solving and a page giving the author's and Virtuality's address, inviting anyone who doesn't understand anything or wants to send comments to write to them. The author is also a Club member.

The introduction starts off by establishing the use of the BBC BASIC assembler to assemble ARM Code programs and gives a shell program to which ARM code can be added so that it will be correctly assembled. Various concepts such as the use of REMs in programs, the ARM's registers and the need for two pass assembly are introduced. Explanation of ARM code and the assembler is complemented throughout the articles by 20 example programs. Also, where new instructions are introduced, as well as giving the syntax and an explanation, three or four examples are given.

There is very little that I can fault in the articles.

The only thing I could find that is wrong, is the explanation of the TEQ examples - it tests whether two registers (or a register and a constant) are equal (hence TEQ - Test EQual), not if there are any bits which are set in both operands. [For those with some ARM code knowledge, it can also be used to test if the top (sign) bits of the two operands are the same by checking the minus, 'N' flag.]

The only reservation that I have about having programming articles on disc in this way is that it can be awkward, particularly for anyone with a standard monitor, to refer to the articles displayed on the screen at the same time as trying out the example programs or writing your own programs in a task window - there simply isn't enough room on the screen to do it. However, there is the option to print from the Magpie reader, so if you do find any pages particularly useful to refer to, you can print them.

The disc only contains the first ten articles from the Virtuality ARM code series. There is nothing for anyone who wants to do more advanced ARM code writing such as relocatable modules, although such an article, along with file handling and others have since appeared in Virtuality - perhaps we will see a compilation of the more advanced articles in the future.

However, for the beginner, the Virtuality ARM Code disc gives a very good, well presented and well structured introduction to ARM Code programming. At only £5.99 it represents good value for money and I can firmly recommend this to anyone who would like to try their hand at ARM Programming.

Mark Smith

Virtuality recently merged with Illusions Disc Magazine based in London – Ed.

ARCHIMEDES VISUAL BACKUP
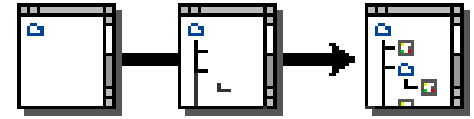
Reviewed by Tom Hughes

When Visual Backup arrived, I opened the parcel to reveal the now standard library case, containing a single disc and an eighteen page printed manual. Ignoring the manual as usual, I put the disc in and clicked on the floppy icon to reveal the contents of the disc. The usual copies of !System and !Scrap appeared, along with the two Visual Backup applications and a directory of examples. The copy of !System contained nothing new, but did have a rather old copy of the Interface module for doing 3D borders.

Quickly copying the !VBackup and !VExtract applications to my hard disc, I started !VBackup and clicked on the resulting icon – my hard disc started working and a dialogue box appeared, recording the program's progress in scanning my directory tree. Several thousand files later, and the scan was finished. Having by this time read part of the manual, I knew that I should now be presented with a graphical depiction of the tree, similar to that produced by packages such as XTree on the PC.

Instead, I got a rather cryptic error message. This threw me slightly, and I spent the next few hours looking for the problem, which turned out to be my setting of the system variable File$Path – mine contained several components, and Visual Backup appears to object to this.

Once the directory tree is on screen, performing a backup is as simple as selecting the parts of the tree to backup and then clicking on the 'Start' button. The program prompts you for the discs it needs and tells you how much more data is waiting to be written to floppy as it works. It is fully multi-tasking at all times – even during the writing of the backup floppies.
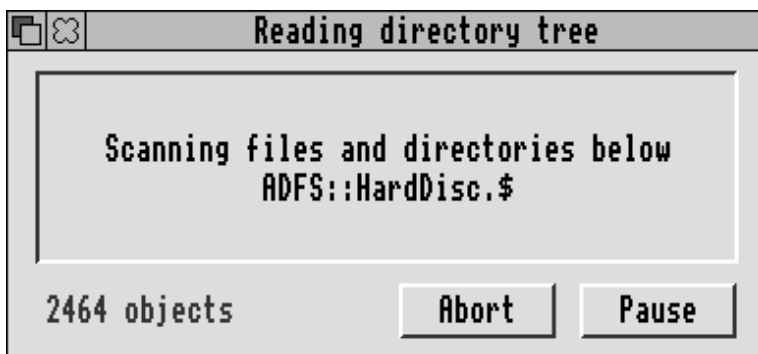
Selecting 'Preferences' from the menu reveals a whole host of options, some of which include the source and destination directories; the directories to use for temporary storage; and whether or not to compress the data as it is written to floppy (a 12-bit LZW algorithm is used for this).

