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Editor: Stuart Cooke

Deputy Editor: Paul Whittington

Group Editor: Mark Webb

Ad Manager: Paul Kavanagh

Ad Copy Control: Karen Bashford

Origination: Project 3

Designer: Kim Goodhew

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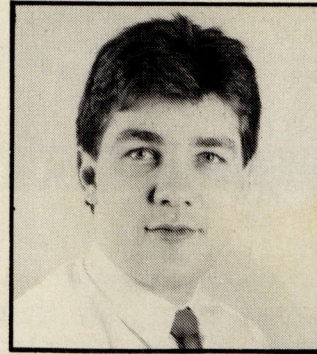
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**ARGUS
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Welcome

■ At long last we've done it! Yes, *Your Amiga*

is now monthly. You'll no longer have to wait two months for the next issue of your favourite Amiga magazine. From this issue onwards, *Your Amiga* will be on sale the third Friday of every month.

This change to monthly publication reflects just how well the Amiga is doing in the UK. Software houses are producing so much high quality software that it's proved impossible to cover everything on a bi-monthly basis.

Watch out for even more changes next month, with more colour, more pictures and many new products. Our Readers' Amiga Gallery will reappear as an enlarged section consisting of pull out posters of your artwork — so do send more of your Amiga pictures in.

So what does this month has in store? Of course we've managed to cover a selection of the latest games releases including *Batman*, *Hostages*, *Afterburner* and a host of others. We also take a close look at *MOVIESETTER* from Gold Disk — an excellent piece of software that puts you in the director's chair.

On a slightly more serious note, we take a look at Professional Draw, a superb structured drawing package. But maybe Icon Paint is more in your line — a program that allows you to have up to 16 colours in use on your workbench screen, plus a 16 colour icon editor to go with it.

So whether you're a newcomer to the fascinating world of Commodore Amiga or an old hand you're bound to find plenty to interest you. See you next month!

Stuart Cooke

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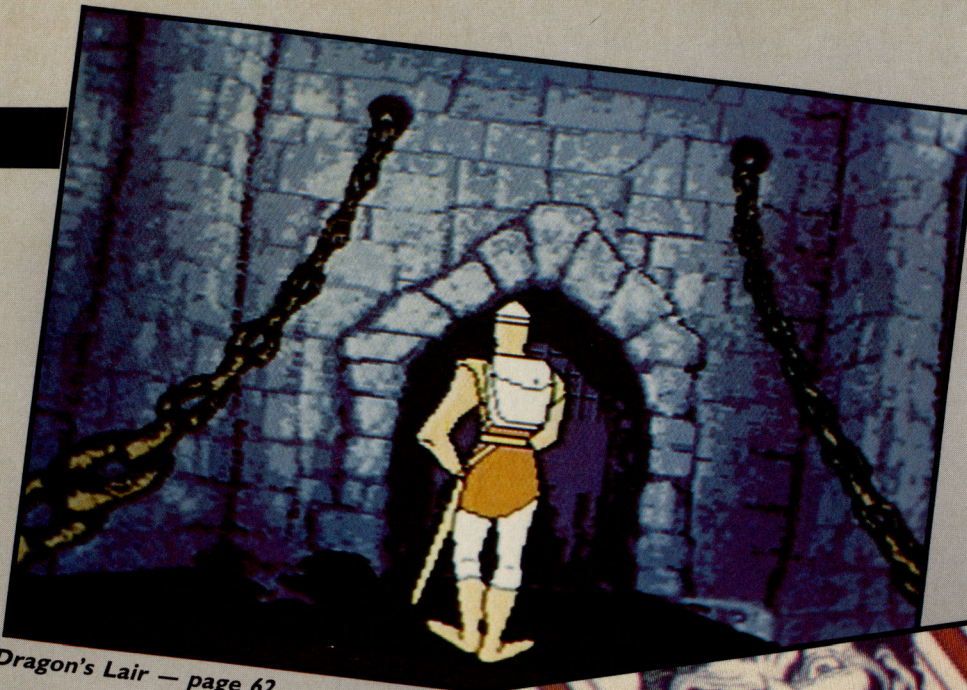
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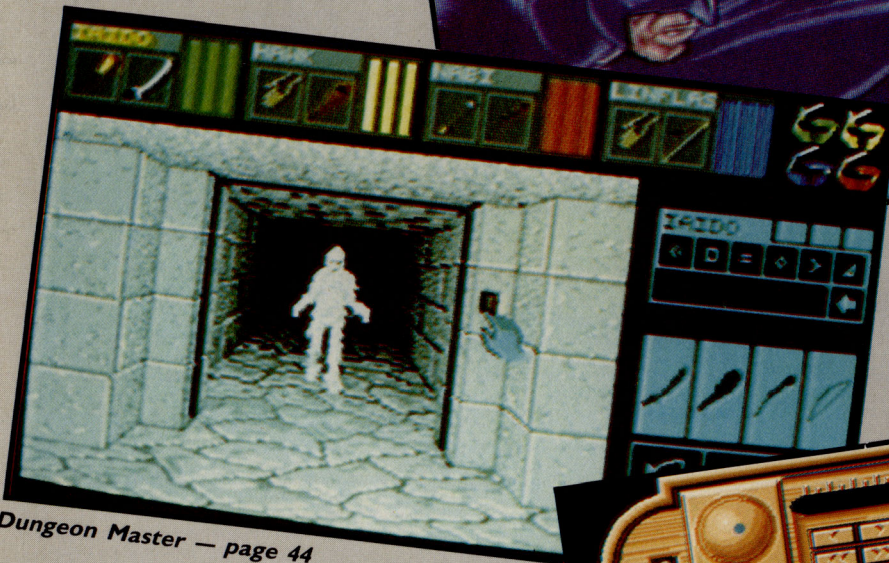
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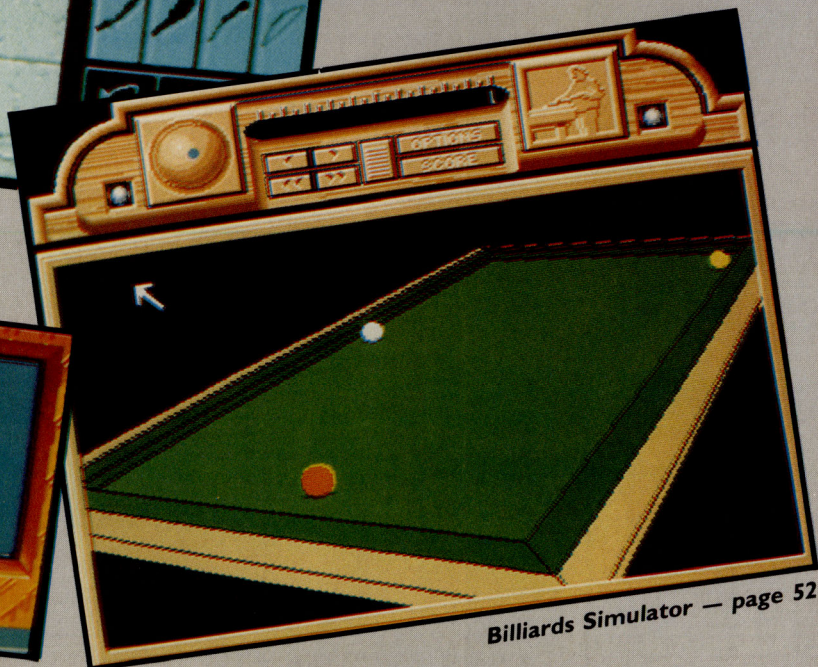
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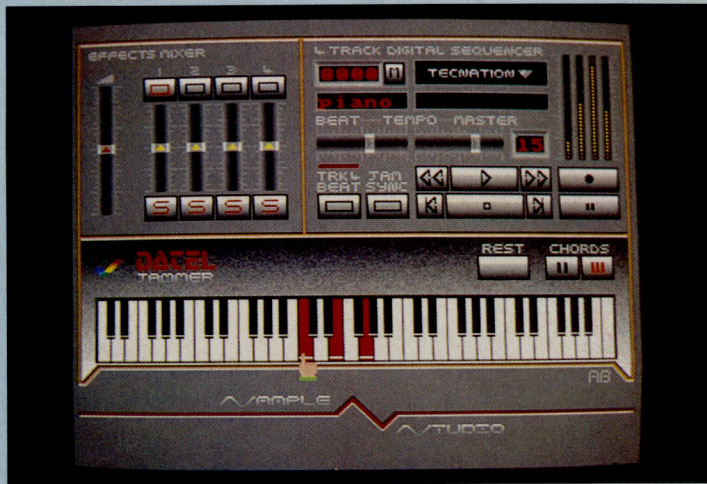
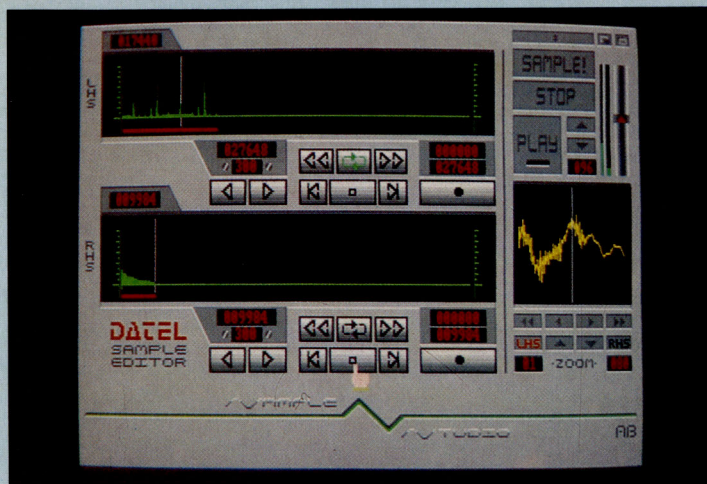


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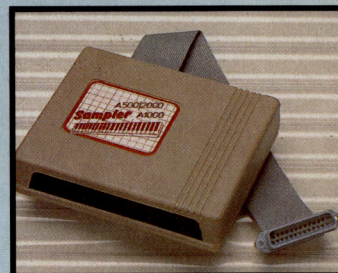
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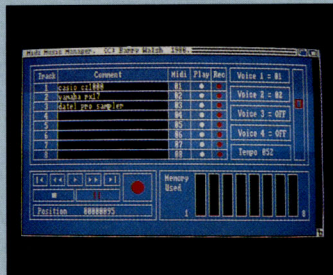
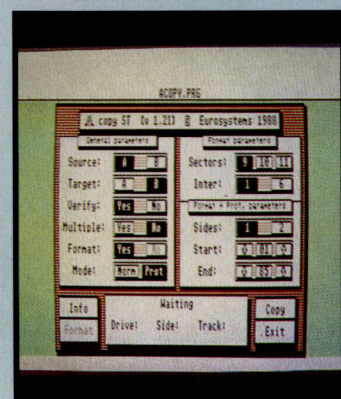
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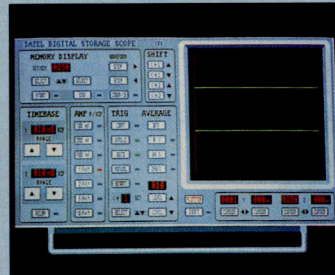
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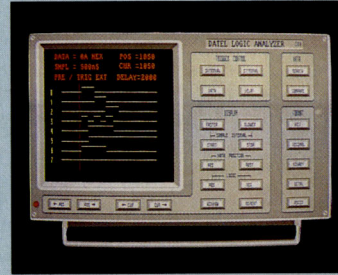
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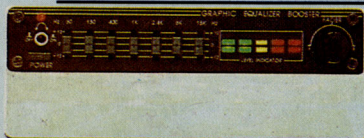
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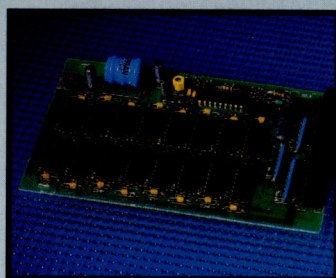


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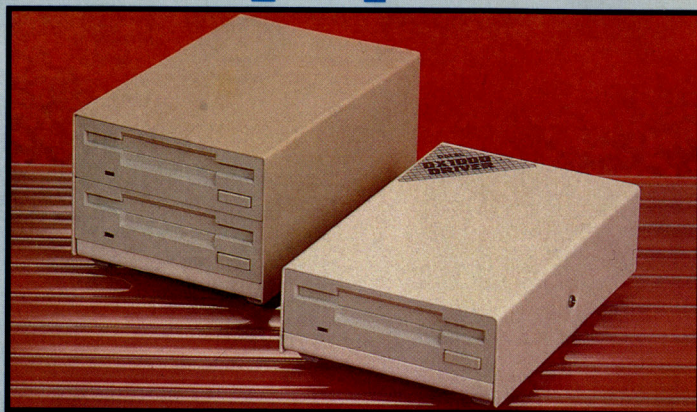
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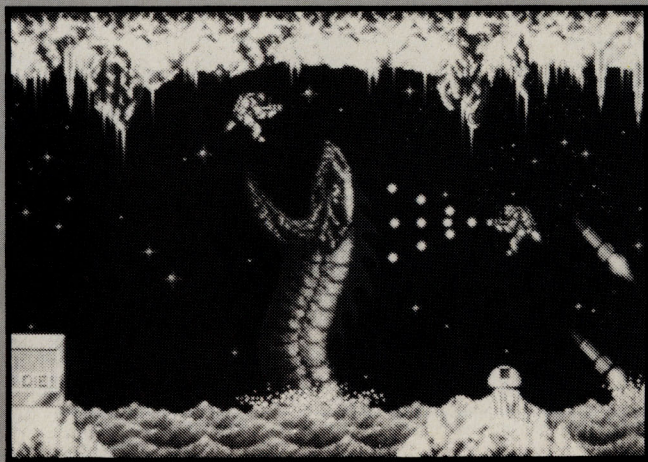
Amiga Update

Blood Money

The latest offering from Psygnosis, *Blood Money*, is being touted as the ultimate arcade game. As you'd expect from Psygnosis, the graphics are good: "over a megabyte of bit-mapping graphics in stunning colours". The action is also good — they claim it's addictive — with well planned and absorbing tests. Each player has to navigate either a submarine, a helicopter or a jet pack through three different worlds. Presumably it's called *Blood Money* because of all the dollars you get every time you shoot a squid (if you're a submarine) or

a giant robot (if you're a helicopter). If you're a jet pack man, I don't know what you zap to oblivion, because I ran out of cash before I got there. But that's what it's all about — risking life and limb to get one more little dollar, buying and shooting your way through the planets of Gibba, Grone, Shreek and Snuff.

If those names don't get you first, a wandering orange bomb is bound to. As the blurb says, "the natives aren't just hostile ... they're positively psychopathic". And watch out for that Psygnosis owl logo: it looks as though it wants to tear somebody's liver out! (29-95).



DUNGEON MASTER — A500 Version

"After a long and diligent effort to adapt *Dungeon Master* to work on the unenchanted Amiga 500, FTL has decided to abandon the project."

Yes, FTL has finally thrown in the towel, and conversion work on *Dungeon Master* has stopped, apparently, because of cheaper RAM chip prices, the decrease in the price of upgrades and the increase in demand for upgrades. FTL recognises that it will inevitably lose sales, and that the move will disappoint many *Dungeon Master* fans waiting for an Amiga 512K version. It appears that a 500 version would lead to "a serious compromise (in

the games's quality, and resulting damage to the FTL reputation". FTL's move is part of the tendency towards a higher quality game, using at least one megabyte of memory rather than the not so sophisticated games using less than this.

What a turnout!

The recent AmiEXPO show in New York apparently broke all records for Amiga attendance. We are told that some 11,863 people took the time to visit this event. On top of this, there were some 77 exhibiting companies.

Considering the fact that this show was dedicated to the Amiga, the figures are encouraging.

'C' The Light

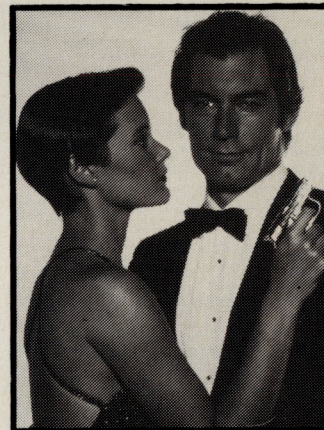
Artronic Systems have just launched a ray-tracing package called C-LIGHT. The idea behind it is to allow complex 3D scenes to be produced using a simple editor. The package allows for true shadows, multiple light sources, mirror surfaces and fisheye lens

simulation. The whole package comes complete with a scene editor, ray tracer, picture viewer, animation creator, animation player and stereo viewer plus a comprehensive manual.

Touchline: Artronic, 1-3 Haywra Crescent, Harrogate, N. Yorkshire HG1 5BG. Tel: (0423) 525325.

Licence to Kill

Due out in June, the latest Domark game closely follows the plot of the most recent Bond film. According to the press info, you'll have full control of 007 "in an exhilarating helicopter chase, a death-defying underwater scene dodging sharks", all in an attempt to stop the drug-smuggling arch criminal, Sanchez, from escaping across the border down Mexico way. Next!



Amiga Graphics Tablet

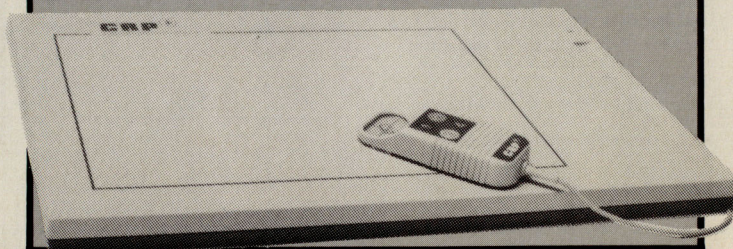
The world's first Amiga graphics tablet, designed in Germany by CRP, is now available in the UK. There are two models, one for A3 work and one for A4 work, both of which are adaptable, with all the leading paint, CAD and layout software packages available on the Amiga range.

Standard features include a facility for the automatic drawing of a line between two priorly chosen points, a horizontal and vertical aspect selector and a surface scaler. A steel tipped pen, with an alternative ball point nib, works over a lead interface that the distributors, Burocare Graphic Design, claim is 'virtually

indestructable'. The package also comes with a dual adapter and an optional puck, a four button mouse variation that offers a greater degree of accuracy for precise drawing. The tablet is known as the 'Mouse Killer' amongst German graphisists.

Personally, I don't think it looks anything like a cat, more like an art hot plate that allows you to draw and cook bacon on it at the same time. I think you'll agree if you look at the picture.

The A4 model costs £395, the A3 £595 plus VAT. The optional puck costs £85 plus VAT. The sole distributors, Burocare Graphic Design, are located at 211 Kenton Road, Harrow, Middlesex HA3 0HD. Tel: 01-907 3636.





F16 Combat Pilot

Already a succesful game on ST, *F16 Combat Pilot* is about ready for Amiga. Digital Integration's programmers have been working on it night and day for two years, with a thoroughness which should ensure that its shelf life will be nearly as long as the time it's taken to produce it.

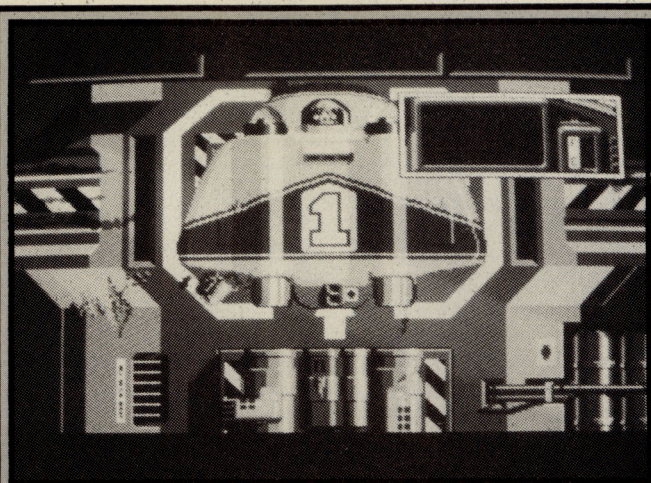
This game must be getting close to complete trigger happiness for all those wide-eyed kids getting carried into

the wide blue beyond of F16 bliss. As the blurb says, it's the "first ever major flight simulation of an American fighter plane by a British company". Although it's Digital Integration's first release for 12 months, they look assured of retail prominence in the US through their marketing company, Electronic Arts. In the UK the game went straight to No. 1 in the MicroDealer 16-bit charts: a definite indicator of its potentiality. (24-95).

MicroProse Soccer — 16-Bits

This one is based on MicroProse's 8-Bit, C-64 *Soccer*. It has all that game's attention to detail, with

overhead kicks, banana shots, tackles and "much more besides". It has been programmed by the Electronic Pencil Company to include a number of unique functions like 8-way scrolling and no on-screen player limit. (24-95).



Powerdrome

This new 1 magabyte capable game has been rewritten (by Michael Powell) to take full advantage of the Amiga's capabilities. Graphics and sound effects have been enhanced, and a beginner's mode added. There is also a two player option which allows a dual data link between two machines, either ST or Amiga.

Powerdrome is an intergalactic jet racer game that allows you or another player to compete against four other pilots from different galaxies. There are seven *Powerdrome* circuits, and a possible season of seven races using tracks on five different planets. There are unique features on each track, and accompanying special effects like electrical storms with digitised lightning. (24-99).

Amiga generated slides

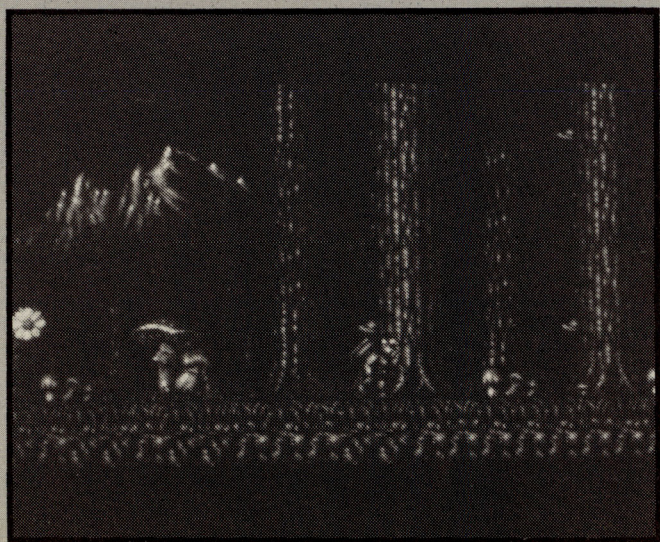
New software development now permits the Amiga to give almost instantaneous colour

slides of its graphics. The breakthrough involves the lingage of the Poloroid Palette directly into the back of the Amiga. The direct method, used in the software interface 'Screenshot', is an improvement on the previously used interface box because it is not inhibited by signal drain. A complete package, from Buocare Graphics Design, also includes the Poloroid Palette Computer Image Recorder which can produce 12 35mm slides, prints, or overhead transparencies, in about half an hour. It can utilise Amiga's HAM facility, which offers up to 4,096 colours and can also print up to poster size.

For £1,495 plus VAT, you get an Amiga interface, Poloroid Image Recorder, Poloroid dedicated 35mm autowind camera back, Poloroid 3 1/4" x 4 1/4" print and overhead transparency camera, 35mm Auto Power Processor, illuminated slide cutter/mounter, software and manual.

Stormlord

Stormlord's mission, like any good computer hero, is to free the captured and defend the peace and tranquility of his realm. Of course, opposing him is the evil Queen, out to get him and keep the 'fairy folk' imprisoned. Sounds like fun? Seen it before? Maybe, because it's by Raffaele Cecco the creator of *Cybernoid*, *Cybernoid II* and *Exolon* — all released by Hewson. Fortunately, it doesn't look as though there is a ring in sight, which is good, because I'm very Bored of the Rings. **Price** £19.99.



Amiga forecasts

The Amiga 2000 is now starring on two top TV weather broadcasts. The Weather Department (Ltd) has installed two of its Amiga forecasting systems so far: one with Central Television, the other with the satellite channel, Sky. Developed by The Computer Department (Ltd), the forecasting system operates as follows:

The Amiga 2000s are connected to a satellite dish aimed at the Meteosat weather satellite, and store digitally enhanced forecast pictures as they receive them. The stills are stored at half-hourly intervals, and then turned into colour animations. The animated sequences and stills are then digitally shot over to TV stations from the Weather Department on a Dell 310PC

running Xenix. Amiga 2000s in the studios then run the still frames and animations. The forecast frames that presenters use were designed using Electronic Arts' Deluxe-Paint package on the Amiga, and 2000s are used to generate and broadcast images using the new Rendale genlock.

The Weather Department's forecasting system makes full use of the 2000's multi-tasking capabilities to deal with the animations and forecast frames. The company has also designed a neat keypad for the Amiga 2000 which allows presenters to run stills and animations while in-vision.

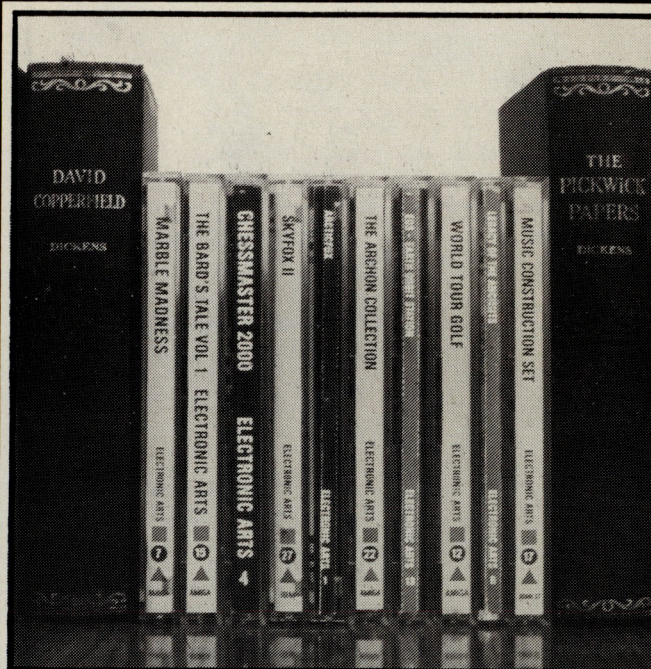
Touchline: Commodore Business Machines (UK), Commodore House, The Switchback, Gardner Road, Maidenhead, Berks SL6 7XA. Tel: (0628 770088).

Amiga Used In Locherbie Mystery

Dumfries and Galloway police have installed a major Amiga 2000 system to help them in their investigation into the Locherbie Air Disaster. The packed PanAm flight fell from the skies last December, and the Amiga system is helping to process the many hundreds of hours of videotape taken in the aftermath of that tragedy. The 2000 is helping to reconstruct

the site of the crash so that police can work out exactly what happened immediately prior to the incident. The system will allow police experts to produce stills from video material via a digital framestore, and the finished pictures are then enhanced and printed out to a Polaroid freeze-frame film recorder.

Touchline: Commodore Business Machines (UK), Commodore House, The Switchback, Gardner Road, Maidenhead, Berks SL6 7XA. Tel: (0628 770088).



Software Classics

These 'Software Classics', marketed by Electronic Arts, are a selection of highly acclaimed titles already well

established, and now released at half-price or less. The titles include *The Bard's Tale*, *Marble Madness*, *Skyfox II* and *The Archon Collection*, and will retail at £9.99.

Microprose Deal

Microprose have signed Incentive's two best-selling strategy games, *Dark Side* and *Total Eclipse*, for 16-bit format. Like Incentive, MicroProse also emphasise quality as the important denominator of their products. The games should benefit from MicroProse's

higher marketing profile under two new labels specifically created for this purpose. The games will still feature Incentive's Freescape 3D graphics, enhanced by the translation to 16-bit. These factors, combined with MicroProse's publishing expertise, should give us two popular and attention-grabbing games.

