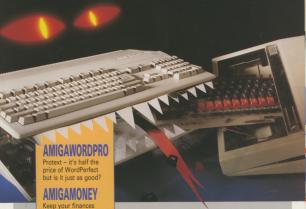
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#### AMIGA SCEN

Z LATE NEWS A full report fi

A full report from the Commodore Show plus hot news from home and abroad to help you make the most of using your computer in 1989.

#### ADVENTURES

12 ORIGINS
LATEST

Dave Eriksson looks at Ultima IV from Origin and treads the path in search of Lancelot's silver grail with help from Level 9 and Mandarin.

#### COVER STOR

20 GOMMODORE'S
BEBULATOR
Schizophrenic programming from
Dave Parkinson and Mike Bolly has
given the Amiga the ability to run
programs written for the BBC Micro

#### MUSIC

26 MIDI MAGIN

MAGIC
Graham Wayne takes some synths, his
Amiga and a recording studio, adds
Midi Magic and produces some really
happening hot tracks. Listen in.

#### PROGRAMMING

33 SAY IT WITH WORDS
Give your computer an elocution lesson with some short and simple Amiga Basic listings to type in and

try. It speaks for itself:

#### HARDWARE

30 CITIZEN 24 PIN COLOUR PRINTER High quality, high speed and high price. The primter which can add a little colour to your reports but will only cope with 9 pin dumps.

#### WORD PROCESSING

46 PROTEXT PREVIEW
David Foster and Simon Rockman

preview a British word processor from Arnor, built for speed which will sell for half the price of its rivals.



Minid Magic . . . Page 26

move, but Rex Last has mixed

feelings about a program which

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Activision didn't want a visit from John Minson, but he went just the same. He reports that exciting things are happening out in Reading.

THE PLAIN MAN'S GUIDE TO CLI Phil "Snouty" South types EDIT at the Command Line Interpreter to make setting up the Amiga's start-up sequence a really simple task.

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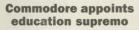




Citizen 24-pin colour printer . . . Page 39



# ■ AMIGA SCENE ■



A FORMER Atari execuby Commodore to spearhead its growing impact on the education marketplace. Bill Owen, who becomes

sales manager for education, was won over to the Amiga at the Hanover computer fair in Germany.

Owen first came across the

machine when he was working for leading distributor SDL. He told Amiga Computing:

"I was convinced that 68000 machines were right for education but there was not enough good software around for the ST.

"What I saw at Hanover

"What I saw at Hanover convinced me that the

# Amiga sales success story

Commodore is one of the success stories of the year. It is clearly emerging as Europe's second largest supplier after IBM—according to a leading research organisation.

Dataquest's European

Dataquest's European Monitor reports Amiga sales are booming and Commodore's PCs are increasingly finding favour in the busiAmiga outstripped the ST's capabilities in education, both in terms of software and flexibility in the classroom. It will be good to be working with a company that is really committed to education".

Owen worked for Atari as

a regional sales manager, was head of Eltec's public service division specialising in education, and then was national sales manager for SDL in its corporate and edu-

Commodore's sales manager for education, Peter Talbot said: "I believe this appointment is a clear statement to the market that Commodore is committed to the

ness sector.
"Commodore is obviously

cation division.

riding high", commented Dean Barrett, the company's UK marketing manager. "Worldwide, our first

quarter profits to September 30, 1988 were up 92 per cent to \$9.6 million on the corresponding quarter for 1987. "The Dataquest figures are

further proof that Commodore is taking control of the home computer market and advancing strongly in the business sector".

#### Awards for Mirrorsoft

THREE best-selling games from Mirrorsoft - Tetris, Dungeon Master and Falcon - have won honours in Europe.

In Paris the programs captured four Tilt d'Or awards - the highest number received by any software publisher - from France's biggest circulation computer games magazine. Tetris was voted Best Strategy and Best Original game, while Dungeon Master was voted Best Role Playing game and Best Animation.

Germany's leading entertainment software magazine, Happy Computer, had earlier given its Best Concept award to Tetris and Best Adventure to Dungeon Master. Falcon was voted Best Simulation.

# Train as a commando

AT a secret location within a dense forest lies one of the world's toughest schools, where commandos learn their trade. That's the scene in Action Service, from Infogrames (01-364 0123), soon to be released for the Amiga priced £19.95.



### and scramble

FLYERS, including the chief test pilot of makers General Dynamics, were consulted during the writing of F16 Combat Pilot.

The new simulation from

Digital Integration (0276 684044) will be released on the Amiga shortly. It follows each mission from the crew room through to postmission debriefings.

Players get to pilot one of the most advanced multirole fighter planes in the US major roles – air defence, battlefield support, offensive counterair, interdictor strike and reconnaissance. F16 Combat Pilot simulates all these activities, from

lates all these activities, from scrambling and desperate dogfights to tank-busting battle support.

Digital Integration director Dave Marshall (third from right in the Digital team above) said: "We are very grateful for the assistance we received from General Dynamics and F16 pilots our game is the closest you can get to flying this awesome aircraft"

# Developing in Germany

COMMODURE: A muge Technical Support (CATS) is to hold a second European Developers' Conference. The first conference was held two years ago in Brighton, but as the aim is to take in all European programmers the second meeting will be held in Frankfurt. All the discussions will be in English, with talks from the Amiga design team which will be flying in from Los Gatos, the Californian birthplace of the Amiga.

It is aimed at professional developers, so if you think a long word is something like sesquipedailian, you would be better off skiing. And as the conference is to be held in January you might get the chance.

# Power from a compiler

A MIGA users can now fully exploit the power of their machine without having to learn another computer language. Hi-Soft Basic is a new high

specification compiler/editor which takes Basic programs and converts them into super fast machine code within an easy-to-use environment like that of the Borland Turbo

products for the PC.
Following the world standard Microsoft Basic, as well as compiling Amiga-

Basic interpreter programs, it also greatly extends the language to include many features from QuickBasic for the PC and HiSoft Basic for the Atari ST. Additional language fea-

tures include full recursive sub-programs and functions, parameters passed by value or reference, and flexible looping constructs. HiSoft Basic supports all

HiSoft Basic supports all Amiga library routines; programs can be as large as memory allows, strings can be up to 16Mb in length and arrays any number of dimensions. Price £99.95 from HiSoft (0525 718181).

# Amiga practically stole the show

Ist used to be called the Pet show, when Commodore's Personal Electronic Transactor was king. Then with the rise of the Commodore 64 to become the world's best selling home computer the "proper" name of The Commodore Show took

over.

After hearing one C64
owning visitor complain that
there was nothing new for
her machine, it probably
won't be long before we all
start calling it the Amiga
show.

Still the Commodore Show it remains, and this was the Commodore Christmas, so it snowed on the Sunday. Shows at the Novotel have always seemed split between the bargains in the basement and the posh lot upstairs.

The big news from Commodore was the BBC
Emulator, but there was no
sign of the new hardware it
has shown in the US. Commodore seemed genuinely
pleased and surprised in the
interest shown in the emulator and announced a
January 12 launch date.

Digita launched two new products in its range of small business programs. Day by Day – a simple diary – and E-type – a "typewriter emulator", which sounds like an excuse for a word processor. Expect reviews in Amiga Computing soon.

Basic seems to be an up and coming language with Microdeal previewing GFA Basic and HiSoft demonstrating its compiler. Neither language was finished, but both seemed pretty comprehensive.

HiSoft seemed to be doing a roaring trade in cut-price Devpac assemblers and the new Devpac II, as well as answering techie questions on the merits of various C compilers.

Mandarin was demonstrating Time and Magik, Lancelot and Pioneer Plague. While the adventures were pretty much ignored it was PP which drew the crowds, many of them asking what had happened to the Lombard Rally game. It was due to be finished on the Monday after the show.

Up market company Microway showed why the Flickerfixer is worth £300 but refused to say anything about the possibility of an



National sales manager Peter Falbot heralding Commodore's educational drive

Amiga 500 version. Video add-ons w

Video add-ons were very much in evidence. A couple of stands were showing the Mini-gen £99 genlock and Rendale had a slightly more up-market device for a shade under £200.

Pam Smith from Triangle Television was showing some very exciting video hardware including a Hitachi video printer which dumps screens from RGB on to a special paper, and selling a tape of video effects produced using an Amiga and various video gizmos.

Tony Sellinger from Pure Graphics sold out of his CombineR. GB units which take and split an RCB signal so that you can use DigiView without needing the filter wheel.

Two teletext adapters were on show, one from Solidisk and a much more impressive device from Microtext which follows Commodore guidelines to the letter. It will be reviewed soon in Amiga

The people from Microtext were very patient, having a stand next to Ariadne which was showing a preproduction version of Opus

I the music language.

Perhaps the Microtext people didn't need to be patient because the sounds emanating from Ariadne were really pleasant – a great selection of jazz and classical tracks using sound generated by Paula and a crowd of

Midi boxes.
Simon Cobb from Siren
Software was making a lot of
noise with Soundblaster, a
device which plugs into the
phono connectors and a pair
of speakers to deafen the

of speakers to deafen the neighbours.

Precision Software gave demonstrations of its products on a big screen TV, including the first games in the range from Mindware in the States and the latest versions of Superbase and Superbase Pro, the best data-

base programs for the Amiga. You had to queue to spend money with Silica Shop. There was some interesting software, for example Who framed Roger Rabbit on special US import.

The bargains continued at HB Marketing which was selling Comic-Setter for under £50 and showing a stupendous demo of a Star Wars AT-AT walking past an Amiga 2000 running on a 2MB A500.

But for real bargains you needed to go downstairs. Super-slim second drives with a disable switch for £75 from Evesham, really cheap discs from Centec and a wide range of C64 and Amiga goodies from Postronix. AUG and ICPUG both had

good shows, the latter celebrating its 10th birthday, and it was good to see an historic computer on its stand.



### Driving ambition

CRAZY Cars II is under development in France by Gil, the top programmer at Titus Software which claims that this is the road game which does the things which other driving games that spin and a road which spilts at a fork.

It features the fastest Ferrari ever, the 200mph F40, doing battle with the police and collecting speeding tickets.

#### First out of the Chrysalis



NEW software house Chrysalis (6709 370102) is releasing its first game for the Amiga this month. Prison, based on a penal colony planet deep in space, is pure escapist entertain-

ment in more ways than one. The player must search a series of screens for clues to the location of a hidden spaceship which is the only means of escape from the planet.

Programmed by Michael Hart, with graphics by Jason Wilson, Prison will cost £19.95.

Chrysalis has emerged from Teque, the development house responsible for such titles as Terremex and Pac Mania. "Consequently the company differs from other software houses as it is product rather than marketing orientated", said a spokesman.

#### Hot on the scent

AMIGA owner Ian Robertson, of Tooting Junction, London, has reached the final of the Mandarin Software competition to win a £5,000 replica of the

Using his Amiga, Ian has come up with a possible location for the replica which is buried somewhere in Britain.

He is one of the first nine finalists to be named. A further 27 will come to light in three more stages of this national treasure hunt. It was devised by Mandarin (0625 878888) to coincide with the launch of its latest title Lancelot, based on the legend of King Arthur. All clues to the whereabouts of the Grail are in code within the program. Hand crafted in solid

sterling silver, the goblet is gilded inside with 22 carat gold and encrusted with amethysts, garnets and opals.

Along with other finalists, Ian will now take part in a play-off in February.

hi-res graphics. It can be four-player adapter.

#### Vanquish a vampire

NEW Amiga entertain-ment software was previewed at Comdex in the USA by Microdeal (0726

Arcade adventure Fright Night is based on the film and gives players 12 hours to wipe out the vampires or become their victim.

International Soccer has nine difficulty levels. digitised sound effects and played using Microdeal's

Microdeal also showed its AMAS advanced midi Amiga sampler, an 8 bit stereo digitiser with a full implementation Midi interface.

And, from Michtron, it had VTX on line for the Amiga - described as "the ultimate in telecommunications packages for Amiga owners" - plus VIVA, Visual Interfaced Video Authoring, software combining video. sound, colour and graphics.

#### Here there be dragons

FULL eight way scrolling is featured in Dragonscape, the latest offering from Software Horizons (01-348 4577) for the Amiga. Due out next month, priced £14.95, the shoot-emup action game includes wacky puzzles and elements of

#### Fax service facilitated

MICROLINK subscribers have been spared the problems reported by users of Telecom Gold's new fax

service Mailfax. Because Mailfax bewildered many people, up to 30 per cent of messages were being addressed to invalid

But MicroLink (0625 878888) has come up with a simplified method for using the facility - called Easy Fax.

"People were being asked to key in all sorts of different sequences in order to send fax messages", said Micro-Link systems manager Tim Clarkson, "Even I found Mailfax difficult to use. But

we've re-written the front end of the program for our own subscribers - now all they need do is type in the telephone number of the fax machine they want to send their message to"

At the same time, Micro-Link has introduced Fax Check - a method of seeing whether messages queued for transmission have been sent or not

"The whole principal behind using electronic mail for faxing is to make it as easy to use as possible", said Derek Meakin, head of MicroLink

"We feel that with Easy Fax and Fax Check as add-ons to the Telecom Gold fax gateway, we've managed to get it right for our subscribers"



#### **Staffing signals Amiga success**

JIM BUTTERFIELD reporting from Canada

Autumn has been his role as VP of game showtime for Amiga machines. if a new machine is on its

was poorly attended, but developers were out in strength. Some West Coast software houses expressed unhappiness that it was acquiring ARP, the Amiga Replacement Project system pioneered by

Many users are pleased with the ARP system, but that opinion is not unanimous, at least not yet.

In contrast, the first World of Commodore of the season, mobbed by enthusiastic users. Perhaps the most encouraging sign of all was that Commodore had set up a booth whose specific purpose was to hire new employees. Seems like a sure

sign of Amiga success. Commodore saved its new product displays for the Comdex show. included such items as the 590, an Amiga 500 expan-

Reports from the show Unix-style system and (perhaps shown behind closed doors) the Amiga transputer a system that includes net-

Vice President at Commo dore. At EA he headed the 64 dore some observers view ticipate in testing

way using Amiga custom chips. It wouldn't likely carry the Amiga name, but I suspect that there would be

no mistaking those great graphics. Interest is growing in

allow information to be passed in a standard form from one program to another.

Commodore has indicated that it might standardise on AREXX. Another contender is IPC, a protocol developed by a group of UseNet pro-

The network discussions continue to be fast and furious. Systems programmers see the need for such systems, whereas most general users don't relate to them.

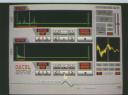
supplying user updates for summer, the company outdid itself. By mistake, it sion unit that comes with shipped a new product, Li-

SCSI controller for hard disc When some asked for the documentation, WordPerfect also tell of the AT board, the discovered its error, and politely declined to be that

Early glimpses of the 1.4 system can now be obtained

via a Commodore system-in-David Klein, formerly of testing, Jumpstart 1.4. The Electronic Arts, is now a current version is being made available in selected areas to developers willing to buy the chip set and par-

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OU are walking in the country. The world has been treating you badly, but the peace and quiet under a clear blue sky clears your mind and gives you a real sense of wellbeing. A pillar of blue light appears before you. Lasting for seconds only; it disappears, leaving behind an amulet and two books wrapped in thick cloth.