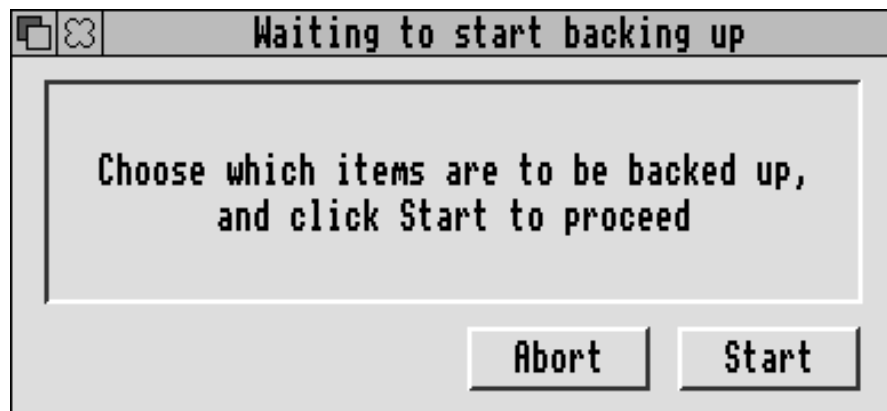Some particularly nice things revealed here include the ability to specify the timeslice used when multitasking during the backup. The default is to take four centiseconds in every five, which leaves a perfectly usable desktop for most things - if you wanted to do something particularly intensive at the same time, you could make this say one in five which would slow the backup down, but leave more time for other programs running at the same time.

Two different temporary store directories can be specified - the first is for a small area of fast store (the Ram Disc by default); and the second for a larger, but slower area of store - within the !Scrap application on the hard disc by default.

```
┌──┬─┐                                    ┌─┐
│◰ │⊠│   Waiting to start backing up      │ │
├──┴─┴────────────────────────────────────┴─┤
│ ┌────────────────────────────────────────┐│
│ │                                        ││
│ │   Choose which items are to be backed up,││
│ │       and click Start to proceed       ││
│ │                                        ││
│ │                                        ││
│ │                                        ││
│ │                                        ││
│ └────────────────────────────────────────┘│
│              ┌────────┐    ┌────────┐      │
│              │ Abort  │    │ Start  │      │
│              └────────┘    └────────┘      │
└────────────────────────────────────────────┘
```

A final neat feature of the options is the ability to give a string which is used to format discs - this allows you to control what format is used (useful for people with high density floppies) and whether or not a verify is performed.

To really put the package to the test, I decided to use it to back up my hard disc (something that needed doing anyway). As my 40MB hard disc typically contains about 39MB of data, this is quite a test. In fact, by the time I had told it to ignore some of the sillier stuff on my Hard Disc, it only had about 23MB of data to back up. It managed to squeeze this onto eleven high density floppies in just over half an hour, with the data being compressed to about 16MB in size.

Extracting the files is just as easy - you just need the !VExtract application (which can be freely distributed). Running this presents an icon, and dragging a backup file to this icon will prompt you for the disc containing the indexes (the last one in the set), before presenting you with a window displaying the stored directory tree. Dragging files and directories out of this window into filer windows will cause files to be extracted, and an application can be run from the backup simply by double clicking on it. Note though, that this causes a decompressed copy of the application to be left in !Scrap.