Bomber

Another flight simulator, this one from Vektor Graphix... Unlike Digital Integration's *F16* package, *Bomber* is a multi-aircraft simulator with the F-4 Phantom, the Tornado IDS, the Mig-27 Flogger and the F-111F Aardvark. It has a heavy emphasis on action, and the aircraft are, as the title suggests, strike-based. The game is designed to allow a player to choose between a strategy approach to playing, or an outright shoot-em-up. However, you won't be able to play it yet, because no release date has been confirmed, and its provisional public showing won't be until the summer, at the CES in Chicago.



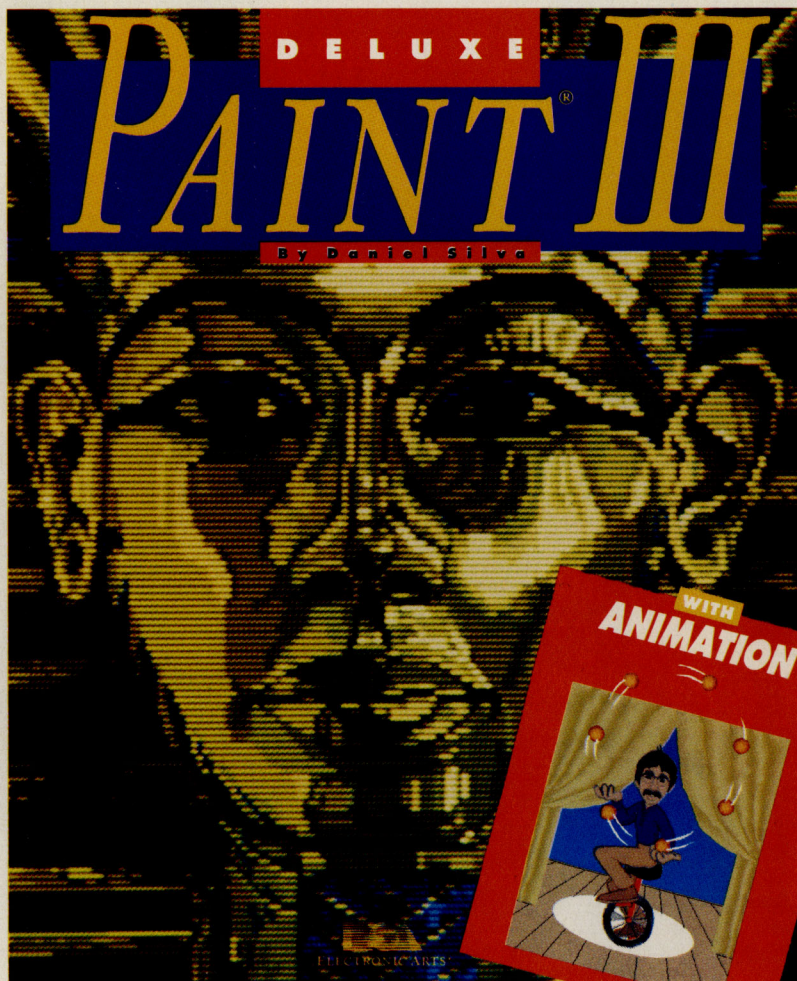
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ELECTRONIC ARTS[®]

Sweet Sixteen

Anne Owen confronts a more colourful and detailed Workbench display

■ Ever wondered why the Workbench is only in four colours when the Amiga is the graphics computer with 4,000 plus? So did *Hi Tension Computer Services* so they brought out *Icon Paint* which provides a 16 colour Workbench and an icon editor to create four, eight or 16 colour icons. The package consists of one 3.5" disk and a 24 page manual. The disk can be backed up but you need to insert the original (key) disk during the loading sequence.

The editor gives a full and zoom display, both of which can be worked on with the current brush style. Fills and shapes complete the drawing facilities. Naturally you are going to need a second highlighted version of the icon to indicate that it has been clicked. The designer offers some quick highlights for the alternate design.

The program takes care of technical aspects of the icon such as whether it's going to be used as a disk, drawer, tool, project (picture or music usually) or garbage type. The correct attributes are saved with the graphic file.

Utilities

Utilities are supplied to sample the colour palette from an IFF picture to determine the Workbench colours and to set them for the front screen. A palette utility is also provided and the current palette data is held in a file called COLOURMAP16 in the DEVS directory.

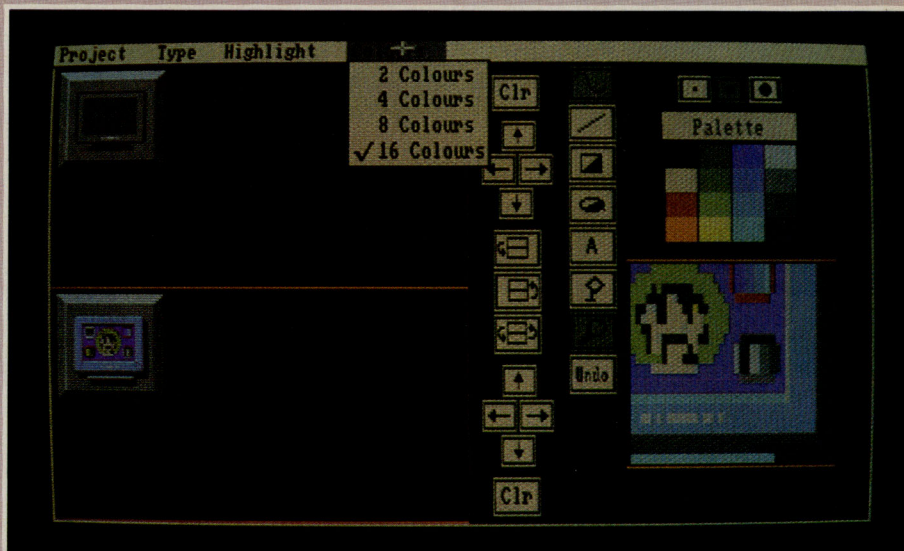
With 16 colours as your default on the Workbench, utilities are also provided to move over to two, four colour etc. to run other programs.

A new Workbench — in addition to the you are working on — can be created with a NEWWB utility. Initially a four colour WB, it can be used in parallel, an interesting concept but one I was unable to put to much practical use. A KILLWB is provided to remove it when unused.

As you know, most disks are distributed with a Workbench so, if you're moving up to 16 colours, you'll want to do so on more than one disk. This is made relatively easy by a MOVE16 utility. You'll need some space on the destination disk of course.

Up front

The 16 colour front end is very attractive and detracts little from performance (slightly



The sixteen colour icon editor



Sixteen colour Workbench with various palette utilities displayed

slower window sizing). The size of the icons does mean that you don't get as many icons on screen at once but they are easier to recognise. I found memory running short quite often when working in 16 colours so for 512K machines I would advise against going for 16. If you are lucky enough to have a Mbyte machine then no problem.

It's easy to design new icons for existing programs (you can use a paint program like *Dpaint* if you want and import into the icon editor) or for distribution of your own. *Icon Paint* is a quality utility, well designed and presented.

Factfile

■ *Icon Paint* costs £17.95 and is available from:

Hi Tension Computer Services,
Alexander House,
Station Road,
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GU11 1BQ.
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Amiga Basic

Alan Webb explains how you can access the Amiga library routines from within Basic.

■ There is, as this article will show, great advantage in using the library routines provided with the Amiga when writing Basic programs. I will give an introduction showing how you can use libraries to achieve some unusual effects.

So what are the libraries? Well in order to give you a completely flexible machine the Amiga is provided with several collections (or libraries) of routines. These routines are used to perform the standard routines such as creating a window, allocating memory etc. In order to ensure upward compatibility, the routines are accessed from a jump table sitting at the start of the libraries. Although the address and length of routines may alter in future updates, the positions of the routine pointers in the jump table remain fixed. This is why some games which call the actual routine addresses crash with the new 1.3 Workbench.

In order to use libraries from AmigaBasic, you must create .bmap files using the utility given on the Extras disk. These files will normally be sought in the directory containing the Basic program using them. For the purposes of the demo, I chose to put them in a drawer called "libs". You will notice this if you look at the LIBRARY commands in the demo listing. These commands summon the .bmap files. If the files are not found, the system will flag an error.

The .bmap file tells Basic the names of the library commands and into which registers the parameters are passed.

That's a bit of the theory, let us look at some examples. First, let's see how to change the graphics mode.

As I described last time, the Amiga supports four graphics modes. These can be set by using the SetDrMd routine in the graphics library by use of the following command:

CALL SetDrMd& (WINDOW(8),mode%)

The value used in mode% determines which graphics mode is adopted (see Table 1) with combined modes achieved by adding the

values in the table.

The WINDOW(8) parameter tells the routine where to find the address of the data structure for the Rasterport.

Many pieces of software allow you to move the screen by dragging it with the pointer. The MoveScreen allows you to do this. The routine can be called from the following pair of commands:

**ScreenAdd& = PEEKL(WINDOW(7)+46)
CALL MoveScreen(ScreenAdd&,0,2)**

The first line first gets the address of the Intuition window data structure (WINDOW(7)) and then gets the screen address (this is offset 46 bytes from the structure). The last two parameters in the routine specify the rate at which the screen is moved. The first refers to the horizontal direction and is ignored. The second refers to the vertical position. In the demo I have used a value of 2 to move the screen down at a rate of 2 pixels and -2 to reverse the process.

Next we have the question of fonts. The Amiga uses a default font held in ROM. Using library routines it's a simple matter to generate other variations on the style. These variations (bold, underlined, italic) are algorithmically

```
' A demonstration of Amiga graphics facilities
using ' both the BASIC commands and Library
functions ' Allen Webb October 1988
'
```

```
DECLARE FUNCTION OpenFont& LIBRARY
```

```
LIBRARY "libs/graphics.library"
LIBRARY "libs/intuition.library"
```

```
title$= "Tester"
Xtop1 = 0
Ytop1 = 0
Xbotr = 300
Ybotr = 100
type = 22
DIM dataArray%(16)
```

```
Depth = 5
```

```
' Main segment
'
```

```
OpenLoresScreen
OpenWindow
GOSUB ReadData
GOSUB Textmode
GOSUB Dcircle
GOSUB MoveWind
WINDOW CLOSE 1
SCREEN CLOSE 1
Depth = 2
OpenHiresScreen
Ybotr = 180: Xbotr = 590
OpenWindow
GOSUB RowFont
GOSUB LongWait
WINDOW CLOSE 1
SCREEN CLOSE 1
```

```
Depth = 2
OpenHiresScreen
Ybotr = 180: Xbotr = 400
OpenWindow
```

```
GOSUB DrawPolyBas
GOSUB DrawPolyLib
END 'of main segment
'
```

```
' Open a high resolution screen
```

```
SUB OpenHiresScreen STATIC
  SHARED intflag,Depth
  SCREEN 1,640,200,Depth,2
END SUB
```

```
' Open a low resolution screen
```

```
SUB OpenLoresScreen STATIC
  SHARED intflag,Depth
  SCREEN 1,320,200,Depth,1
END SUB
```

```
' OPEN a WINDOW
```

```
SUB OpenWindow STATIC
  SHARED title$,Xtop1,Ytop1,Xbotr,Ybotr,type
  WINDOW 1,title$, (Xtop1,Ytop1)-(Xbotr,Ybotr),
  type,1
END SUB
```

```
END SUB
```

```
' Use library to set text mode
```

```
SUB Text (mode%) STATIC
  CALL SetDrMd& (WINDOW(8),mode%)
END SUB
```

```
' Text mode demo
```

```
Textmode:
```

```
FOR c = 0 TO 31
  COLOR c
  LINE (x,0)-(x+10,180),,bf
  x=x+10
```

```
NEXT c
```

```
Text 0:PRINT "THIS IS JAM1 MODE"
Text 1:PRINT "THIS IS JAM2 MODE"
Text 2:PRINT "THIS IS JAM1 & COMPLEMENT MODE"
Text 3:PRINT "THIS IS JAM2 & COMPLEMENT MODE"
Text 4:PRINT "THIS IS JAM1 & REVERSE MODE"
Text 5:PRINT "THIS IS JAM2 & REVERSE MODE"
```

```
RETURN
```

```
' This shows the use of JAM2 and Complement
Modes to move
objects non destructively across the
graphics screen.
```

```
' It works rather like exclusive ORing.
```

```
Dcircle:
```

```
Text 3
FOR x = 20 TO 250 STEP 5
  CIRCLE (x,10),10
  Pause
  CIRCLE (x,10),10
  LINE (x,30)-(x+30,60),,bf
  Pause
  LINE (x,30)-(x+30,60),,bf
NEXT x
Text 2
```

```
RETURN
```

```
' Wait a bit
```

```
SUB Pause STATIC
  FOR Delay = 1 TO 50
```


generated rather than using data tables. First you must tell the system which font size you want. This is achieved by using OpenFont as shown below:

```
FontName$ = "topaz.font"+CHR$(0)
FontType&(0)=SADD(FontName$)
FontType&(1)=height*65536&
Ptr& = OpenFont&(VARPTR(FontType&(0)))
IF Ptr& THEN SetFont WINDOW(8),Ptr&
CALL SetSoftStyle (WINDOW(8),4,255)
```

The parameter used — (VARPTR(FontType(0))) points to a data structure (FontType\$) which is a data structure containing details of the font's attributes. The address of the font's name is held in the first part of the structure. The font's height is held as a 16 bit value in the second part of the structure. Once the font has been opened, you can define the font style using SetSoftStyle. The second parameter determines the style as given in table-2.

As with the graphics mode, you can combine styles by adding the parameter values.

My final example allows the rapid production of wire drawings. The normal Basic approach is to use LINE repeatedly with pairs

of data. It works but it's slow. The better approach is to use a library routine called PolyDraw.

```
CALL Move& (RastPort&,100,50)
CALL PolyDraw& (RastPort&,8,
VARPTR(DataArray%(0)))
```

The first line positions the drawing cursor. The second draws a sequence of lines using the data pairs held in DataArray%. As you see from the demo, this approach gives significant speed improvements and can be used for clever wire line animation such as used in Mercenary.

These are simply examples to show you what can be achieved and to set the scene for what comes next. To use the libraries to the full you must, I regret, invest some cash in the ROM Kernal Reference Manual and this will cost you around £30.

Finally, I want to make some introductory comments on the use of sprites and blitter objects (bobs). The AmigaBasic doesn't really try to indicate the differences between these concepts and this is really a tiresome omission. A sprite is a hardware generated shape and up to eight are normally available. Using interrupt mechanisms, AmigaBasic allows more than eight virtual sprites (vsprites) subject to certain

limitations. Simple sprites are limited to four colours but by linking two sprites, you can combine more colours. Since they are hardware generated, sprites can be moved more quickly.

Bobs are blocks of graphics moveable via the blitter chip. As a consequence the only limitation on their size and the number of colours used is the available memory.

In the next installment I will show you how to use sprites and bobs both from normal AmigaBasic commands and also via the use of libraries. The latter offers a wide variety of options to the Basic user.

YA

Table 1

Graphics Mode	mode%
JAMI	0
JAM2	1
Complement	2
Reverse	4

Table 2

Font Style	Second Parameter
Normal	0
Underlined	1
Bold	2
Italic	4

```
NEXT Delay
END SUB
'
'
'
MoveWind:
ScreenAdd& = PEEKL(WINDOW(7)+46)
FOR Inc$ = 0 TO 120
CALL MoveScreen(ScreenAdd&,0,2)
NEXT Inc$
FOR Inc$ = 0 TO 120
CALL MoveScreen(ScreenAdd&,0,-2)
NEXT Inc$
RETURN
'
' Polygon Data
'
DATA 180,50,210,80,210,120,180,150,100,150,70,
120,70,80,100,50
' Read data
'
ReadData:
z = 0
FOR i = 0 TO 7
READ x(i),y(i)
DataArray%(z) = x(i)
z = z+1
DataArray%(z) = y(i)
z = z+1
NEXT i
RETURN
'
' Basic LINE command
'
DrawPolyBas:
CLS
PRINT "USING BASIC LINE COMMAND"
T1=TIMER
```

```
Text 3
FOR Count = 0 TO 100
FOR i = 0 TO 6
LINE(x(i),y(i))-(x(i+1),y(i+1)),1
NEXT i
LINE(x(7),y(7))-(x(0),y(0)),1
FOR i = 0 TO 6
LINE(x(i),y(i))-(x(i+1),y(i+1)),1
NEXT i
LINE(x(7),y(7))-(x(0),y(0)),1
NEXT Count
Text 1
PRINT "Time for 100 operations ="TIMER-T1
RETURN
'
' Library PolyDraw
'
DrawPolyLib:
LOCATE 3,1
PRINT "USING LIBRARY POLYDRAW COMMAND"
RastPort& = WINDOW(8)
Text 3
T1 = TIMER
FOR Count = 0 TO 100
CALL Move& (RastPort&,100,50)
CALL PolyDraw& (RastPort&,8,VARPTR
(DataArray%(0)))
CALL Move& (RastPort&,100,50)
CALL PolyDraw& (RastPort&,8,VARPTR
(DataArray%(0)))
NEXT Count
Text 1
LOCATE 4,1
PRINT "Time for 100 operations ="TIMER-T1
RETURN
'
RomFont:
```

```
PRINT "This routine uses the ROM based font"
PRINT
height = 8
PRINT "height = 8"
GOSUB Drawit
CALL SetSoftStyle (WINDOW(8),0,255)
PRINT
height = 9
PRINT "height = 9"
GOSUB Drawit
CALL SetSoftStyle (WINDOW(8),0,255)
RETURN
Drawit:
FontName$ = "topaz.font"+CHR$(0)
FontType&(0)=SADD(FontName$)
FontType&(1)=height*65536&
Ptr& = OpenFont&(VARPTR(FontType&(0)))
IF Ptr& THEN SetFont WINDOW(8),Ptr&
CALL SetSoftStyle (WINDOW(8),4,255)
PRINT "This is in italics"
CALL SetSoftStyle (WINDOW(8),2,255)
PRINT "This is bold"
CALL SetSoftStyle (WINDOW(8),1,255)
PRINT "This is underlined"
CALL SetSoftStyle (WINDOW(8),3,255)
PRINT "This is bold underlined"
CALL SetSoftStyle (WINDOW(8),5,255)
PRINT "This is italic underlined"
CALL SetSoftStyle (WINDOW(8),7,255)
PRINT "This is bold, italic and underlined"
RETURN
'
'
LongWait:
FOR i = 0 TO 30000
NEXT i
RETURN
```


Professional DataRetrieve

Amanda Jones looks at Professional DataRetrieve, the new relational database product from Data Becker/Abacus.

■ **Professional DataRetrieve** is the relational database offering from Abacus/Data Becker. It is a 'heavyweight', upwardly compatible with the original *DataRetrieve* program but far more powerful. It runs on all current Amiga models and can be used with just a single disk drive but it does however need a minimum of 1 megabyte of memory.

Read All About It

The well produced manual uses the now almost obligatory A5 loose leaf binder arrangement. It contains both tutorial and reference material with the early sections introducing the package, its facilities and the general modes of operation. Six tutorials (occupying nearly one hundred pages) give a good idea of the basic capabilities of the package and these use example databases which are supplied on disk. The introduction is followed by reference sections dealing with the menu options, the editors and Professional DataRetrieve's programming language. The manual is, in general, well written although a couple of areas do exist where the wording of the manual could be improved.

Professional DataRetrieve is a multiple file database package. Any number of files can exist, each with their own separate record structures, and up to eight different files can be open at the same time.

File definition is a straightforward process. You select a filename, add any password facilities required, and then identify the field names and field type details. Password protection allows restricted use of the databases at both operator and user levels and you can, for example, prevent certain users from changing records or using those facilities which allow record structure alteration.

Text, date, number, time, IFF and choice type data fields may be used. **IFF** fields are used for the display of pictures — they allow you to display such data (using a separate screen) as the appropriate records are accessed. **Choice** fields are quite useful because they allow you to restrict field values to a pre-defined set of acceptable values.

Professional DataRetrieve is mask orientated. In effect datafiles are viewed through logical masks which may be designed to present and use a given portion of the database information in a particular way. Different users can therefore have individual views tailored to their individual needs despite the fact that the data itself is stored in a common database. One of the benefits of this type of approach is that it becomes possible to add, remove or modify the particular views of one user without interfering with any existing views that other users of the database might have. It's a simple concept but one that has far reaching implications in the world of database design.

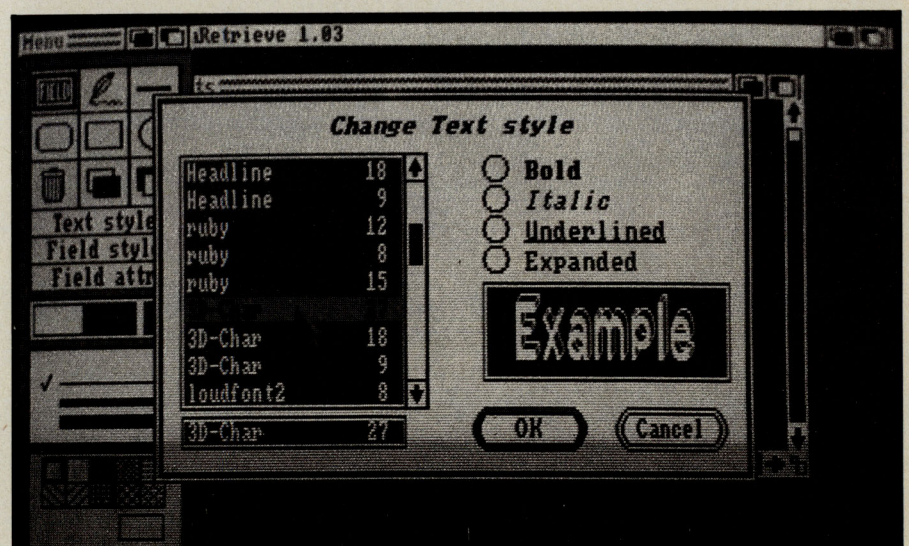
Three types of masks are available — screen masks, printer masks and list masks. Every time a database file is created a set of default masks are made available and these allow the database file to be used from the minute the file definition has been prepared. This facility is a real help to the new user who wants to set up and use some simple applications whilst they learn about the more advanced features of the package. The overall visual appearance of the default masks is quite good and many users will probably opt for using many of them unchanged to start with. Screen masks are edited using a *Screen mask* editor. You can move record fields, text and other objects around by picking them up with the mouse. You can change the display length of data fields, add new fields and add graphics objects to the display. It is easy to incorporate data fields from other database files, incorporate field verification, automatic field calculation, and alter many other field attributes. At this time you are effectively creating a particular logical view of the data which will (or perhaps does already) exist in

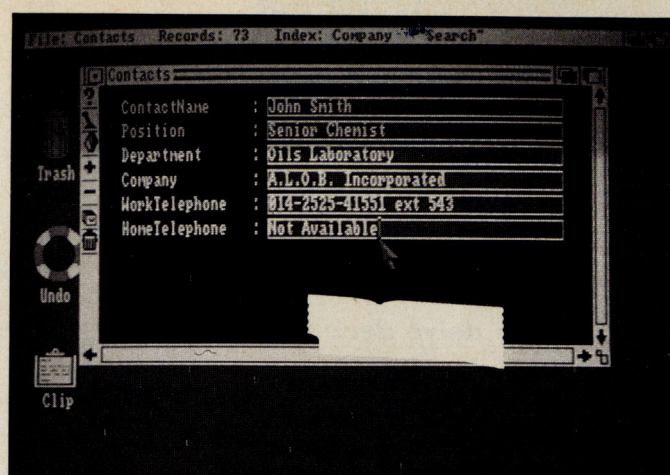
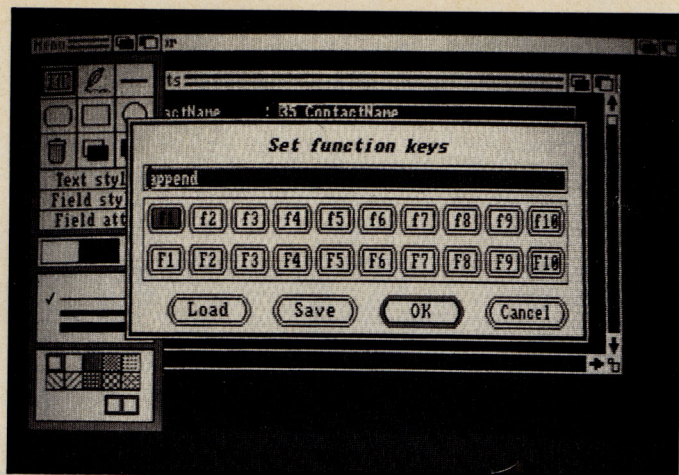
the database. Many such views can be created — each tailored to a specific purpose.

The screen mask editor is easy to use and very effective. Users with no previous experience with a product of this nature will be surprised how simple it is to give their applications a professional looking appearance. The more advanced capabilities of the screen mask editor are powerful — those users who need a database product which is able to provide logically independent views of relations defined on data fields pulled in from multiple database files will find the facilities sufficient to implement many types of relational models. Users who have never used relational database software before, might find the setting up of the more complex multiple file relations a rather difficult area to understand — it comes with practice. The best approach when you are creating your initial file structures is to build all of the necessary data-base files, create the links, and then make some preliminary tests on the models that you create.

Getting Output

The *print mask* editor provides the means of producing printed reports. It is supplemented by a single line *list mask* editor which provides single line formatting capability. This is ideal for those types of reports which are essentially lists of two or three fields printed in a single line (e.g. names and addresses). The *print* and *list* mask editors will please both beginners and expert users alike. You can test the mask that you produce by performing trial print runs or you can opt to send the output to the screen for a layout preview. In short they offer a way of producing many types of commonly needed reports very easily. On the odd occasion that you want to do something particularly unusual





you can use the integrated programming language to do the job.

Programming Options

The programming language itself is called **PROFIL**. It has over two hundred commands and functions and, like most such languages, is similar to Basic although it includes additional facilities connected with its use in database interrogation. It is well suited for writing cleanly structured programs and if you can understand Basic then you should have no trouble with **PROFIL**. Many applications will not need separate **PROFIL** programs initially, but as the package becomes more familiar you'll find it hard to resist the temptation to experiment.

Professional DataRetrieve has many other facilities including the ability to export and import data to and from WordProcessors or

other database programs. It can also exchange data via the Amiga's *clipboard* device. Multiple indexes and sub-ranges can be created which speed up the searching of large databases. The basic search options support wildcard characters (unknowns), range specifiers, logical tests and global field and record searches. Again **PROFIL** programs can be used to carry out any operations that might need particularly complex search criteria.

Conclusions

Professional DataRetrieve is a relational database management system (RDBMS). Such products are potentially the most powerful and the most flexible of all database products but they do suffer from one potential disadvantage — to use the full power of such packages you need to know how to set up the required relational model. This area is well recognised as a trouble spot because many users will not

know the best way to go about producing such models. Fortunately *Professional DataRetrieve* is a well thought out piece of database software and it caters for the beginner in that it is easy to get to the stage where you are actually doing something constructive. It looks also to be one of the most robust Amiga database products we've seen. Anyone who values their data will agree that robustness, i.e. the ability to effectively withstand mis-use, is most important with a database product. Our copy has now been in daily use for over six weeks now and we've yet to see any signs of problems. It is of course relatively early days but the signs, at least at the moment, are that this is a piece of software which is quietly going to win a lot of friends amongst serious Amiga users.