The amulet is an ankh, a cross with a loop at the top. The cloth is an ancient map and one of the books is The History of Britannia by Kyle the Younger. Fascinated, you settle down to read about the realm of Britannia.

Finished reading, you become waver of music, and following its baunting melody find what appears to be a Remissione Fair. The music the second of the second for from the rest. An old gypy, also warring an ankh, welcomes you and asks you a number of questions. Each has two answers and you reach deep into your heart to give an honest response. After the final question the fabric of your universe seems to form the properties of the fabric of your universe seems to to continue the properties. The properties of the properties. The properties of the properties properties the properties pr

You open your eyes and find yourself somewhere in Britannia. Life now has a new meaning, Ultima IV – Quest of the Avatar has begun.

This role playing adventure is vast in its scope. There are plenty of monsters to fight but there are also monsters to fight but there are also the underlying quests to solve. In each of the castles, towns and villages of Britannia vou must talk to the people and thread together the information they give you. There are more than 200 people or creatures to interrogate. Many will have something useful to tell you and seven are willing to join you.

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About to be questioned by the Gipsy

correct mantra, to attain Avatarhood. You will need some help to stay alive long enough to reach this first alive long enough to reach this first class – paladin, fighter, ranger, druid, tinker, bard, mage and shepherd. The questions you answered for the old gypsy will have determined your class, and you will arrive in Britannia etc., and you will arrive in Britannia or will girly you in each of the other towns. However, some man not other towns. However, some man not other towns. However, some man not

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STAYING POWER.

SO much to find will take weeks to

scratch the surface

Keep careful notes of conversations.

OVERALL 84

A true classic of the senre.

join straight away if they think you are not yet worthy of their friendship. Most evil creatures carry gold. If you fight them and win, they will

you gust them and win, they will leave behind a best which you must open to get the sold. Many carry traps could be the sold of the sold of the country weapons, armour, the ingredients to prepare magical spells and a few special tiems from the Guild. In your spell book you will find how to prepare many of the simpler spells. The more powerful will need research, and the gathering of two ingredients not on sale at any shop.

TALKING to people is simple, there are three nain quantum that may be posed to all you most-their name, bol and health. The replies may encourage you to pursue an additional subject. For example, a young mage met in an out of the way village may say "I seek the windom of willage might will be a seek that will be a seek that the will be a se

Some lines of enquiry will lead you to many different places scattered around Britannia. Persevere and make careful notes of who you meet where, and what they have to tell you. As





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One of the Gypsy's questions

you gain information you will learn that becoming an Avatar is not all that is required of you.

There are a number of objects to find and some lie in the dungeons deep below the surface. Needless to say the creatures found on these trips are powerful. Make sure you have prepared plenty of spells before you enter the deepest levels.

LTIMA IV is great to play and will take you a long time to solve. The graphics are similar to those of Ultima III - simple and explicit. Normal travel out in the open

weapons, but in the early stages I found the missile weapons, sling, bow or crossbow to be most effective. Let the monsters get too close and they will damage you. This may mean either the use of a heal spell or a visit to the healers.

Visit the castle of Lord British often If your experience has increased enough, he will raise your level, giving you greater hit points and increasing your basic attributes, such as strength and dexterity.

He will also heal your wounds, but beware of not going to the healers. They will ask you for a gift of blood to help others, and agreeing to this will help your elevation to Avatarhood. Also in this castle is Boarding and engaging in hand-tohand combat is a safer option. Dungeons are 3D corridors divided

Dungeons are 3D corridors divided into relatively small sections where it is not too easy to get lost. The dungeons are separated by battle sections that contain creatures and puzzles which must be overcome before passing through.

It is possible to walk your party out of an available exit without giving battle, but presumably the program will record your lack of valour. Likewise, ignoring a needy beggar in one of the towns decreases your compassion and I'm sure Hawkwind the Seer will have something to say if you follow this path. Be warned, there are hink that your companions may leave you if you do not measure up to

Ultima IV is a feast for the role playing adventurer. The only minor criticisms I can make are of the lack of noticeably increasing difficulty in the battles as you progress and the sometimes laborious sequential movement of eight characters in

connected battle sections.

It is a must for all followers of the active role playing adventure.

ANCELOT is the latest adventure from Mandarin Software and sadly it signals the end of the company's short but useful collaboration with top adventure writers, Level 9. The game is based on the historical and legendary accounts surrounding King Arthur and his Kniehts of the Round Table.

and his Knights of the Round Table.

Apart from King Arthur, the best recognised name linked with that era is Lancelot. It is as this shining example of knighthood that you will

The adventure is loosely divided into three parts. The first concerns the arrival of Lancelot at Camelot and the court of King Arthur and his elevation to knighthood. This achieved, the second section involves his exploits to prove himself worthy of his knighthood by resuing a number of wrongly imprisoned knights. These in turn return to Camelot to swell the ranks of the Order of the Round

The third part follows on some 20 years later where your goal is to help Lancelot in his attempt to find the Holy Grail. The third part may be



or in a town is shown as a plan view with your party represented by a single figure.

Enter battle and a larger scale plan view is displayed showing the position of each of your party members. You may then manoeuvre them in turn to place them in the most effective position. There is a reasonable choice of Hawkwind the Seer, who will instruct you on obtaining perfection in the eight virtues of the Avatar. Being attacked by a pirate ship can

Being attacked by a pirate ship ca be a blessing. Having beaten them, you end up a ship to the good. You may now sail the high seas and explore further still. The cannon on board is quite powerful, but beware of other pirate ships' armanment.



played independently of the first two. As with all adventures from Level

9, the descriptive text is full and highly atmospheric. The command interpreter is an improved version of what was already a very acceptable system used in its previous games, Knight Orc and Gnome Ranger. The high quality graphics complement the flavour of the text.

HARACTER interaction is a vital part of the game. Cooperation between Lancelot and others who are with him is necessary on a number of

Level 9's command Wait X means that characters can be instructed to perform an act at a particular time For example, if a rock is too heavy for others to move it without coordinating their push with yours. Gawain, wait 2, push rock. Ector, wait, push rock, and finally push rock: would ensure that all three of you would be pushing the rock at the same time

A small scale map showing the major places you will need to visit in parts one and two of the adventure is supplied with the game. The command goto xxxx (or run to xxxx) will take you to that area. You should still draw your own maps to ensure that you explore all possible

Remember throughout that Lancelot has always been depicted as the perfect knight. This was the time when chivalry grew of age and was the watchword of the Knights of the Round Table. To succeed in either part of the adventure, manners,

honesty, mercy and honour must be interpreted correctly. His relationship with Oueen Guinevere proving to be an exception. There is no room in this game for today's lager lout.

At the beginning, when Squire Lancelot first visits Camelot, he is unable to see the king straight away. He must wander around the town and find somewhere to rest for the night. While here visit Merlin. Although he has no major role in the adventure, his books are worth reading. On the following day be certain to end up at the court of King Arthur.

AVING felt the touch of Arthur's sword upon your shoulder, remain in his presence until dismissed. You will now have a clue as to where you should go next. A number of quests have to be completed and several hints will be supplied to send you in the right direction. The completion of individual quests is not easy.

It is possible to perform some

quests out of sequence, but only when you have tackled all of them will the program automatically lead into part three - The Ouest for the Holy Grail.

This final section introduces Lancelot's son Galahad. It is only with his help that the quest may be accomplished. Again cooperation between Lancelot and others is vital

The instructions are clear and explicit with a number of hints to novice adventurers. There is also a very readable section giving a résumé

of the Arthurian saga. Lancelot is one of Level 9's finest adventures. It is not easy but for those that falter, an excellent hint sheet is available. Used sensibly this will enhance the enjoyment and elation at solving the many puzzles.

Level 9/Mandarir

Excellent text, believable quests

Just what legends are made of STAYING POWER.

Plenty of devious puzzles to solve

Well planned system to utilise characte.

Plenty to see and do in olde Britain.

Not easy but the clues are there

Very good mixture of plot and puzzles



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The Amiga can already emulate an IBM PC and a Commodore 64. Simon Rockman looks at a package which will add the BBC Micro to its repertoire of impersonations GHOOL. A place where life is determined by bells, torture is timetabled as double French and Fatty Wilkins never does games. It is also a place which has a load of Acorn-designed BBC computers. They are there because the school bought them at half price under a government scheme, and given the

# The Amiga that thinks i



hoto: Martyn Howett

with an excellent Basic and a 3k Vic 20 I think the school made the right

The usual rule is that a computer only succeeds if there is software written for it, and software only gets This loop is what has kept the IBM

is for the computer manufacturer to put a lot of effort into getting software

Acorn struck lucky, the machine sold without software. Brilliantly dream. The BBC took 10 per cent of

So the BBC Micro reversed the loop and became a success before the software was written. Keen to capitalise on this, lots of small companies produced software for it, and thanks to the educational foothold the BBC ended up as the only machine with a respectable quantity of educational programs worth a second look.

ls. These institutions would love they are ever likely to see

Amigas to schools, partly to improve the sales of the Amiga 2000 but also to get the Nigels of the future to ask for an Amiga at Christmas. Now if the Amiga could run all the

the computer studies teacher keeps under lock and key, she might wake up to the joys of Commodor computing. While Nigel is blase about a ray-traced five bitplane blitter-object on the kreeblies, nothing impresses snowman which can count three green balloons.

To turn the Amiga into a machine exacting standards, Commodor

difficult beasts. Anyone who has some experience of Transformer (the Amiga PC emulator) or the Readysoft G4 emulator will know that such software is of limited use.

Commoders to produce a genuinely useful program which could run the majority of BEG Micro programs used in schools, including a hit list of 12 major ones compiled by the Department of Trade and Industry. The result is the Resbulator. This is an Amiga program which makes they are not the program of the pr just an implementation of BBC Basi for the 68000.

rating system (OS) which means





that all programs which use proper system calls – "legal programs" – can be run on the Amiga. Unfortunately many graphics programs use the "illegal" technique of direct screen

"illegal' technique of direct screen access. The software, provisionally priced at £49.95, comes with a slim manual and a disc of programs.

The main file is Beebos. It is represented as an icon by a BBC computer. Click on it and the Beeb turns into an Amiga. This, along with DFS – Ariadne's Disc Furtling System – represents 300k of assembler and machine code which forms a software "bridge" from the BBC operating

System to the Amage environment.
Bastic is held as a separate life, it is
only 20th long that is lightly and very
something of which Ariadne is
justifiably proud. BBC Bastic is as
compatible as possible with BBC
Bastic 2, but runs up to seven times
faster. The spitting off the language
and the operating system means that
Ariadne could produce further
languages for the emulator or they
could create an Amiga version of BBC

Because many BBC programs mix Basic and machine code, there is an emulation of the 6502 chip. Using software to emulate a fast processor is pretly inefficient and so this part of the emulator can run up to 10 times

slower than a real BBC Micro.

To reduce this problem, all the

#### Graphics modes

#### The Beebulator supports the following graphics modes:

0	640 x 256	2 colours	80x32
1	320 x 256	4 colours	40x32
	320 x 256	16 colours	20x32
	text only	2 colours	80x2!
4	320 x 256	2 colours	40x32
	320 x 256	4 colours	20x32
	text only	2 colours	40x23
7	Teletext di	splay	40x2!

written in 68000, so even a machine code program which uses the OS extensively will run faster on an

Amiga. While 6

While 6502 can be mixed with Basic in-line – where mnemonics an typed straight into Basic – 68000 routines can be called as extensions, so it is very easy to tweak programs which need a speed boost.

T is possible to run the system without Basic This drops you into a simple machine code monitor which will accept AmigaDos CJI commands, dump or alter memory or registers and disassemble and run 6502 programs.

Some things the Amiga can't cope

with. The BBC has an analogue joystick port. The command ADVAL is used to read this, and since the Amiga uses digital joysticks Beebulator ADVAL is fixed to always return zero. The Amiga keyboard is different and so some substitutions have been made.

The f10 function key mirrors the

BBC f0. DEL is used as a copy key for the BBC's interesting screen editor and left Amiga-help performs a break — which resets the machine. Help on its own could have been used, but was considered too likely to be presented by mittake.

Bits of the operating system which are duplicated by Aming preferences are not implemented. Things like the key repeat speed are sel from Aming Workbench. Disc formatting is done from Amingalbos, and the BBC Micro command \*COMPACT which tidies up a fragmented floppy produces the error message Thou kiddes.

from AmigaDos, and the BBC Micro command \*COMPACT which tidies up a fragmented floppy produces the error message \*Thou kiddes\*. The Amiga has been made to feel like a BBC by emulating the graphics modes (see table), although the character set looks very similar, it is actually closer to the original teletext design than the Acron version.

design than the Acorn version.
The Beebulator powers up in Mode
6, a text only, two colour mode
because this is the fastest at writing to
the screen. On a real BBC Mode 7, the
teletext mode – eight colour with

limited graphics – is very much faster because it has hardware support. While Ariadne's Mode 7 is useable it is not recommended for editing – the manual describes it as being like a

the manual describes it as being like a very skilled painter trying to produce text as fast as a crummy typewriter.

The speed of Beebulator graphics is



E, Smiley,
F, Skittles,
G. Snakes alive

Joey.

B, Christmas tro C, Beetles, J D. Happy faces, K

Huntgar

Teletext mode is supported

most impressive. Amiga libraries and the blitter are used to full effect. which makes some demonstration programs run unbelievably fast

Text output is very quick, and this is the only place where the Beebulator bends some of Commodore's rules for programming the Amiga. The result is that listings scroll by nearly as fast as they do on a BBC Micro which cheats support ANDing and XORing graphics so the BBC's GCOL modes 1

doubts as to how many graphics programs will actually work. HE job Beebulator was designed to do was to allow schools to run their existing programs - ofter home grown - on the Amiga. For this reason some strange commands have been included. Cassette motor control is accepted - although it doesn't do

crashing. The disc filing system works in the same way as Acorn's DFS, with an advanced disc filing system being written by a separate

who wants to use Beebulator will also way to get programs from a BBC to

Numbgames, Sunny. treI. More - fewer. J. Hippity hoppity. es, K, Rabbits.

L. Spider puzzle 2.

ive.

grips with Beebulator will love the system. It is great to see existing

VIEW R2,1 No File Mode a default is the view wordprocessor d Command Boot8 Boot1 Boot2 Boot3

Any "legal" BBC programs - like View - will run on the Amiga

an Amiga is through a three wire gives the Amiga control of the latter

Amiga discs by using a \*IMPORT command, while individual files can be copied using \*ICOPY.