In general, this is an excellent package, which is extremely user friendly. I do have a few niggles however. Top of this list is the lack of an incremental backup facility to allow you to write backups which contain only files which have changed since the last backup. Another is the inability to stop the tree display showing every single file - it would be nice to have an option to show only directories at this point which would make the list much shorter and easier to manage.

Overall, I have to say that I was suitably impressed by this package - the manual was well written, if a little lacking in detail in the appendix describing the choices file, and the interface easy to handle. There is very little competition for this program in the commercial sector, which makes it all the nicer to see a good effort from Dabhand here.

Tom Hughes

Archimedes Visual Backup costs £49.95 from Dabhand Computing. Tom is author of several well-known PD utilities including LinkFS, Grapher and BLib II (with Ian Palmer).

THE PD SCENE

Nick Evans talks about the Public Domain Sofware included on the Magazine Disc

There was a slightly lower return rate of defective magazine discs last issue and I am hoping that this will continue to improve. My apologies again to the small number of members who had to return their discs but at least you can use the Freepost address for free second class delivery.

You will see that this magazine disc is number 8, the same as the number of the magazine issue. It seems appropriate to have both numbers the same although it might confuse some of us to start with. Please note that there are some offers made by the Club from time to time which will result in magazines being given away eg occasionally to prospective members enquiring about the club etc. These offers will not necessarily include a magazine disc, copies of which can be had for the princely sum of £1.00 from the secretary.

There have been only a few additions to the PD library since the last magazine but I am now able to offer an upgrade service for those of you who have found that the version number of your favourite PD program has

been superceded. If the original PD disc is returned, along with stamps to the value of 50 pence for each disc, then I will replace this disc with the latest version. Please don't send cash as I have found that a lot of this goes astray in the postal system. Stamps will do and cheques/postal orders can be made out to 'The ARM Club'. As the later versions of many programs show an increase in size I have now started compressing some of the discs using Compression from Computer Concepts, and including CFSReader where necessary.

The magazine disc this time features Public Domain programs written by Club members, with more to come next time:

3DTetris a demo/game from Dominic Beesley. A little concentration will show you how to get your programs onto the magazine disc.

AddLabel by John Reed which is a small program to print addresses onto address labels.

Calc a cutdown Shareware version of a program of the same name by Colin Turnbull.

CloseWin which is a program from Stuart Tyrrell that allows you to keep your desktop tidy by closing all the open windows associated with a given task. For example, you can close all the Filer windows, or all the open !Paint windows.

Database which is a simple database from Mark Johnson.

DeskZOOM from our erstwhile editor, Simon

ADFS::MagDisc 8.$.Programs

!3DTetris !AddLabel !Calc !CloseWin !Database !DeskZOOM !Genotype !Grabber

!GraphicEQ !HotKey !HourMake !PrintEmul Art
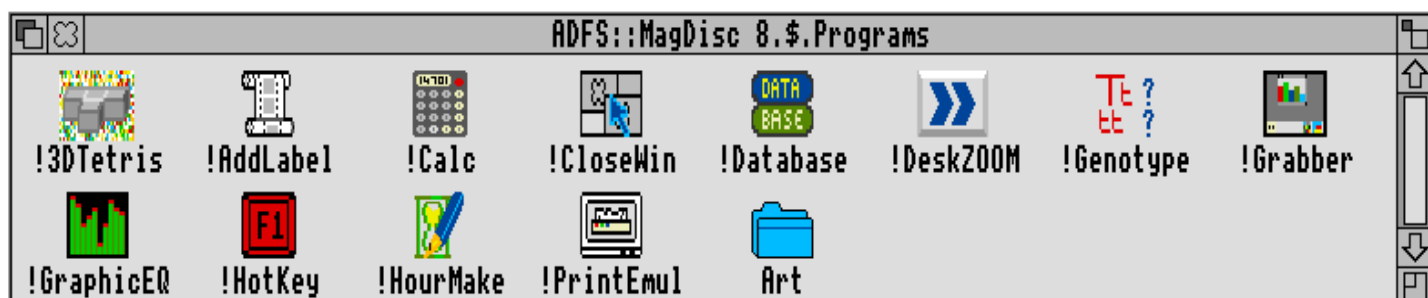
Burrows (*Are you trying to embarrass me? Ed*). It is a utility which allows you to amalgamate the !Boot and !Sprite files of a number of applications into two master !Boot and !Sprite files contained in a directory of their own so that directory viewers can be opened much quicker, particularly on floppy discs and networks.