Title: **Professional DataRetrieve**

Price: £173.87 + VAT

For details contact: **H.B. Marketing Ltd.**

Tel: **089-544-4433**

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Armed with C's structured variables, we delve deep into the Amiga's interior to find out about windows and graphics, using a special example program which shows you how to set up a window application. By Mark Burgess.

any specification. Each window can be used to display text or graphics, or both. It can contain gadgets, menus and can summon requesters and alerts.

The aim of this final article in our series is to show you how to set up an Intuition window for your program, with a few gadgets and requesters and how to monitor input events from the mouse. These are the raw elements of Intuition programming, from which you will be able to progress to menus and more advanced combinations of these with relative ease, given the Amiga Intuition manuals. You simply must have the *Intuition Reference Manual* and *ROM Kernel: Libraries and Devices* manuals from Addison Wesley.

How is a window specified? A lot of parameters are needed for Intuition to be able to render a window. What size is it? Where should it be located on the screen? What colours should it be drawn in? Can it be resized and relocated? The list is endless.

All of this information needs to be parcelled off to Intuition somehow. The natural mechanism for doing this is to use C's

```
struct NewWindow definewindow =
{
  top,
  left,
  window__width,
  window__height,
  text__colour,
  outline__colour,
  events__to__be__monitored,
  gadgets_in_window_itself,
  refresh_behaviour,
  list_of_user_gadgets,
  menu_tick(selected)__image,
  window__title,
  custom__screen,
  custom__bit__map,
  minimum__width,
  minimum__height,
  screen__type
};
```

Look at the example listing to see how these pseudo entries can be used in practice, and try changing the values of the members in the listing to experiment.

C: The Window To Intuition

■ **One look at the layout of the Amiga** Workbench must tell you that something very complex goes on inside your machine each time you use it. Something must control the movement of windows and icons, the redrawing of requesters and menus and all of the graphic manipulations which are so easily taken for granted. That something is called Intuition. It is the heart of the Amiga's input output system: a set of high level functions which takes care of the display and listens out for input from the keyboard and from the mouse. To set up any kind of application program on the Amiga, you must go through Intuition.

Intuition is a complex system. Programming it is not easy. The tools we need are the data structures, revealed in the last issue.

Windows

On the Amiga, all input and output for a program is perceived as passing through a window. A window is not just a portion of the screen display for viewing some output, but a portal through which a program communicates with the world. The window is central to Amiga input-output (recall the Dec-Jan issue). Amiga windows are complex animals. You can custom build them to almost

structured variables. Intuition is a mine of structure. If you do not feel happy about the idea of data structures from the last issue, go back and look over the article again, because you will need to employ the full repertoire of ideas: Intuition employs massive data structures for rendering its graphics. To make a window, you build a data structure of all of the elements in the window which you want Intuition to put together. There is the window itself, which is one item in a data structure, then there are gadgets, drag bars, which have to be added on to the window. Each gadget might require special information about text or border graphics and so on. The result is a potentially massive linked list of attributes and features.

Here are some of the important structure variable types which Intuition uses:

```
struct NewWindow defines a window design
struct Window defines an actual window
struct RastPort defines an area of display
memory
struct Gadget defines a gadget
struct Border defines graphics for decoration
struct IntuiText defines a string of text
struct IntuiMessage defines a message bundle
```

The root of these is the NewWindow structure which is used to specify the design of a window. The members of this structure are as follows.

Gadgets

Like windows, gadgets are described by structured variables. If you want to add a gadget to a window, you must first build up a list of attributes for a gadget and then connect that description to a window, so that the gadget belongs to something. In fact, you provide a pointer to a gadget structure (the address of your description) and add it to a window by placing it in a list of gadgets (one of the members of the NewWindow structure. Intuition looks after the details of drawing the gadget. A gadget structure looks like this:

```
struct Gadget
{
  struct Gadget *NextGadget; /* ptr to next item in list */
  USHORT LeftEdge, TopEdge, Width, Height;
  USHORT Flags;
  USHORT Activation;
  APTR GadgetRender;
  APTR SelectRender;
  struct IntuiText *GadgetText;
  LONG MutualExclude;
  APTR SpecialInfo; USHORT GadgetID;
  APTR UserData;
};
```

Messages

When the user of your program clicks the mouse over a gadget, you have to be able to know about it. Intuition monitors all mouse

activity for you. This is a very civilized arrangement, whereby, you simply tell Intuition where your gadgets are, and it tells you whether somebody uses them or not. You are not required to actually work out the x,y positions of the gadgets yourself and calculate whether or not the mouse lies inside your gadget when it is clicked.

Intuition communicates with your program by sending messages. Messages are bundles of information regarding the user is doing with the input. They are broadcast to programs and programs have to reply to them to say that they are received and understood.

For example, if the user of your program clicked a gadget you would receive a certain

type of message, indicating that a gadget had been clicked. The message would also tell you what that gadget was by giving you the address (a pointer to) the gadget structure which you used to define the gadget in the first place. The information is carried in the members of a message structure.

An Example

Intuition programs are necessarily quite long: there is a lot to be defined before you can get anywhere. The easiest way to see what has to be done therefore is provide an example program, so I have kept these initial remarks to a minimum.

The program listed opens a window

containing a number of gadgets (see screen shot). I have filled the window with a striped pattern, using the AreaFill() graphics function.

The example listed below is quite heavily commented so that you can see what is going on. I have split the program up into three modules, which are assumed to have the filenames ZONE0.C, ZONE1.C and ZONE2.C. They deal roughly with the three different concepts involved: setting up the display, message processing and gadgetry.

The example is a toy program in the sense that, it does no more than echo back the fact that you have hit certain gadgets. You can use it as a basis for your own programs. Indeed, you can add your own code to make the program into what ever you wish.

```
#include <zone1.c>
#include <zone2.c>

#define intu_message (1<<window->UserPort->mp_SigBit)
#define notquit 1

/*.....*/
/* LEVEL 0 : main program */
/*.....*/

main ()
{
    int response;
    ConstructDisplay ();          /* Zone 1 : Make window */
    while (true)                 /* Loop & process messages */
    {
        switch (response = MessageMonitor())
        {
            case QUIT : Close_and_Tidy (4);
            case PUSH : printf ("Push gadget\n");
                        break;
            case POP : printf ("Pop gadget\n");
                        break;
            case MAP : printf ("Map gadget\n");
        }
    }
}

/*.....*/
/* LEVEL 1 */
/*.....*/

MessageMonitor ()

/* Enter a loop which waits for messages from
 * Intuition. The loop 'wakes up' when a message
 * is sent. The relevant parts of the message are
 * copied as quickly as possible and then the
 * reply is sent to clear the message from the
 * system. Once replied, the message is acted upon */

{ struct IntuiMessage *msg;
  int wakeup;
  USHORT class;
  APTR Identity;

  while (notquit)
  {
      wakeup = Wait (intu_message); /* Wait for a message */

      if (wakeup & intu_message) /* If message... */
      {
          while (msg=(struct IntuiMessage *)
            GetMsg(window->UserPort))
          {
              class = msg->Class; /* type of message */
              Identity = msg->IAddress; /* Which gadget ? */
              ReplyMsg (msg); /* Discard message */

              /* Work out what the message was about and return the
               * info to the main program for action! */

              switch (class) /* what was the message ? */
              {
                  case GADGETUP : return (GadgiID(Identity));
                  case CLOSEWINDOW : if (quit())
                      return ((int)QUIT);
              }
          }
      }
  }
}
```

```

    }
}

/*.....*/
/* LEVEL 2 */
/*.....*/

GadgiID(ID)

/* Interrogate the gadget structure to find out
 * what ID code I chose to give the gadget hit */

APTR ID;
{ int hit;

  hit = ((struct Gadget *) (ID))->GadgiID;

  return (hit);
}

/*.....*/

quit () /* Really Quit program requester */

{ static struct IntuiText QuitText =

  {
      BLACK, WHITE,
      JAM1,
      20,10,
      NULL,
      "Really quit Program?",
      NULL
  };

  static struct IntuiText Negative =

  {
      BLACK, GREY,
      JAM1,
      5,4,
      NULL,
      "Continue ",
      NULL
  };

  static struct IntuiText Positive =

  {
      BLACK, GREY,
      JAM1,
      5,4,
      NULL,
      "Quit ",
      NULL
  };

  return
  (AutoRequest(window,&QuitText,&Positive,&Negative,NULL,
    NU-LL,280,80));
}
```

Listing 2 : Zone1.c

```
/*.....*/
/* Zone 1 : INTUITION ZONE1.C */
/*
 * Display Design
 */
/*.....*/

/* Define window type and display graphics in this file
 * In other words, everything to do with the display */

#include <types.h>
#include <intuition.h>
#include <graphics/gfxmacros.h>

extern struct Window *OpenWindow(); /*

/* Manifest constants / macros / static variables */
/*.....*/

#define true 1 /* dimensions of windows etc. */
#define false 0
#define bufsize 32
#define WinWidth 640
#define WinHeight 255
#define numofgadg 6
#define GboxWidth 110 /* Gadget dimensions */
#define GboxHeight 20
#define Woffset 10
#define Hoffset 2
#define FrameWidth (GboxWidth - Woffset)
#define FrameHeight (GboxHeight - Hoffset)

enum colours /* Define some constants */
{
    GREY,
    WHITE,
    BLACK,
    ORANGE
};

enum CtrlGadget
{
    MAINGADG,
    PUSH,
    POP,
    TOOLKIT,
    ZONE,
    MAP,
    QUIT
};

int IntuitionBase = NULL; /* code libraries */
int GfxBase = NULL; /*

/* GADGETS AND GADGET GRAPHICS */
/*.....*/

SHORT FrameArray[] = /* Coord array for line graphics */

{
    0,0,
    FrameWidth,0,
    FrameWidth,FrameHeight,
    0, FrameHeight,
    0,0
};
```



```

...../
SHORT ShadowArray[] = /* Shadow line under box */
{
    0,GboxHeight,
    FrameWidth,GboxHeight,
    FrameWidth,Hoffset
};

...../

struct Border shadow =
{
    Woffset,Hoffset/2,
    ORANGE,WHITE,
    JAM1,
    3,
    ShadowArray,
    NULL
};

...../

struct Border frame = /* frame around the gadgets */
{
    Woffset/2,Hoffset/2, /* origin x,y rel to gadg */
    BLACK,WHITE, /* Front pen / back pen */
    JAM1, /* draw mode */
    5, /* no. of coord pairs */
    FrameArray, /* coord array pointer */
    &shadow /* ptr to another struct */
};

...../

struct IntuiText main_text =
{
    BLACK,WHITE,
    JAM1,
    10,6,
    NULL,
    "main()",
    NULL
};

...../

struct Gadget main_gadg =
{
    NULL,
    200,3,
    GboxWidth,GboxHeight,
    GADGHCMP,
    GADGIMMEDIATE | RELVERIFY,
    BOOLGADGET,
    (APTR) &(frame),
    NULL,
    &(main_text),
    NULL,
    NULL,
    MAINGADG,
    NULL
};

...../

/* WINDOW */
...../

struct NewWindow definewindow =
{
    /* UTILITY'S OWN WINDOW */
    0,0, /* top left x,y */
    WinWidth,WinHeight, /* width,height */
    2,3, /* detail/block colours */

    GADGETDOWN /* Events to be monitored */
| CLOSEWINDOW
| GADGETUP,

    /* Gadgets to be rendered */
    WINDOWDEPTH
| WINDOWDRAG
| WINDOWCLOSE
| GIMMEZEROZERO
| ACTIVATE
| SMART_REFRESH /* Window refresh behaviour */
| NOCAREREFRESH
},
    &(main_gadg), /* Pointer to first gadget */

    NULL, /* N/A */
    "Program", /* Window Title Message */
    NULL, /* N/A */
    NULL, /* N/A */
};

```

```

50,40,480,0, /* Min,Max : width height */
WBENCHSCREEN /* Background Screen Type */
};

...../

struct Window *window; /* Global Window pointer */
struct RastPort *rast; /* Screen memory pointer */

...../

/* ZONE 1 : LEVEL 0 */
...../

ConstructDisplay ()
{
    static USHORT pattern[] = /* define a fill pattern */
    {
        0x6666
    };

    static USHORT defaultpatt[] =
    {
        0xFFFF
    };

    OpenIntuitionWindow ();
    ControlGadgets(); /* Add gadgets */
    rast = window->RPort;
    SetAPen (rast,WHITE); /* Foreground pen */
    SetAIPt (rast,pattern,0); /* Set area-fill pattern */
    RectFill (rast,0,0,WinWidth,WinHeight); /* Area fill back */
    SetAIPt (rast,defaultpatt,0);

    RectFill (rast,200,3,200+GboxWidth,3+GboxHeight);
    RectFill (rast,0,210,GboxWidth,210+GboxHeight);
    RectFill (rast,125,210,125+GboxWidth,210+GboxHeight);
    RectFill (rast,250,210,250+GboxWidth,210+GboxHeight);
    RectFill (rast,375,210,375+GboxWidth,210+GboxHeight);
    RectFill (rast,500,210,500+GboxWidth,210+GboxHeight);

    RefreshGadgets (&(main_gadg),window,NULL);
}

...../

/* ZONE 1 : LEVEL 1 */

OpenIntuitionWindow ()
{
    if ((GfxBase = OpenLibrary ("graphics.library",0)) == NULL)
    {
        Close_and_Tidy (0);
    }

    if ((IntuitionBase = OpenLibrary("intuition.library",0)) ==
    NULL)
    {
        Close_and_Tidy (1);
    }

    if ((window = OpenWindow(&definewindow)) == NULL)
    {
        Close_and_Tidy (2);
    }
}

...../

ControlGadgets () /* Add gadgets */
{
    InstallGadget (0,210," Push ", PUSH);
    InstallGadget (125,210," Pop ",POP);
    InstallGadget (250,210," Toolkit ",TOOLKIT);
    InstallGadget (375,210," Zone ",ZONE);
    InstallGadget (500,210," Map Finder ",MAP);
}

...../

/* ZONE 1 : SNAKES & LADDERS */
...../

Close_and_Tidy (level)
int level;
{
    switch (level)
    {
        default :
        case 2 : CloseWindow (window);
        case 1 : if (IntuitionBase != NULL)
        {

```

```

        CloseLibrary (IntuitionBase);
    }
    case 0 : if (GfxBase != NULL)ÛÛÛ
        CloseLibrary (GfxBase);
    }
}

exit (0);
}

Listing 3 : Zone2.c

...../
/*
/* ZONE 2 : GADGETRY MODULE (ZONE2.C) */
...../

#define system_position -1

...../

InstallGadget (x,y,title,ID)

int x,y;
char *title;
enum CtrlGadget ID;

{
    struct Gadget *ptr;
    struct IntuiText *AddText();

    if ((ptr = (struct Gadget *) (malloc(sizeof(struct Gadget))))
    == NULL)
    {
        MemoryAlert();
        return (false);
    }

    ptr->NextGadget = NULL;
    ptr->LeftEdge = x; /* gadget pos */
    ptr->TopEdge = y;
    ptr->Width = GboxWidth; /* gadget size */
    ptr->Height = GboxHeight;
    ptr->Flags = GADGHCMP;
    ptr->Activation = GADGIMMEDIATE | RELVERIFY;
    ptr->GadgetType = BOOLGADGET; /* 'button' gadget */
    ptr->GadgetRender = (APTR) &(frame);
    /* graphics for gadget */
    ptr->SelectRender = NULL;
    ptr->GadgetText = AddText(title); /* text for gadget */
    ptr->MutualExclude = NULL;
    ptr->SpecialInfo = NULL;
    ptr->GadgetID = (USHORT)ID; /* My code. User space */
    ptr->UserData = NULL;
    AddGadget (window,ptr,system_position);
    /* Add to system list */
}

...../

struct IntuiText *AddText (title)

char *title;

{
    struct IntuiText *ptr;

    if ((ptr = (struct IntuiText *) malloc(sizeof(struct
    IntuiText))) == NULL)
    {
        MemoryAlert();
        return (false);
    }

    ptr->FrontPen = BLACK;
    ptr->BackPen = WHITE;
    ptr->DrawMode = JAM1;
    ptr->LeftEdge = 10;
    ptr->TopEdge = 6;
    ptr->ITextFont = NULL;
    ptr->IText = title;
    ptr->NextText = NULL;
    return (ptr);
}

...../

/* TOOLKIT : ERROR MESSAGES */
...../

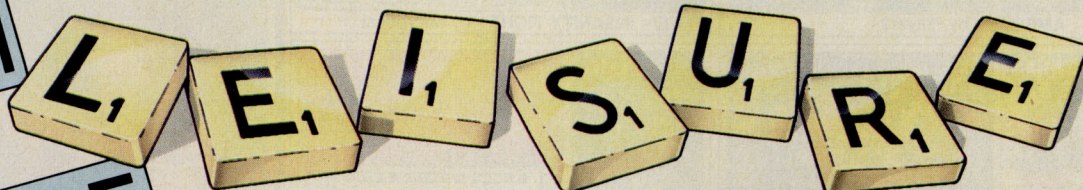
MemoryAlert ()
{
    DisplayAlert (RECOVERY_ALERT,
    "x20x10RECOVERABLE ERROR
    SYSTEM IS OUTOF MEMORY0",100);
}

```

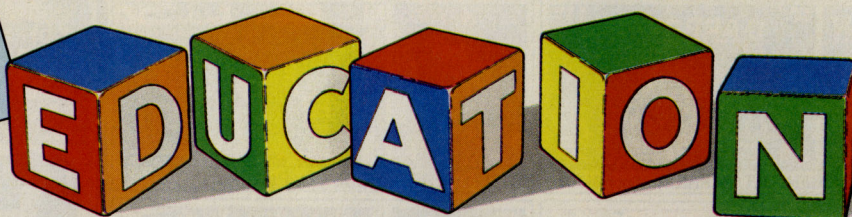

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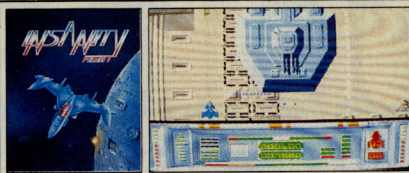
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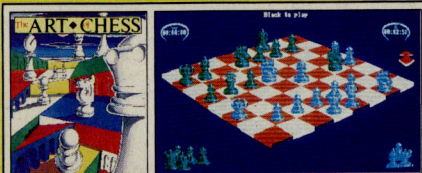
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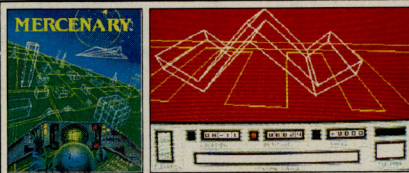
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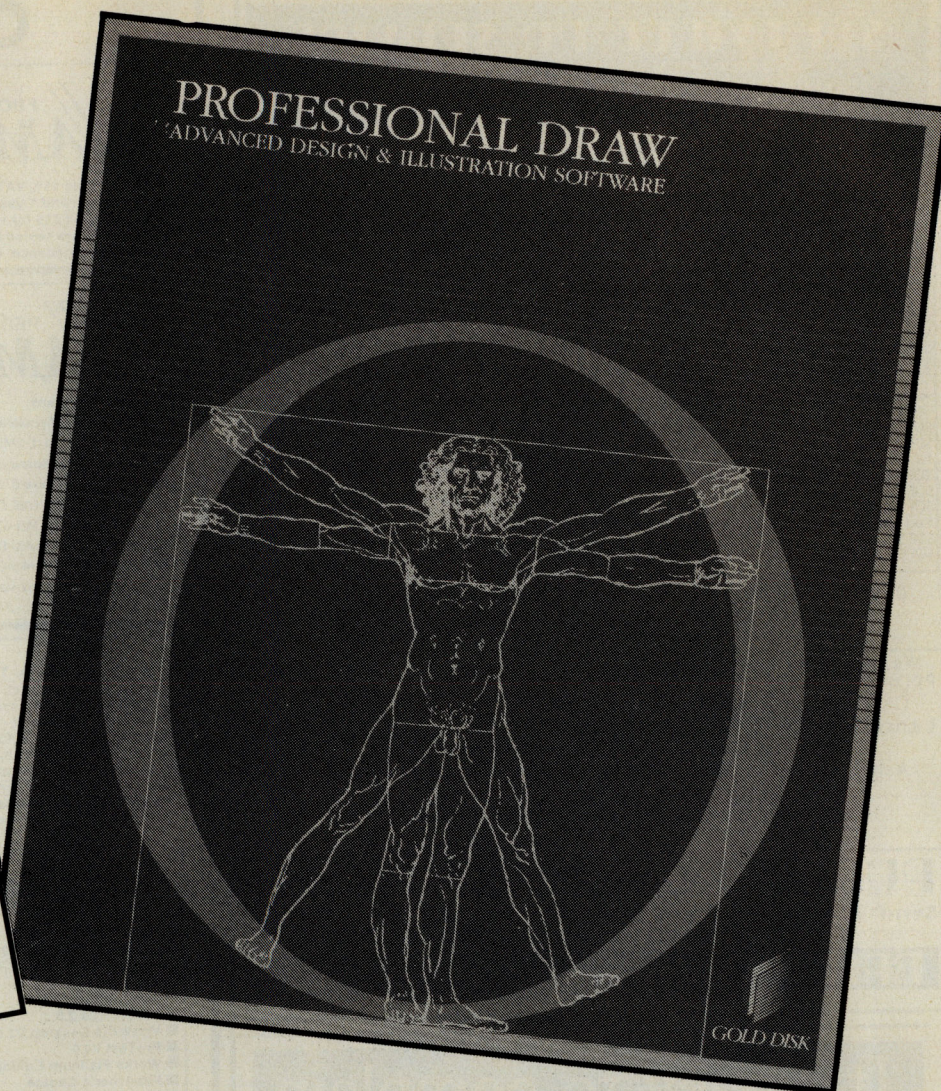


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REVIEW

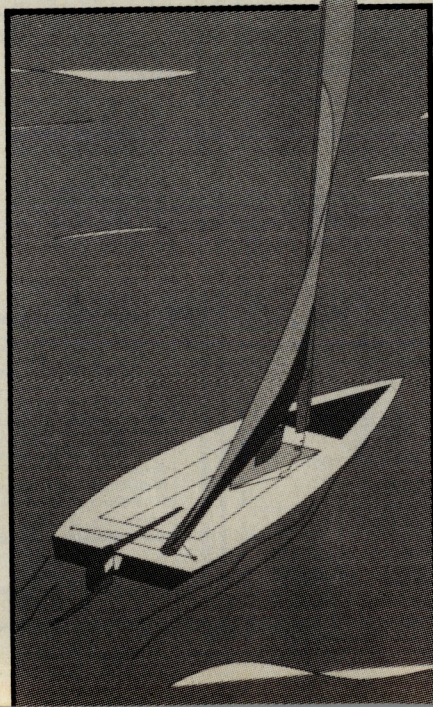
Professional Draw, it is claimed, is suitable for desktop artists whatever their level of skills. But isn't it just an add-on for desktop publishers?



Dynamics of Drawing

■ Canada's Gold Disk continues a sequence of extraordinary software releases for the Amiga. This time it's Professional Draw and the emphasis should be place on the "Pro". First of all you need a (1)meg machine (RI) to run the program. Secondly the power of the program is in its support for expensive output devices, from PostScript laser printers (Qume's Publisher currently the cheapest at £2999) to typesetting equipment in the tens of thousands of pounds category.

Professional Draw has the same output capabilities as sister DTP program Professional Page and that means colour separation output, a first for any personal computer/software combination. Separations are the four sheets of plastic film which carry (as fine patterns of dots) the information about the density of the four main printing inks (cyan, magenta, yellow, black). On a printing press the inks actually adhere to the "dots". The four sheets of film carrying their separate colour information have



to be matched (registered) perfectly and Professional Draw will print registration marks to help your printer achieve this.

Of course you aren't expected necessarily to own this equipment. High street copy shops have PostScript lasers (black and white) and computer magazines advertise output of your completed A4 artwork from £6.00 + VAT. Colour will cost you around £50.00 per page.

Creative department

We've explained that you can achieve professional standard output through the processing power of Professional Draw but (I)what (RI)are you going to output? The draw part of this program provides a number of tools to create artwork on screen. If you are a beginner just starting out with the idea of using your Amiga for DTP or technical drawing then one of the most positive things about Professional Draw is the excellent manual,

including a tutorial section, reference section and index. It exhibits good design and professionalism. They've come a long way since PageSetter.

The drawing "page" can be set up to any size with six popular options, standard, legal, A4, A3, A5 and B5. The grid and ruler are set up in your choice of units of measurement (inches, centimetres and picas). Line weight is defined in half point sizes.

You can scroll around and zoom onto a WYSIWYG display. Interlace and WYSIWYG can be switched on or off.

There's no mystery to the curve, ellipse, rectangle, grid and freehand tools. The ESCAPE, ALT and CTRL keys are used with the mouse to close curves, and constrain angles, height and width. Each drawing operation creates an object which consists of control points — anchor points and direction points which define the tangents of curves.

To edit an object it has to be selected and made active. You can select groups of objects for global changes, eg line colour. An object can be sized (with proportional control), rotated through any angle and mirrored — with considerable flexibility. You can also apply the distortion tool which lets you drag one of the control points to distort the object against a rectangular background.

A hook tool lets you add another control point to a Bezier-type object and the cutting tool severs the chain of control points that make up such an object.

Professional Draw offers some CAD type features. Grouping objects allows functions, eg cloning, to be applied to combinations of objects. Objects that overlap have a layer attribute. An object can be brought to the front or sent to the back — a bit like windows in Workbench. Objects can be locked against further editing.

Text characters are treated in the same way as objects and a text string is automatically "grouped" when entered. Large, 24 point to 144 point, typefaces are provided for titling and heading purposes.

Any IFF bitmaps can be imported. While the full data is retained on disk ready for the output process, only a four greyscale picture is used on screen. A bitmap (a pixel based picture) can be cropped (cut to size), sized and moved around the screen.

Line patterns and joins (butt, bevel, mitre and round) are also available to the artist. Fill colours can be selected and defined in a palette utility.

Colour

Certainly the most advanced element of the program is the ability to generate colour drawings. Lines, fills and text can be given any one of the Amiga's 4096 colours. Printing colours can be adjusted to match RGB colours if required.

The main drawback is that on-screen colour is not available although with a knowledge of printing processes and a pantone book (a reference book which shows a large range of different percentage mixes of the four print colours) the designer should be able to predict the results accurately. The colour palettes of bitmaps should be preplanned to match the designer's requirements. Because Professional Draw supports Preference printers it is also possible to "proof" the output to an inkjet printer such as a HP Paintjet. For dot matrix printers there is the opportunity to experiment for best results.

Backroom boys

Professional Draw offers a number of features which make the program friendly to the user. Professional Draw's screen layout is familiar from PageSetter and Professional Page, an important consistency of style which will benefit users. Filing activities have got markedly faster than in previous programs, presumably due to the 1.3 upgrade. Pages can be saved individually or as a group (folio). There are also load and save menus for clipart and colour selections. Objects can be saved as clips into a library, building a resource for future use and distribution.