The syntax is a strange hybrid of command \*ASSIGN 0 RAM: allows the Beebulator to save files to the Amiga ram drive as though it was a BBC floppy. A \*ASPOOL command the BBC side to the Amiga side very simple - ideal for a user who has a lot of data on BBC discs and wants to get the information onto the Amiga.

UT Beebulator is really at its best when you realise that it is

atthough you will need a 1Mb machine to get more than one emulator running at a time. It is hoped that schools which buy Amigas as BBC replacements will start to use the real power of the machine. They will have to learn some things about Workbench and CLI. If BBC Basic for the Amiga does appear it will be a useful next stepping store.

Amiga, typically two to four but possibly seven times faster than on the machine for which it was It is just the excuse Mrs Martin and

Nigel were looking for

BBC Emulator Commodore £39.99 to schools

EASE OF USE..... Micro. You will need a book on the

The BBC machine operating system guidelines, but the emulator will multi-

Up to seven times faster than a BBC Micro, which was one of the fastes!

BBC Micro.

Won't run games or any programs



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Graham Wayne, professional musician and former manager at Rainbird Software, looks at Midi magic

EQUENCERS are the tricky end of Midi programming design and implementation. Timecode, Midi clock rates, song pointers, sync to tape, loops and sequencers are more complicated. The more you pay the more you get. So unless you are considering buying a top end of the market sequencer the only way you can evaluate the available software is by the kilo, as it were In other words, what doesn't it do, and how important are the omissions. anyway? Midi Magic is a 16 track system written by the American team Circle Design. It sells for \$130 in the US, so we can reasonably expect it to cost about £80 in the UK, putting it in the middle band of prices for this kind of software. It should, I believe, offer a substantial range of facilities to the semi-pro and professional who don't require the most advanced types of data handling and control, since £80 puts it out of the fooling for fun budget and into the let's get serious

At least, I get serious for £80; don't know about you.

The front end of Midi Magic is well thought out. If you've already had experience with a sequencer system it is quite possible to find your way around the window system without reference to the manual.

Commendably, all the buttons work more or less as you would expect. Some exceptions are necessitated by





the Wimp environment. Things such as clicking on a numeric value and holding down the mouse button down while moving the mouse left or right to increment and decrement the number.

On start-up, the inappropriately anned Tape Transport, Track Display and Dort Panic windows are opened. This last option halts the sequencer in mid-stride and sends noted commands on every channel. As meter on the right side of the screen gives a visual and percentage display of the available memory, and above it be play-through buttons control the output and rechannelling of Midli information.

A T the top of the screen pulldown mems reveal Project, which we'll come back to, Controls, which deals with clocks, tempos and Midi control messages, Song, through which the architecture of sequences is built and manipulated, Sequence, which contains similar options to the Song mem but for the individual formally Track, which is where the editing of track data, quantising and track copying may be selected.

The pull-down menus are nested. This appears to be a sensible method of grouping available options, but in practice the computer has to draw and then erase every sub-menu as you drag the pointer down the menu to select your choice, and the speed of selection is irritatingly tardy.

Many of the menu choices open other windows through which new information or instructions can be entered, and all windows can be placed and sized according to user requirements. There is also a startup file accessible via the workbench through which the user can set startup preferences.

Recording with Midi Magic is straightforward. Select a track, or tracks for recording in the Track Display window – Midi Magic allows

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Monday-Saturday 10.00am/6.00pm Access/Visa/Eurocheques accepted multiple track recording on different MIDI channels, a feature not found on many sequencers of this price – by clicking on the record select button for the track, which blinks red, just like a 24 track in record ready mode.

When you are ready to record, you come across a nice touch which my much more expensive sequencer could do with: instead of galloping off recording a load of nothing while I prepare myself for another performance. Midi Magic will wait until the first note is played before it uses any memory, although the metronome is running all the time.

The program will assume that the first note, if played just before beat one (when I jump the gun, usually) should actually be on beat one (where its maker intended it to be). Some sequencers simply won't acknowledge anything that occurs in the countdown period, cutting off the first chord or beat.

RECORDED tracks can be manipulated with the mouse — here the thought that has gone into the user-interface shows. Operations such as trimming a track or setting in and out points for further work such as drop-in recording can be done quickly and efficiently, often without leaving the main display area.

It is also at this point that one comes across the most glaring omission in Midi Magic, the lack of an Undo function. Early on in my test I wanted to correct the timing of some sloopy rubbish If played into a sloopy rubbish If played into a two well conceived and offers four well conceived and offers four different kinds of correction, I blythly seelected the wrong note value to correct to and turned my opus into an unintentional waltz. Cops.

But moving on, we come to event deliting, which requires a menu selection to that effect from the track menu. Events are represented following the numeric conventions of presented with various editing options for the recorded data. Events can be added, inserted or deleted either separately or as a group, by drogging the pointer over the required range of events. Bort make any read whatever you've undone.



Tape transport, channel selection and individual sequence.



Tempo control behind the extensive online hel-

OTES can also be entered in the design seems, for once, rather clumsy. Even the manual admits that "you may have to be something of a contortionist..." since you must pres a note or chord and select the note value by clicking with the mouse simultaneously.

There is no default setting for steptime note value. You must click on the note value window for each note input. A strange eccentricity in the design stage here, boys. If I was working with tape, the next creative stage would be to cut up all my tracks and join them together in one long line. Midi Magic arranges the construction of multiple tracks in sequences and songs in the fashion of the drum machine.

A song may contain any of 26 sequences – called A to Z – and the sequences may be of any length constrained only by memory. Sequences in turn may contain up to 16 tracks of Midi data of any length,

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The Midi event window is where all the real work takes place

any of which can loop, transpose and repeat.

EQUENCES can be appended to each other if 26 parts isn't enough, which it often isn't. Midi Magic affords the user simp le methods of building songs and sequences, and other than typing in the names of tracks and sequences, I can't remember using the keyboard at all, or missing it for that matter. Some mouse-intensive programs are actually rather awkward. Midi Magic works, if you see what I mean

Any manual that informs me that "Some of you Virgo types may want to clean up the sequence..." or warns me that I "...may be about to have a good time..." wants burning over a charcoal brazier, in my opinion Luckily, the Project menu contains an extensive Help file available by topic. Listing all the commands and

procedures, it is all one needs to make the most of Midi Magic. In all fairness, the manual does list all the Midi commands, op-codes and system messages as well as hard disc installation methods

The package is fast, powerful and nice to use. It has many refinements lacking on sequencers twice its price and does nearly all the things you would expect, and quite a few you don't. It is multitasking, which is most useful if you want to run editors at the same time. Too bad it doesn't recognise song pointers but it will read Midi timing code from an external source, so some kinds of synchronisation are possible.

HE software is flawed by the lack of a Undo function and the poor step-time operation, but the extensive on-screen information about using the system is a big bonus. making possible the use of those clever little facilities one wouldn't normally get the manual out to look up. A word of warning about memory: Midi Magic takes up a lot of ram, so a memory expansion pack is nearly a compulsory accessory.

#### Midi Magi Circle Design/Brown Wagh Direct 01-602 2502 USEFULNESS ..... Has useful features and sophisticated options that cater for most Midsequencing demands if the number of



Fast input and screen routines but gets happen at once. Quick with editing.

With other sequencers coming on to the market every week, this one may not be so well priced in a year, but right now it's a viable choice.

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A good choice for keen amateur or

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THERE can be no prizes for guessing what must be the all-time favourite "first Basic program you have ever written". As I recall, it goes something like this (give or take a few REMs and the odd bug, of

Mat.

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18 PRINT "MELLO MORIAL"

Wouldn't it be nice to play a variation on that age-old theme and write a first program that goes like this instead:

10 SAY 'HELLO WORLD'

Well, you can – it's almost but not quite as easy as that. If you load your Extras disc and double click on AmigaBasic, you can see the speech synthesiser at work, and start

Easiest things first. In the List window, type the following line:

SAY TRANSLATES (\_Hello there )

AmigaBasic beginners will see with relief that this is one of a new generation of Basics like Turbo Basic which doesn't require line numbering and which positively encourages

structured programming.

Let's consider the Say statement in a little more detail. The speech synthesiser goes through the following stages:

- First, it requires a string. This can either be a literal string or a string variable like fred\$, or even bits of strings or concatenated strings.
- Now the string has to be converted into a phonemic representation which the synthesiser can understand, and that's done with the TRANSLATES() function.
- Finally, you use SAY to make the translated text come out as speech.

If at this point you are muttering to yourself "A phonemic what?", I'm simply referring to the way in which the synthesiser program takes the

# Speaking Basic

In Part Two of his speech synthesiser series Rex Last tries out an interesting variation on an all-time favourite beginner's program



4

string of characters and carves it up into what it thinks are the right sounds before then going on to utter them.

Try this out with a program like the following:

```
fred$ = "hi there"
PRINT fred$
joe$ = TRANSLATE$(fred$)
SAY joe$
PRINT joe$
```

That breaks down the first demonstration program line into its component parts.

component parts.

The output should include the line we saw in last month's article:

```
/HAY4 DHEH1R
```

That's the Translate-d phonemic representation of the string "hi there" One way of experimenting with the Say command is to find out how the

synthesiser "speaks" the letters of the alphabet. That can easily be achieved:

| samfs'abcdefghijklanopqrstuvxxyt' | FOR i = 1 to 26 |
| SAY TERMICLIES(RID(samf,i,1)) |

So far, so good. But if you've taken even a cursory look at the way in which the synthesiser operates you'll know that you have quite a lot more control over it than simply throwing strings at it and leaving it to muddle through by tiself.

In fact, the command SAY is a lot more complicated and powerful than appears at first sight. There is a modearray feature which can be added to Say, a string of parameters which alter the default values.

It's a rather neat way of overcoming the problem of a function with a whole succession of variables. If you have to cope with mine parameters, as here, then the error potential is pretty impressive if you have to tag a list of them after the function each time you use it. So the mode-array concept gets round this problem in a neat fashion.

If you have a nine-element array params% to hold the parameters, you

you simply fill it up with a READ statement from a DATA statement, and then you can play around with the spoken word as much as you like, so long as you don't give Say silly values.

Program first, explanations later:

```
DATA 118,8,158,8,22288,64,18,8,8

REM Input Thanges please: ",aI,bI

FOR i = 8 TO S:READ paramsI(i):NEXT

REM paramsI(aI)=DI

SAY TRANSLATES("Hi there"),paramsI
```

Note the comma after the string in brackets, with the mode array

params's immediately after it.
Run that, and you'll find that the
Amiga speaks in its default mode.
Now let's take the gloves off and
remove the REMs, which will enable
us to tinker with the parameters,
which we'll now go through one at a
time. To get the full picture of what
these variations achieve, I suggest you
lengthen the string to be spoken to
reasonable length sentence. Here are
the parameters for Say:

#### Parameter 0 - Pitch

The pitch of a voice is defined as the relatively lowness or height of a sound. This is conditioned by the speed with which the vocal chords vibrate. So a high-pitched voice will be one in which the chords vibrate faster and (you guessed) a lowpitched gruff and manly voice will do the opposite. The default value is 110, which AmigaBasic defines as the normal male speaking voice.

Run the program, and at the prompt, type 0,320, then you'll get the highest pitch. The lowest value allowed is 55. Try typing a value outside this range, your screen will flash orange, and up comes the error message illegal function call. You'll have to click on the OK box before you can continue.

#### Parameter 1 - Modulation

In other words, whether the voice is inflected or stays on a monotone, and whether syllables are stressed or not (remember, the numbers in the

Arpanet strings indicate stress). Have a go at the program with the value 1.1. The value 1 gives you a passable imitation of an Amiga-Dalek, and the intoned value 0 is the default.

#### Parameter 2 - Rate

This parameter determines the speed at which the words are spoken. The permitted range is between the languid drawl of 40, and the machinegun rattle of 400. The default value is a measured 150. To my ear, anything over 300 sounds garbled.

#### Parameter 3 - Voice

The default value is 0, that's a male vicin. To try and turn your Amiga into a real lady, run the progam with the value 3.1 and you'll be a little disappointed. It's faintly feminine, but is sounds like one of those American TV chat show hostsesse with razor-sharp little tongues who garge in graves used to the property of the proper

with it.

Click on the List window, and change the parameter of the Data line (that's the Pitch parameter) to around 250, and then you are treated to a much more seductive sounding set of yocal chords.

#### Parameter 4 - Tuning

This parameter controls the frequency which is sampled in order to generate the best sound balance. To see what happens, try the extremely low and almost incomprehensible lower limit at 4,5000.

The squeal that comes from the upper limit is on 4,28000. The default value is 22200.

#### Parameter 5 - Volume

Here we are dealing with a simple volume control in the range 0-64. The loudest, 64, is the default. 0 is no sound. Run the program with the setting 5.5.

You can just about hear the sound.

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If you can't, chances are that the

speaker volume control isn't turned up sufficiently. I could still just about hear the voice over the sound of the computer's fan and the wind blowing outside when the sound value was set

#### Parameter 6 - Channel

This is a little more complicated

0,3 - sound is from the left audio

1,2 - sound is from the right audio 10 - any available left or right pair

of channels for output. As you might expect, 10 is the

For fuller details, the AmigaBasic manual gives you a Channel assignment table on Page 8-132

detail, write a loop assigning parameter 6 the values 0-11 and you can then determine the exact

differences. In normal use, it's safest

#### Parameter 7 - Mode



synthesiser is in synchronous mode.

If you set parameter 7 to 1, and printed "This is what I am saving" as the next program line, then the strine "This is what I am saving" would appear as it is being spoken. With the default, the synthesiser speaks first,

#### Parameter 8 - Control

When the Mode setting is 1, the Amiga has to be told what to do in a statements come one after the other. string is dealt with at a time. The other values either stop the string being spoken (1), or interrupt it (2).

So far, so good. But what about a program which demonstrates the benefits of speech and has a little



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But most of us have to compromise
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photographic poster is still out of
reach somewhere in the financial
stratosphere. The better ink jet
printers will still leave the current
account in need of an oxygen mask.
However, there is a large choice of
cheap, and not so cheap, impact
printers for those who still dream but
prefer to breath as well.

pineter to the anneal variety is the new Citizon HQP-40. Citizon, initially a lapanese watch maker and still ticking along as such, has recently set up a factory at Scuntherpe. Many Japanese the structure of the structure packages offered in economically depressed areas and by the thought of having a production facility inside Europe when 1992. The structure package is the structure of the stru

Enough of the economics. The

What's got 24 pins and looks good on paper? No, not a dozen Madonna clones, but the new model Citizen HQP-40 colour printer. Rupert Goodwins checks its forms and sees if this citizen's arresting

HQP-40 – boring name, whatever happened to the Valiants and Imperials of old? – is a 24 pin dot matrix, plain paper and inky ribbon printer that has a colour option. It's quite expensive, with a price tag of 2559 and the rainbow bits costing another £50. Coming from Citizen it has to be good, but £600 pond?

nas to be good, but £000 good?
First impressions are of yet another
printer. Finished in the legally
required off-white, it has a set of
buttons on the front poised above an
intriguing flap. The first button
chooses the type style from draft (as
fast as you can, my man, I've got a
train to acthol. correspondence (for





writing letters), letter quality (for writing quality letters) and prop spacing.