Genotype from Toby Smith which illustrates a genetic principle.

Grabber from Sean Creech a utility for grabbing screenshots.

GraphicEq also from John Reed which plays with a Tracker tune.

HotKey by Mark Stoter which sets up some hotkeys (shortcuts) to help with some aspects of disc management.

HourMake from DoggySoft which is a utility to help you design your own hourglass.

PrintEmul which is an Epson FX compatible printer emulator for graphics from John Tytgat.

As in the previous magazine disc (cunningly designated number 3) I have included a screen from Chris Kecun, whose excellent artwork is now being sold by Matt Black in the Vanguard series, and also a couple of smaller offerings from RESPARC.

Please remember that not all programs will run from within an archive. You should unarchive the programs onto a couple of newly formatted discs before you run them. If anyone needs to know how this is done then write to me.

Nick Evans

The ARM Club PD Library, 19 Woodberry Way, London N12 0HE. All discs £1.00 each.

Classified Ads

This issue we have several items advertised for private sale by Club members. If you would like to sell any Archimedes related equipment or original software, please send in details for a free advert. Do remember that the magazine is only published quarterly, so there may be a significant delay before your advert appears.

Bargain Offer!

For sale: one Syquest 44Mb SCSI drive for the Archimedes. Cased with power supply and one formatted 44Mb cartridge. Good working order, willing to demonstrate and help set up. Price: £240 + delivery. Tel Simon Burrows on Leicester (0533) 712030.

Complete System!

Fully upgraded A3000 system including ARM3 and RISC OS 3. Colour monitor, external SCSI hard drives 20Mb Seagate and 50Mb Quantum. Multitude of original software including Impression II, Pipedream3, Poster, Jigsaw, Compression, Cyber Chess and much much more. Plus one hundred discs many full of software. Start at the top with this package at £950. Contact John Crabtree Tel (0803) 832505 (state personal) anytime.

EMR Hardware & Software

Mick Cooper has an enormous selection of EMR music hardware and software which he wishes to sell at "sensible prices". It includes a MIDI podule, Studio24 Plus, and a long list of other items, ideal for building up your EMR collection if you have one, or for starting off an Archimedes music career. Please phone Mick for full details on (0705) 371018.

Ovation DTP

RISC Developments' acclaimed Ovation DTP package for sale. Latest version, boxed with manual. Excellent condition. Price only £40 inc postage. Phone Simon on (0533) 712030.

Thacker's Thoughts

Our illustrious former Editor returns from the dead with some views on publishing!

One of my pet hates is reading letters, fanzines, magazines and other literature produced on a computer, which oozes spelling mistakes, grammatical inaccuracy and general language sloppiness. As the owner of an Archimedes armed with a suitable text processing package like Impression, a spelling checker and thesaurus, professionally produced documents are in your grasp, and taking a little time to 'polish' a piece of text can easily impress the reader.

After typing in the text, it may be obvious to say that carefully re-reading the text and spell checking it is essential, but it is surprising how many letters I receive contain sentences that do not make sense. Re-reading will also point out words that are frequently used, and with the help of a thesaurus, alternative words can be substituted. It is important to remember that a spell-checker cannot detect errors where the misspelt word forms another word; "I went to the slops" (shops), and remember that many words have more than one meaning and therefore spelling: "He ate to many cakes" (too), "Over their" (there), "Keep stationery; don't move please!" (stationary). Also look out for questions asked that do not have a question mark after them.