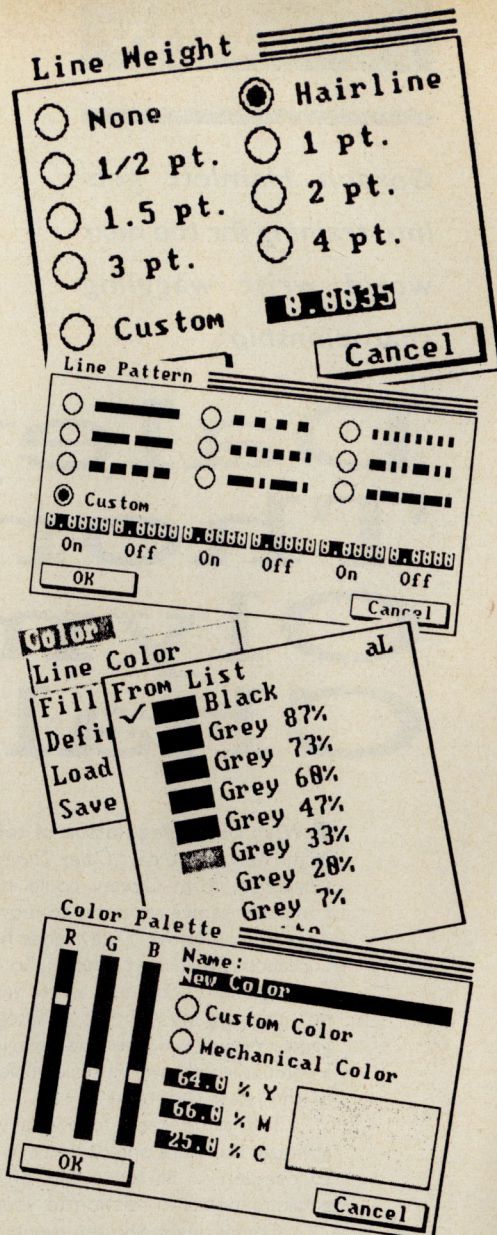
Because many different drawings are likely to be generated with this program, perhaps by different people, Professional Draw lets you add information about creation date, artist etc to a folio.

Professional Draw is all about line drawing and does not contain any picture processing features. Perhaps, following the pattern on the Mac, a "photography" type program will be Gold Disk's next DTP release.

If you are printing to anything other than a PostScript device then Professional Draw won't compete with Aegis Draw for CAD or Dpaint for painting.

Closedown

Behind the ordinary looking display Professional Draw has the rare capability to interface seamlessly with the world of design and print. The line, shape and fill drawing tools are easy to use as is the program in general. Note that it is not possible to run Professional Draw properly on a 512K machine and that dot matrix output is possible but that a PostScript printer is the intended output device.



Professional Draw is unchallenged on the Amiga and combines with Professional Page to put the Gold Disk packages at the forefront of DTP.

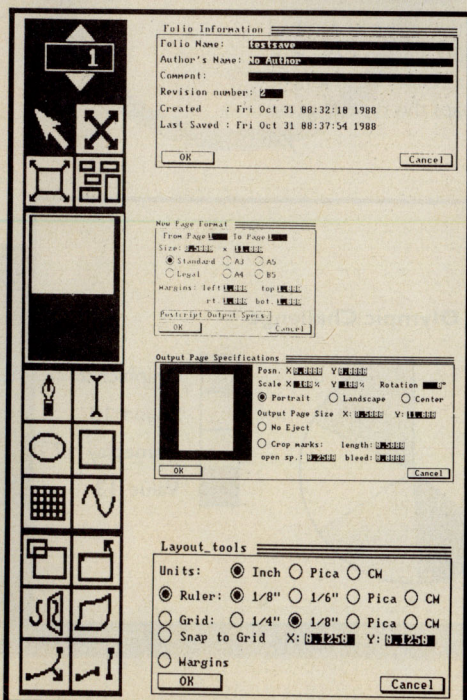
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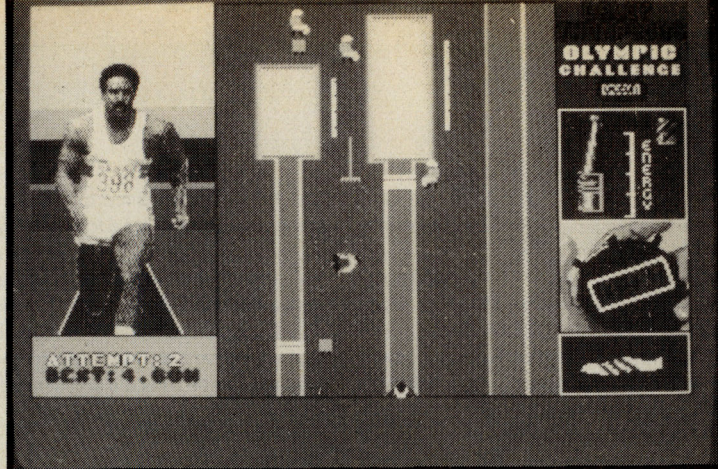
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Pixels vs Points

Professional Draw is not a pixel based program but, more like a Computer Aided Design program, is based on objects. When drawing an ellipse for instance the program saves the result as a number of attributes (screen co-ordinates, line thickness (weight), line colour and so on). There are two major advantages of saving the display information in this way: firstly the attributes can be changed from a pulldown menu and the object(s) edited by clicking and dragging the mouse; secondly the way the information about the drawing is held is similar to the way a PostScript printer "describes" the drawing internally before finally printing it at the appropriate resolution.



Gordon Hamlett gets into training for the next world wrist wagging championship



Daley Thompson's Olympic Challenge

■ With the deregulation of television much in the news these days, *Daley Thompson's Olympic Challenge*, from Ocean, could indicate the way computer games are going to move in the future. As you may know, Daley lends his name to the Lucozade advertising campaign. So what do we find in the game? Lucozade features very prominently, not just as a logo but, as an integral part of the game. Where will it all end? Imagine stopping for a computerised advert after completing every stage of the latest shoot-em-up.

The game itself follows a well worn path although there are one or two new ideas. You have to compete in all ten events of the Decathlon, amassing points in relation to your performance.

Competing in the ten events — 100 metres, long jump, highjump, pole vault, 110 metres hurdles, 400 metres, shot, javelin, discus and 1500 metres involves the usual combination of wagging your joystick as quickly as possible in order to build up speed and power coupled with sundry other movements when precise timing is required such as judging what angle to release the javelin or deciding when to start jumping.

Before the competition actually starts though, you get the chance to improve your performance by training. Two minutes of wrist-wrenching wagging in two different exercises gives you the chance to earn yourself up to three cans of a well known glucose drink. These can then be used later on in the competition to give you an added boost in the events that you have most trouble with.

Before competing in each event, you have to select the correct footwear, choosing from long or short spikes, training shoes, sandals etc. Incorrect selection can effectively ruin your chances in an event, knocking seconds off your time. Unfortunately, there is no indication whether you have selected the correct shoes or not. You have to rely on trial and error and even then, you are never quite sure whether you have chosen wrongly or merely that you are not wagging as quickly as you might.

The game looks good with plenty of digitised images of Daley competing in the different events together with sarcastic newspaper comments about your inept performances. External presentation is also good with a free poster and audiocassette.

The area where the game falls down though is that only you can play. One of the features of this type of program is that it is great fun to compete against a few friends. Everyone has their own strengths and weaknesses and laughing at someone else's incompetence has always been a national pastime.

As a result of this, I felt that a lot of fun had gone out of the game. At just under £25, it is seriously overpriced too. Just as Daley is no longer the force he once was, so perhaps this type of game has had its day.

Y/A



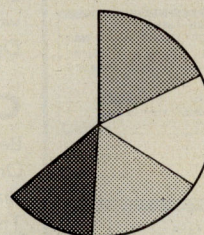
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The Magic of MOVIESETTER!

The puppet theatre is alive and well! Louis Tilley discovers that MOVIESETTER is more than just an animation package.

■ Somewhere in London today there is a dingy little shop, left over from the times of Dickens, where an anachronistic shopkeeper sells for exorbitant prices tools of theatrical fantasy which once sold for a penny plain, and two pence coloured. Few children seem to frequent his shop, but grandparents from America like to take home these nostalgic reminders of a time when toy theatres brought excitement to Victorian nurseries.

In Santa Fe, New Mexico, USA, the Museum of Folk Arts has a grand, original collection of the same type of coloured prints from England, Germany and France of miniature theatre interiors, proscenium arches, and lavish sets to be peopled with tiny cut-out paper casts of 18th and 19th century plays. The elaborate nature of these paper toys indicates that it was not only the children of that time who gave home theatrical performances with them — elegant adults, too, pushed the small heroes and heroines onto and off the stage.

This fascinating hobby may have reached the height of its popularity in Victorian times but the same elements which made it such fun then are still with us, revitalized and given the speed and excitement of today's electronic action by Gold Disk. *MOVIESETTER* is so much more than another animation package. Truly, a toy theatre, movie house and vaudeville stage has come to the AMIGA!

Passive and Active

If you did no more than load *MOVIESETTER* and used one of the supplied data disks as you would the old paper cut-out backgrounds and play-actors to stage your version of a cartoon comedy... or tragedy, this could well become a consuming passion of passive interface with a world of animation. It certainly offers the

possibility of interactive story telling which, so far, has not been touched by the ordinary game software.

Hopefully, Gold Disk will supply data disks which will enable the buyer to recreate some of the great masterpieces of the past... or, contracts allowing, cartoon and/or theatre personalities of today.

What MOVIESETTER Does

You are the producer-director, the puppet master, the impresario. From the moment you boot *MOVIESETTER* you control the elements which make a play or a movie. 'People, places and sounds' are the dynamic trio of story-telling on the screen. *MOVIESETTER* calls them *faces*, *backgrounds* and *sounds*. They are the raw materials which are manipulated by the tools of *MOVIESETTER*.

You arrive at the tools you use by turning raw IFF faces, which are the single image of

a person, animal, or thing which you want to animate and move about, into a set or series of the same face drawn in progressive steps of the movement. The SET EDITOR is a separate program within *MOVIESETTER* which does the job. This series of faces (called a set, remember) may be stamped in or out of sequence onto the Background. The resulting stamped series is called the Track.

Where did we stamp the set? Onto the background, which is the simplest of all the elements to create. All of the elements may begin as standard IFFs, but the background stays IFF. You create it with any low-res paint program. Preferably, choose one which can supply a full video overscan (325x240). A practical suggestion: try to use the default palette of *MOVIESETTER* at all times when working with another paint program. The use of one palette throughout the entire process seems to make life easier. But be warned — keep the background simple, so that it doesn't detract from the action figures which will



detract from the action figures which will always lay on top of the background. Call for and place the background by using the pulldown menu EVENT.

The EVENTS menu also controls our third element, Sound. The Sound Control, under EVENTS, allows you to preview any standard IFF.snd file which you may have collected from public domain sound effects programs. The Sound Control enables stereo for a total of four tracks at once with variation of pitch between a four octave range and seven steps within each octave. 'Pan' and 'Volume' are slide controls.

The most important thing about Sound Control is its ability to synchronize a sound to the exact frame of a production. You do this by clicking on 'Event' box before returning to the major *SCENE EDITOR* where you are seeing what you create as you create.

MOVIESETTER stores its completed 'movie' under the file heading of PRODUCTIONS. To start your exploration of this magic kingdom (a phrase copyrighted by Disney Enterprises, I believe) of *MOVIESETTER* it would be a good idea to load and run one of the productions included on the 'MOVIESETTER Clip Art' disk. The length of productions is astonishing.

The method of compressing animation files developed by the programmers James Morehead and Ian Donen is responsible for this feat. Don't fret about the inability to call forth these files into one of the other animation players available from Public Domain or other animation packages.

MOVIESETTER outputs the individual 'faces' of a 'set' into IFF with its Set Editor. By the use of the new Deluxe Paint III animation feature, the transfer is made easily. Deluxe Paint of any version is most useful when working the *MOVIESETTER*.

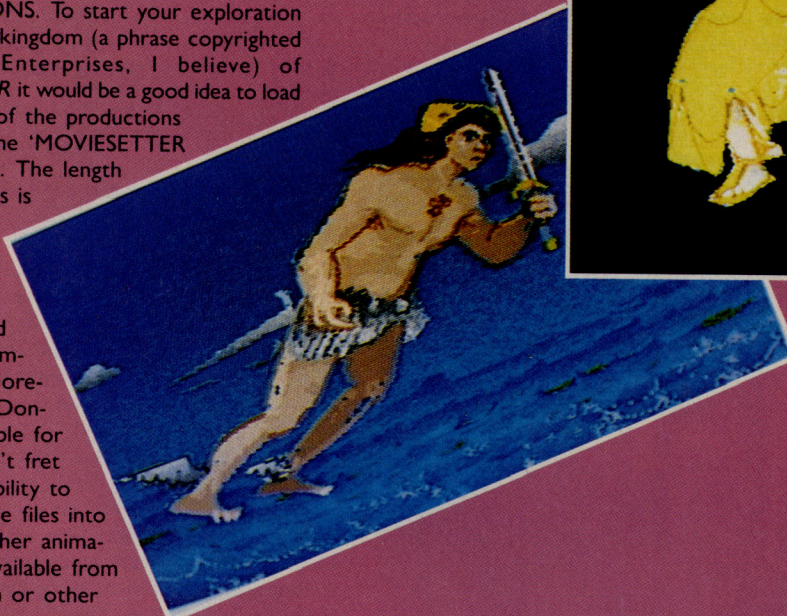
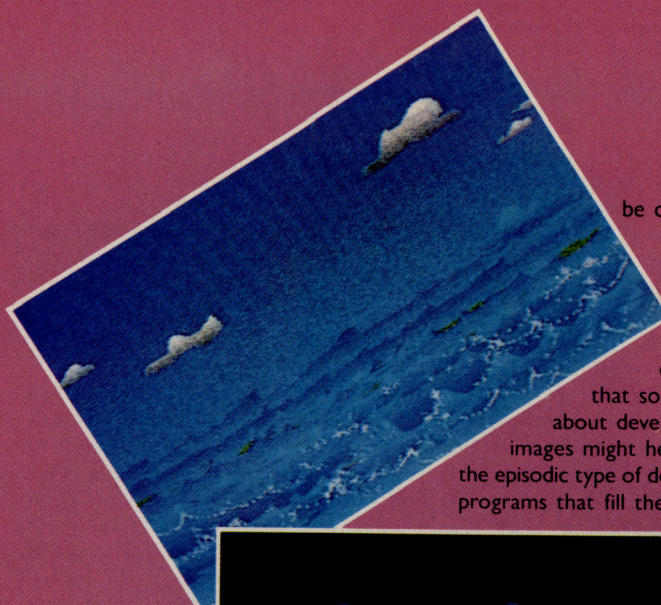
Examine the individual parts of the Production chosen from the Clip Art disk. Try to recreate what you have seen by starting a new production (from the 1st pull-down menu). All of the different Backgrounds, Sets and Sounds may be loaded into your new production.

Not Just for Professionals

The ease with which the elements of *MOVIESETTER* are handled opens up the world of animation to young, old, experienced and inexperienced alike. It is no criticism of so many of the animation programs available to label them 'professional'. *MOVIESETTER*

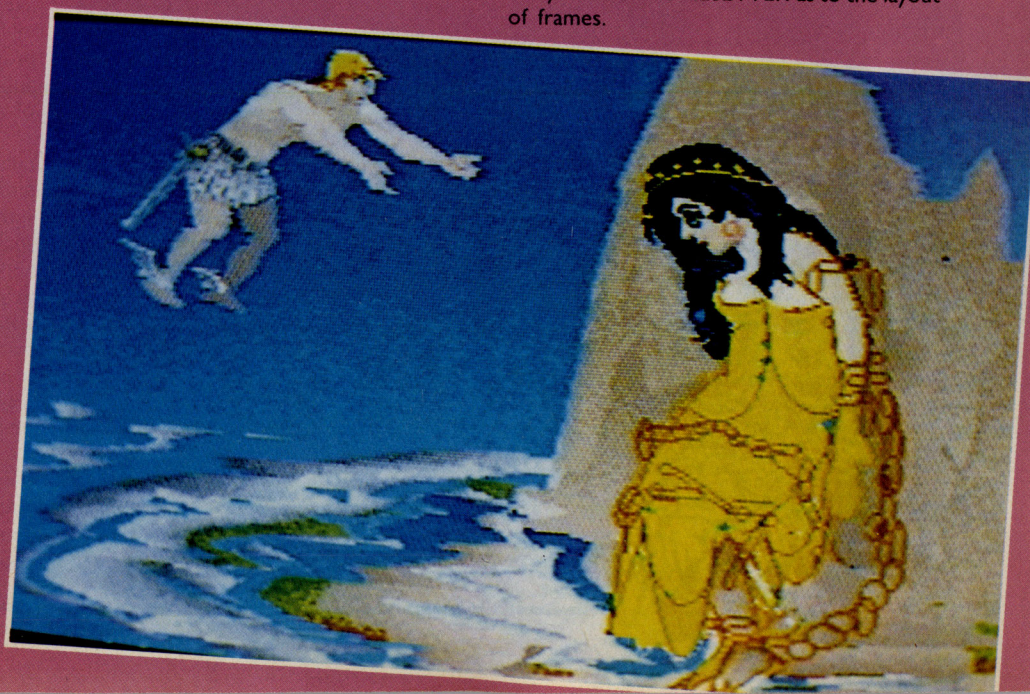
itself should be considered adequate for 'professional' work.

However, in contrast to other programs, creating a production has been made so easy by *MOVIESETTER* that some general information about developing story-telling with images might help the beginner escape the episodic type of demos using 'professional' programs that fill the BBS networks.



The tool, 'Storyboard', enables you to see your production laid out as a series of stills. These are displayed on call as the frames which contain a background or a set track change. You may call for other options of change from its menu.

Storyboards are even better used before a film sequence is begun. Try planning your first movie production by making a series of rough notes in graphic form of what the different scenes in your film will be. Generally, these are done on a page much like a comic strip, with the scenes following each other in a sequential manner. Take your tip from the *post storyboard* of *MOVIESETTER* as to the layout of frames.



Almost all film plot may be summed up by the catch-phrase, 'A likeable character overcomes difficult obstacles to obtain a worthwhile goal'. Plan a beginning, a middle and an end. First, design or choose the likeable character. Let's make him a prince. Then set his goal. How about having him rescue a maiden in distress? Now, what shall his obstacles be? Why not a dragon?

The three main 'sets' you will need will be of the prince, the maiden and the monster or dragon. The backgrounds will depend on how elaborate you want to be with this first production. A favourite theme of Renaissance artists was the Greek myth of Andromeda. Let's, as they did, steal the plot, characters and action.

The Scenario

Perseus, son of Zeus and Danae (of the golden shower) rescues Andromeda, a beautiful Ethiopian princess who had been chained on

WIPE TO:

(There are six wipes included with *MOVIESETTER*, plus a *non wipe* I prefer called 'NONE', which is a straight 'cut'.)

SCENE 1: The scrolling Background of a seascape flows from right screen toward left screen. (There are facilities for regulating the speed. This should be fairly slow.)

SUPER TITLE: 'Perseus & Andromeda'

ENTER LEFT SCREEN a small boat that bobs up and down. (This boat gives scale to Perseus who will fly faster and in front of it.)

CONTINUING ACTION as Perseus flies in from left screen and moves to centre of screen. Hold him there a bit, then let him swiftly fly off right screen.

CUT TO: Stationary Background of large rock, seas lapping at foot of rock. A beautiful maiden is bound to the rock with chains. A monster crawls back and forth in front of her. (Lap the still picture SEA by using 'Color Cycling' of up to four colours running at the same time. Make a set of the Maiden and a

TITLE: THE END

Don't be misled that this is too simple for you to tackle. Although there are only three characters, each change of action any one of them has will require a new 'set' of animations of the 'face'. Take a look at the break down of the sets:

These shots are all MLS (Medium Long Shots, i.e. full figure) except for the CUs (Close-Ups) of the kissing scene.

Perseus

Flying

Landing by Princess

Fighting with Monster

Hacking off Andromeda's Chains

CU profile puckering up for kiss

Monster

Pacing back and forth (Set Editor has a neat reverse mode under Special Menu called Flip Set Horizontally which will take care of this. Cut into pieces which fall to ground Blood... lots of squirting blood from the pieces.

Andromeda

Posing against the rock as if bound with chains. The chains must be SET, too.

Released from chains.

CU of profile puckering up to kiss Perseus. (There are two titles. The opening title is a 'Set' which is given its own 'Track' onto the scrolling sea Background. The second one, 'The End', is a plain Background IFF file.)

The film is ended, but we have no melody to linger on. Music has given me a hard time on *MOVIESETTER*. Every animated film must have a good sound and music track. *MOVIESETTER* gives you remarkable sound-tracks which sync with the action easily. However, to get a music track you must build it sound and or note by note from what is essentially a SMUS snd. file.

Sampled sound can be thrilling with its subtle live recording effect, but it eats memory like the cookie monster. The AMIGA is multitasking; so why don't one of you bright programmers write a little program that starts and stops in sync, with the beginning and end of a *MOVIESETTER* production?

To place SFXS (that's Sound Effects in film talk) in the story of Andromeda & Perseus, dig into your PUBLIC DOMAIN files of SMUS snd. and come up with a wave rushing, the smack of a sword blade, the shrieks of a dragon and the sighs of a maiden. Use them as much as you have left of your memory. You can get a lot of mileage from one sound by using the piano key pitch alter in the 'Sound Control' of *MOVIESETTER*. The cries of a baby when played several octaves lower sounds like the horrible death throws of a monster.

Well, that's it except for you starting your own film. Keep it simple, watch the colour of palette changes, and save often. Good 'Lights! Camera! Action! to you... or is that another program we'll soon be dealing with? *Y/A*



a rock in the sea to be eaten by a monster. The plot needs some plain sea, preferably a scrolling one that Perseus flies over (oh yes, *MOVIESETTER* can scroll a background either vertically or horizontally). It will require one background change. The end scene will be a rock to which we can chain Andromeda. The sea laps at its base. There are two backgrounds.

The Script

The film opens on a black screen.

set of the chains, for later the chains are cut off).

ENTER left SCREEN: Perseus swooping down to a landing beside the fair maiden. He does battle with the dragon.

ACTION CONTINUES as Prince hacks monster into pieces, then hacks off chains to free Princess.

CUT TO: Close-up of face of princess. Face of Perseus enters from left, kisses Andromeda. (Use the Sea BG (Background) for this or make another BG of solid sky blue).

WIPE TO BLACK:

Copyist Professional

■ **Producing a printed music score is not** an easy task and computerised help in this area has been a long time coming. *Copyist Professional* is such a program. It offers the musician access to the same type of cut and paste editing facilities that a writer gets with a word processor, but it allows the user to manipulate musical symbols as well as words. The program comes on two disks and needs a minimum of 1 megabyte to operate — even though a hard disk is recommended we encountered no real problems with the 1 meg/twin floppy A500 system used for this review. Commodore's new WorkBench 1.3 is also needed in order to run *Copyist Professional* but *Dr. T* includes this as part of the package.

Copyist Professional is supplied with a moderately sized, but comprehensive, manual. A tutorial introduction gives a general overview of the package and this is followed by chapters which deal in detail with the various program modules. Towards the end of the manual there's the familiar *Dr. T* selection of advanced tips, troubleshooting notes and other appendices. All in all the manual is well written and does a good job explaining a very sophisticated program.

Editing

When you load the score editing module you are presented with the screen equivalent of a blank piece of paper. To create a sheet of manuscript you simply move the cursor to an appropriate place and select **staff** from the pull down menu options. You can decide on the positioning and spacing of the staves used and there are similar options for adding clef and time signature details etc. *Copyist Professional* has rather a lot of symbol creation facilities so some of the commands, such as those to add bar lines and link staves, are implemented as function key based operations instead.

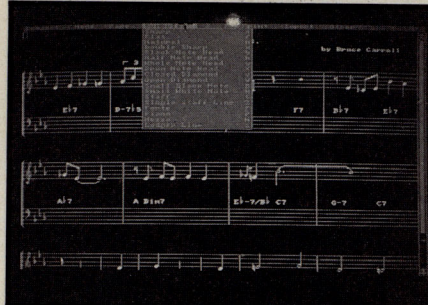
Like many sophisticated programs *Copyist Professional* takes a little while to get used to but surprisingly it doesn't take that long — within a few hours I'd made significant progress. By the end of the first day's use I had no doubt that the program is well thought out. The cut & paste operations allow you to move, edit and transpose complete sections of music and they are very flexible. For instance you can mark out a phrase and then write it back in transposed form straight into the section that the music was originally taken from. This allows you to superimpose a rough harmony line onto an original melody (all you then need to do is make the odd adjustment for major/minor thirds etc., to complete the harmony).

The *Copyist's* editor facilities have been designed with the serious user in mind. You can add song words, chord symbols and miscellaneous text anywhere on the score and you can even change the position of bar lines after a piece has been written. The editor caters for all of the usual notational needs:

beams; ledger lines; stem direction; triplets; rest bars; slurs; trills; extended brackets etc. You can even incorporate user defined symbols which have been designed with the *Copyist's* own font editor. A general macro facility has been implemented and this lets you automate many of the *Copyist's* routine operations.

There are several ways of entering data. Notes can be placed on the staff individually (in conjunction with the block move cut and paste facilities), a **join** mode allows groups of beamed notes to be entered quickly, and a **keyboard** mode is also provided so that you can position notes using the Amiga's keyboard. Lastly there is a separate **text** mode which enables you to place verses, choruses or any other pieces of text onto the composition.

The editor can handle scores that contain up to 50 manuscript pages per score and each page can consist of up to 9000 different symbols.



As an added bonus *Copyist Professional* can do something else which is both clever and very useful — it can import **SMUS**, **MIDI**, and **KCS** sequencer files, translating (transcribing) them into musical notation as it goes. This transcription ability adds a new dimension to the program because it enables you to use a MIDI keyboard/sequencer arrangement to produce the bulk of the score with the final tidying up being done via the *Copyist's* editing facilities — this not only saves time but allows you to do a job which is almost impossible by other means.

Does it work? Well somewhat surprisingly, yes, and it seems to do a good job of it as well. Bars were correctly divided, i.e. long notes that were played across a main bar division were properly split and tied so that the bar in question was correctly partitioned. The transcription facilities are an area where you need to experiment to get the best results. If you expect to be able to read in a mixed up 24 track sequencer file and get each part written out separately you'll be disappointed. If you use this transcription option sensibly, especially if used in conjunction with a sequencer so that you can separate out parts etc. you'll get the maximum control over the translation process and will find it both a fascinating and very useful facility to have.

Other Modules

The *Copyist Professional* package also contains some other modules: *Parts* allows you

Amanda Jones takes a look at Copyist Professional, the new musicians' 'word processor' program from Dr. T's Software Company.



to create separate instrument parts from a score and allows the isolated parts to be renamed, transposed and reformatted. *Synth* converts *Copyist* score files back into **KCS** .ALL file and **MIDI** file formats.

Visual Quality

As far as final print quality goes this will obviously depend on your printer capabilities but with the right hardware at the end of your system the *Copyist* can produce excellent high resolution score printouts. Manuscript quality scores can be created using specially optimized printer drivers for dot matrix and HP LaserJet printers.

Conclusions

The *Copyist Professional* costs £199.95, so is really aimed at professional and serious amateur musicians. It is clearly an impressive and well thought out program. It is also a program which you need to spend time with if you wish to get the best possible results — but having said that there's little doubt that this would be time well spent. As far as the Amiga goes there doesn't seem to be any obvious competition and for this and many other reasons I suspect that this piece of software is going to win a lot of new friends for *Dr. T's Music Software Company*. *YA*

Title: **Copyist Professional**
Author: **Dr. T's Software Company**
Supplier: **Digipro Ltd.**
Enterprise House,
Howards Grove,
Southampton SO1 5PR
Tel: **(0703) 703030**
Price: **£199.95**

Gauntlet II

■ And here it is ladies and gentlemen, the stunning sequel to the all time smash hit classic, *Gauntlet* !!!! Yee harr !! Er, just a minute, *US Gold* never released the original game (thankfully some might say after seeing the other versions) yet here we are with the sequel *Gauntlet II*.