This isn't for airmail, rather it prints text with the space between the individual letters adjusted to look good rather than constant. This has the secondary effect of changing the length of words on the page, so any tables or structured text your word processor might produce will look mighty odd. Which is why Citizen puts the option on a button.

The next button selects the kind of font. Or rather it doesn't, because the HQP-40 only comes with the one font. Pressing the button makes a little light marked IC GARD flash in a yellowish way; this is nature's way of telling you to go out and spend another 235. More on this potential expenditure later.

A NOTHER button is marked both Line Feed and Form Feed; press it briefly and the paper advances just the one line. Hold it down for more than a second or so and the rest of the page spools out. The final button is the On Line switch, and connects and disconnects the printer from the computer.

That flap, marked with a tempting Push, hides a healthy complement of DIP switches. DIP? Dual Inline Package, the jargon for the way in which the electrical connections leave the switch and completely irrelevant to their function, which is to control the way the printer works.

These switches, unlike the more public buttons stop them, only have an effect when the printer is first switched on and are thus used for more or less permanent settings. The area of the state of the

Boring but necessary, and it's nice to see that these essential functions are easy to get at and to change.

Remember that flashing yellow light? This stroboscopic inducement to personal impoverishment is trying to tell you to plug in an extra font card. On the flap of plastic that covers the top of the printer is a sort of plastic sunroof, beneath which are a



Good with primary colours, but mixes are muddy

couple of slots. These accept cards containing a memory chip which can either hold a new typeface or a program for the printer to make it pretend to be something other than the Epson LQ-800 it normally imitates.

Other printers have adopted this approach before, but apart from laser printers, whose owners have resigned themselves to a costly life, it hasn't taken off.

aken on

The new wind of sanity that's ruffling the toughe of the printer world hasn't missed Citizen, as the sockets for the serial and parallel interfaces have moved from the normal back position to the right-hand side where they can't foul the paper. Or rather they wouldn't if I didn't usually put my printers to the right-hand side of my computers, but that's probably my fault.

AVING both sorts of interface is useful, especially if the parallel port on Amy is tied up with a sampler or somesuch. Unfortunately, the power socket is still at the back of the printer, a problem mitigated because it's offset from the area where the paper enters and exits.

Paper movement is an area where many printers have problems. The Citizen has a wide variety of options to wind in the woodpulp, including an effective automatic paper load. Programmers, hackers and leaflet producers tend to use fanfold paper, whereas less ardent hobbyists and gamers with the odd letter to write prefer the single sheet.

The HQP-40 copes with both, coming as it does with a plate to hold sheets and a tractor mechanism to pall or push continuous stationery through the machine, as this collection of cogs and spikes can be mounted in two positions. Furthermore, the paper can enter either from behind or beneath, which means that most people should be able to slot the Güizen into their

current layout. The automatic paper load came as a surprise, since it sprang into action as I was trying to load up a single sheet without realising that the printer was capable of grabbing it from my hand. It was and it did, pausing only to position the paper perfectly before liming up the head. This, and all the many other options, are detailed in the manuals.

Unfortunately, the manuals fall down on a number of points. Firstly, and for no particularly good reason there are two of them – the User's Manual and the Reference Manual and the Reference Manual was considered to the DPS witch settings to make the printer start up in Letter Quality and where the code to tell your word processor to switch the printer into Letter Quality? One of these is to

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This next botton solects the kind of fact to print seen. Of Jather R doesn't, a state layer earner gotton cases with the one fact. French and the betterm nakes as that layer earner and speed in the French seep; the layer than the same print of the contract of the contra

quality, correspondence and proportional

User's, the other in Reference,

Secondly, the manuals are an odd shape, very tall and thin. No, not just reviewer's pique; I'd like to be able to keep them on the bookshelf with the rest of the books I might need in a hurry. They don't fit. They'll get lost. And for why? Ask Goodness again.

Thirdly, they're full of grammatical mistakes and structural flaws, the most glaring of which is the "lets get down to basics" Chapter 2. This tells you what words like platen mean. Unfortunately most of those words have been used in Chapter 1.

And lastly, they are sometimes plain wrong. For example, Commodore and Sinclair computers will, it states, "need a suitable converter to convert (their) output to parallel or serial format". Of my three Sinclair (I was young and foolish once) and one Commodore computers, not one needs such an

adaptor. This could lose Citizen sales in the High Street, where wrong statements like those confuse short assistants and purchasers alike. "What converter do I need for this Commodore Amiga then?" "Oh. I'm not sure. But the Epstrad printer doesn't need one'

There's more, but why labour the point

UT does it work, this printer? Yes it does. It produces output as good as anyone else's 24 pin printer, that is to say output which you would not be ashamed to show your maiden aunt. It's a shame that it sells itself short by only having the one typeface. Courier, which tries hard to look like a typewriter. In letter quality, it succeeds, too, Resulting correspondence is as good as most 9 pin printer's NLQ, only faster, and draft is fast and still quite acceptable.

What's got 24 plns and looks good on paper? No. not a dozen Madonna clones but the new model Citizes more 40 colour printer. Expert Occoburs checks it forms and sees if this Citizen's arresting.

Describe has a quest in life. Some spend years in silent contemplation on a stage mountaination, some try to assess and definitive collection of Relgam stages made con anigas. For many of motivations group of disastingting souls, there is not converted to Sirvana - the possession of the parfect cole original.

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One of the on-coronag variety is the one citizen par-60 Citizen initially features when the citizen initially along a such that citizen initially feature at Southerner, many it initially along a such that citizen in the citizen is such as a coronag a such that the citizen is a coronag and the citizen initially along a coronag and the citizen initially coronage and the citizen initially coronage and citizen in the citizen and citizen a

In graphics mode, which is, I suspect, the one that most Amiga owners will be using, it manages to pretend to be an Epson LO-800 well nigh perfectly. With the appropriate printer driver - Workbench 1.3 knows about all 24 pins - it makes an acceptable substitute for a full-blown laser printer when used with DTP programs like Professional Page or ComicSetter. And of course, there's the colour option

The HOP-40 handles chromatics by means of a four-colour ribbon. By combining red, cyan, yellow and black it can approximate most of the colours that the Amiga produces. This ribbon sits on a hinged holder which is moved up and down by a motor: the upgrade from monochrome to colour consists of this motor and the ribbon and takes about three minutes to install. (Well it took me five minutes to understand the diagram -Ed).

S a successful colour print can A sa succession colour printer take up to six passes of the head - for a mixture of three of the colours each printed in double density - it's important that the paper stays still. As the paper is held best when it's being pulled by the tractor feed, this is the configuration that Citizen recommends

The problem with colour - and this isn't Citizen's fault - is that there aren't any drivers that can properly handle the resolution. The best is the Epson IX emulation, which puts the printer into 9 pin mode. It's a very nice 9 pin mode, and quite fast, but still not getting everything out of the printer that it can offer. When I rang Citizen technical support to ask about a 24 pin driver, they hadn't heard of preferences and so told me about IBM control codes instead. "It doesn't help you", said the techie chap, "but it is information".

HE colour dumps that I got out of the machine were OK; there was still the occasional white line. and the paper had to be fed in just right to avoid distortions, but by and large they were acceptable. Bold splashes of primary colours on a white background came out especially well; large areas of black were liney

•

and uneven.

The printer is a little noisy. Most 24 pin printers are, but most are quieter than the Citizen. Fortunately the paper handling is good enough to allow the machine to be left to get on with it in a broom cupboard or somewhere equally deadening, but having it on the same desk as one's ears could be wearing.

Swittching between colour pribbon – at £20, it needs to be eked – and black is not a simple business. Although the former unplugged easily enough, with the latter dropping in its place, it took a part of the colour pribbon of the printer to produce even text. The decible leads that connect the printer to the electronic; inside the printer tended to push the ribbon out of alignment at one end of the

It wasn't clear how to stop this happening and it took a lot of experimenting to get it right. For an operation that's likely to happen quite often, that's disappointing.

I'm not sure whether this printer is worth the money. Adequate colour 24 pin machines can be had for several hundred pounds less, and usually come with a much larger range of fonts and special effects.

And if colour isn't really needed, then the range widens to include some excellent printers indeed; one thinks of the NEC 2200 which is superior to the HQP-40 in almost every respect and costs about half as much. To be fair, not many people buy printers at full price, but the HQP-40 has got a long way to come down to be competitive.

and it of the competitive.

And if Citizen is trading on its name to sell the printer as a quality product, it should tighten up details such as the manuals and ribbon mechanisms. The overall machine just doesn't feel worth that amount of hard earned cash.

Verdict: Consider it on a par with the rest of the cheap 24 pin printers and judge the price accordingly.

#### REPORT CARD

HQP-40 printer Citizen 0895 72621 £559. Colour option £50

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THIS is a preview of Protext, rather than a review, as it has been carried out on beta test versions rather than the final release and minor changes may well have taken place by the time this is published.

Protext is a word processor and makes no pretences of being a poor man's DTP program. It has no facilities for importing graphics into documents.

This is the first version of Protext to use a Wimp environment and a lot of thought has gone into integrating it with the feel of Intuition while retaining all the existing features and quick keystrokes which have largely remained common through all

Protest comes on two discs, with an AS ring bound manual, about which I shall make no further comment since I wrote it. Two versions of the program are supplied. The spelling checker is an integral part of Protest in the full version, but the second version has the spelling checker as a separate program to reduce its separate program to reduce its capand is for use when less than 1Mb of memory is available.

A comprehensive configuration program is provided to change settings of most aspects of Protext. Other utility programs create new printer drivers and convert files from other programs into Protext, or Ascii, format.

In common with WordPerfect, Protext does not use the standard Amiga printer drivers and a wider range of printers is supported by the supplied drivers, including the HP LaserJet, Kyocera and Epson GQ3500, together with the facility to create special drivers for virtually any



printer. Only a single drive is necessary, but if a second one is available Protext will make full use of it, minimising the amount of disc changing required. Installation on to a hard disc is also possible.

It may be run from either Workbench or the CLI and may be loaded as part of the startup process if required. Once loaded, Protext displays a status line at the top of the window, giving details of various settings such as word wrap, insert/ overwrite mode and details of page line and column numbers.

Edit mode is where all entry and correction of text is carried out. You can select editing commands from pull down menus or by shortcut keystrokes. The pull down menus are standard Intuition type, but Protext does not make use of requestor boxes to use its own status line.

Movement around documents is fastest by using keystrokes, to move by character, word, line, paragraph,

# A word processor better than WordPerfect but at half the price? David Foster takes a close look at what Arnor has to offer



Windows are new to Amiga Protext

The second secon

The command line take some getting used to but is very

screen. a page at a time, or immediately to the start or end of a document. The mouse can be used to move within a screen, but Protext does not use scroll bars. Positioning the pointer on the status lines or the bottom line of a document and clicking, scrolls the screen. Protext is not particularly well integrated into the Amiga environment.

Not only is it possible to delete single characters to left or right, but also part or full words, or delete to the start or end of a line – all single characters to the start or end of a line – all single characters of the start or end of a line – all single characters of the start or end of a line – all single characters of the start or end of a line start or end of a line start or end to the start or the start or end to mark a line to delete it, lines can be deleted at a single keystroke without the need to mark to delete whole sentences which don't fall neatly into lines, (MPx can? someone produce a word processor someone produce a word processor and the start of the start of the start or end is start or end to start or

Characters may be converted to upper or lower case by positioning the cursor on the first character and using a shortcut keystroke. Two characters entered in the wrong order may be swapped round with a keypress. Small points, maybe, but they all go towards making editing quicker and more efficient.

In addition to all the usual block editing features which work with areas of contiguous text, Protext also has a Wordstar-like box mode, in which any rectangular block in the document can be marked and copied, moved or deleted.

Protext supports two file editing, which enables you to work on two documents, switching between them and copying text. When two file editing is in use, only one document is visible at a time, the complete window being switched. This is not



as flexible as WordPerfect, which allows up to 32 documents, but it is a good deal faster.

Find and Replace are fast and powerful. Searches may be carried out globally, forwards, backwards, only on marked blocks, for complete words only, ignoring the case and either stopping at each occurrence for confirmation, or replacing automatically. Repeat searches require a single keypress rather than a return

to the menu each time.
Up to 10 place markers and
unlimited multiple markers may be
positioned in the text for instant
recall.

BOLD, italic and underline effects may be in any combination. Super/ subscript and enlarged/condensed printing are supported but are not displayed on screen. All the usual variations of "non-break" spaces and hyphens are available, as well as soft hyphens.

The screen display may be toggled so that control codes are shown to make re-editing text easier, rather like working in WordPerfect's reveal codes window. Protext can handle fully proportional, right justified printing and micro-spacing with suitable printers. Any number of rulers may be

incorporated into documents and there is no limit to the number of tabs. Rulers are typed into the text where required and may be moved, copied or deleted. Both normal and decimal/right justify tabs are supported, as well as indented left and right mareins.

Default settings for most things, from page dimensions to what mode Protext starts in, may be configured to suit in Config. but may be over-ridden at any time by the use of stored commands. These are entered into the text, but are acted on by Protext rather than printed. A stored command takes the form of a "greater than" symbol at the start of a line. Gollowed by two characters such as

David Foster is self employed and has never been an employee of Arnor Ltd. although he has been responsible for writing some of Arnor's manuals on a freelance basis and has carried out beta testing of new versions on a number of different computers, including the Amiga version of Frotext.

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Multi-line headers and footers are supported. These may be different for odd and even numbered pages and may be turned on or off, or the contents changed, at will. A simple footnote facility is also included, but indexing and contents generation are not provided, although with a bit of ingenuity it can be achieved using the

mail merging stored commands.
Command mode on the Amiga has
less importance than with versions for other computers, as all loading and
saving of text files and disc file
management can be carried out from
edit mode, using the pull down
menus. But a press of the Exc key – or
a click in the appropriate menu – will
take you into command mode.

N command mode the lower part of the screen beneath the status line clears, and a command prompt similar to the CLI prompt appears. This may be used for loading, merging and saving text. Many other tasks may be carried out from command mode, including RUNning other applications from within

Macros and exec files are two further features of Protext. Exec files are created as normal text files and may contain a mixture of editing and command mode commands. Exec files may be run at any time and the commands are read from the file and acted on as if they had been typed in

at the keyboard.

Exce files provide an ideal method
of automating frequently used
sequences of commands. Protext can
also be configured to run an exce file
when it loads. This might contain
commands automatically to copy the
dictionaries into RAMs and load a
special macro file.