From the signs for cafés and hairdressers, to official government correspondence which I have received, it is apparent that the use of an apostrophe is a mystery to many people. It is used to note possession or association; placed in front of the 's' in singular cases; "Fred's problem", and after it in plural cases; "The Smiths' house". The only exception is 'it'. *It's* is a contraction of "It is". To indicate that the bone belongs to the dog, one would say "its bone".

On long documents and articles, a series of *Search and Replace* operations can be carried out to make documents look that bit more professional. From Impression this is accessed by pressing CTRL and F4. The letters that Impression can search for are fi, fl, oe, ae, OE and AE, to be replaced by a single letter, correctly joined equivalents fi, fl, œ, æ, Œ and Æ (for example "Encylodædia"). It is essential to click on the 'case sensitive switch'. The Archimedes does not have a correctly joined fj, but that's hardly worth worrying about. It is also worth checking that the font you are using has all of these characters defined, since some cheaper fonts, particularly PD ones have the bare minimum number of characters defined.

Inserting smart quotes is an indication of a professional document. From Impression they can be typed in as needed, using CTRL and [for ', CTRL and] for '. If there is any direct speech in the document, also pressing SHIFT at the same time produces the required " " punctuation.

Foreign text is catered for, both on the individual words (Meine Brüder sind groß, le château), and for inconsistencies in English and foreign punctuation (for example the German opening speech mark „ and the

Spanish inverted exclamation mark ¡). The Archimedes font system is equipped with the characters, so why not utilise them?

Finally, a few points to remember and include as you see fit. In a lot of publications a double space is used instead of a single one after each full stop. References to Bible verses and the like are usually done in a slightly smaller point size (say, 9pt instead of 10pt). Inserting the date is sometimes done like such '25th June 1993'. The superscripted 'th' is turned on and off in Impression by using SHIFT and CTRL and J. It is a good idea to insert a hard space (ALT and SPACE) around all hyphens, to ensure that they are not stranded at the beginning or end of a line. Whilst on the topic of hyphens, it is worth noting the different types of hyphen available. In addition to the usual shortie, -, that splits words, the EN dash (ALT and 151) indicates a range of numbers, 'Players 1–20'. The EM dash (ALT and 152) is used when a pause in speech occurs, "he went to the post office — took his time, mind you", and the correct minus sign (ALT and 153), '3 – 5 = –2'. Impression provides a so-called 'soft hyphen' (ALT and -) which can be placed in any word which is found at the end of a line and needs to be hyphenated at a different position than the computer's choice.

There are many other punctuation and grammar points not covered in this article, due to restrictions on space, but I hope that this has helped clear by any questions you had about presentation of text. On the magazine disc you will find a short program which prints a chart of the extra character codes, which can be handy.

Andrew Thacker

Andrew was the co-editor of this magazine until last summer, when he started University. His involvement stretches back to the foundation of the Club, when it was known as Club A3000.

Quick Hints & Tips

• To wipe the contents of a floppy disc fast, keep a blank disc handy, and backup the blank disc onto the disc to be blanked. It's quick!
• Always dismount a DOS disk after use, otherwise data may be lost.
• To open a directory viewer in the desktop quickly, hold down the CTRL key when you click on the drive icon. This may also save memory by not running the !Boot files.

Arnold's Observations (continued)

...computer to learn by playing. By the use of biofeedback it will gauge from input from its human teachers whether its actions fall into the area of creativity and intelligence or random selection. The system will then develop a model and its own rules for each particular activity. This work is expected to take 20 years to complete and cost 200 billion dollars. Funding is being sought.

1999: The first cyber-links are tested in secret. This is performed by removing one of your eyeballs and attaching filament electrodes to the optic nerve. The codename for this project is CYCLOPS..

2000: Nostradamus was ....? You decide....

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Remember:
Absolute Power corrupts, absolutely knowledge is Power. Therefore Knowledge leads to corruption. (I remember something in the Bible about this).

Final thought: The future is always tomorrow..