In fact while *US Gold* has been messing about with the license, *Rainbow Arts* has nipped in and released *Garrison I* and *II* (though that was the same game with different levels), a hugely impressive *Gauntlet* variant. It's now ironic that *US Gold* actually distributes

Duncan Evans tries his hand at running around mazes, collecting treasure, and beating up nasties in this version of an extremely popular arcade game



Rainbow Arts stuff in this country.

How much of a mark can the official sequel make though? I suspect that it will make quite a lot, regardless of what I or any other reviewer may say about it.

You all know that you're down in a dungeon, along with up to three mates (if you have the joystick interface available from *US Gold* or *Microdeal* for another £5.95 — thanks very much) roaming around, hacking and the like, and simply accumulating points. Well, the points are one thing, but what will drive most people on, especially if you have that interface (otherwise it's two players only) is the desire to see how far they can get, how many levels they can master.

Down in dungeon city, you can play an elf, warrior, valkyrie or wizard, in any formation. So, there could be four warriors or three elves and a wizard (which I wouldn't recommend). While the elf is quite spritely, he's a bit of a wimp, and once you get past the first few levels he gets wasted with tedious regularity. Only play this sucker if you want a challenge.

The wizard and warrior are the two best characters by far, and the former has the best command of magic (which amounts to how many hits the monsters take when he activates

the smart bomb-like potions).

One of the first problems that you'll encounter is locked doors. Unfortunately, pretending to be a Millwall supporter and booting them doesn't really work, so you need keys, loads of them. Some walls do succumb to the violent approach though, and other sections are either portable or they move by themselves.

As you watch your health points steadily drip away, like Luton Town's home support, don't despair (just yet) — a leg of pork will have you feeling much better.

While you are strutting around, laying into those horrid monsters, and the smallish screen (*Garrison* was bigger in every department) scrolls adequately well, you will encounter various amulets. Don't ask if they belong to anyone, just grab them yourself as quick as you can (note to small children: don't try this in real life). You can then make yourself invisible, invulnerable, be totally repulsive, have reflective shots, have super shots, and be able to walk through walls. So they're worth having mates.

Over on the 'beat me, beat me' side are ghosts, which move incredibly quickly, grunts (these are Millwall supporters), demons (breath fire etc), lobbers (they lob, what else ?), sorcerers (who disappear then reappear), deaths (as you can imagine, an encounter with a death is not pleasant), acid puddles (which make a disgusting gargling sound on contact), the IT monster, a dragon and the thief.

The IT monster is a bit of laugh in a multiplayer game as once it touches you, you become IT, attracting all the monsters on that level. If you manage to touch a fellow adventurer then they become IT. Cooperation goes out of the window when IT's about.

The dragon is quite impressive, and the thief pinches things (what else).

To be honest I prefer playing *Garrison* in two player mode, because it has a bigger playing area and better graphics. That said, *Gauntlet* can support more players, has better in game sound effects and is still a decent game. Having said that, it looks and plays exactly like the ST version (except the ghosts are marginally faster) and the scrolling isn't perfect.

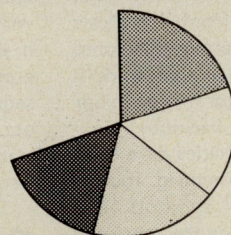
Still, if you want a good multiplayer mindless thrash then *Gauntlet II* should suffice, so polish that broadsword and get hacking. *YA*



GAUNTLET II

Title: **Gauntlet II**
Supplier: **US Gold**,
Unit 2/3,
Holford Way,
Holford,
Birmingham B6 7AX.

Tel: **021- 356 3388**
Price: **£24.95**



Graphics: **20**
Sound: **16**
Playability: **18**
Value: **16**

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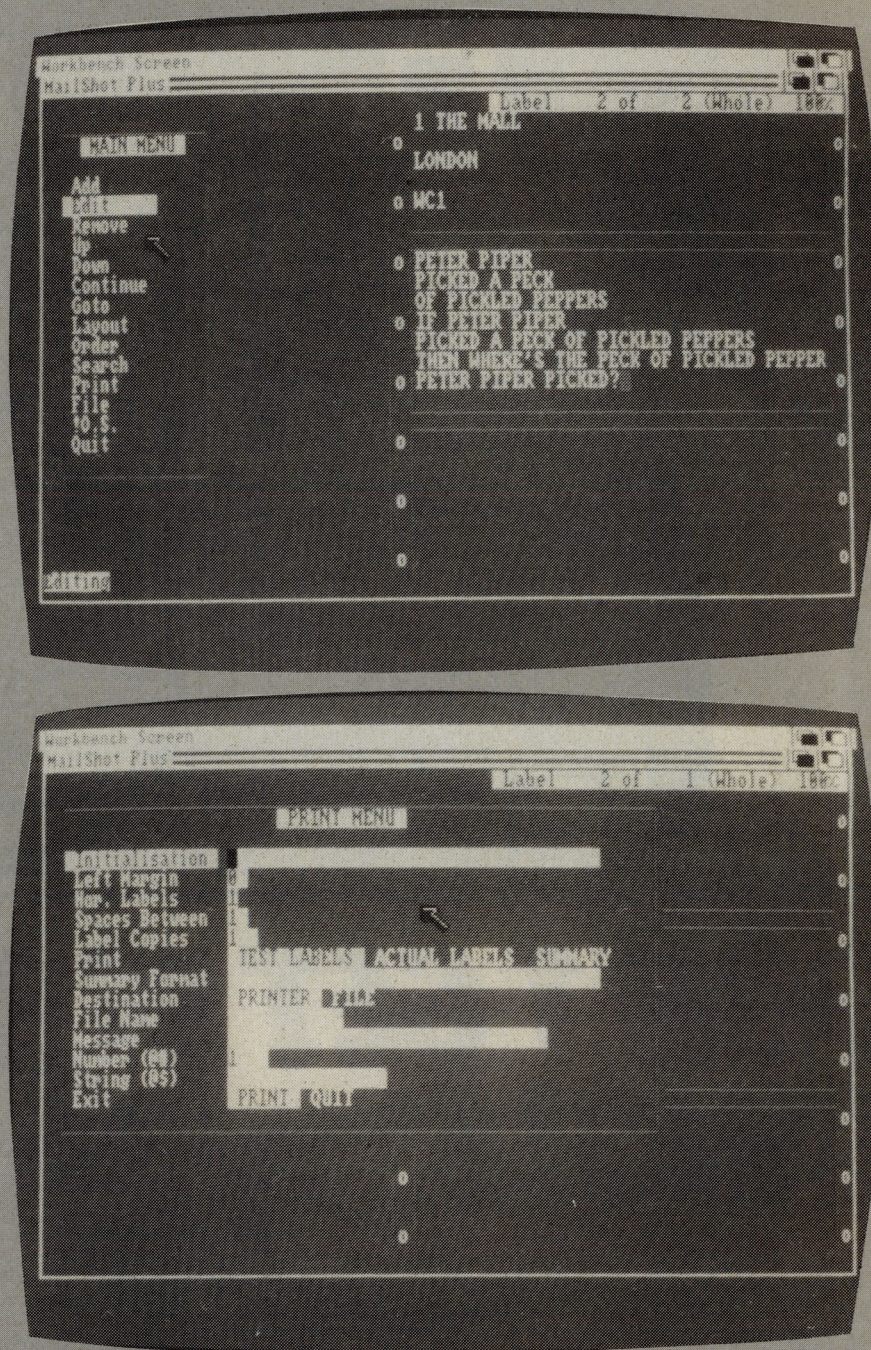
Mailshot

Mailshot is a label printer for the busy small business. Fin Fahey gives it the once-over

■ Along with putting things inside other things, putting labels on the outermost of the things is a serious business — a lot of people are kept in gainful employment by this simple but pleasing artform. So is Digita's *Mailshot*, a piece of software wholly dedicated to this task, going to represent a threat to their prospects?

Mailshot is oriented specifically towards address labels — in effect it's a simple database with as many fields available as you may need for any given size of label. The innovative aspect of the program is that it displays the label file on screen rather like a strip of film that you can scroll through. This gives the process of producing labels a certain immediacy — you stop thinking in terms of files, and think of the disk as containing a direct image of the label data. Commands for moving up, down and searching through the 'label spool' are all provided.

Title: **Mailshot**
Supplier: **Digita International**
Kelsey House, Barns Road
Budleigh Salterton
Devon EX9 6HJ
Tel: **(0395) 45059**
Price: **£24.95**



Having said that, that's about the only feature that pleased me about what is, when all's said and done, a very slender piece of software for a business program. If you are extremely, and I mean *extremely* computer-illiterate, you may need this approach. Rather like moving your lips when you read — no offence. Anybody with a hint of suss will want a proper database — may I recommend Precision's *Superbase* — which will be compatible with other applications. This will allow you to mailmerge, for a start. These days, full databases, particularly on the Amiga, are not that user-hostile. It was *dBase II* that got databases their bad reputation, but those times are long gone.

In sum, then, if *all* you want to do is get a set of labels out quickly, this might suit you. I feel that most users would be better off, in the long run, with a more versatile piece of software. *yA*

TV Sports Football

■ **TV Sports is part of Cinemaware, the Mirrorsoft offshoot that shot to fame with Defender of the Crown** and regained its reputation after a sticky period with *Rocket Ranger*. Now it's trying its hand at sports simulations with American Football as its first offering.

American Football is growing tremendously in popularity and the recent close Super Bowl between Cincinnati and San Francisco will no doubt ensure that more and more American Football games enter the fray. So it's becoming more important to judge such games on their merits rather than just because they are American Football games. Consequently, this review may appear more critical than other magazines that heap praise on any football game.

The first thing to mention is, of course, the game's graphics which, as you would expect, are quite exceptional and include TV announcers to predict the outcome of the game. There are fans and cheerleaders to spur you along and, of course, the players. These usually appear as a top down display but for field goals and extra point kicks they are promoted to full 3D. Unfortunately, unless you have a second disk drive, this will become slightly irritating as you will have to swap disks before and after every kick.

TV Sports Football also has details and stats on all 28 of the NFL's teams and allows you to play a full 16 week regular season complete with playoffs. This might not sound exceptional until you check out the other games and realise how few contain such a basic criterion. This game goes further and allows you to play a whole season or set the program on automatic for half of it if you haven't the time. You can also play exhibition (one off) matches against the computer or human opponent or gang up with a friend against your Amiga or practise running, passing and kicking which is essential if you're going to stand any chance at all in a game.

Running the ball is the simplest move where you guide the ball carrier into openings until the defence crunch. Similarly, kicking is a matter of timing and learning the best place to make contact with the ball to get it between the posts. But passing is the stumbling block: to complete a pass you must hope your Quarterback has time to aim the ball upfield and then move a green cursor to where you think your receiver will be to catch it.

Since receivers follow predetermined pass routes in time you'll be able to learn them, but it will take time as most of the time the man you're trying to throw to is off the screen. Perhaps there was an argument for a beginner's passing option that always throws it in the right direction (see *4th and Inches*) because if you can't throw the ball you can't play the game!

Eventually, you'll be accomplished enough to try out your skills in a game and try out the different formations as well as defence. In defence your task is to clobber the opposition before they make 10 yards. To do this you select one of the defence formations which in turn are better at blocking runs, stopping passes and stopping quarterbacks but are risky if the offence doesn't do what you think its going to do. Then again, American Football is half physical and half mental skills. Without both you'll end up bruised and beaten.

Graphically, *TV Sports Football* can't be beaten, however, some of the routines, such as the TV announcer, rapidly become slow and tedious but the players move and tackle well which should keep the arcade pundits happy. I'm slightly concerned about the shortage of plays compared to some other American Football game such as the PC game *NFL* challenge and it's disappointing to find lists of players that have little to do with today's stars.

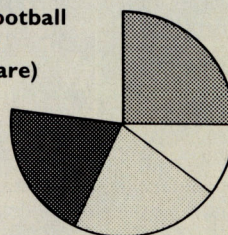
Overall, it is the best Amiga football game to date and one of the best overall, but in some areas it could have been even better. **YA**

Strap on your helmet and prepare for the best your Amiga can offer in bone crunching action as you play football, American style, under the glare of the TV Sports camera.



TV SPORTS FOOTBALL

Title: **TV Sports Football**
 Supplier: **Mirrorsoft**
 (Cinemaware)
 Headway House
 66-73 Shoe Lane
 London
 EC4P 4AB.
 Tel: **01 377 4645.**
 Price: **£24.95**



Graphics **25**
 Sound **12**
 Playability **20**
 Value **20**

Journey To The Ce

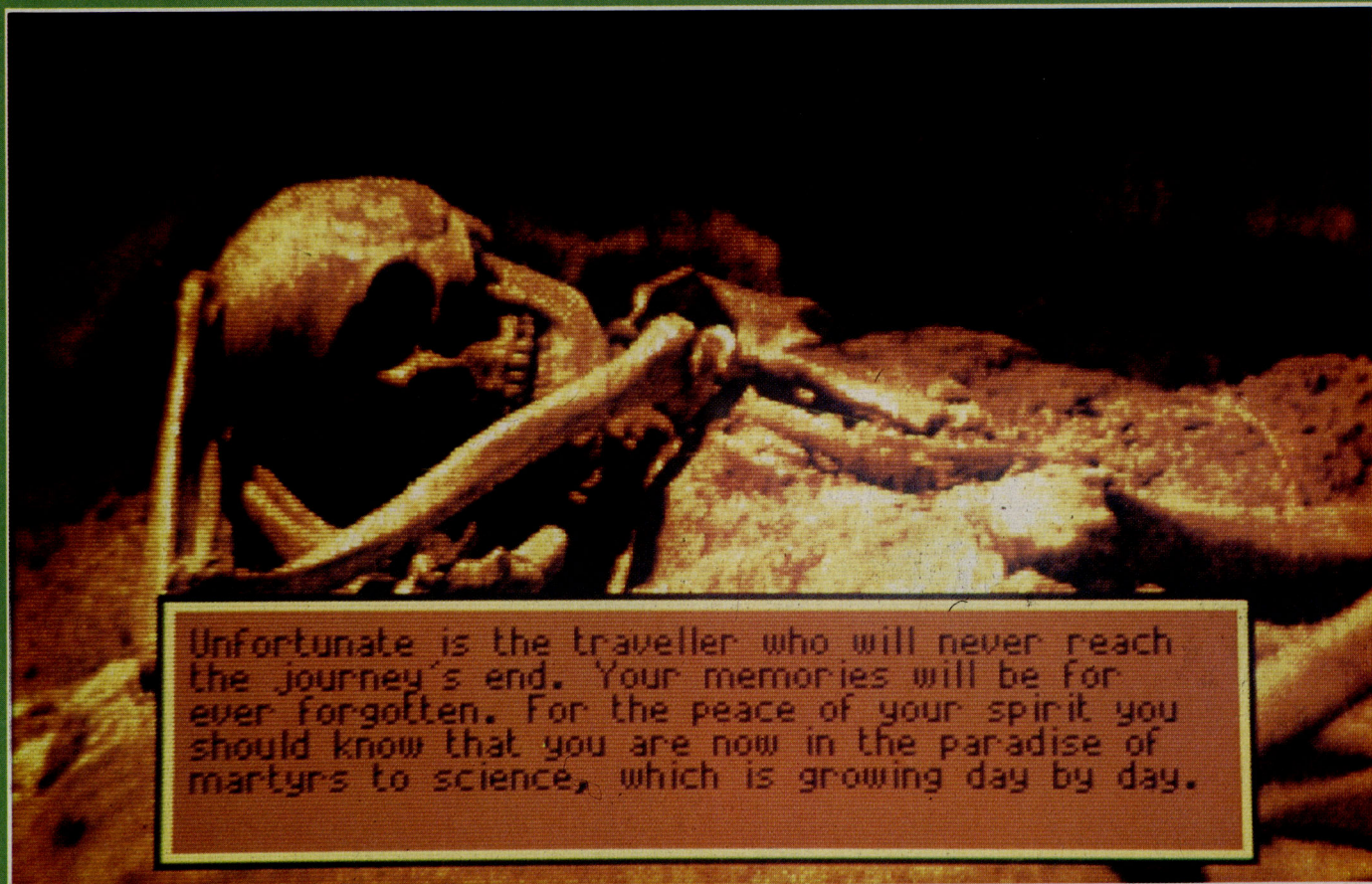
Duncan Evans goes underground with US Gold, and finds himself in a right jam.

broker, you set off to the volcanic crater Sneffels, where things are sure to hot up. Let your guide take you down a 3000 foot deep chimney, and wonder at the beautiful volcanic gallery, but watch out for the falling rocks.

Yes, as an added bonus, for no extra fee at all, we have thrown in a spectacular rockfall

to make your journey to the centre of the Earth even more eventful and action packed.

Just listen to those rocks thumping down, listen to your heart beat faster and faster as you realise that you could be smashed to a bloody pulp at any second ! For the slower members of the party there is a 'money back



Unfortunate is the traveller who will never reach the journey's end. Your memories will be forever forgotten. For the peace of your spirit you should know that you are now in the paradise of martyrs to science, which is growing day by day.

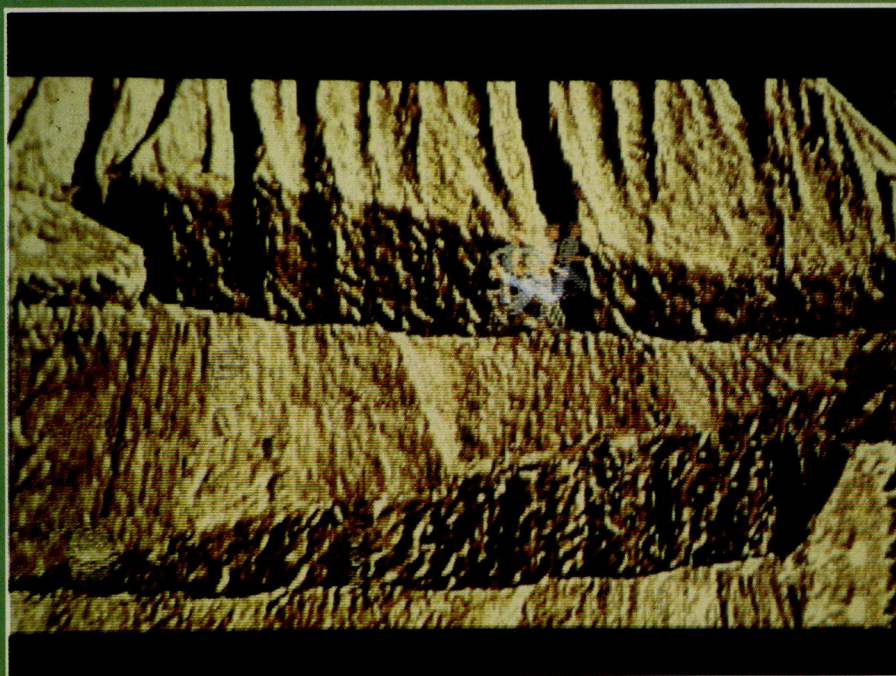
■ Yes for only £25 return, the holiday of a lifetime to the centre of the Earth can be yours.

You start your adventure at the *US Gold* office in Birmingham where you will deposit the £24.95 fee and sign a disclaimer for damages.

From there you will fly to Mount Scartaris and sample the invigorating mountain air of Iceland. Stay in our luxury one star hotel overnight and select the guide who is going to take you deep inside the very Earth itself.

Will it be number one, Erik Gunnarson, strong and reliable, number two, Louis Bourdon, intellectual but a heavy smoker, or number three, Francis Rutherford, aged but full of experience, or even number four, Antonio Rossi, another clever chap but with a dash of Italian passion ? The choice is yours !

Following in the path of Arne Saknussem, 16th century sage and stock



Centre Of The Earth

if you die' option, so if this is the case then just pop along to our head office in Kabul and we'll give you a full refund. On the spot !

Having escaped the cascading rocks you'll find yourself separated from the rest of the party, and faced with the satisfying challenge of finding your way to the Mushroom forest.

We supply you, absolutely free, with food and water, a hammer to examine geological strata, and a first aid kit. Just the thing for those sticky encounters.

Yes, it's true, we are supplying a limited amount of medicine which will completely heal your battered torso, but hurry, stocks of this popular item are sure to disappear quickly so take the opportunity now.

As you descend into the Earth just marvel at the wondrous cave formations, and watch out for the wildlife. Thanks to advance booking and our computerised system you too will be able to enjoy the thrill of fighting off a pterodactyl, and have to run for your very life before a stampede of hairy mammoths. It certainly beats crossing the MI wearing a blindfold !

Just follow the clues — like daggers labelled A.S — catch the odd moment of sleep to keep your vitality up, and before you know it you'll have reached the eighth wonder of the world, the Mushroom Cavern.

Should you be getting short of water you can always play the catch the droplets game, but watch out for those stones, they'll make you spill water everywhere.

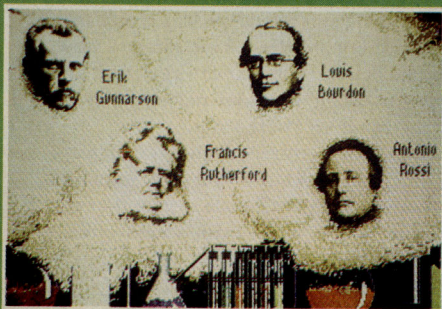
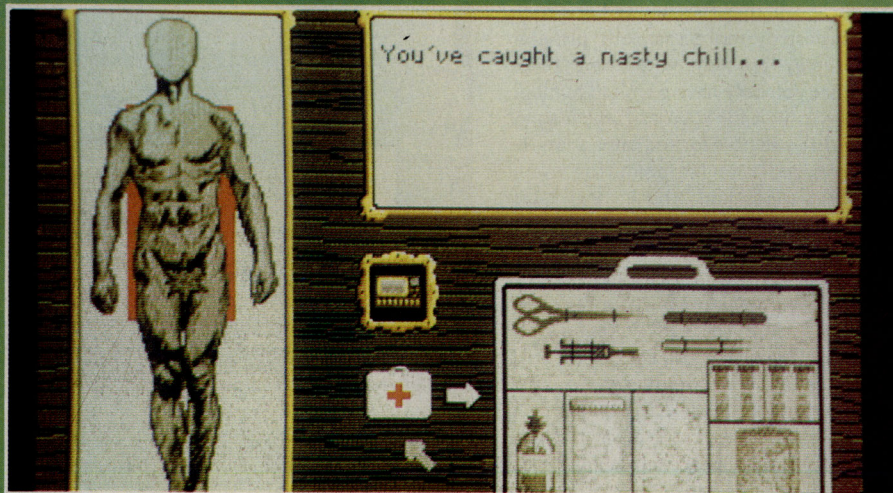
From here it's only a short trek to the cavern of bones, the great underground lake, and the final stop on your whirlwind tour, the ruined town. Exit from centre of the Earth the quick and easy way, by lava propelled lift, and you'll find that your fabulous journey has come to an end all too soon. Still, there is always next year.



Basically this is a strategy game with a pretty poor map, lots of digitised underground scenery, sampled sound effects and some turgid arcade sequences, all in the vein of *Joan of Arc*. Unfortunately, *Journey's* arcade sequences are mouse control only which is unforgivable, and is just chock a block of totally random encounters and accidents. For example, you click on the walk icon, you hear footsteps,

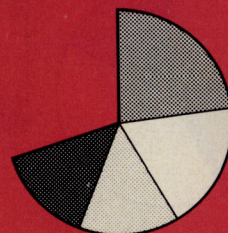
then a text message informs that you step on a steaming rock and pull your foot away screaming. I mean, really.

Journey could have been a decent strategy game with classy arcade elements, but alas falls down in all gaming departments to leave you with a very attractive game, some interesting sound effects, and a desire to go to Turkey for your holiday this year instead. **YA**



JOURNEY TO THE CENTRE OF THE EARTH

Title: **Journey to the Centre of the Earth**
 Supplier: **US GOLD**,
 Unit 2/3,
 Holford Way,
 Holford,
 Birmingham B6 7AX.
 Tel: **021-356 3388**
 Price: **£24.95**



Graphics: **23**
 Sound: **19**
 Playability: **14**
 Value: **14**

Gordon Hamlett ventures off into the wild blue yonder

■ Is it a bird? Is it a plane? No! It's an oncoming air to air missile. Oh well, it's only another life up the spout.

Afterburner from *Activision* is the conversion of one of the top arcade games of last year. All that's missing is the seat cum console that you sat in as you blasted your way to death or glory. Those of you seeking added realism will have to make do with a swivel chair I suspect.

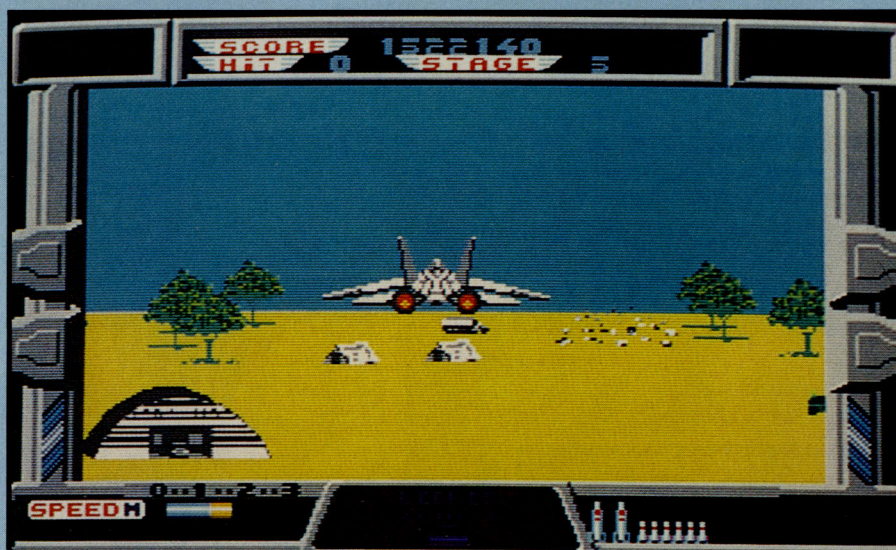
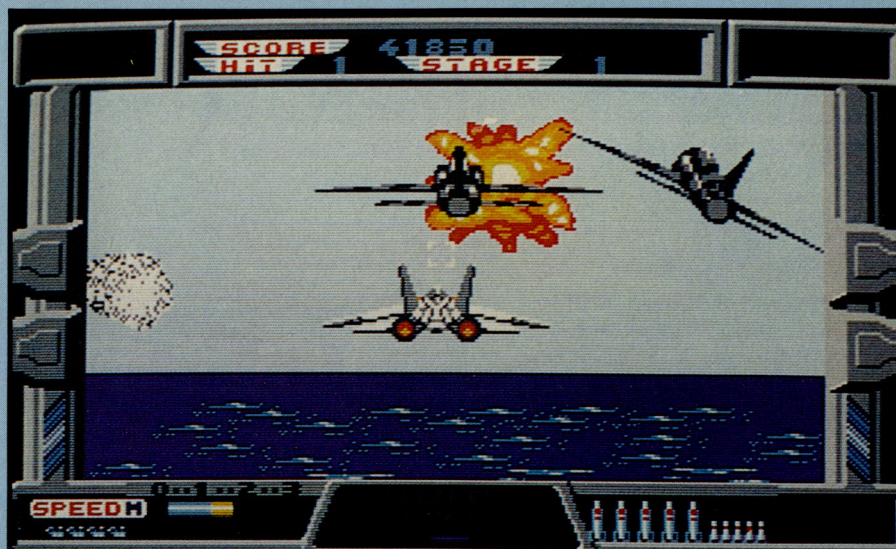
As plots go, *Afterburner* offers the ultimate in minimalism. There isn't one. You are at the controls of the latest in supersonic jet fighters — an American F14 — battling against ever increasing odds against a nameless but nonetheless relentless enemy.