Macros, sequences of keystrokes that may be recalled with a single designated keystroke, may be a mixture of editing commands, text oromand mode commands and Protext has a "learn mode". Press Curl-F1 and then specify the key combination to be used to call the macro, and from then on Protext will store every keystroke until Ctrl-F1 is store every keystroke until Ctrl-F1 is store every keystroke until Ctrl-F1 is propeted to den the macro. Macros repeated to end the macro. Macros

#### IN THE BEGINNING . . .

Protext and Arnor are names that will probably be new to many Amiga owners, although they are well known to owners of other

makes of computer. Protext started life as a source code editor called Maxam for an assembler for the Anastrad CPC and received so much comment about its speed and efficiency that Arnor was persuaded to produce a word processor based on it. The resulting program was called Protext, and fully integrated mail merging and fully integrated mail merging and speed checking programs was followed. Protext was then completely rewritten for the Amstrad PCW, incorporating further enhancements

Arnor then moved on to the IBM PC and compatibles, and yet again re-wrote the complete program with more features, to take advantage of the PC's features. This was followed by a version for the ST.

Arnor has now turned its attention to the Amiga and following the usual pattern, it is not just a simple "port it across from another computer" effort, but a program written to make full use of the Amiesa.

may be saved for future re-loading and may also be edited by loading into Protext as a text file.

The package has powerful mail merging features in the form of stored commands. Data files can be created as normal text files, or database export files can be used. Once data has been read from a data file, it may be manipulated and used in a document.

Text and numeric data can be split and merged together. Mathematical calculations may be carried out on numbers. Conditional printing is supported and requests for user input may be made during the course of printing.

All. merging is almost a Protext, as it really amounts to a complete programming language. To complete programming language, To keen on programming, Arnor also markets two further programs, Protext Filer and Protect Office, which are largely written in the stored command language and provide flexible menu driven data filing, mail merging and riven data filing, mail merging and region of the protect.

Spell checking may be carried out in several different ways, and when the full program is in use it may be carried out as text is entered, with Protext checking the spelling as each word is completed. This is at its best when the dictionaries are either on a hard disc or a ram disc. Alternatively, single words may be checked at any time.

Complete documents can be checked, and this is often the fastest method. Either the document in memory may be checked, or a text file from disc. The small version of Protect with the separate spelling checker will only work with disc files. Speed of checking varies according to how it is being done but, with sufficient memory and the dictionary in memory, speeds of up to 10,000

words a minute are possible.

Multiple dictionaries are supported
and new dictionaries may be created.
Unrecognised words may be added to
dictionaries, ignored, corrected during
checking, or Protext may be asked to
suggest suitable alternatives and the
correct one inserted into the text. It
does not do this automatically, which
is a bit of a bind if you are used to
WordPerfect.

The supplied dictionaries are British English, rather than the American variety and contain about 70,000 words. You can view the contents of dictionaries, and add or delete words. Two commands, ANAGRAM and FINDW, are provided for crossword and word puzzle fanaliers.

Printing is flexible, and Protext can print part or all of a document, a specified number of copies, cortain pages only and odd or even pages only. Different printer drivers may be loaded so that draft prints on one printer may be followed by final prints to another. Text may be printed to a disc file if required, or to the screen, so that you can view the final layout of beaders and so on.

What doesn't Protext have that some programs do? Well, for a start, unlike WordPerfect, it doesn't have a thesaurus, an outliner or true multicolumn editing. The thesaurus I can live without, preferring the paper

Multiple columns can be achieved by using box mode to move text alongside other text just before printing, but no further editing of that section is then possible. Other than the above features and split screen editing, there is little I can think of that you could possibly want.

I make no apologies if this preview sounds full of praise. I have used many word processors on different computers, and Protext is one of the few that seems to have evolved as a result of feedback and suggestions from users, rather than at the whim of the programmer or the marketing department.

Protext isn't perfect - is any program? - and there are still a few features that I would like to see, but there isn't much missing. What there is works well and quickly. What more could you ask of a word processor?

#### EDITOR'S EXPERIENCE

I used Protext on the little Amstrads for many years before going over to WordPerfect on first the PC and later the Amiga. I have written many thousands of words with each. People tend to get emotional about word processors, but I would like to think that I have equal loyalty to the two programs

Having spent a month using a prerelease version of Protext I have decided to use the British software in preference to the colonial code.

They both have faults but WordPerfect is better integrated into the Amiga environment. They both have irritating features in the spell checker. WordPerfect thinks that numbers mixed with text - as in Friday 13th - is a spelling mistake. and Protext can't learn words with mixed case - as in AmigaDos which is a habit beloved of Amiga

Protext is faster. The speed of

moving around a document is important but it was not until I popped back into WordPerfect that I noticed how much more quickly the Arnor product runs. This article took less than two minutes to spell chock

Because Protext uses a lot of ram few people will have the space to multitask it

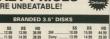
A buffer is used for printing and this takes a while to fill. I would have preferred a separate task which would allow me to continue typing as soon as I had issued the print

command. The beta test version shows signs of being rushed, ported from the ST version and Amigaised. If the improvements are done properly before the software goes on sale it will be wonderful

Even as it is, Protext is merely the best word processor available for the Amiga.



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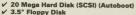
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# Penny wise, pound wise

MUST confess that I'm more than a little cynical about programs which over-technologies fairly simple transactions which can be achieved perfectly simply hand. I am going to take a lot of persuading before I can be convinced that it is worthwhile keying in humdrum transactions into the Amiga when I can get a statement of my account at the bank twice a month.

In fact, as a user of the Bank of Scotland's HOBS system, I can call up their computer more or less any time of the day or night to find out how red the situation is

But there are many people who like to keep a close check on the money flowing in and out of the household and this may just be the program for

It's pretty clear that Digita is determined to established a strong foothold in the non-games Amiga market. This product, like others of theirs I've reviewed, is professionally packaged and comes with a well produced, helpful and informative manual. The one exception to this are



the screen shots which were taken on a foggy November evening.

When you crank the system up your prime objective is to set up your accounts. After the date has appeared in a window for updating, the screen goes worryingly blank with 10 little

rectangles sitting across the bottom. The manual comes to the rescue. Select Account from the menu bar then New, and up pops a set of details to be filled in for a new amount of the selection of the selection of many them. The concept and the selection of a similar Min warring, initially set to off. The concept behind these upper and lower limits its to warry out when you have too much in an account, white little and interest bearing shiftled into an interest bearing.

account.

The Min warning speaks for itself –
the all too familiar moment when
there is too much month left at the

end of the money.

Having entered the details which identify your accounts, these are displayed in summary in the boxes at the foot of the screen. Task number two is to establish the number of types of income and expenditure

which you require.

Each type is identified by a code of
up to four letters, plus a longer
explanation of what it stands for, so
"PTRL" could be petrol, for example,
I supposed calling it "PET" could
cause some disasters with the family
dop being fed a mixture of four-star
and GTX oil, so a little care is called
for here.

NCE that is completed, the next step is to set up a budget which is designed to bring together the accounts you have defined, the income/expenditure types, and a monthly notional allocation, which of

#### Why home accounts?

Home accounts programs are one of a class of increasingly popular packages which have been around some time on machines perceived to be more business than pleasure.

more business than pieasure. With home accounts you have to be careful. If the package is designed for a family with one income, a semi, 2.4 children. Volvo and Labrador, then it may not be much use to a freelance writer with several different accounts, an overdraft as long as your arm and wildly varving commitments.

So check in advance that the parameters of the package fall within your requirements. And – oh yes, do make your mind up as to whether you really need one at all.

If you want to go into the matter in full earnestness, then maybe it would be worth your while investing a little more time and effort into a full-blooded spreadsheet like Digita's excellent 9 out of 10.

course doesn't have to be uniform throughout the 12 month period. Fuel bills will almost certainly vary, but mortage payments tend to be more stable – at least, they used to be until the last year or so. I got myself tied in knots a bit

I got myself tied in knots a bit when trying to type in a year's petrol allocation. Under Acc for account, I managed to type in a monthly sum by mistake, and it took a bit of time to unscramble myself. Why, I wondered, doesn't the package only allow you to key in Types and Accounts already

ELL, it does warn you – but not until you've typed in the whole dozen figures, and I lost my carefully calculated list the first time. Probably me being stupid, but a little more idiot-proofing at the point of delivery could be called for here.

Still, the concept was beginning to build up clearly now. The package offers you:

- A number of different accounts
- defined by type.

   A list of income/expenditure types.
  - A list of income/expenditure types
     An annual budget set out by account, income/expenditure type,
    - and laid out monthly.

      Now we move on to the next stage



Viewing budget



sent to the screen TEN LEVELS OF **FAST FRANTIC** 

# IS MERCENARYN Coming Soon ANDVAGEN

- with these features:
- · A list of regular transactions with specifiable frequency.
- Then you set up manual transactions.

All this information can be readily inspected and edited - once I get the hang of it - and you can activate transfers when you alter the date on the package. So if the date is moved to December 25, all regular transactions which fall due between the previous date and then will be made and the account appropriately updated.

Once all the details are entered, you are ready to go live and watch vourself spiralling into the red from the comfort of your own computer. I suspect, though, that the most useful aspect of this system is the option to inspect the relationship between budgeted and actual expenditure. This changes as soon as you alter individual items of information, and acts as a kind of mini-spreadsheet. And my overall verdict? If it's the

kind of package which you would find helpful in your money management, and if the way in which it functions suits your needs, then there is no question that Digita has come up with another polished piece of professional software.

E? Ouite honestly, I'm going to wait until the day dawns when I can download from Prestel my Home and Office Banking accounts and merge them with a package like this to establish expenditure patterns I suspect that day isn't far distant. In the meantime, I'll try and remember what I spent on the mortgage (did I update the amount?), the airline tickets (have I paid back Amex?), the local supermarket (was it fifty pounds or a hundred and fifty?) ... and so it

Maybe I'm basically untidy and don't like being reminded of the fact by a mere machine. Still, you may love Digita's Home Accounts and save vourself a fortune in bank charges.

Home Accounts Digita International £39.99

USEFULNESS ... - and you can keep it updated, fine.

hang of it. Has the feel of a compete

Will multitask but has been ported from the ST and it shows

bank statements may be faster

you need this kind of program

It is difficult to justify the time needed

to use the program.

# Chuckie Egg

#### ARCADE STYLE GAME

from one to four players. You must collect the eggs before the nasties get out and eat up all duck - if she gets out of the cage. you're in real trouble! You must collect all the eggs to proceed to the next screen. Look out for hidden eags!

Select your own keys or joystick. Full instructions included in the

#### GAME PLAY

The game plays over 4 groups each of 8 screens which become Survive all 32 screens and the speed then increases to present game will play an indefinite number of levels. There is no limit

now being released for Amiga. LOOK OUT FOR CHUCKIE EGG 2.







Cherues POs to: Pick and Choose (FG) Ltd. 45 Burv New Road. Manchester M8 8EG. Tel 061 831 7922







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Use your Amiga's serial port to drive a second Centronics compatible printer. A 3 metre cable is included - no extras required.

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# **Amiga Answers**

#### Library choice

I program in Amiga Basic and would like to know which book you recommend on the subject of libraries. What is a hard disc and what does it do? G. Fyans

Dyfed

We recommend Advanced Amiga Basic by Tom R. Halfhill and Charles Brannon published by Compute! Publications, Inc. ISBN 0-87455-045-9, £14.95,

A hard disc is a high capacity storage device which ranges in size from 20 Mb to 150 Mb. Your normal 3.5in floppy disc holds 880k of data formatted but a hard disc can hold 20, 40, up to 150 times as much, and it has very fast access times as well.

Using a hard disc, programs load around 10 times faster. The result transforms the Amiga

#### Listen up

How can I load a sound file for playing in Amiga Basic? I am thinking of buying the Trilogic Audio Digitiser. As I only program in Basic and have the public domain software of Perfect Sound I was wondering if I could use that for my samples? How can I make a file with ED so that I can type the filename and not use EXECUTE ?

N. Lines. Coventry

Amicus Disc 13 contains routines to load and play IFF sound files from Amiga Basic, and you can obtain this disc free if you join ICPUG (01-346 0050) or you can buy it from Cavendish Commodore Centre (0533 550993).

You can use ProSound software with the Trilogic digitiser and use the above routines to play them back from Basic. ED is a screen text editor which is used to create text or a batch file.

Solve your Amiga anxiety with a letter to Amiga Answers. Our panel of experts is ready to sort out all kinds of tricky problems. From machine code to midi, communications to compilers. Whatever your question our team will find the answer.

We cannot deal with enquiries personally so please don't send an SAE. But we do need loads of questions. So write to Amiga Answers, Amiga Computing North House, 78-84 Ongar Road. Brentwood, Essex, CM15 9RG

batch file of executable commands for Amiga Dos to load. It is not possible to create a file from it that will execute

#### Loading lament

I have had my Amiga for nearly a year and it has recently started having problems loading commercial software. Is it possible that the drive heads could be out of alignment. If so what is the easiest way to cure this ?

D. Brooks, Berks.

Although it is possible that your drive may be misaligned. it is more probable that the heads are dirty. The cure for this is simple, just pop down to your local computer shop and buy a head cleaning kit. They are relatively inexpensive and easy to use.

If the symptoms persist take your Amiga to your nearest authorised dealer who will realign the drive for you. Don't overdo the use of a cleaning kit as you can damage your drive

#### In a spin

I have recently bought an Amiga A500 and among the You can create a text file to read or a free software was a copy of the game

Wizball. The problem with this game is that after loading, the disc drive does not stop

As the Amiga manual recommends you do not remove a disc when the drive light is on, how do I get out of the game? Can you damage the drive taking a disc out while the light is on? Can this continuous use of the disc drive damage my drive? Is this a form of software protection?

N. Haworth.

To quit the game all you have to do is to press Ctrl-Amiga-Amiga (the normal three key reset). You can't damage your drive if you remove a disc while the light is on, but you can severely damage the disc where this particular game is concerned, as the software is just spinning the disc, the head is not actually accessing any information. This isn't likely to be any form of software

#### Quick lead

I recently bought an Amiga A500. Would you please tell me what I need to do to connect up my Riteman F+ printer to it?

> R. Finlay. Essex

If your printer has a Centronics port all you need is a cable which you can obtain from Trilogic (0274 691115). They will make you one to order, the charge being £6.99 for one metre and £9.99 for a three metre cable

#### Sound wave

Can vou recommend an audio digitiser? And how useful is the WAVE command in Amiga Basic? I have been led to believe that this command can turn my computer into a true synthesiser. Is this true?

P. Benson, Essex.

A good audio digitiser in the budget range is now available from Trilogic (0274 691115). It is compatible with all digitising software on the market. Trilogic has just released the MK II version at £27.99. If you can stretch to it, look at the Eidersoft digitiser which came top in the review of samplers in our July issue. Eidersoft is on 0372 67282.