Written by Steve Arnold

Archimedes Help Service

As a member of The ARM Club, you are entitled to full technical support with any Archimedes-related problems you may have, to the best of our ability and within the constraints of our resources and manpower.

Telephone

Instant support is available to all members courtesy of the Archimedes Help Service. This is available every evening or weekend, on (0533) 413850, and is manned by Toby Smith. Please ask for the Help Service, and have your membership number available if possible. Please think beforehand how to phrase your problem, so as to minimise the time spent on the phone.

Fax

Queries and problems can be sent to us by fax if you wish. This has the advantage of being suitable for detailed problems where a speedy reply is required. The same fax number can also be used for general enquiries about the Club, and also for editorial matters. The number is (0533) 712030. Please keep faxes brief.

Letter

For more detailed queries or problems, please send them to the following address, including a disc if appropriate. We will endeavour to reply as soon as possible:

Technical Help Service
The ARM Club
FREEPOST ND6573
London
N12 0BR

The Archimedes Help Service, which kindly provides telephone support to Club members, also produces a range of *HitchHiker Guides*. These are brief guides to the use of well known software packages and hardware, and may be freely photocopied. For more information on these, please phone the Help Service on (0533) 413850. They also have a wide range of demonstration versions of software available in return for a blank disc and postage. The address is:

The Archimedes Help Service,
7 St Catharine's Way, Houghton on the Hill,
Leicestershire, LE7 9HE.

Training Courses

Our busy programme of software package training courses continues at Mill Hill School. Details of all the courses were printed in the last issue of Eureka, for more information or to book a place, please telephone Bruce Dickson on 081-959 3321.

We are currently arranging a Building Blocks course to be held in the East Midlands later this year, for more details of this please drop a line to the Club Office. We need more venues around the country for training courses, if you know of one please get in touch!

Stallion Offer!

Stallion Software, who market the *Almanac* and *StrongEd* packages reviewed in this issue have made a generous offer to Club members. Unfortunately details arrived too late to be included here, for more information please see the Magazine disc.

Stallion Software Ltd. Arundel House, Arundel Road, Camden, Bath BA1 5JX. Tel (0225) 339090. Fax (0225) 333090.

Comms Corner

Simon Burrows reveals how many uses he can find for a domestic telephone line..

In the olden days, there was not much you could do with a domestic telephone line. Chances are, you would have a single rented GPO telephone on the end, unless you were very affluent and had two of them. Phones were not fancy things like they are now, most coming with a rotary dial and a bare minimum of facilities.

Matters have changed completely in recent years, partly because of improvements in technology, and partly (dare I say it?) because the GPO became British Telecom which was then privatised and turned into BT. Most telephone exchanges are no longer electro-mechanical but are instead digital, offering all sorts of facilities such as automatic alarm calls, conference calls, call redirecting, itemised billing and so on. Competition has entered the domestic market via Mercury Communications, and in some circumstances a lot of money can be saved by switching to Mercury.

More and more houses now have telephone jack sockets fitted, into which you can plug almost any telephone of your choosing, or several if you want to, and DIY extensions are now legal. Telephones are often sophisticated affairs, with umpteen memories, tone dialling, last number redial and so on.

Many computer users have an interest in communications, and modems have also improved enormously over the last few years. Not all that long ago, a modem for connecting to the *Prestel* service might cost an arm and a leg, and would only operate at around 1200 bits per second. It would also take up a good part of your desk. The latest modems are much smaller, much faster and also more capable.

I recently bought a modem for under £300 capable of handling data at 57600 bits per second, with full fax send and receive capability thrown in, all in a box smaller than a VHS video cassette. With this I can call up mainframe computers and bulletin boards, important for my work (the former not the latter!), and also with the click of a mouse send messages to any of the millions of fax machines installed in this country or overseas, courtesy of the brilliant *ArcFAX* software produced by David Pilling.