Your view is presented from just behind the tail of your aircraft with the enemy coming head on to meet you. Apart, that is, from those that sneak up on you from behind. The 3-D effects work superbly well as you hurl your plane round the sky.

The game effectively divides into two phases, offensive and defensive manoeuvres. As enemy planes come within range, your cannons fire automatically although my experience is that they do little damage. More useful are your missiles. These will take out instantly any craft that they hit and it is even possible to destroy more than one plane at once. The only problem with using these though is that you only have a limited number and you have to wait for your instrument panel to indicate that you have locked onto a target. You get awarded one hit point for every aircraft destroyed and these are later converted into a bonus when you complete a section. As you progress further into the game, you get topped up with missiles and gain the odd extra life to help you on your way.

If you can shoot at them, it seems only reasonable that the enemy can fire back at you, and so you will have to avoid large numbers of incoming missiles. In the early stages, it is easy enough to dodge out of the way of them but when they start appearing in numbers or

AFTERBURNER



from behind, then things become somewhat tricky. Fortunately, there are warning lights in

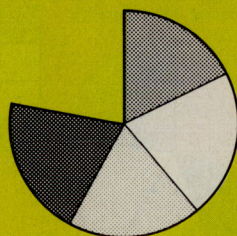
your cockpit to let you know if someone or something is trying to shoot you up the bum. The standard escape route here is to move into one corner of the screen and perform a 360 degree. Ideally, this should now put you behind whatever it was that you were previously in front of.

Also at your command, and useful if you happen to have run out of missiles is a change of speed. There are three basic rates — slow, cruise and fast — but you can really hit the accelerator, albeit for brief periods only by switching on your afterburner.

As already mentioned, the graphics are very good and there is a range of sound to accompany your task. Choose from either the usual repetitive tune or from sound effects which includes some excellent speech synthesis even if the vocabulary is a trifle limited. All in all then, a first class shoot-em-up. *YA*

AFTERBURNER

Title: **Afterburner**
Supplier: **Activision**
Blake House,
Manor Farm Estate,
Manor Farm Road,
Reading,
Berks.
Tel: (0734) 311666
Price: £24.99



Graphics: 21
Sound: 18
Gameplay: 19
Value: 20

Palette-Mate

■ **Palette-Mate** is a short, basic utility program for the Amiga, which will enable the user to create a palette of up to 32 colours or shades. A predetermined amount of numbered colour bars is displayed on the screen along with a digital readout of red, green and blue values which make up the colour selected. Underneath this are slider controls which allow fine tuning of the R.G.B. composition of each colour. To the lower right of the screen appears a large rectangle of colour which identifies the present colour, while clicking the mouse on the menu bar reveals a fifth set of options under the heading 'DISK'. These will perform tasks such as Loading or Saving the palette, viewing the directory from program mode or Randomizing the palette. Also, a complete list of palette values can be displayed by selecting 'CHART'.

Using Palette Mate

Palette-Mate is extremely easy to use and should assist anyone in swiftly creating a colour palette to be used in other programs.

On 'running' the utility, you will be asked for the number of colours required. After choosing this, the program sets up a palette display on screen 2. At this point, the program is completely 'Mouse' orientated. Now simply click the mouse over the colour you wish to alter. Immediately the colour reminder to the lower right of the screen takes on the selected colour, whilst the slider controls jump to the correct setting for this colour. At the same time the appropriate digital R.G.B. values will be displayed in the boxes above the colour indicator. To adjust the colour, move the slider controls using the mouse. A little practice may be needed in creating the colour you want! If you have any difficulty here, try clicking on one of the colours that is closest to the shade you desire, then make a note of the position of each slider. After you've designed all the colours you need, use the 'CHART' option under the heading 'DISK' to display a complete list of all the R.G.B. values which make up your colours. These can then be jotted down for future use in palette statements or alternatively, use the 'PSAVE' option to save your colour scheme to disk. This can then be recalled at a later date, by using the 'PLOAD' option. The program will inform you if it can't find a colour file when using 'PLOAD'. You may then want to use the 'DIR' option to examine the present directory.

Finally, a 'MIX' option will Randomize the palette. Don't use this option if you have colours on the screen which you need and haven't saved or made a note of! 'MIX' will also reset the default colours of for Palette-Mate. These are a black background with green, brown and yellow for colours 1,2 and 3.

Typing It In

If you, like me, hate those awfull GURU MEDITATION messages, then save the listing to disk before 'running' the program, just in case Amiga crashes!!! Should you make any errors when typing-in (and you will), these will be picked up by the error trap routine at the end of the listing labled '999:'. This routine will force window 1 to the forefront and flash the message "PROGRAM ERROR". At this point, stop the computer and plate a 'REM' in front of line number 10. Now the error can be

found by 'running' the program again.

The error trap is designed to filter out 'Load errors'. This means that the program doesn't stop if a colour file can't be found, it merely aborts the load. Make sure that you erase the 'REM' that has been placed in line 10 if you wish to keep the abort facility.

ya

```
REM "Palette-Mate" by Frank Bingley 1988
REM For any AMIGA
REM AMIGA must be in 80 column mode for this utility

10 : ON ERROR GOTO 999

'Initialize
DIM colour(31,3),hash%(96),bar%(1546),block%(76)
PRINT "PALETTE MATE v1.0"
PRINT "By Frank Bingley 1988." :PRINT
init2:
INPUT "NUMBER OF COLOURS (4) (8) (16) (32)";cols$:cols=VAL(cols$)
IF cols<4 AND cols<8 AND cols<16 AND cols<32 THEN
PRINT "Try Again !":GOTO init2
END IF:scrn=2:depth=5:mode=1
GOSUB addmen:MENU ON

'Define screen 2
SCREEN scrn,640,200,depth,mode
WINDOW 2,"PALETTE-MATE v1.0",0,0,-(320,176),0,scrn

'Get colour scheme
GOSUB colormix
COLOR 1,0:GOSUB display
GOSUB slide

main:
m=MOUSE(0):IF m<=0 THEN GOSUB getmouse
u=MENU(0):IF u<=0 THEN GOSUB getmenu
GOTO main

'Screen 2 Display
display:
'Draw Palette
FOR a=0 TO (cols/4-1):FOR b=0 TO 3
LOCATE 1,1:COLOR 0,a*4+b:IF a=0 AND b=0 THEN COLOR 1,0
PRINT USING "##";a*4+b
LINE(10+40*b+1,10+a*10+2)-(50+40*b-1,20+a*10),a*4+b,bf
GET(0,0)-(15,6),hash%
PUT (10+40*b+12,10+a*10+3),hash%,PSET
NEXT b,a
COLOR 3,0:LOCATE 1,1:PRINT SPACES(3)
LINE(11,12)-(49,20),1,b

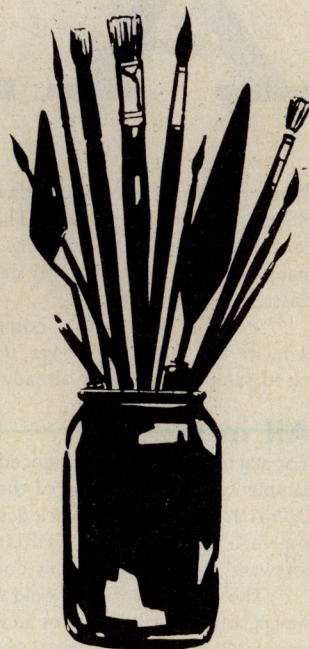
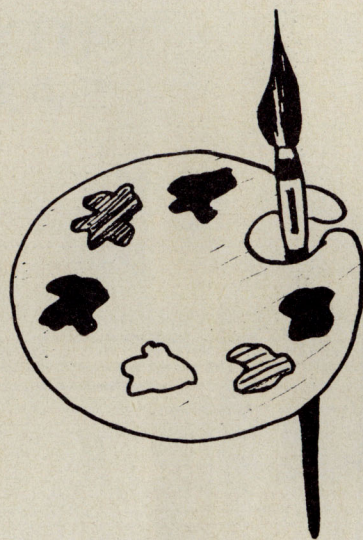
'Display Title, Digital palette references and Colour Indicator
COLOR 3,2:LOCATE 2,23:PRINT "--PALETTE-MATE--"
COLOR 2,0:FOR a=0 TO 2
LINE(180+(40*a)+1,32)-(220+(40*a)+1,52),3,b
LOCATE 6,25+(5*a):PRINT ".00":NEXT a
LOCATE 8,25:PRINT "RED GREEN BLUE"
LINE(180,72)-(300,92),3,b
LOCATE 13,28:PRINT "COLOUR 0":RETURN

'draw slider controls
slide:
LOCATE 15,1:PRINT " RED"
LOCATE 17,1:PRINT "GREEN"
LOCATE 19,1:PRINT " BLUE"
FOR a=0 TO 2:FOR b=55 TO 255 STEP 25
LINE(b,110+(16*a))-(b,119+(16*a)),2:NEXT b
LINE(50,113+(16*a))-(260,115+(16*a)),1,bf
NEXT a
LINE(0,0)-(10,8),3,b
GET (0,0)-(10,8),block%
GET (50,110)-(260,120),bar%
FOR a=0 TO 2:PUT (50,110+(16*a)),block%,PSET:NEXT a
LINE(0,0)-(10,8),0,b:RETURN

'randomize colours
colormix:
RESTORE:FOR a=0 TO 3:FOR b=0 TO 2
READ colour(a,b):NEXT b
PALETTE a,colour(a,0),colour(a,1),colour(a,2):NEXT a
'Utility Default Colours (0-3)
DATA 0,0,0,0,66,0,45,3,0,85,85,0
RANDOMIZE TIMER
FOR a=4 TO 31:FOR b=0 TO 2
colour(a,b)=(INT(RND*100)/100):NEXT b
PALETTE a,colour(a,0),colour(a,1),colour(a,2):NEXT a
remix:
GOSUB digits:GOSUB upslider:RETURN

'display colour values
colorchart:
WINDOW 1:CLS:PRINT:PRINT TAB(22)"COLOUR CHART":PRINT
PRINT " No."TAB(8)"RED"TAB(14)"GREEN"TAB(21)"BLUE"
```

Expand your colour range with this easy-to-use utility



Continued on Page 49 ►



A.M.A.S.

■ It's not long ago that software house Microdeal were known as "The Pirates of Penzance" due to the uncanny resemblance many of their games had to certain arcade classics I could mention.

So what could this company do to redeem the laughable image the software-based sampler programs already had?

All in One

For starters, A.M.A.S. (Advanced MIDI Amiga Sampler) is a combination of the relevant A-D/D-A hardware which includes a full MIDI interface (IN, OUT and THRU), and all the software needed to run this combination.

The MIDI interface should work with all Amiga software that requires an RS-232-based set of MIDI ports. As yet, I have found no package that isn't compatible. Therefore the unit can effectively be plugged in and forgotten about if you're planning to use your serial port for musical applications only.

The interface also sports two line level phono inputs (left and right) plus a 3.5 mm mic level socket so whatever you intend to sample from, be it the highest quality CD player or the lowest quality microphone, you're catered for.

Software-based samplers have been treated with contempt over the years. Darrin Williamson wonders if Microdeal's new package will change all that

The Software

On paper the software looks very impressive indeed: audio bandwidth catching top frequencies of up to 28Khz, full stereo capability, real-time spectrum analysis, options to load and save samples as raw data or as IFF files for inclusion in other packages plus all the editing facilities you can think of.

MIDI facilities are also up to standard with a host of channel assignment and keyboard split options making it what proves to be a most

flexible unit, at least on paper. Let's see how it stands up on screen.

As with many of these programs, all the controls are confined to one screen to give the appearance of a highly sophisticated tape recorder. At first this looks quite complicated but in the long run it's the best way to lay this kind of package out, because loading several screens in off-disk is a time consuming process (particularly with the speed of Amiga disks!).

At the top of the screen are the cursor position displays and the bank memory selectors. Up to eight banks of ten samples can be stored in the computer at any one time — assuming you have two Mbytes of RAM to play with. A bog-standard 512K gives you one bank of eight samples which is still comparable with several pro hardware samplers on the market. Each additional bank of samples requires a 200K block of memory. A.M.A.S. will suss out what RAM you have spare and allocate it accordingly.

Below that are two sample edit windows for left and right sound channels. In the middle of the screen are the transport and sampling controls, and to the left and right of these are a pair of oscilloscopes, again, one for each channel.

At the very bottom of the screen are the various utility icons which carry out most of the A.M.A.S. editing facilities along with the standard disk and data management task (Saving, Loading, etc). Their uses are as follows:

Info — Merely gives you the usual blub about who wrote the package and when.

Swap — Here you can swap a portion of a sample in one channel with the corresponding area in memory on the other. If you're working in mono this is useful, as you can copy the whole sample onto the other channel and play around with the original.

Mix — This allows you to overdub sounds on one or both channels.

Reverse — Flips the sample on its end so that the sample's end is at the beginning. This is useful for percussive effects, but in general is of no more use than a similar control on a video recorder.

Cut — Handles all your cut and paste requirements. Cuts out the section of sound between the two pointers and joins the two ends together.

Copy — Copies of small parts or whole sounds can be placed within the same sample, or between the two channels.

Shrink — Compressing samples is often an excellent way of saving memory without losing much sound quality. For instance, a 10Khz sample squeezed by 50% will only be 5Khz but will, in general, sound better than if you'd recorded at 5Khz to start with.

Bounce — Creates some interesting cross-fading and panning effects which are useful for thickening up a rather weedy mono sample.

Load/Save — Not surprisingly, saves and loads all sound data in memory.

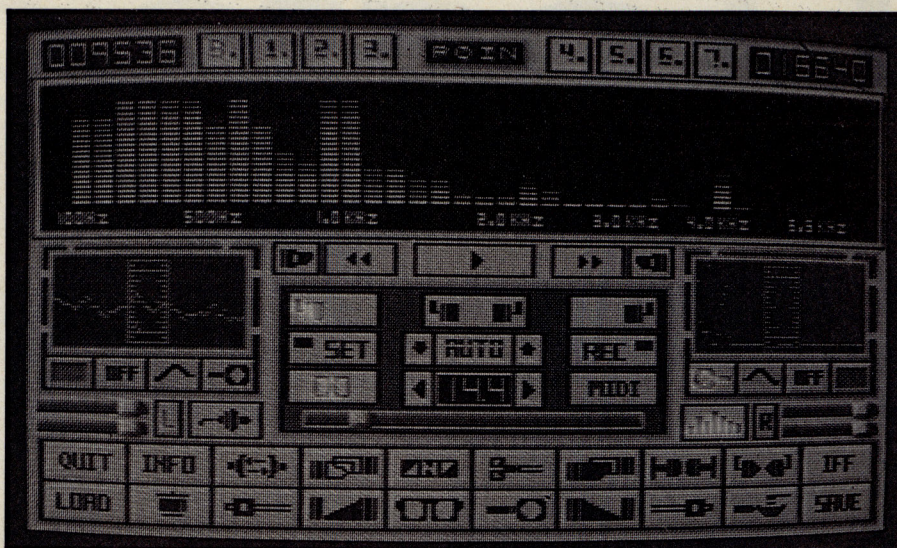
IFF — With this activated anything saved or loaded will be in IFF format, which will allow you to use other people's sounds (Public Domain Libraries, Bulletin Boards etc) plus, of course, using sounds you have created yourself with A.M.A.S. within other sequencers such as Intelligent Music's M or indeed Music X (when it arrives!).

Wipe — Clears out your memory.

Volume Up/Down — Boosts or cuts the output of a sample to your requirements. It's a good idea to keep a copy of what you've got — messing about with this option isn't reversible.

Fade In/Out — A rather nifty little utility that allows you to fade in or out the sound in memory. Excellent for creating slow attacks on string sounds.

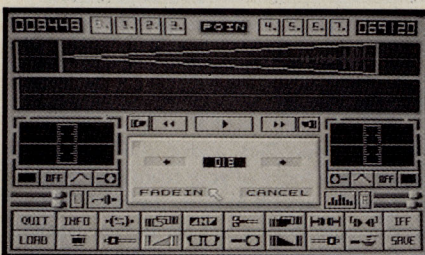
Magnify/Unmagnify — For intricate editing, you have the option to zoom in on a small section of the sound. Once you've done all the



tweakings you need, you can zoom out in exactly the same way.

Filter — Internal low pass filter can be used here to reduce the amount of top end noise heard. This is especially useful on vocal samples or sounds off audio tape which have a lot of background noise.

Quit — Takes you out of A.M.A.S. and onto the workbench screen.



MIDI Implementation

Clicking on the MIDI icon alters the bottom of the screen and another set of gadgets pop up, much like the dashboard of the Lotus Esprit owned by James Bond.

MIDI Mono or Omni modes can be selected, allowing MIDI response from one or

all 16 MIDI channels. Additionally you can assign up to ten MIDI key splits (great for drum banks), octave shift up by two or down by one, fine tune samples, play stereo samples (with two voice polyphony) or mono samples (with double the polyphony).

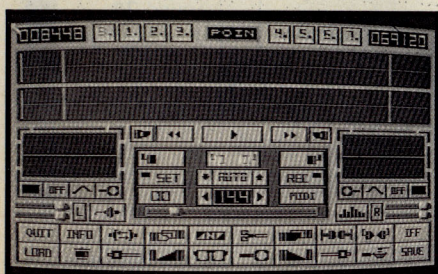
Major Uses

A.M.A.S. has two major uses — as a cheap sound expander/drum machine to be driven from an external sequencer, or as an IFF compatible samplmaker which can be used to provide useful sounds for sequencer packages that cater for this option.

As for sound quality, one can easily be confused by figures quoted by manufacturers. Microdeal quote around the 25Khz mark and in fairness the quality isn't at all bad — it's certainly usable. But don't be misled into thinking that a package retailing for less than £100 will replace hardware samplers costing over ten times that amount.

What it does do is offer a superb introduction to the world of sampling, where you can pick up all the editing and looping skills you need for good samples without breaking the bank in the process. Furthermore the samples will certainly hold their own within a mix and you get a full MIDI interface as well. Who could ask for anything more?

YA



A.M.A.S.

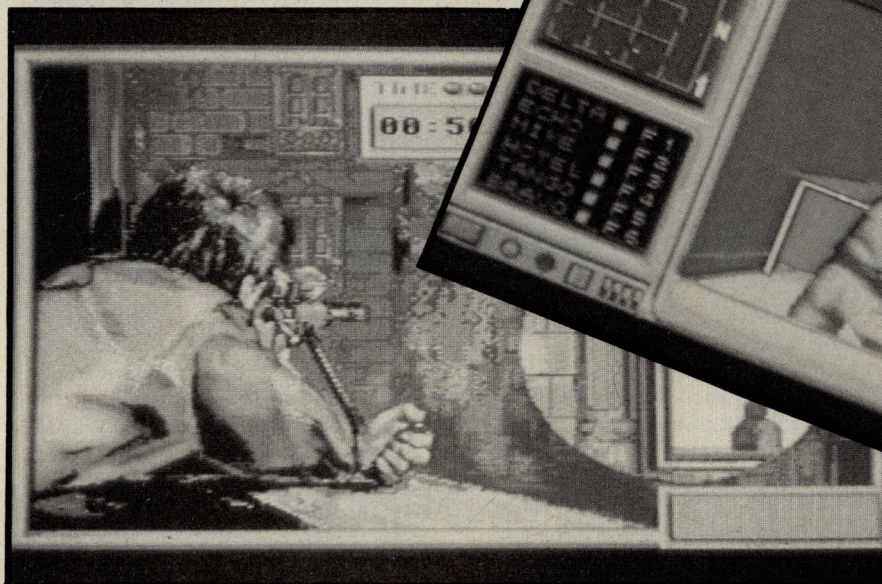
Title: **A.M.A.S.**

Supplier: **Microdeal**, Box 68, St Austell, Cornwall, PL25 4YB

TEL: **(0276) 68020**

Price: **£99.95**

Hostages



Are you cut out to be the leader of a crack team of terrorist bashers?

■ Most of the noteworthy games software for the Amiga now seems to be emanating from the continent, not the States. Obviously spending the last five years on Orics and MSX machines has stood them in good stead, now that they have proper machines to work on.

In *Hostages*, you must free four diplomats who are being held to ransom by terrorists in an Embassy. It's your job to get these guys out alive, and this is achieved in two stages.

Stage One

You must set three of your men up as snipers in vantage points to the North, South and West of the Embassy. You can toggle between Delta, Echo and Mike with F1, 2 and 3 respectively. To do this you must guide them round the street, avoiding the terrorist searchlights. If you're spotted they'll open fire, and you'll lose one of your marksmen positions.

You have a high degree of agility at your disposal. You can run in both directions as well as tumbling and diving for cover in doorways and windows. Once all three marksmen are in position (or however many you managed to get through) you can go about saving those hostages.

Stage Two

Your Helicopter flies above the Embassy, dropping three more of your team (controlled using function keys 4-6) onto the roof. From here you must abseil down the outside of the building and swing through one of the windows. But beware of the shadows at the windows — they're probably the bad guys. Here's where the marksmen come in handy as they can blow away any silhouettes that appear. Mind you, care must be taken when blasting away as there's no way of telling, from the outside, whether the person at the window is a hostage or a terrorist.

Once you're inside, you can prowling round the three levels of the building looking for the four captives. Once you've discovered one of these blue suited chappies, he will follow you

up to the top floor to a room with no windows where he will remain. Once all four are in this room (or have been accidentally shot!), the game ends and you are treated to the newspaper report on your handling of the whole affair. However, you will no doubt come into contact with a few of the uncouth perpetrators of the crime, who do not play fair at all. They won't think twice about using one of the hostages as a shield, or shooting you in the back.

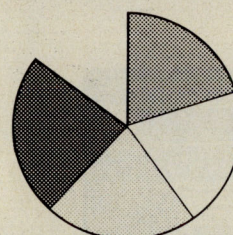
Your view inside the building is first person. Whilst control of your machine gun is excellent, I found the actual movement control a little confusing.

The graphics are superb, the animation simple but effective, and the sound effects/music are highly commendable. In short, one of the few Amiga games I come back to.

ya

HOSTAGES

Title: **Hostages**
Supplier: **Infogramme**
Address: Mitre House,
Abbey Road,
Enfield,
Middx EN1 2RQ
Tel: **01-364 0123**
Price: **£24.95**



Graphics **20**
Sound **20**
Gameplay **22**
Value **23**

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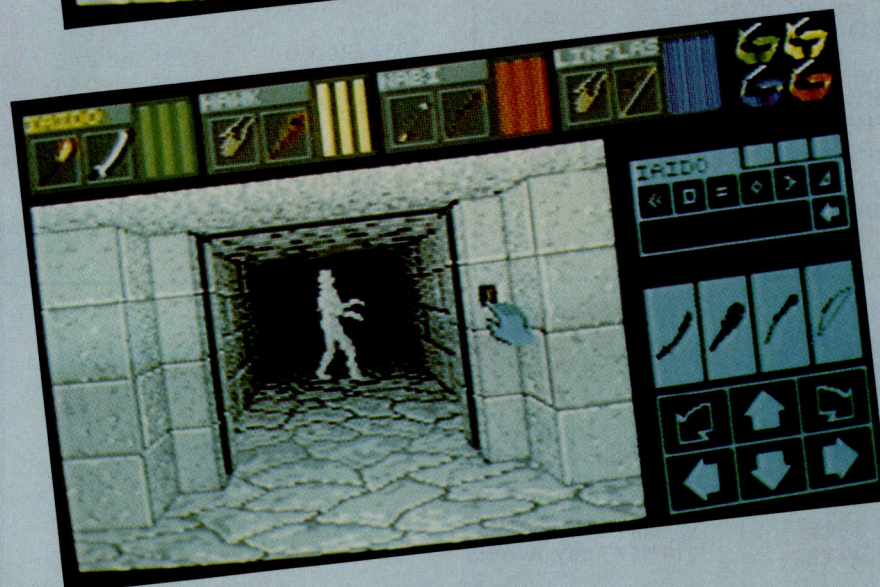
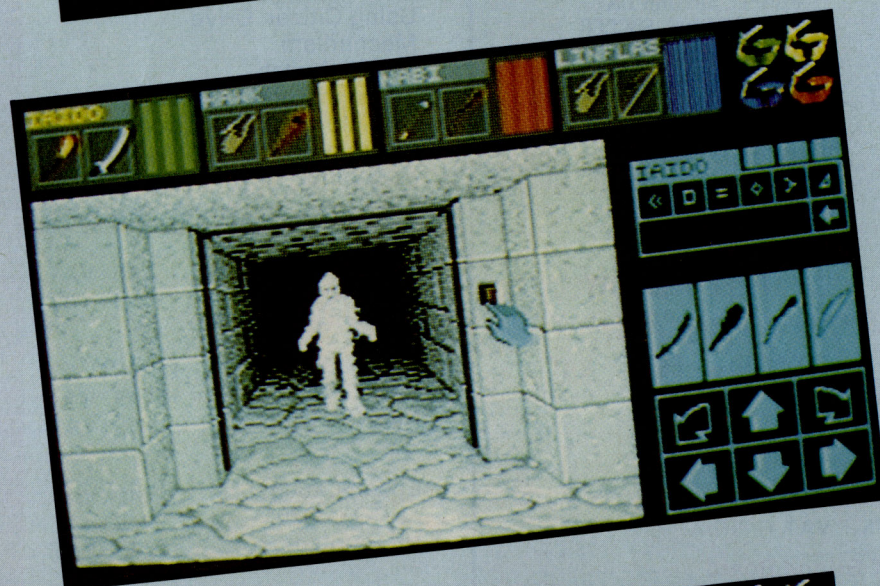
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Dungeon Master

Allen Webb delves into what is probably the most exciting dungeon on the Amiga.



■ Rarely has there been a program which, having first appeared on the ST, has been awaited with great anticipation on the Amiga. However, everyone seems to have been hanging on for *Dungeon Master*. For months before its appearance, I was subjected to a wide range of enthusiastic comments on the ST version and it was with much anticipation that I obtained my copy. The enthusiastic acclaim of the ST version made life difficult when I attempted to assess *Dungeon Master* and I have therefore assessed it in isolation as an Amiga program bearing in mind the other programs of its genre.

So what is *Dungeon Master*? In simple terms it's a role playing game in which you control a group of four characters, in their quest to explore a maze of dungeons and, battle against various foes, traps and other problems. It is not an original game because there are other excellent products such as the *Bards Tale* and the *Ultima* series on the market. It is, however, rather different in its approach. Most of the other types of Role Playing Games (RPGs) have you exploring an area of land. Within this area are cities and catacombs which must be visited. As a consequence the detail and graphical quality is a compromise. In *Dungeon Master*, your activities are restricted to the dungeon. As a consequence, the attention to detail is much greater.

Before I launch forth, here is the bad news. The game is only currently available for those of you with 1 Meg of memory. I understand that a version for an unexpanded A500 is in the pipeline but I don't know when it will appear.

(See News for an update about this — Ed).

Your view

The majority of the display is taken up by the view of the dungeon. This view changes as you move thereby showing you where you are going. Along the top of the screen are four windows which show the status of the members of your band and what items are in their hands. The windows show the strength, stamina and magic levels of each member. In the top right corner is an indication of the relative positions of the band members. Each indicator can be moved to allow you to move weaker members to the rear. The right hand portion of the screen shows the magic window, movement icons and the icons for the weapons used by the band. Your combat actions are controlled from this final window.