WAVE adds versatility to the SOUND command by allowing you to design nearly infinite variations of waveforms. You can mix two or more together to get the effect of multiple chord notes from a single voice. You use the sound statement to play those waveforms. As for turning your computer into a synth, unlike its predecessors, the Amiga has a sound system that is completely waveform-orientated so you are not limited to one or a few waveforms chosen for you by a sound chip or synthesiser manufacturer

You are free to design or sample your own waveforms, so in theory you can write a program to produce virtually any kind of sound. It is just about one of the best synthsisers on the market.

#### Sprite artist

How can I call up and use a Deluxe Paint picture file as a background screen for my Amiga Basic games? Can a brush in Deluxe Paint be turned into a BOB for incorporation into my programs?

What in your opinion is the best book to read to actually start writing assembly code programs? Before spending large amounts of cash on a sound digitiser, are the results easily incorporated into my own programs? P. Derrick.

N. Yorkshire.

Most of your questions will be solved instantly if you obtain the following two Amicus discs from either ICPUG (01-346-0050) or from Cavendish Commodore Centre (0533-550993).

Amicus 11, contains a program

called brushtoBOB which converts IFF brushes to Amiga Basic. Amicus 13 contains routines from Carolyn Scheppner of CBM Tech Support to read and display IFF pictures from Amiga Basic, and documentation

Also included is a program to do screen prints in Amiga Basic, and the newest BMAP files, with corrected ConvertFD program. Also example pictures and the Save ILBM screen capture program

There is a variety of example programs in the BasicDemos drawer on the Amiga Basic disc. They are well commented, and you should print out the listings, study them, and incorporate the required parts into your own

One of the best books to ge' started in assembly language is First Steps in

68000 Assembly Language by Robert Erskine published by Glentop, ISBN 1-85181-0811, £12.50,

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# Golden disc

Have you ever fallen in love with an £700 shoebox? No? Perhaps your Guccis couldn't handle 30 megabytes. Rupert Goodwins goes for a drive



Dear Santa. Because I've been a good Amiga owner all year, didn't pirate StarGlider II and was even nice to Spotty Smith the ST owner, this is what I want for Crimbo. First, some more memory. Then another floppy disc drive. Then a three zillion dots per micrometer photographic quality colour laser printer. And finally a hard disc drive.

Love, Simon,



of this review, the SupraDrive 30 megabyte SCSI hard disc, dents the Considering that this sum would oppy disc, there would have to be harder variety. And there is

The SupraDrive comes in two parts The hard disc itself, the same width,

The drive has another, slightly Smaller, Socket and a flams connector. The second socket is there as part of the SCSI standard – SCSI, pronounced Scuzzy, stands for Small Computer Standard Interface and is so clever it gets a paragraph to its later. Plugging in the disc drive to mains completes the hardware

ence in which the Sunra important. The manual advises tha before the Amiga, and turned off after fried interface that the manual warns

If all goes well the first time you noise level of a Hoover in the next room, and the usual upside-down disc icon appears on the monitor. For, due to some ancient design decisions, the Amiga cannot start up from a hard disc with Kickstart 1.2. A floppy

The floppy supplied with the SupraDrive contains the startun out the hard disc. This process is fairly fast, since as soon as the hard can load Workbench from the

Once into the Workbench, there are praDrive 1 to 4. Clicking on these yeals that the Amiga considers each

UPRADRIVE has all the standard Workbench bits and pieces Basic, Say, the CLI (command line interface) and so on. The other four

of files on one device - like like floopy - and lest the user select all or some of them with the mouse before copyring them on to another - like the SupraBrive. There are various other facilities like MakeDr and, although it doesn't do much more than the CLI and CLImate is much friendlier.

Ann CLImate is much friendlier, carned the contract of th

Amiga thinks there are five separate hard discs called DH0: to DH4:, You thought the areas were called SupraDrives?

the most of it. And the hard dis reveals, with no punches pulled, the

#### Transformation scene

The SupraDrive is excellent in daily use. After about a week of learning more of the intricacies of AmigaDos than I thought existed, I had installed a healthy selection of software and written a few CLI programs to make them work more or less as I wished to. ComicSetter was a transformed program, since having six discs' worth of clip art only a mouseclick away made experimentation not only possible but painless. And shuffling IFF files between DeLuxe Paint and

Perfect and Professional Page was wonderfully simple

For the first time, the idea of writing a major chunk of software on the Amiga was attractive. Likewise. with all the tools to modify text and graphics to hand, using DTP to produce a magazine seemed almost asking me to "Replace WB 1.2 (GB) in any drive" were forgotten - it was like having a new computer. And they want it back... perhaps I can emigrate.

tried. It's possible to change the more partitions makes for a faster filing system but need more memory And once many files have been

created, deleted, moved around and tribution of data on the disc car come widely scattered. This really slow down loads and saves and can best be cured by copying all the files on to floppy, reformatting the hard disc and then copying everything back again

ORMATTING, repartitioning and clearing sections of the disc is taken care of by the SupraFormat program. This is an initially screen all the information about t mation about the rtitions. The major operations are explained - with suitable frighten attached - in the manual, but much

isn't. This includes SCSI changes. dard. It was originally intended to device, and also to enable storage devices to talk directly to each other using tape to store a lot of data, useful discs) which is not designed for use with the Amiga and just plug it into the socket in the back of the

different manufacturers have tended to use different interpretations of the published standard - much like check the combination of bits before committing to the purchase. But it's nice to know that it's there.

S the SupraDrive worth the

isn't much choice.

Why does it cost so much? That, as they say, is a good question. Perhaps in the next year or so there will be enough competition to bring the price earthwards slightly. Perhaps.

Meanwhile, it's up to you whether you can justify the expense. I've tried hard and failed, and anyway I've got to the age where Santa just brings me socks. But if you can, do. You won't

#### CLI, own the AmigaDos manual and have spent many happy hours diving in and out of subdirectories, adding ASSIGNs and pondering PATHs, then there is little in the SupraDrive to

Photon Paint, and text between Word

shock you. But otherwise there is a lot to learn before the hard disc can be configured exactly to taste

program on to DH2: might not be much good if the startup sequence for

good section on installing something seems not to work. And

Once this point is passed, and some confidence is gained about the way the disc and AmigaDos interact, some of the more dangerous ideas can be

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You need to understand a lot about

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actually - sound effects on or sound

down both mouse buttons while on

ship moves swiftly and resnonsively

screen shows the number of Cyber-



blobs à la Arkanoid) and seekers !

desired key. Fumbling for or stab-

treasure gathers it into your hold

I found it a little too tough to play. me, you haven't got either of those in

location. Aurally, too, the game is

plenty of appropriate spot effects

Bob Chappell



NE of the things that was supposed to happen when we all got Amigas was the concept game.

But still the shadow of the Specmegagame - it's the same stuff in

strategy. And it doesn't have a loadafter the 'type word 534 from the manual' software protection). Can it

The scenario for Tracker is a around a huge maze complex (isn't with the ultimate intention of

on the planet. You will undoubtedly

However, should you disregard that last bit, the mode of getting to maze is made out of trackways connected by nodes. You can turn

As you fly around the maze, you The most interesting and least per-

cations Centres. There are six, one for convolute, and each houses a Neutron Bomb. You'll need a few of these if you want to deconstruct the Cen-

Unfortunately, the Centres are Centres can be destroyed by Quark There are many more Communi-

cations Links than Centres, so the

on the control screen. The short-



range one shows the current skimmer and the very nearest nodes. The long-range one can show either the as much as seems necessary to show

Each node containing a Link or a t'other, and the game is yours.

But hold hard - what are these the Cycloids. And you are a rapidly expanding cloud of bits, none bigger

succeed in hitting something. Then they start to take an interest in your get at the game, the greater their

automated agony aunts (guess who

gets the agony, dearest coz), the shielded - and the Defender, single-

becomes safe. If you don't, new ships can be made to replace those you

- the map and general game control controls, you're shown the view from

But for most of the inter-fight flying, it's best to leave the game in all six of the skimmers can be

last any strategy-minded gamer

weeks, at least. But that's its strongest point: the graphics and sound from time to time). But for those who like some thought in their mindless maybem Tracker has a lot to offer.





to produce an amazing film.

If you haven't seen it you should
And it might be best to stop readin
this review because it will give awa

Toontown is the home of all the cartoon characters. Many of them work at the studio of R. K. Maroon



All is not well in Toonton

(played by Alan Tilvern in the film) in the real world, popping home to Toontown at night.

The good thing about being a Toon is that nothing can hurt you, having a fridge dropped on your head is all in a day's work for Roger Rabbit (Chales Flickers)

(Charles Fleicher). Unfortunately Judge Doom (Christopher Lloyd) has plans to level Toontown and turn it into an exit for

To further this aim the judge has



which will erase Toons, and so must be handled with rubber gloves. He can't touch the town because it belongs to Marvin Arme (Stubby

But Marvin has been playing Pat-acake with Roger's wife, so when he gets killed R. Rabbit is the prime suspect. The judge wants to dip Roger for killing Marvin and then dip the whole of Toontown to make way

The Toons have only one hope. They must find Marvin's will and get it to the gag factory before midnight and crush Judge Doom's claim to the land. Marvin was a bit of a joker (watch out for the hand buzzer – gets 'em every time), and has written his will in disappearing, reappearing.

In the game you play Roger. You have to drive to the club where Marvin left his will, pick up all the napkins and bits of paper and then drive to the gag factory.

The car. Benny the Cab (Charles)

Fletcher). is a Toon and so must avoid the puddles of dip on the road. either by driving over the buildings or by leaping the puddles. If you touch the dip you collect a barrel of the stuff and are shown a map which

destination.

Collect five barrels and the gam over, Toontown is lost and you h

By raising Benny's suspension yo can pick up tires [sic], diamonds an gloves to help you on your way. Th tires (still sic) make Benny drive faster, which will give you more tim at the club. The gloves protect Benny from the dip and the diamond decre

All this is set to a brilliant arpegg tune in keeping with the 1947 perio for the film. You have to dodge oth cars: the brilliantly animated crash are not fatal but slow you down.

When you reach the club you hat to run around the tables and pick the papers. If Roger touches a whishe will go crazy, but the worst haza is a gorilla which will throw Rogout of the club.

From there it is back to the road and on to the gag factory to do battle with the evil indee

In the factory you have to pick up and use the tricks lying around. The game comes with a pamphet which describes the different gadgets in a cute 1947 way. It also serves to protect the game.

At intervals you are asked a question about one of the gags. If you get it wrong the game resets. This means that the discs can be copied to a hard drive – a recommended procedure since there is a lot of disc access.

The tilm has 390 people in the credit list, the game apes this with a who's who in the Amiga world. The program was written by Eric Daniels and Reichart Von Wolfshield of Silent Software.

The ever so cute graphics are by

Pick up the pap

there are credits to Ben Fuller famous for project D - Heidi Turnipseed - famous for the Photon Paint manual - and Leo Schwarb - famous for being Leo Schwarb - along with a long list of other notables and

But is it a good game? Well it is pretty and the music is great. It carries off the film link better than any game since Ghostbusters. Filling two discs is an achievement. I'm



Simon Rockm
Who Framed Roper Rabbit
4TRA
Buenn Vista Activision
Sound
Graphics
Gameplay
Value

Overall 82%

game. Best described as out-

our cartoon cab has a big mouth and interesting suspension

#### THUNDER BLADE



OLLOWING the hugely successmayhem - Thunder Blade. The object of the game is simple - shoot

Whichever you play, the seat-ofthe-pants feeling you get is remarkable, with or without the hydraulic

boggling feats, an Amiga for code. This is precisely what the team

As per the original, the same is split into four stages of three waves dreadnought - an emplacement of for miles.

The first scene of each wave is

behind the chopper in glorious 3D. spective.

the chopper rise, pushing forward

of the first stage is marked by a

attack to keep to busy

Later stages see the addition of

tough even for me with my highly

of the subtle detail of the origina while retaining the main structure

and in the end Thunder Blade is

Phil Lawson







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#### SORCERY PLUS

SORCERY plus is a a souped-up version of an old, but in its time ORCERY plus is a a souped-up very popular, game. The original In both sound and graphics, Sor

where, as usual, a nasty necromancer

seek and destroy mission, the necromancer being the main target.

The game is basically a puzzle-Your sorcerer gets to fly around a



covering which objects do what, and element you'll spend a lot of time

To make things more difficult, a host of bizarre monsters infests the ution to this harassment. Water is another hazard - you can fall in and drown - and a time limit on the game Graphically the game is attractive.

sonal friend, because they come up in certain natterns. Recognise the patbasic, and sampled spot sound effects - thunder crashes, creaking a muchness - collect and fly, fly and collect - and soon becomes less than The chances are that, despite its

good enough in today's company. Bob Chappell



#### AROUND THE WORLD IN 80 DAYS

ROM the people who made far too good a job of Katakis for it to have escaped the eagle eve of Activision's lawyers, comes a tale of

London naturally with our Phileas the world in 80 days, and that amounting to a tidy £20,000 - which never mind buying you a cottage in

On October 2 Mr Fogg and his the way you have to split yourself Anyway, the game kicks off with a 1

snend half their time, as the game before returning to the map once

The bribe option speeds up your rate of travel, depending on how

terns and you can make a lot of Anyway, the first adventure that our lads find themselves embroiled India in search of? What? A take-

The bottom line is that this is arcade action time, with said butler



dor

It isn't too hard, and the graphics ioke. We're talking routines rejected

Next stop is Japan and catching

acrobats on your shoulders, which is

is not an easy one. So, after an enjoy able sledge ride it's on to good old Blighty, just in time to get

Although the graphics are quite

Mark Luckham



#### HYRRIS

REALLY good shoot 'em ups are something of a rarity on the Amiga. Sure, there's Xenon and Zynaps and a few others, but when you consider the range of games of this type that exists for the 8 bit computers, it seems extraordinary that

Maybe it's because programmers are busy trying to come up with new game concepts to match the Amiga's strengths – but even so, there are few games quite as enjoyable as those that involve wasting row after row of

The good news is that things are about to change, at least three powerful Amiga shoot 'em ups are poised for imminent release. Activision's R-Type, Phantom Fighter from Martech and Discovery's Hybris. Of the three, Hybris is probably the least impressive looking, but it only takes a few plays before it becomes

far from accurate.

The action is typical of the top to bottom scrolling type. The player flies in all four directions shooting wave after wave of advancing aliens

and ground installations. Extra weapons are available along the way by collecting icons which appear from time to time

Pretty normal so far, eh? There are however a couple of points which enhance the playability far above most of the competition. The first of these is the weapon enhancement feature: Collect any weapon, waggle the joystick (without holding down the fire button) and the weapon immediately assumes now destru-immediately assumes now destru-

Although this only lasts for a short time, three enhancements are allowed per weapon, which is just

allowed per weapon, which is just enough to keep things going until the next comes along.