Communications is important, and it is becoming increasingly so. From the keyboard of my Archimedes, I could call computer systems in America or Australia, and at very reasonable prices. Through the mediums of electronic mail and facsimile, a telephone line is now much more than it ever was in the past. Fax is a technology which is now widely accepted, you will not find many businesses, schools or other organisations without a fax machine hiding somewhere, and it looks likely that computer communications will be an even bigger growth area in the future than now, along with mobile telephones.

In the next issue of Eureka, we will be looking at a new service available from a company called Demon Services Ltd, which opens up the world of Internet, Usenet and Email to anyone who can use a modem. As the figure on our front cover shows, life is becoming more and more hectic, better communications mean that things have to be done quicker to keep up with everyone else. Where will this all lead? I don't know, but I plan to re-read this article in about twenty years' time and laugh at the outdated technology!

News Update

What has Acorn been up to over the last few months? Well, quite a lot it would appear, unfortunately this is a fairly quiet time of the year for public announcements, but we can be sure that there are some interesting new products in the pipeline.

Within the next couple of months, there are likely to be a number of new products revealed, although Acorn has already put a damper on expectations by saying that there will be fewer new products than the record number last year. The existence of two items has been widely publicised (or should that be leaked?), the new Floating Point Accelerator Chip, and also a new 3D *look and feel* for the RISC OS desktop.

Acorn recently released a version of its Educational Directory on CDROM. This contains information about thousands of products for the Archimedes, and also contains some demonstration versions of software. The advantage over the paper version is the powerful indexing and searching facility, as well as the demonstration software. The CDROM is priced at £29, quite expensive compared with the paper version, although this does include a free site licence.

Acorn has been targeting the European markets recently, with a strong presence at the CeBIT Show in Germany and also links with A.B.Dick, producers of professional pre-press printing systems. A special adapted version of RISC OS 3.11 has been produced for the German market, the only change being the translation of all messages into German.

Sadly, Acorn announced the demise of the BBC Master 128 computer back in April. It will no longer be maufactured because of the diminishing demand for the machine, although support and spare parts will continue to be available.

The *Discovery* pack has been launched by Acorn specifically for the primary education market. It consists of an A3020 computer with monitor and hard disc, pre-installed with a variety of software including *Advance*. Various other peripherals and support material are included, and the pack retails for £1149 ex VAT. Acorn *XChange* is a scheme whereby schools can trade in any computer (literally!) against certain A3020 or A5000 systems. Discounts of up to £100 are available for trading-in. The Tesco/Acorn *Computers for Schools* promotion was also extended and looks to have been very successful.

Acorn has cut £50 off the price of the Pocketbook in a summer promotion, bringing the retail price down to £199.95 inc VAT. A diary and calendar upgrade has also been announced, in the same way that the Psion3 organiser comes with *Agenda* software. This costs £19.95 on solid state disc for a limited period only.

Acorn has finally released the updated Programmers' Reference Manual for RISC OS 3. After 18 months of waiting, programmers can now exploit the extra features of the new(?) operating system. A cheap upgrade is available to owners of the RISC OS 2 PRM. Unfortunately Acorn is holding back the release of part of the PRM, the new Style Guide. This is expected to be released in a blaze of publicity in time for the massive Acorn World Show at Wembley in October.

Simon Burrows

Final Thoughts

Eureka is growing bigger and (we hope) better, mirroring the way that The ARM Club itself is changing. The Archimedes world is sadly lacking in independent user groups, and we are trying very hard to rectify this situation. We have worked to initiate the formation of several local groups, and some others have recently applied for affiliation to us.

As with so many things in life, you will only get out of your Archimedes what you put into it, and this applies to the Club as well. Those of us who have got involved with the running of the Club, which is entirely voluntary, thoroughly enjoy it. Only by contributing to the Club in some way will you get the most from it. That could mean writing something for this Magazine, attending or organising a meeting, training course or open day, or even just using some of the generous discounts on offer from companies.

You may feel that you have insufficient time or expertise to do anything worthwhile, but you would be wrong. Many Committee members have many other commitments, and some even started off with comparatively little experience.

Whatever you do with your Acorn computer, use it, enjoy it and share it with other people!