A motley crew

Your first task on entering the dungeon is to select your band. The first chamber looks rather like an art gallery with framed pictures on the walls. In fact the pictures are mirrors

containing the essence of past heros awaiting resurrection to join your band. You must choose four of these heros to make your quest. As in most RPGs, each hero has different attributes and you must choose a balance between magic, dexterity and strength. Once you have your band it's off into the dank dungeon.

see and hear it open. If you cannot see it open, you can still hear it. This is part of the atmosphere generated. You can hear things happen. The problem is trying to work out whether it is important.

The dungeon is full of nasty creatures which are out to get you. Rather than simply appearing in front of you, they roam around

the dungeon waiting to leap out on you. Very often you can see them approach from the distance, other times you might see a foot appear around a corner, other times they leap out behind you with a scream. If you listen, however, you can hear the nasties creep around.

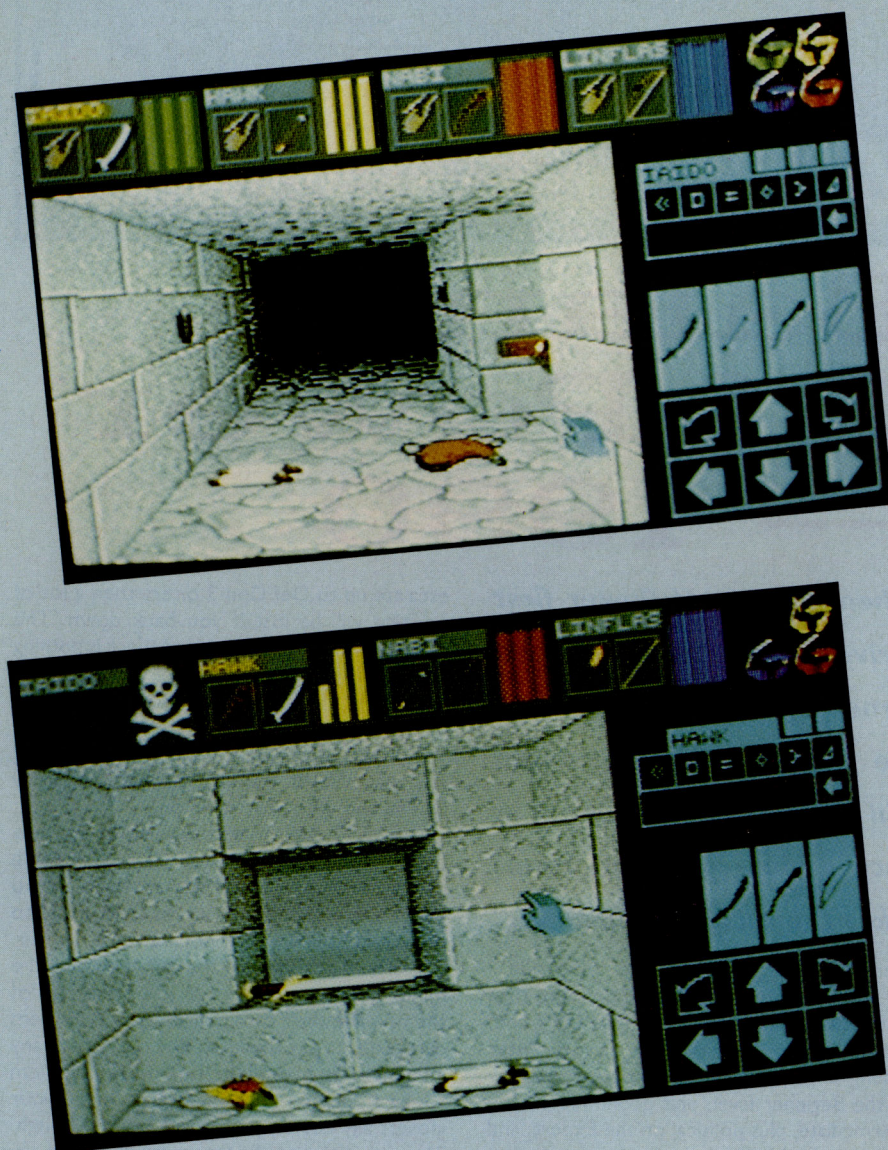
I've mentioned sound rather a lot. This aspect is extremely well done. You don't get any nasty little tunes, the sound track is limited to clanking doors, shuffling sounds, rattling skeletons, the sound of heart beats, screams and all sorts of other ghoulis noises. The sound is in stereo and both shifts and changes in loudness as you move. This all leads to an amazing atmosphere especially when you play at night. More than once I've nearly had heart failure as a nasty leapt out from a dark side passage.

The dungeon comprises around a dozen levels, each becoming progressively nasty. The passages are littered with hidden tunnels and a variety of switches, levers, buttons, pressure pads on the floor and moveable bricks. These often have an obvious effect such as opening a door or activating a teleport. Other times you simply hear an ominous click which appears to have no obvious effect. In keeping with most RPGs, your route is littered with problems to solve. Some are word problems, other require logic or lateral thought. This combined with the unfriendly attentions of the nasties leads to a challenging and enjoyable game.

In order to deal with the nasties, you must resort to magic and brute force. Different nasties require different treatment. As the band use magic or force, their powers increase and they achieve higher levels of ability. The magic system uses a range of runes to generate spells. You can learn which have which effect by either practising or by reading scrolls scattered around the dungeon. It is vital to develop these skills since lower level nasties require greater power to destroy them.

Given all this, what is the game like? In a word — amazing. The plot is challenging and requires both brute force and thought. The graphics and sound combine to create an atmosphere which absorbs the player completely. If you never buy another game, by this one.

YA



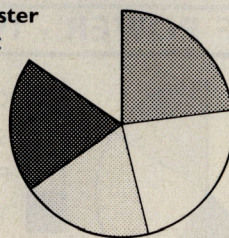
For each hero, there is a display which shows which objects are carried. Seventeen objects can be carried in a rucksack, four in a quiver and two in a pouch. In addition, a full range of garments and armour may be worn. The objects carried are subject to the maximum weight which can be carried. A Rambo-like character can carry a greater weight than a weak wimp.

Throughout the dungeons you encounter a wide range of edible items, bottles, keys, weapons and jewels. All can be used, some have a purpose. One aspect which soon becomes important is the husbandry of your food and water. In some areas there is plenty, in others there is none.

The most striking feature of the game is the attention to detail. If you open a door, you

DUNGEON MASTER

Title: **Dungeon Master**
Supplier: **Mirrorsoft**
Tel: **01-928 1454**
Price: **£19.99**



Graphics **23**
Sonics **23**
Gameplay **22**
Value **25**

■ You're a thinking gamer, right? You're getting pretty despondent about the lack of strategy games on the market. You've started reading ST and C64 mags for news of anything interesting on the far horizon and you're even considering digging that old C64 out of the cupboard for a game of *Risk* or *Colonial Conquest*.

But wait up, what's this? *Mindscape*, that all American company has set up shop here in the UK, and has brought something rather special with it. *Balance of Power*, the brilliant game of geopolitical strategy where nuclear war is total failure, has been updated and enhanced.

Prepare your nerves for *Balance of Power: The 1990 Edition*, and a whole new challenge. There are two main enhancements, that of adding another 18 countries to the world (taking the total from 62 to 80), and the provision of a new level of play, the Multipolar level. Before I describe the most complex level though, let me guide the innocent through the levels of the game in which they'll get hammered, but have fewer directions to watch the trouble coming from.

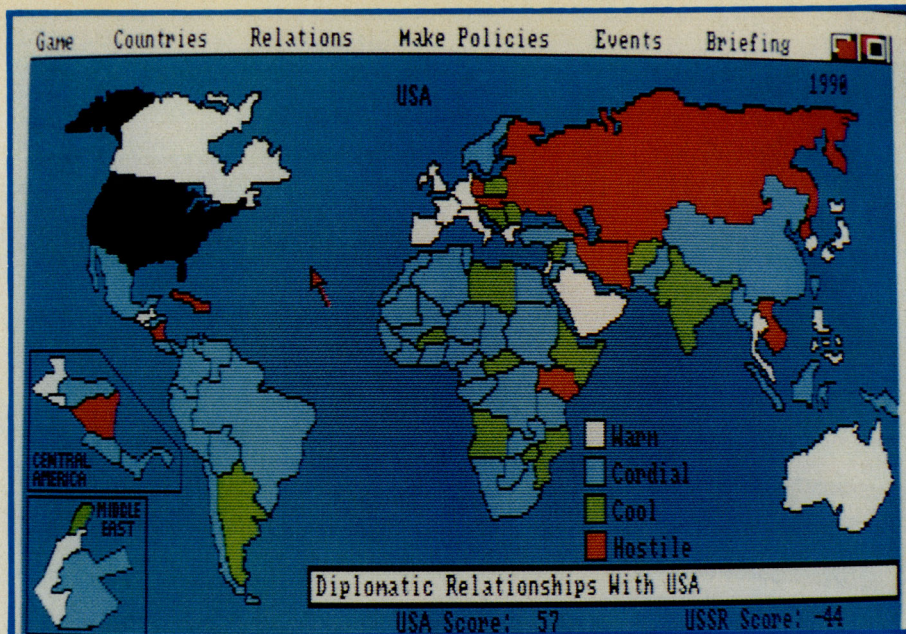
Your first decisions in *BOP:1990* are which level (Beginner, Intermediate, Expert, Multipolar), which side (USA or USSR) or how many players (one or two) are going to play.

Most people will be opting for Beginner, USA and one player in their first game. This is sensible, as is reading the manual. It says on the title page, people who play this game without reading the manual are wasting their time.

A plain-looking map of the world comes up, with close ups of the middle east, and central America, and a multitude of drop down menus to confuse you.

The basic objective of the game is to finish with more prestige points by the year 1997 (you start in 1989). Prestige points are gained from geopolitical popularity. But it's a little more complex than that. The more powerful countries of the world count the most, thus being on friendly terms with China is worth a hell of a lot more points than being best buddies with Panama. Strategically Panama might be important, but geopolitically it means very little. The mistake you can make here is that although Panama is worth so little it is within your sphere of influence, and if you let the Soviets (if you're playing the USA this is) subvert and take the country they will think you're a spineless President and take liberties everywhere else.

Thus, the way to success in *BOP:1990* is to garner strong friends and leave your weak



Balance Of Power — 1990

When Balance of Power first arrived in the UK it received some rave reviews. Now that the game has been updated will it bring out the ruler in us once again — Duncan Evans takes the dictator's chair

enemies to being pals with the other side.

Unfortunately you have to do more than that. Where you can win and lose the game, and destroy the world, is in a crisis. After making all your policies for the year (military on the Beginner level, plus economic on the Intermediate, plus political on the Expert, and trade on the Multipolar), the opposition has the right to question your policies and try to get you to retract them.

If you do so immediately then no prestige is lost, but if the crisis becomes public, and you

escalate up to Def Con 3 or so, then a lot of prestige will be lost if you back down. The converse applies of course, and there is nothing more satisfying than escalating to Def Con 2 and seeing the Soviets back down at the last minute.

If you invade Cuba, don't expect anything less than World War III. You have to know where and when to try it on.

The Multipolar level, which is the new one, introduces the chance to impose trade embargoes, or favoured trade, which has no effect economically, but serves to illustrate to the target country your displeasure or favour.

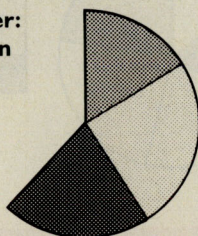
The big difference though, is that all the minor countries of the world (ie the rest of them) make their own policies, some of them dangerous to say the least, and if you have any influence you have the option of forcing them to back down. Publicly arguing with your closest ally costs you prestige points though. The alternative can be far worse. If a close ally gets into a war with an enemy and you leave them too it, and they lose, or the opposition intervenes directly and they crush your lot, then your treaties around the world, and reputation for defending client states will plummet. Be warned.

Balance of Power: 1990 takes the strategy game to new heights. If you want a game that is going to entertain, infuriate, challenge and inform, and that you can still come back to in six months time then *BOP:1990* is the one. It doesn't get any better than this.

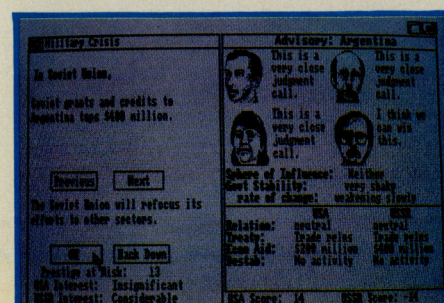
BALANCE OF POWER - 1990

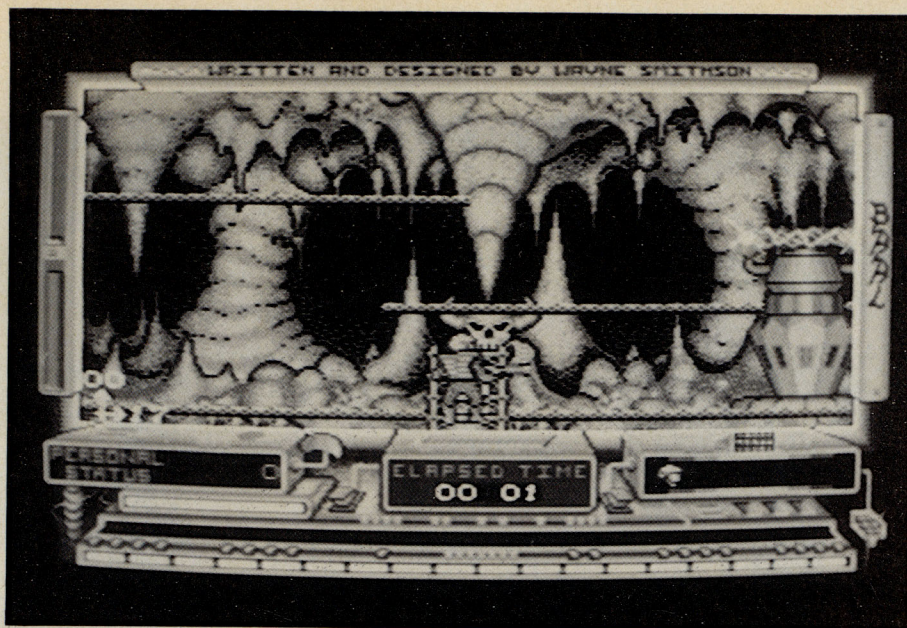
Title: **Balance of Power: The 1990 Edition**

Supplier: **Mindscape**
Tel: **044 486 545/547**
Price: **£24.95**



Graphics: 17
Sound: n/a
Playability: 24
Value: 21





REVIEW

Exploring, killing, solving puzzles — what more could a games player want? Dave Reeder attempts to find out.

I want to finish but, perversely, once I do finish it, I'll want to find other ways of doing it. The eight way scrolling is smooth enough, the graphics are intriguing enough, the sonics are compulsive enough — so go for it. What else has coder Wayne Smithson done? I want it. NOW!

YA

BAAL

■ Looking for a good arcade adventure?

One in which the puzzles are not too complex? One where you can blast away at anything that moves? And quite a bit that doesn't? One which even (dare we mention it?) requires more than a touch of agility as well as a well-calloused joystick thumb?

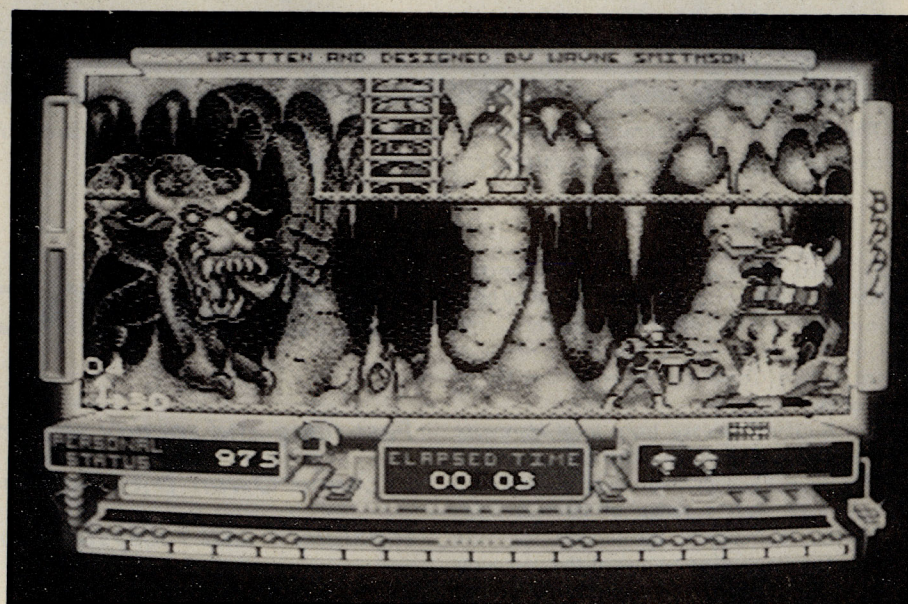
Then, perhaps, your quest is over. *BAAL* is all of this and more. The title screen suggests that quality is to follow and the game does not let you down — across more than 250 screens, a time warrior must search for a war machine in the realm of Baal. Ten pieces collected moves you on a level, but from every side snakes spit poison venom, bouncing nasties throw killing worms, pools of gunk await and traps lie everywhere.

If the game has a fault, it is that too much happens. The action is pitched at about the right level but the 100 plus monsters are of too many types — too long spent learning their patterns, too few lives to benefit from the knowledge.

Yet that isn't a concern when you're playing; too much is happening. There's a great deal to marvel over, visually and aurally. The Time Warriors move with a very effective swagger and chunking swing of their over-sized lasers; the feet reverberate through the caverns, the laser thumps away and the nasties die with unpleasant screams. Background detail is great too — lots of detail in the screens but perhaps a bit too much in-filling in the deep background. Better to have used the memory for even more sounds.

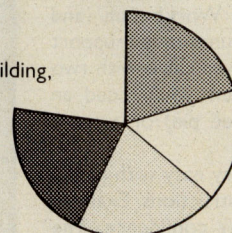
Up and down ladders, shooting nasties, collecting fuel for your laser or parts of the war machine — it's a dirty job, but someone has to do it. Most importantly, the game has a real compulsive quality, that one-more-try element that every software house wishes it could bottle and sell. Tough, kids — it's not that easy.

I'm really enjoying this game — it's one



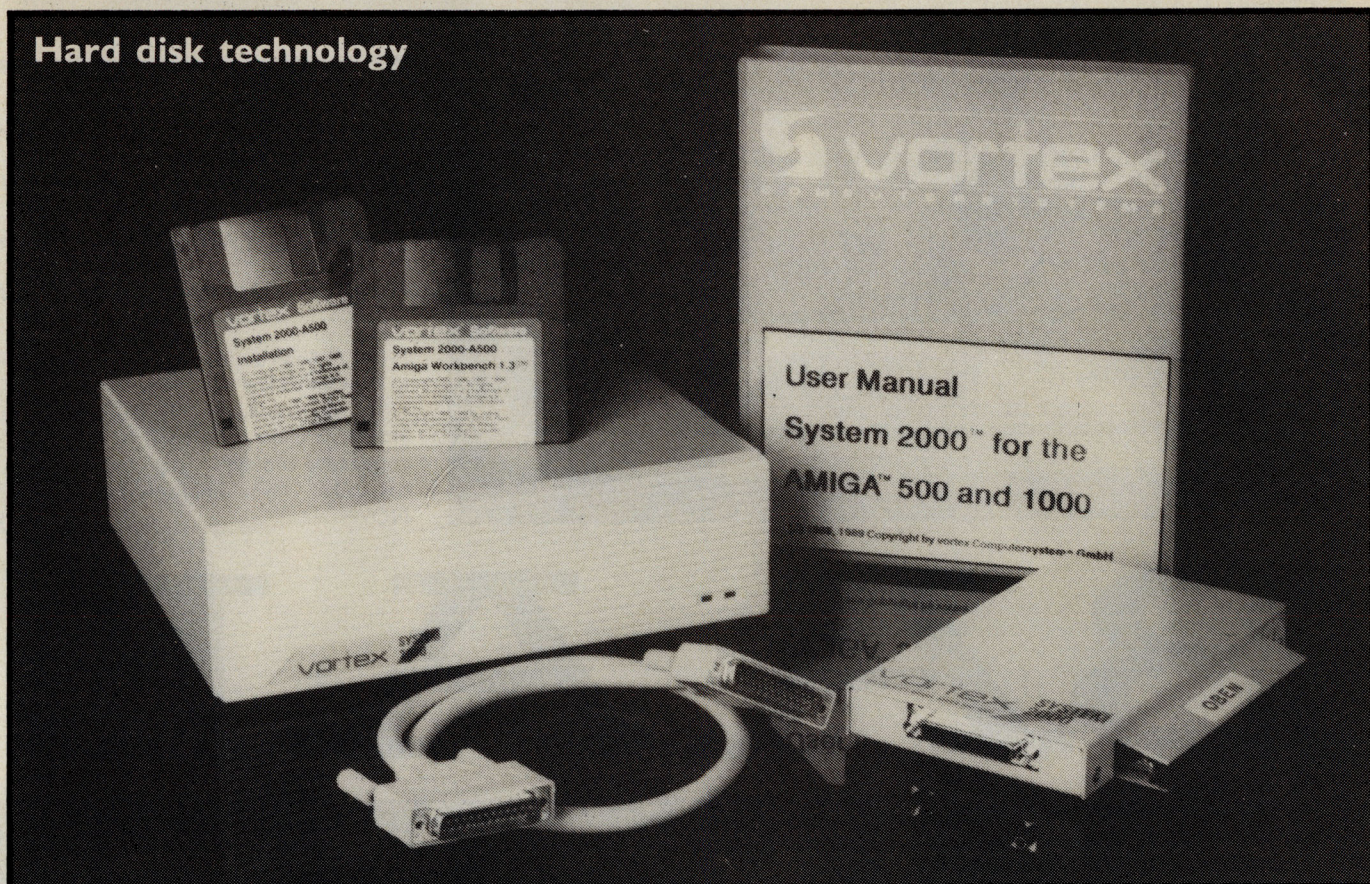
BAAL

Title: **BAAL**
Supplier: **Psygnosis**
Port of Liverpool Building,
Pier Head,
Liverpool L3 1BY
Tel: **051-207 0825**
Price: **£19.95**



Graphics: **20**
Sound: **16**
Gameplay: **21**
Value: **20**

Hard disk technology



The hard drive is a separate unit connected to the interface via a cable. The interface is, in turn, plugged onto the edge connector of the Amiga. On the A1000, the interface is supported by a metal stand.

■ **Hard disks are hotting up for the Amiga.** The American imports have now been joined by German contenders and Commodore previewed their own 590 unit at the *Which Computer Show* at the end of February.

A timely release from *Ideal Hardware* therefore is their *Vortex* hard disk subsystem. This clever concept involves supplying a hard disk drive with a range of interfaces for different computers. It's flexible for both manufacturer and consumer. If the computer is changed the hard disk (minus data of course) can be retained and a new interface purchased.

Quit installing

The equipment which emerged from the sturdy packaging rapidly sent over by Ideal, consisted of the following: hard disk unit, smaller than expected and Amiga grey; similar colour ring binder with a thin layer of documentation, a 1.3 Workbench and Installation disk; interface unit; metal support and connecting cable; power cable with two pin plug. The latter means you'll need an adaptor unit (two to three pin) or a spare power lead.

Installation proved very easy with hardly a reference to the clear instructions. Example photographs supported my confidence. The hard disk will "boot up" whether you are using Kickstart 1.2 (A500s and A2000s until now) or 1.3 (recently released on disk for A1000). I found the hard disk preformatted and the

Hard Life

Fast filing and speedy sectors as Anne Owen tries out the Ideal hard disk subsystem for Amiga 500 and 1000

Workbench rapidly appearing on screen after power-up.

Many applications have hard disk installation instructions or batch files to do it for you so software distributed on floppies presents no problems to the hard disk owner.

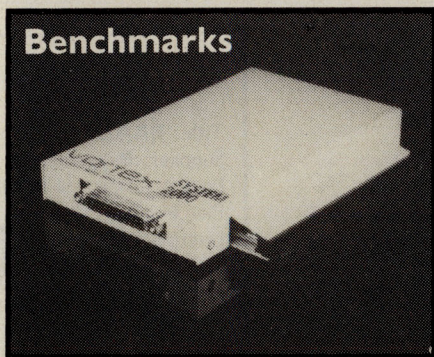
Points to watch

In the same way that an external disk drive takes memory for itself, so too does the hard disk, in fact so does each partition — which is separately formatted for AmigaDOS — of the hard disk. Each takes about 30K. On a 20Mbyte hard disk the partitioning defaults to two 10Mbyte sections, on a 40Mbyte disk to four such sections — a total of up to 120K taken out of available memory! To save memory you can re-partition the disk with fewer logical drives. This is a necessary operation on a 512K machine. With only two partitions we struggled to run some important applications in 512K eg. *Superbase*.

Further memory is used by the fast filing system which is also installed by default by Workbench 1.3.

So there are obviously decisions to be made about what your priorities are: more logical drives, fast filing, or more memory

Benchmarks



The hard disk is partitioned by default into four "drives", hd0 to hd3. You can change the partitioning if memory is at a premium.

remaining. With IMbyte machines there are no problems with the majority of applications. Only those greedy animation/DTP programs which always eat memory might give up the ghost.

Utilities

The utilities supplied are related to preformatting, installation and partitioning/formatting for AmigaDOS. There is also a PARK utility which is called up at the end of a session before turning off computer and then drive.

Big difference

The *Ideal* hard drive made a fantastic difference to the use I got out of my Amiga while it was installed. Filing requesters pop up with full directories in an instant. I didn't mind turning on "icons" in *WordPerfect* because the time to display them on screen was now minimal. The same with *PageSetter* and *ProWrite*. Simply, the most frequent filing activities of loading, saving and merging files, were stunningly quick. CLI picks up its disk-based commands without delay and removes the need for *resident* commands etc. Our benchmark tests reinforce the point.

The horrible irony is that, given the choice, I would buy a hard disk *before* extra memory, but the choice is not available. Memory must come first if the hard drive is not to cause more trouble than it's worth.

Factfile

The *Vortex System 2000* for the Amiga 500/1000 is available from:

Ideal Hardware

Tolworth Tower
Surrey

KT6 7EL
Tel: **01-390 1211**

Prices are:

20Mbyte: TBA

40Mbyte: £499 + VAT

Y4

Vortex 40 Mbyte Hard disc timings:

Operation	Timings (secs)		
	Floppy	Hard	FFS
Open Window with 32 Icons	53	9	7
Warm Boot (Ctrl AA)	37	37	NT
Copy AmigaBasic Icon			
Floppy-Hard		18	15
Hard-Hard		13	9
Floppy-Floppy	37		
Relational Database			
Load & Read Dir	45	22	NT
Open file	19	6	NT
Output Query	115	43	33

Notes:

Hard disk was partitioned into two 20Mbyte sections. DH0: with no FFS, and DH1: with FFS. NT=not tested because of lack of RAM. All timings are approximate, and comparative. Depending on conditions, the time taken for tasks to complete may vary considerably. All timings were taken from the workbench environment.