Another point in Hybris' favour is that the playability is perfect – the going is tough but not frustrating, and the extra weapons and smart bombs should enable even the least coordinated player to get further along this landscape than they nor-

And even those who fail miserably to get past the first screen needn't WIC.

Excellence

play leature should see them just as far into the proceedings as they want to go.

The music and sound effects also deserve a mention – the in-game soundtrack is especially impressive, sounding something like a cross between Brunski Boat and Bon Jovi. The graphics are a little ordinary, but they're exactly the right size, small enough to allow plenty of room to manoeurre yet still big enough to be distinct.

Of all the game's good points the

option which allows you to set most of the game's parameters. The number and regularity of the enemy's bombs can be changed, as can the frequency and duration of the expansion systems.

Hybris doesn't only shine because of the dearth of this type of game. It's also the best shoot 'em up of any type that I've seen in ages – and that

One last thing. If you do decide to have a crack at Hybris, make sure that you've got a good strong joystick and a couple of hours to snare.

irs to spare. Ciaran Brennan







- Second - Second beniates

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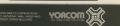
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## **Max Tennant's** winning streak

EY, you have been a busy lot. The postbag this month had a bumper bundle of handy hints for gamelords. It may take a time to send out joysticks and games to the wonderful winners because I've exhausted my supply. A new lot is due in soon and should hit the mat at your place for crimbo.

AZINE

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te

The first tricky tipster is C.J. West from Holt in Norfolk with a wide cross section of gamey advice. In Ferrari Formula One, count to two after the green lights come on, he



advises, then press the accelerator and keep it pressed.

Keep the car in a straight line and your turbo boost will kick in so you'll find yourself moving rapidly up through the pack. Don't be too keen though, because a sharp corner is never far away.

Too late to give that advice to Nigel Mansel though, he joins Ferrar just as turbos get banned. Good thing too, where was 1? Oh yes C] was about to give some advice on Bone Cruncher. Password entry to different screens. Try these: Gole Killer, Golemstench, Morphicle, Scarab, Web of Death, Underground, Hornslut. Oh and always make Soan whenever nossible always make Soan whenever nossible

Nice one CeeJ, I like your Bionic Commandos tip of throwing the hool



Ferrari Formula One...fast into corners



Bionic Commandos...swing that hook

to scroll the screen and reveal platforms or defences. This is frequently handy in making progress.

But it is back to the track for the best advice. In Enduro Racer, type the word CHEAT after the countdown. then press the letter T if you want an extra 10 seconds, press S to advance to Level One or Press F for turbo speed (210 Kmh).

AMES Thomson from Glasgow has some totally halibut tips for Better Dead Than Alien. If only one person is playing, both sets of control keys may be changed to the same to give one player control of both spaceships. But if you really wanna cheat use these control codes: Elektra, syzygy, drambuie, plug, soprano, mayonnaise faucet, potato, wookie, narcissus, debutante, firkin, acoustic, triptych, jabberwocky, whimsical, cornucopia. punjabi, tiddly pom, kewpie doll, sepulchre, euphemism, grammarian, crossword and quarantine

His last tip is for Sentinel - a bunch

7	84257688
8	16257084
15	64046644
16	66974534
20	13509961
43	84199553
44	96088666
58	46574972
61	26060764
73	77809996
82	45949644
95	48883305

James' Sentinel codes

Andrew Davidson's hint is for Menace. At any time during the game. type XR3ITURBONUTTERBASTARD to enter the cheat mode. Once the cheat mode is operative you will receive all the weapons and outriders.

However, the energy levels for the lasers and cannons can still decrease To go straight to the end-of-level guardian, press Return and to access the different levels press the relevant number on the numeric pad

The Great Giana Sisters may have been banned, but not before John Burrows from Burnham-On-Crouch in Essex got his mitts on a copy. He's drawn up a this list of hints:

 All pits which contain a blue line at the bottom lead to bonus screens. Be careful when jumping out On some levels you are able to break through the uppermost level of

bricks. Do this and jump through for easy access to the end of the level



Better Dead than Alien...dual control

· Many blocks contain hidden bonuses. Always headbutt these several times, as many of them contain several bonuses

 Both dragons and spiders die if shot repeatedly. Do unto them before they get a chance to do unto you

HOMAS McDermott has a pretty good cheat for Wizball. All you have to do is pause the game, type RAINBOW and continue to play. The next time you pause the game enter C and you will automatically fill the paint pot for that level I'm a Faery. My name is Nuff

Faery Nuff. Dave Walker has sent in the short basic program below to allow the player in Faery Tale adventure to start the game with the



Dave's Faery Tale listing



maximum number of totems, which makes gameplay considerably easier without spoiling it.

To use this cheat, first make a copy of the extras disc then type in and save the basic program. Give it any name: I called it TOTEMS

Then load up Faery Tale and immediately save the game as A'Y on to the copy of the extras disc. Finally load up the basic program and run it. Load Faery Tale once again, and use the saved game A from our copy of extras disc. Julian has a near infinite (255) supply of totems, enough to do plenty of mapping.

I don't wish to spoil the game, but should you wish to begin with a supply of keys as well, modify the program to alter the output file for the



Sentinel handy landscape code



Wizball ...keep tha paint pot

values of n as follows: 171 for yellow, 172 for green, 173 for blue, 174 for red, 175 for grey and 176 for white keys. Do not exceed the value of 255, which is a maximum – and plenty anyway.

Thanks Dave, you're a hero.

BILLING from Strood wrote in and here is his utterly brilliant tip for Peter Beardsley's Football. If you are tired of always getting tackled, run towards the opponent's goal and keep continuously clicking the fire button.

You must keep going a straight line and almost certainly you'll reach the goal without being tackled. The trick is that when you are about to get tackled you kick the ball beyond your opponent and run past him.

A warlike soul is N (please let's have full mane; you deserve more than a letter for your letter, if you see what I mean!) OK, N: has some tips for lear Warriers. We all know if's good fun running up the screen with the auto fire on cyring Die you swines but that's one good method of how not to succeed in this game. If anything many precautions and great care must be taken.

The wise thing to do is to destroy everything in sight, otherwise a few men will run back up the screen straight at you and cause a few problems.

The explosions caused when throwing greades could catch you by surprise. If you are close enough to destroy a shelter, you are close enough to get killed by the explosion, unless you have picked up a flashing L by killing a red enemy. This will increase the range of your bullets and grenades.

Other flashing letters include Bs, Ks and Fs. Ks at as smart bombs, and Fs. Ks at as smart bombs, flight all men shown on the screen. Bs are rare but very useful as they make the explosions from grenades and tank shells more devastating. When you lose a life, your firepower will return to normal but your grenades and bullets will be replenished. When throwing grenades at certain tanks and shelters, chain reactions can be

But it is Andy Van-Kerro of
Huntingdon who can really rack up

Huntingdon who can really rack up the points on Ikari Warriors. Simply on the high score chart. Great! He has more tips – to complete

each level of Menace first make sure that you have the highest score possible by shooting the bonus blocks as quickly as you can until you are given extra energy.

When you reach the end of a level wait for the meanie to start shooting, then move right on to it and start shooting as fast as you can until it is dead. An extra hint. If you are right handed try holding the joystick with your left hand and shooting with your right. You can shoot much faster and will soon get used to it.

Andy also has a hint for Aaargh. Always make sure that you destroy buildings from the side, he says. This way you can carry on destroying the building by punching it until the gnat is really close, then go for it.

Eat all the food you can – don't bother about eating people, as this wastes time. On the challenge level keep your joystick pressed towards the opposition then keep on pressing fire as quick as possible.

N the last scene – the volcano – try to get to the top of the screen as quickly as possible and don't worry about the nasties, they won't hurt you that much. I find it a lot easier playing the ogre instead of the stupid looking godzilla.

Thanks everyone, keep your tips coming in, I'm aiming for a bumper column next month. I've had loads of letters about StarGilder II, most of them included tips I've already printed and so won't win the author's fame on these pages or a Konix Speed

What you will get though, is a free StarGlider II poster autographed by the team which wrote the game. So if you have sent in SGII tips wait by the letterbox.

Max the Hacks is always on the lookout for help in the joystick jive. If you have any cheats then send them to MTH. Amiga Computing. 78-84 Ongar Road. Brentwood. Essex. CM15 5BG. He will send a game from the goodie drawer and a Konix Speed King Joystick to everyone who sends a letter which gets printed.



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AMANDA Barry, Activision's head of public relations, doesn't want me to pay a visit. At least not this month, And certainly not with a camera. All of which seems like a mighty strange approach.

But Amanda has a point. Activision has just moved into new premises in Reading and, like anywhere else when a move has just taken place, there is still a sense of living out of boxes. In fact, the company should really have held on a month or two before relocating, but the impossibility of packing everything

Rod's

vision

into vans at the height of the pre-Christmas rush forced a slightly premature transition.

premature transition.
Which is why I find myself on the first floor of a brand new building, the ground floor of which still appears to be under construction. The partitions that will divide everybody offices have still to arrive, giving the place an air of extreme open plan. The one advantage, according to Amanda, is that you can shout across to your colleagues.

Even the coffee machine is only there for evaluation and I just manage to grab a cup before the engineers reclaim it. But it's easy to see that this new space is going to be attractive and easy to work in. Even a certain royal architecture critic would find it hard to criticise the modern design, with its glass walls which allow us to watch the autumn sun sink slowly... (Enough of the poorty! – Ed.

(Enough of the poetry! - Ed)
More importantly, the new offices
will allow Activision UK to unite its
operations in one building, in the past
division was based in Southampton.
resulting in many hours wasted
roaring down the motorway from
London. Later this year all that will
change as everybody moves under
one roof, though The Softwarn Studio
and privacy by being separated from
Activision's office space.

amanda takes me for a brief tour of the inhabited area. Despite the half-finished feel of the place, everybody is hard at work with their day it day business. Meetings are taking place and phones ring — in particular for Julie Barwick, the newly appointed consumer relations

John Minson braves builders and tea
chests for an audience with the head
of Activision UK, Rod Cousens

Call in with an enquiry about an Activision game and you'll find yourself talking to Julie, who says she's already got a number of

Tim introduced to Martyn Oliver, Activision's production co-ordinator Mike Segrue, sales manager, Emma Bridgwater, who's in charge of European sales and finally Amanda's assistant, Zia Brooks, Despite the initial reluctance we're all getting along fine – and it's a good thing we didn't put off the interview, as I'm about to find out.

ROD Cousens' nickname in the God. It fits. Not only is be the high profile head of Activision UK but he profile head of Activision UK but he least in a Prockle 911 and 1 avairiety of international airlines. I'm lucky to catch him between his return from the States and a brief visit to France and Germany. He makes the return trip across the Atlantic eight to ten times a year.

All of which serves to give Rod the image of a high-flying entertainment mogul, which is also accurate. "It's not engineered that way". he grins. "If you spend most of your waking hours working, which I do, and the job's not just confined to sitting in the office but includes conducting telephone calls with America at two and three in the morning – well, yeah, I like to have some fun".

Rod entered the computer industry with Quicksitys, publisher of some original games during the golden age of the Spectrum. "It was a thrill to build a company up from very modest beginnings and take it to a work of the company to the spectrum of the company and the it to a work of the company and the it to a work of the company and the it to a work of the company. Even today Rod followed by the company. Even today Rod followed in the company. The company is considered in the company in the c

"Following the acquisition, I stayed for a year before leaving to set up Electric Dreams Software. I'd built up various relationships with American companies and one of the individuals I came across at that time, who I now regard as a friend and admire



Shape of things to come ... Amanda Barry holds the master plan for The Software Stu

enormously, was a man called Gregory Fischbach, who was then president of Activision International"

Activision's roots lay in video
games, which Rod points out is ironic
considering the current revival in
consoles. Its three founders took the
company from zero to a turnover of
\$158 million and went public.

HE collapse of the cartridge market saw Activision diversifying into home computer software. It was 1985 when Rod took the idea of Electric Dreams to the Americans and they agreed to fund it, and from there it was a short step from turning Rod's constant contact with Activision into an even closer with Activision into an even closer managing director in June 2 to Rod just over a year ago was made vice president for Europe.

This promotion indicates Activision's close links with the UK. Unlike some American software houses, which were happy to license their product to British publishers or just set up satellite operations over here. Activision was the first US outfit to have a British operation and, hanks to Rod's hard work, has made the most of British programming salent. But if 8, not always been casy.

We had to learn along the way. Things like the formats to support and the concept of cassettes. Discs have, until recently, been considered a luxury rather than standard in the UK, which restricts the complexity of games to a single load. Often the British market is seen as relatively young and immature compared with Aurica, and its an assertion that do not consider the Activision's early releases seen very "Californian".

There was Zenji, a Zen-based block shifting game which some found impenetrable but which has been successful on budget re-release. Then

Alter Ego, a psychologically accurate

time, but as the 16 bit users mature life. "Alter Ego cannot be viewed as a mass market product, and I think it's write these products off. The market has yet to become meaningful in does we can re-promote, re-launch

"The commercial reality today is that we enter the market through them with a rapid turnover, but as the necessarily be the case. The products will require far greater support and achieve extended shelf life; also the

Bruce Davis, the company president, May, 1988. This is the corporate presentation tool fields. There's also a



MSdos users, Z Soft. We have our inhouse sports label. Gamestar, We have the presentation tools label

"Now on top of that we have are familiar to people over here, some are not. They include Microillusions, Sierra On Line, and System 3 in this country. There's New World Computing in the US, where we distribute Lucasfilm. In Japan we

As if this wasn't enough, Activision for the UK. The first is Vivid Images, Ninja and Last Ninja 2, John Twiddy Mey Dinc and Hugh Riley, "They were looking for a personal profile, should stay with us. We therefore put seeing four products from them in the

The affiliate publisher position "It's the creative input which we don't want to stifle. When you build an organisation like this you have a number of resources and facilities which can be tapped into by those who have no desires to run a business but who have distinct ideas on where the market should be going and what they can contribute to it. And that's always exciting.

"It sometimes works, it sometimes fails, but that's the nature of this





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business. I'd rather take that forward

revolutionary. "It can cater for individuals who may not be able to produce four to six titles a year by carrier. I would be very much surprised if it's anything other than original programs. It's what those individual programmers make it. It's but a corporation has to work for you in terms of its flexibility. The first product will be Conqueror, the tank game based on Firebird's Virus.

"This is one of the most creative markets in the world. You only have to look at the record industry or any other entertainment industry to see that. It's an incredible source but very often it suffers from the resources and facilities so if we can contribute in any way shape or form to change that we will"

OW, I wondered, does all this talk of originality fit in with the Activision and Electric Dream reputation for arcade conversions. Excellent arcade conversions. admittedly, but licences all the same "I accept that entirely. What we try to achieve in developing our product mix is a balance. But to keep in

However, I can see a situation

probably be made up of 30 per cent arcade licences, 30 per cent affiliate publishers and 40 per cent original

"But there's no reason why a story that has worked as a film and has recaptured as a piece of home computer software". Rod adds. Indeed, he is just in the process of signing the UK deal for the computer version of the blockbusting movie. Who Framed Roger Rabbit. Providing nobody frames Rod the God, the program should be appearing over here in January, Rod has seen the game in the States, where the lead system was the Amiga, and reports

that it looks very good. 'It's published by Buena Vista Software, which is the Walt Disney arm. That means you've got a piece of work direct from the creators of the film. They were very sensitive to the nature of the product. It's interesting that you've got a major motion picture company which cares so much about their property that it wish to control it"

The enthusiasm with which Rod

expounds his view of the future makes you wonder where he finds the energy. Not only does he jet around the world, he has also found time to organise the annual In-Din industry dinner since its inception and, even more importantly, initiated the charity compilations which have helped raise well as earning money for many worthy causes.

"I thought that the industry could be part of what Bob Geldoff was doing for Ethiopia, so I proposed the idea to a number of fellow software houses who were all fairly receptive. And the result was Soft Aid which raised £350,000 for Band Aid, which I thought was an incredible achievement. It was something I was

very proud of and was very grateful to everyone who participated, so we tried to make it an annual event". Though the same level of success

couldn't be expected in successive years, Off The Hook raised £75,000 for the Prince's Trust to combat drug abuse and last year the charity was the NSPCC which has already benefited to the tune of £35,000, with Rod expecting £50,000 by the end of the year. This year's proceeds will go to the National Autistic Society and for the first time the compilation will be 16 bit - another sign of the changing market

Whether it's business or charity, Rod Cousens makes things happen. It takes a combination of enthusiasm. courage, foresight and energy, and as I leave I ask the vital question: With all that travel, how does he escape jet

He laughs before he gives his simple remedy: "Sleep on the plane".



Walt Disney's Who Framed Roger Rabbit . . . the source of Activision's next blockbuster?



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# Plain man's guide to CLI

It is not until you find yourself using a 16 bit computer that you realise the finer points of text editors. Hold it. What's all this got to do with the CLI or AmigaBos? I know it sounds a bit odd, but on the subject of text files, nothing could be more pertinent.

When you use an 8 bit computer

like all the previous Commodore machines or a Spectrum or Amstrad, the concept of batch files has never arisen. The operating system of these machines doesn't allow you to autoboot or tamper with the configuration of the machine in very many ways.

But the operating systems of the IBM PCs and their affiliates, of which the Amy and AmigaDos are the direct descendants (with a little C and Unix blended in) had a method by which text files could be stored in memory and executed like programs. What they are is just a series of Dos commands which are executed in order, as if you typed them in.

I know this sounds like the description of programming proper, but don't let's get confused. Batch files only start programs which do something, they aren't really programs themselves.

So you need to get a series of commands executed. What can you do to generate one? Well, it's a simple matter of typing out what you want



#### This month Phil South takes a look at the ED and EDIT commands, and runs up some batch files

the file to do, in a word processor or more properly a text editor. Wordpros tend to put control characters into the text to change type style and size or even colour.

What we need is something simpler, generating a plain Ascii file, Ascii being a standard code recognised by all computers as a representation of text characters.

Loosely, this is how modems can send information between

incompatible computers. But this isn't the point, and I digress. You can get wordpros which can generate plain Ascii files, but it's usually preferable to use something a bit less complex, and believe it or not, there's a pair of programs to hand which do the trick. The ED and EDIT commands are text editors built into AmigaDos disguised as simple commands.

ED is what is called a screen editor.

The file is loaded into memory and so is limited to a working space of 40,000 bytes. You can alter the working space with a keyword SIZE like so:

#### ED [FROM] <file> [SIZE

where n is the appropriate workspace. You don't type the brackets, I just put them there to make it clearer. Usually just:

ED <file

does the job, opening a new file if one matching your filename doesn't

You have to remember a lot of control codes to perform different functions, but if you're used to Wordstar at all, this will be a familiar

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Keys	Function	Keys	Function
CTRL-A	Insert line	CTRL-R	Cursor to end of
CTRL-B	Delete line		previous word
CTRL-D	Scroll the text down	CTRL-T	Cursor to end of next
CTRL-E	Move to top of bottom		word
CTRL-F	Flip upper lower case	CTRL-U	Scroll text up
CTRL-G	Repeat last ESC commad	CTRL-V	Verify screen
CTRL-H	Delete left	CTRL-Y	Delete to end of line
CTRL-I	Tab cursor	CTRL-	Same as ESC key
CTRL-M	Return	CTRL-]	Cursor to end or start of
CTRL-O	Delete word or space		line

900

sensation. The table above shows the commands.

Extended or ESC commands form the backbone of the program's capabilities, however. There are a lot of them, so rather than quote them at you I'll just refer you to the AmigaDos or MetaComCo SHELL manual instead. ED is best for small docs or "read.me" messages to be TYPEd or MOREd for the information of someone using your programs. So what about EDIT? One of the major differences between ED and EDIT is that the latter can handle source files containing binary. whereas ED can only deal with text. EDIT is, in fact, better suited to editing source files for programming. like assembly language and C. (even Amiga Basic) rather than just simple batch files

To create a batch file, just type ED

and the name you want for the file:

When you get into ED type:

echo "I Hear And Obey

Then tap the ESCape key, and a little star will turn up at the bottom of your screen. Press x and the file will be saved and you'll exit ED. Now you could execute the Batch file called muffin, either by typing



or by typing the word muffin into your s/startup-sequence file.

 If you have any AmigaDos queries. write to Phil South, CLI Queries, Amiga Computing, 78-84 Ongar Road, Brentwood, Essex, CM15 5BG. entered into

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## AVIG

#### Praise and problems DAVE Eriksson is doing an excellent

game is reviewed every month - well done! I hope he keeps this un -Bard's Tale II and Ultima IV are out now. The artwork for the adventure sections is great.

The Silicon Underworld series is to the magazine. Just because I like games and can't program in doesn't mean I can't understand it and enjoy its revelations about my most prized possession.

safe to pour oil over the rollers in my damage the ball or circuitry?

My A500 power pack occasionally will make it quiet. Is this a serious problem? Should I get another one?

Rainham, Essex.

Take your mouse apart carefully and only put the tiniest bit of oil on the bearings. If you get oil on the ball it won't go round properly, and if you block the vanes on the rollers you will lose an axis. You may find that just taking the mouse apart, cleaning out the fluff and rebuilding the mouse cures your problems. A buzzing PSU to have a look at it.

#### **Kickstart** memories

I HAVE discovered something that will delight owners of the old Kickstart V1.1. Having just bought Interceptor I was shocked to find that it didn't work on my Amiga 1000 because of its primitive Kickstart. To my relief. I eventually managed

to run it faultlessly by loading it via

I have not tried this as yet on any other such programs but, if just for playing Interceptor. I feel it is a worthwhile piece of knowledge for all of us primeval Amiga users Paddy Hood Henley-On-Thames, Oxon.

You should look at getting your Kickstart upgraded. A good dealer should be able to supply you with 1.2 and Commodore (0628 770088) will have stocks of the new 1.3 shortly.

#### Starglider slug

WHY is the ST Starglider II faster than the Amiga's? In the preview (issue 1) you said the blitter chip would make up for the slower clock frequency (or whatever). The blitter IS being used isn't it?

Incidentally if both computers have 68000 processors why does the ST's processor run at 8MHz and the Amiga's at 7.14MHz? Any simple explanations?

Omar Al Faroog. Ilford.Essex.

The reason that ST StarGlider is a mite faster, and it isn't really a noticeable difference, is that the ST runs faster. The Amigas custom chips need the system to be that shade their jobs.

For the routines that StarGlider uses it is faster to draw shapes in software than by using the blitter, so the blitter is only used for clearing the screen.

#### Give it some stick

ARE all joysticks generally interchangeable between micros, or is the

Write to: The Editor, Amiga Computing, 78-84 Ongar Road, Brentwood, Essex, CM15 9BG. We'll send the writer of the best letter each month a program from our goodie drawer.

choice more limited? Would the choice of be determined by the application or is there one all round type that would be suitable for use with all or most programs on the Amiga that require a joystick?

I understand that there are at least two operating principles for joysticks.

Robert Macpherson. Tain, Ross-shire.

Except for IBM users and a couple of

other odd machines, joysticks all have a standard 9 pin connector. This means that the same joystick can be used on an Amstrad, Atari, C64 or Amiga.

The main mechanical principals are leaf spring and microswitch. Leaf springs are harder wearing and often used in arcade machines.

Microswitches are more sensitive and better for home use. It is a matter of taste which joystick you like to use.

the Amiga Computing office came to the conclusion that the Ram Delta is the best desk mounted stick, while a Konix Speedking and Konix Navigator are the best hand-held

#### Black mark

THIS letter is to enlighten all those unlucky people (like me) who got a mono LC-10 before the colour version came out. But just think - they have to pay a fortune for their printer ribbons. Unfortunately, we too have to pay out for ribbons, and at six quid a time it isn't cheap. Luckily I have devised a way of re-inking them by using stamp pad ink. This might also work for other printers but don't

Arthur Wyatt. Meppershall, Beds

Oh no you don't. The ink used on ribbons is specially formulated. Stamp pad ink will work to start with. but it may also gum up the pins and burn out the print head.

Some companies re-ink ribbons and do a good job of it providing you have not worn the ribbon's fabric. We would recommend you contact Aladdink (08907) 50965.

#### Perfect points

WHAT a horrible letter from P. Kenton (September edition). Now it may well be that he is one of the fortunate few who never miss anything when reading instruction manuals, and in that I envy him, but to hit out at people who do miss something in such an arrogant manner is just not on.

I hope the editorial team will agree with me when I say that this excellent magazine is meant to interest and encourage all users of the Amiga, and not just those like P. Kenton, who is, of course, perfect.

A.T.S. Henderson, Watton, Norfolk.

#### **Growing Amiga**

THE technical specification for the A500 states that it is expandable internally to 1Mb and externally to 9Mb. It also states that a hard disc can be added through the same expansion port. Can all of these options be used together?

I can see the possibility that I may wish to expand the memory beyond 1Mb at some point, but as this and a hard disc are the only expansions I envisage, I am reluctant to pay the extra for the 2000 model. Are the expansions I have mentioned practica on the A500?

One of the main uses I intend for the machine is word processing. Would you still recommend WordPerfect as the best package?

In the September issue you mentioned an A590 machine.in the review of sub-system. What will be different about this machine and is it worth me putting off buying an A500 for 2

James T. Gathercole, Gravs, Essex.

The A590 is an expansion box to be added to an A500, Commodore UK has not even seen a prototype. It is not imminent. You can expand the A500 beyond 1Mb by using the Spirit inboard. Ram prices mean that expansion boards sell very slowly and so they are hard to get hold of. You

AMIGA ...

could look at this and a Supra hard disc, which is probably the neatest solution for an A500 owner, or the sub-system mentioned in the September issue. But you really should take a second look at the A2000.

It allows you to use Commodure's A2090 discontroller, which is probably the best around, and offers direct memory access which is very fast. You can also add memory much more easily. As a full system of an A2000 with 3Mb ram and a hard discontrol with a full system of an A2000 with 3Mb ram and a hard discontrol with a full system of an A2000 with 3Mb ram and a hard discontrol with a full system of an A2000 with 3Mb ram and A2000 similarly expanded.

WordPerfect has a fine pedigree, but Protext looks to be a good alternative. It is new and needs some debugging but I use it in preference to WordPerfect. And it is half the price.

#### New monitor

I was about to buy an Amiga 500 and 1084 monitor when I read a brief mention in your Amiga Scene of a new monitor, the A2024. I am now wondering if it would be worthwhile my waiting for it to come out.

Could you give me some idea of how superior it is to the 1084, and is there any (even very rough) indication of its likely price?

P. Bennett, St. Albans, Herts.

The A2024 is a black and white hiresolution monitor. It is ideal for desktop publishing and word processing, but is best used in addition to a 1084. Amiga Computing's guess at the price would be over £1.000 – although this is purely a guess based on it having a lot of complicated circuitry and expensive ram in the design.

#### Beebulator

THE review of the BBC emulator on page 8 of the October issue of Amiga Computing states that the product would emulate the whole of the BBC Micro and its operating system. Could I run my own programs that are on 5.25in DFS discs if I had a 5.25in

drive coupled up to an Amiga?

I have quite a lot of records and data on disc and if I cannot access this information I would have the task of printing out the data and programs. This also brings me to the point that if the emulator was installed, could I load a rom image, of say, my word processor so as to get to my letters?

G. Readman, Redditch, Worcs.

The BHC emulator is dispined to run be the BHC emulator is dispined to run the BHC emulator is the BHC emulator is the machine code, but will be fairly slow. To get a program from a BHC Micro to an Amiga it is easier to wire the "CONNECT command in COMMOD command in COMMOD emulator is programs will run. You don't say a second of the BHC emulator Assuming it is Wordwise, you should disc version for the Archimedes. It disc version for the Archimedes. It work.

#### Shop or post

I HAVE seen A500s advertised in your mail order adverts for £50 cheaper than the normal price. What is the snag? Would you recommend purcha...ng from a local store even though they are more expensive?

R. Reeves, Northampton.

If you can find a good local shop and that's a big if, some local shops are dreadful—then it is worth paying the extra for the help and advice you will get when you want to buy perpherals. If not, buy by post and save the dosh.

#### Logoff

I HAVE a Voyager 7 modem from Modem House which I purchased from Boots to use originally with my Spectrum 128.

I have since sold this machine and bought an Amiga A500. I still have the modem and would like to use it with my Amiga. But I have lost the instructions for it and do not have an appropriate lead to connect it to the computer anyway.

Is there anybody out there with one of these modems and is it possible to connect it to an Amiga? Also has anybody a spare copy of the instructions for this machine? I would be very thankful.

A. O'Neil, Canley, Coventry.

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ı	Bath Computer Shack	61	Services
1	Byteback	41	Miracle Systems 57
1	C64 Centre	28	MJC Supplies 44
1	Calco		Novagen 55
ı	Castle Computers	30	Pick 'n' Choose 56
ı	Centec	50	Postronix
1	Cestrian Software	25	Power Computing . 78,79,88,98
1	Clik	58	Precision Software
1	Condor		Purple PD
1	Cottage Computers	42	Software
1	Cut Price Software	65	SCC
1	Databrain		Silica Shop99
1	Datel Electronics	10,11	Siren Software42
1	Delta Computers	92	SK Marketing 24
1	Digita		ST Amiga Club98
1	Dr Soft	86	Syntax
1	Easyprint		The Games Shoppe
1	Electronic Arts		The UK Amiga Users
1	Evesham Micros		Group
1	Ferrotec		Trilogic
1	H B Marketing		Trybridge 52
ı	Humgold Computers .		Turtlesoft 87
ı	Lan Computers		US Action/Club
1	Mandarin Software		68000 35,38
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