◀ Continued from Page 39

```
IF cols>16 THEN LOCATE 4,31:PRINT
"NO."TAB(37)"RED"TAB(43)"GREEN"TAB(50)"BLUE"
FOR a=0 TO 15:PRINT TAB(2)";";
IF a+1=<cols THEN
PRINT USING"###";a;PRINT"="";FOR b=0 TO 2
PRINT USING"###";colour(a,b);PRINT"="";NEXT b
IF a+17=<cols THEN PRINT"="";PRINT USING"###";a+16;PRINT"="";
END IF:IF a+17=<cols THEN
FOR b=0 TO 2:PRINT USING"###";colour(a+16,b);PRINT"="";NEXT b
END IF:NEXT a
col1:
PRINT:PRINT:PRINT TAB(14)"MOUSE AND SPACE TO CONTINUE"
col2:
a$=INKEY$:IF a$<>CHR$(32)THEN col2:ELSE WINDOW 2:RETURN
'Read Directory
dir:
WINDOW 1:CLS:FILES:GOTO col1
'Analyze Mouse Position
getmouse:
m1=MOUSE(1):m2=MOUSE(2)
'Is Mouse on Sliders?
IF m2>109 AND m2<151 THEN slider
'Has a colour been selected?
colx=INT((m1-11)/40)
coly=INT((m2-12)/10)
selectcol=colx*4+coly:Formula=4y+x
IF selectcol>cols OR coly>7 OR colx>3 THEN RETURN
IF colx<0 OR coly<0 THEN RETURN
IF colx=0 AND selectcol=cols THEN RETURN
legal:
IF selectcol<0 OR selectcol>cols THEN RETURN
'legal colour selected
prescol=selectcol:COLOR 2,0:LOCATE 13,34:PRINT prescol:GOSUB digits
LINE(180,72)-(300,92),prescol,bf
IF prescol=0 THEN LINE(180,72)-(300,92),3,b
'update sliders
upslider:
FOR a=0 TO 2
PUT (50,(a+110+(15*a))),bar%,PSET
PUT ((50+((100*colour(prescol,a)*2))),(a+110+(15*a))),block%,PSET
NEXT a:RETURN
'Update Digital References
digits:
FOR a=0 TO 2:LOCATE 6,25+(5*a)
```

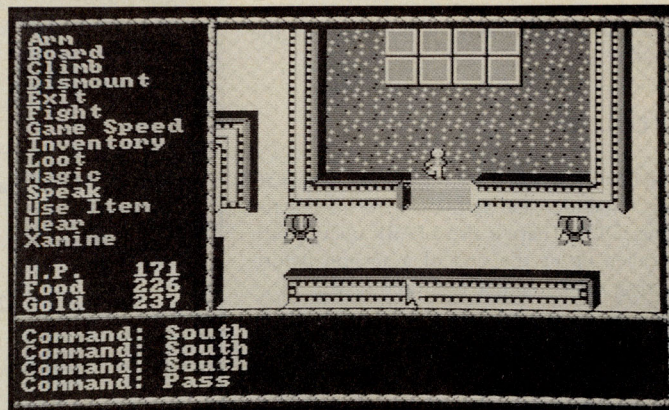
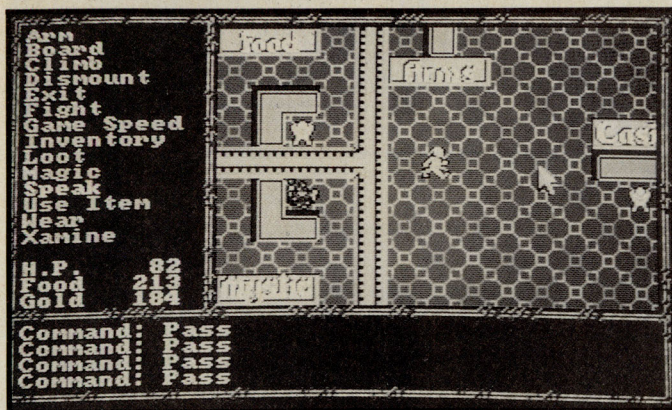
```
PRINT USING"###";colour(prescol,a)
NEXT a:RETURN
```

```
slider:
IF m1>248 OR m1<50 THEN RETURN
mx=((m1-50)/2)/100
IF m2>139 THEN my=142:ELSE IF m2>123 THEN my=126:ELSE my=110
```

```
PUT (50,my),bar%,PSET
PUT(m1,my),block%,PSET:COLOR 2,0
rgb=(my-110)/16
GOSUB digits:colour(prescol,rgb)=mx
PALETTE prescol,colour(prescol,0),colour(prescol,1),colour(prescol,2)
RETURN
'Save Palette
psave:
WINDOW 3,"SAVE PALETTE",(50,90)-(470,140),22,-1
PRINT "SAVE PALETTE....."
PRINT "Please Enter Filename ( X TO ABORT ).":INPUT file$
IF file$="" OR file$="X" THEN pabort
OPEN file$ FOR OUTPUT AS 1
FOR a=0 TO 31:FOR b=0 TO 2
PRINT #1,colour(a,b):NEXT b,a
CLOSE 1:GOTO exit3
'Abort Save/Load
pabort:
COLOR 3,0:PRINT "ABORT":FOR q=1 TO 3000:NEXT:COLOR 1,0
exit3:
WINDOW CLOSE 3:WINDOW 2:RETURN
'Load Palette
pload:
WINDOW 3,"LOAD PALETTE",(50,90)-(470,140),22,-1
PRINT "LOAD PALETTE....."
PRINT "Please Enter Filename ( X TO ABORT ).":INPUT file$
IF file$="" OR file$="X" THEN pabort
OPEN file$ FOR INPUT AS 1
FOR a=0 TO 31:FOR b=0 TO 2
INPUT #1,colour(a,b):NEXT b,a
CLOSE 1:WINDOW OUTPUT 2:FOR a=0 TO 31
PALETTE a,colour(a,0),colour(a,1),colour(a,2):NEXT a
GOSUB legal:GOTO exit3
getmenu:
u=MENU(1):ON u GOSUB psave,pload,colormix,colorchart,dir
RETURN
'add menus
addmen:
MENU 5,0,1,"DISK"
MENU 5,1,1,"PSAVE"
MENU 5,2,1,"PLOAD"
MENU 5,3,1,"MIX"
MENU 5,4,1,"CHART"
MENU 5,5,1,"DIR"
RETURN
```

```
'Error Trap
999:
CLS:IF ERR=53 THEN
COLOR 3,0:PRINT "CAN'T FIND "file$:CLOSE 1:RESUME pabort
END IF
PRINT "program error":PRINT
PRINT "Rem line 10 and re-run":RESUME oops!
oops:
```





QUESTRON II

Gordon Hamlett tries to destroy the Evil Book of Magic

■ **Although Computer Role Playing** games (RPGs) are currently in vogue on eight bit machines, precious few have yet appeared in a sixteen bit format. Those that have arrived on the Amiga have tended to be straight conversions with little or no attempt made to enhance the game in any way.

Certainly, anybody looking at *Questron II* from SSI would be hard pressed to guess which version they were looking at. Screen format and game control system are identical between the eight and sixteen bit formats. The graphics are to all intents and purposes the same. This I feel is something of a letdown. I expect the Amiga version to look better than my old 64 copy.

Superb graphics though are not essential if the game itself is up to scratch. After all, the *Ultima* series from Origin can hardly be said to be visually stunning but that does not matter as the games themselves are superb.

Questron II though falls down on that point as well. One of the earlier RPGs to be written, the game itself offers little more to

the player than to wander round killing monsters, getting stronger, until you are powerful enough to confront your final enemy.

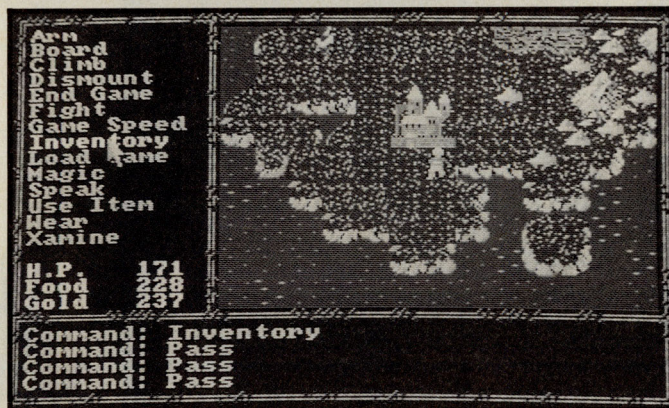
When you defeated the mad magician Mantor in the original *Questron*, his evil Book of Magic was not destroyed. Nor can it be by any normal means. Instead, you must journey back in time and stop the book from ever being created in the first place. Because time travel is so perilous, you can take little in the way of artefacts back with you. In other words, it's a neat little device to make sure that you start the game as a mere peasant rather than an all-powerful fighting machine.

All commands are selected from a menu, using the mouse, so there are no complicated commands to master before you start. You can just load and go although a cursory glance through the instructions might not go amiss.

There are the usual range of creatures inhabiting the land. A few will trade with you although most are after your blood. The general strategy here is to avoid as much wilderness combat as possible. The damage you suffer far outweighs the few gold pieces you gain as treasure. Each monster is best attacked by a specific weapon, ensuring that you carry a good selection around with you at all times — another totally pointless feature of the game in my opinion. By all means, restrict the amount of damage caused by individual weapons but it is churlish to claim that a sword will do less damage than an axe against say death wraiths but the other way round against soul seekers.

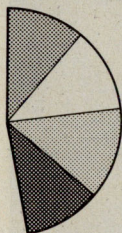
There are four different spells that you can purchase, magic missile, fireball, sonic whine and time sap. The last spell is particularly useful when you are robbing chests from castles, or where-ever, and wish to freeze the pursuing guards.

Questron II looks very dated on the Amiga. Certainly, if you already own the 64 version, then there is no point upgrading. And if you are looking for a good RPG to buy, then I would suggest either the *Bard's Tale* series from Electronic Arts, or the excellent *Ultima IV* from Origin, or hang on for the absolutely superb *Ultima V* which is due for release shortly.



QUESTRON II

Title: **Questron II**
Authors: **SSI**
Suppliers: **US GOLD**
Units 2 and 3, Holford Way,
Holford, Birmingham,
West Midlands B6 7AX
Tel: **021-356 3388**
Price: **£24.99**



Graphics: **11**
Story: **12**
Gameplay: **13**
Value: **11**



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BILLIARDS SIMULATOR

A great game or a load of balls? Gordon Hamlett investigates

■ When I first saw this game, I thought that it was some obscure French attempt at a poisson d'Avril (that's April fool to you and me). Here was a billiards simulation program but there seemed to be something distinctly lacking. Or six little things to be brutally frank, namely the pockets on the table.

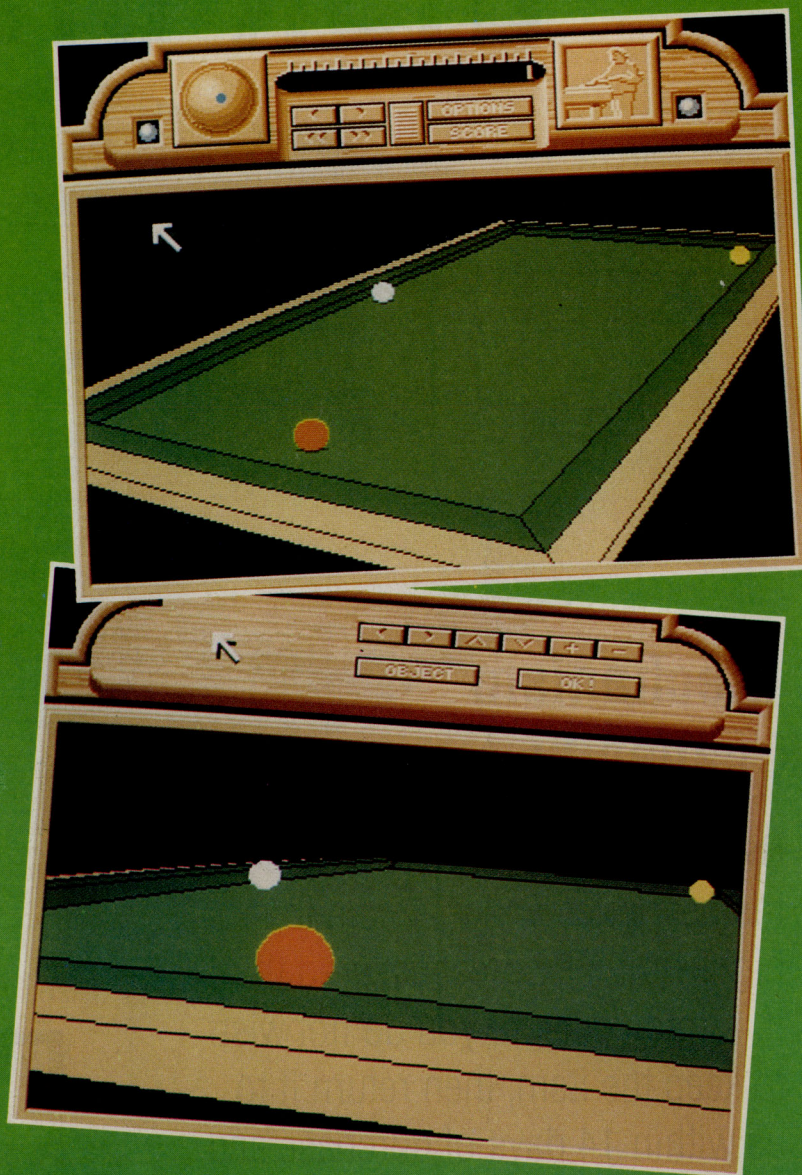
Apparently the French aren't quite good enough yet to play the real thing and having holes on the table that the balls drop into on periodic occasions only serves to confuse them. Instead, they have managed to reduce what was never a particularly sparkling game to one of total banality.

The only way that points can now be scored is to effect a cannon. This involves striking your cue ball in such a manner that it makes contact with both the red object ball and your opponent's cue ball. Gone are all the other shots such as potting balls and going 'in off'.

Now there have been several attempts already at producing snooker, pool and billiards simulations, so what does this one offer that the others don't. The answer is 3-D. Rather than the traditional top down view of the table (although that option is still available to you), you are presented with a view somewhat akin to peering down the end of your cue.

This all looks very nice but there is a snag. It takes a devil of a long time to line up any given shot. You can move left and right, up and down, in large increments or small. You can move either your viewpoint or move the relative position of the table instead. You can

also move into and away from the table modifying the perspective as you go.



The overall effect is very good, the 3-D works well but it doesn't half mess up the gameplay. It is almost as if the programmers got together and said 'look, I've got this really good 3-D routine. Now let's find a game to use it in.'

Once you have lined up your shot, you must decide what spin to impart on your cue ball, how hard to hit it and even which cue you are going to use. There is a whole host of other parameters that can be altered to tweak the game as you see fit. These include adjusting cushion and table friction, rebound and spin values. You can even adjust the gravity of the balls ranging from the Moon to Jupiter. All these options are very nice but I can't see anyone actually using them after a bit of initial experimentation.

Billiards with no pockets on the table and in Martian gravity! Don't call us, we'll call you.

YA

BILLIARDS SIMULATOR

Title: **Billiards Simulator**
 Authors: **Ere International**
 Supplier: **Infogrames**
 Mitre House
 Abbey Road
 Enfield
 Middx EN1 2RQ
 Tel: **01-364 0123**
 Price: **£24.95**



Graphics: 14
 Sound: 11
 Gameplay: 8
 Value: 9

■ "One ring to rule them all, One ring to find them, One ring to bring them all and in the darkness bind them". Few books have captured the imagination quite as much as Tolkien's *Lord of the Rings*. Almost single-handedly, it was responsible for the massive boom in recent years in fantasy fiction. There can be few people around who have not heard of hobbits, even if they have never read about the exploits of Bilbo Baggins, Gandalf the Wizard and Gollum.

There have already been several attempts at producing a computer game based on Professor Tolkien's works but they have been restricted to traditional adventures. *The Hobbit* worked very well and was ahead of its time. *Lord of the Rings* didn't really work at all, not least because the book didn't lend itself to a puzzle-solving format. Now, *Melbourne House* are trying for a third time with *War in Middle Earth* and this time, they seem to have got the format about right. *W.I.M.E.* is a strategy cum wargame with a few adventure-type overtones.

Lord of the Rings is, of course, a classic conflict between the forces of good and evil. Frodo, a hobbit, has come into possession of the one great ring. His task, together with a bit of help from his companions, is to destroy the ring before the arch enemy, Sauron, gets his evil hands on it. Running in parallel with this quest is a war between the good guys — elves, dwarves and men — and the baddies — orcs, trolls and the dreaded Nazgûl.

In *W.I.M.E.*, not only do you have to find a way of getting the ring into Mordor where it can be cast into Mount Doom — the only temperature high enough to melt the ring — you also control all the forces on your side. Your range of tactics therefore is considerable. At one end of the scale, you can try and sneak in a small party with no-one looking. At the other, you can aim for a full frontal assault, hoping to wipe out Sauron's forces entirely before marching into Mordor unopposed.

The game plays on three different levels. At full map level, you are shown a complete map of Middle Earth together with brief details of what forces are moving. At the start of the

game, there are only a few groups that you can actually control. It is up to you to visit the various factions and convince them that you are who you say you are. They may require that you return some precious artifact before they will be persuaded to join your alliance.

By moving up to the campaign level, you get a scrolling close up of a smaller portion of the map showing major terrain features together with identification details of any units present. You can in turn find out the exact strength of these units together with details of their current orders.

It is from this level that you issue any instructions to your troops. This involves little more than selecting a destination for them. They will then move at their own speed and you will be informed if they meet anyone — friend or foe — allowing you to zoom in on the encounter. You can also split and merge units if for example you wanted to send Aragorn off on his own somewhere.

Again, you can get a close up of any given area by moving to the animation level. This gives you a close up of the actual characters as they move towards their destination. It is here that you are able to pick up any objects that you find, magic swords and potions etc. You may also be able to talk to fellow travellers who may give you a clue as to where to find key objects. You will need to be quick though, the messages scroll off screen far too quickly and you then have the problem of trying to locate places on a map that is far too small — a magnifying glass is almost essential to read the tiny print.

Of course, not every creature that you meet on the road is friendly and you will have to fight numerous battles. When combat takes place, a window opens listing all the participating parties. Each unit (and this can range from a single character to several hundred men) can be instructed to charge, engage, withdraw or retreat from the enemy. Each unit has three different health conditions to simplify matters — well, injured or dead! Combat continues until one side is totally defeated or has retreated. The only thing that you cannot opt to do is wear the ring — the

Gordon Hamlett discovers whether Tolkien really is Hobbit-forming

program decides when and if that happens. One useful tip is that it is a lot easier to defend yourself if you are in a fortress than if you are out in the open.

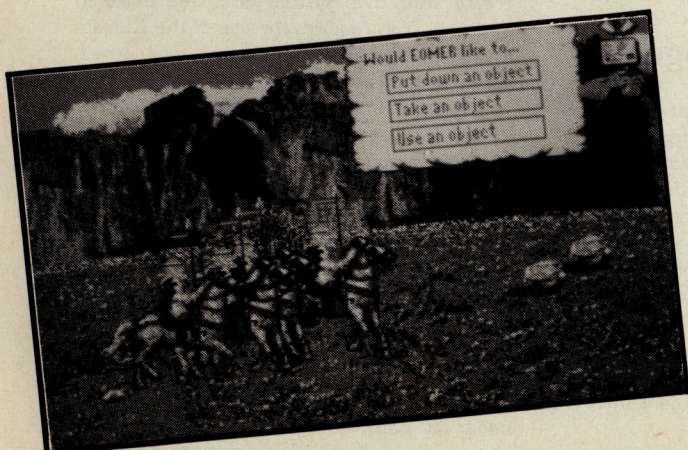
The scope of this game is vast. Just about everybody mentioned in the book gets a starring part, from Saruman to the Corsairs of Umbar. Consequently, it is likely to be some considerable time before you succeed in your quest. Every game is guaranteed to be different, so you can never be sure if the same strategy will work twice.

The game is not perfect by any stretch but considering what it attempts to do, it works very well indeed. Certainly, every fan of the book will want to have a copy and to those people, I recommend it strongly. If you haven't read the book, then you will almost certainly find the game very confusing simply because of all the different names involved. Also, it helps to have at least a vague understanding of what actually happened in the original story. One final point, there is an awful lot of disk swapping involved if you don't have an extra disk drive, so be prepared to be patient. That apart, read the book then buy the game.

YA

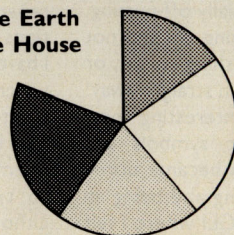


War in Middle Earth



WAR IN MIDDLE EARTH

Title: **War in Middle Earth**
Supplier: **Melbourne House**
2-4 Vernon Yard,
Portobello Road,
London
W11 2DX
Tel: **01-727 8070**
Price: **£19.99**



Graphics: 18
Atmosphere: 21
Gameplay: 21
Value: 21

Keep the bank manager at bay with this type-in program from Stuart Davis.

■ Whenever you get a statement from the bank there is always a great difference between what you think that you've got and what the bank seems to think you have. *Balance Sheet* is designed to help you keep better track of your finances so that those little statements from the bank will no longer be a shock to you.

I wrote my first version of *Balance Sheet* on the Commodore 64, way back in 1987. I felt that it would be useful to have my computer doing something more practical than just running games. I wanted to be able to store details of my bank transactions, so I thought about buying one of the many commercial finance packages, until I saw the price that companies were asking for them!

It occurred to me that it wouldn't be such a hard task to actually write a simple program that could store all of my financial details for me. So I set to work coding my program in '64 Basic, to arrive at a satisfactory result many versions later.

This program offered me facilities for storing, recalling and printing my bank transactions, plus other menial standard facilities (which were no mean feat to achieve in '64 Basic!), rather like a simple database, except geared to what I wanted it for, and nothing more.

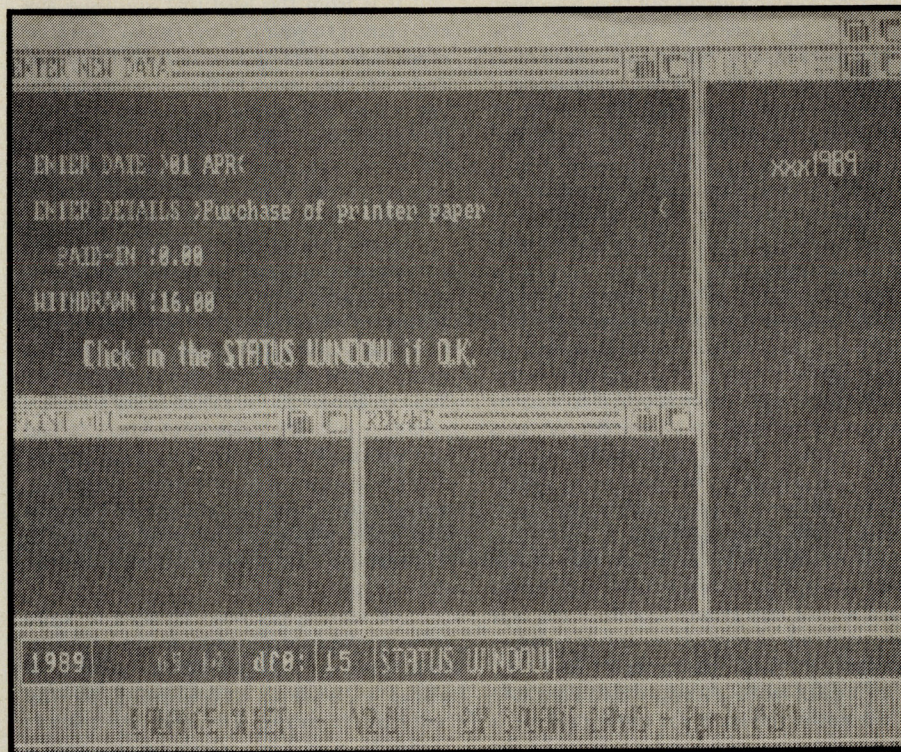
After using the program for several months and finding it actually worked, I decided that it could be of use to others besides myself. So I set about adding a few machine language

program the machine. The first program I decided to write was, of course, *Balance Sheet*. As yet I haven't been able to afford anything like "C" or an assembler for the Amiga (I took one look at the 68000s instruction set and thought 'cripes! give me a 6502 any day!'), so I decided to have a go with Amiga Basic.

I quickly found that it was by no means as bad as I initially expected it to be, with menus and windows being available as standard.

way that it uses its own directories on the disk to store the files in. These directories are preceded with "SHEET" to distinguish them from any other directories. This means that *Balance Sheet* can have more than one user, with each user having his or her own files stored in a different directory.

Having to use two disks with *Balance Sheet* (the system disk (workbench) and the *Balance Sheet* disk) is in my opinion rather messy, so you may like to do what I have done,



Balance

routines and udg's to improve the presentation of the program, and this was published in *Your Amiga's* sister magazine, *Your Commodore*.

In the summer of '88, I decided I was tired of my trusty '64, and that it was time to upgrade to one of the more popular 16 bit micros. My choice was easy, as there was only one decent machine available — the Amiga.

Upgrading from an out-moded computer like the Commodore 64 to such a modern machine as the Amiga was initially off-putting. My first shock was in switching on and not being greeted by a friendly flashing cursor, or being able to type commands in straight away! The workbench was an interesting new experience with its graphic symbols and friendly messages, but I soon became bored with double clicking everything and being an old '64 user, I retired to the CLI where I felt much more at home.

Once I had become familiarised with the Amiga, I decided it was time to get down to the interesting part and actually start to

I soon became familiar with this version of the language, and with some help from the excellent book *Amiga Tricks And Tips* by Abacus, I got down to producing this latest version of *Balance Sheet* on the Amiga.

Typing in the program

Balance Sheet consists of just one main program, so there are no complicated instructions to follow. In places throughout the listing I have placed remarks to help in following and understanding some of the program's modules, and to indicate that some lines are to be left until last before being entered (or at least have a rem placed before them). It is not important to type in these rems with the program, although I would advise typing in the program structure as I have listed it, as it makes the code easier to follow and aids to debugging once it's finished.

I have structured the program in such a

which is to have the program on its own bootable system disk, like a commercial program. This isn't hard, if you follow the simple steps below.

To achieve this, you will first have to create your own system disk, and make it bootable. This requires the use of the CLI, so if you're unfamiliar with its usage, well, now's the time to learn!

First, you must get into a CLI window. The easiest way to do this is to first power-up your Amiga and insert your workbench disk. As soon as the drive gets going, press and hold down the CTRL and "D" keys. When the Amiga Dos window pops up, the message "**BREAK should appear, followed by a "I" prompt. You are now in the CLI. If you are using a two drive system, then you can skip this next section as it deals with those who are suffering under a single drive system.

If you only have one drive, then you will need to copy some of the Amiga Dos commands to RAM. This helps to cut down

on the amount of disk swapping and typing necessary.

Enter the following:

```
makedir ram:c
copy c:/copy |makedir |install to ram:c (return)
copy c:/assign |d |dir to ram:c (return)
copy c:/delete to ram:c (return)
copy system/diskcopy |format to ram:c (return)
assign c: ram:c (return)
cd ram: (return)
makedir l (return)
makedir libs (return)
makedir fonts (return)
makedir devs (return)
makedir s (return)
```

NOTE: the character separating the commands above is on the key to the left of the backspace key at the top right of the keyboard. Next you will need to format a blank disk. Type:

```
format drive df0: name BALANCE-SHEET
(return)
```

All being well, you should be prompted to insert your disk in df0:(remember to remove your workbench disk first!!)

Type the following:

```
cd df0: (return)makedir c (return)
makedir s (return)
makedir devs (return)
makedir fonts (return)
makedir libs (return)makedir l (return)
makedir SHEET.MAIN (return)
```

Now copy all of the necessary files from your workbench disk to the new blank disk:

```
copy ram:c to df0:c (return)
makedir ram:devs (return)
```

install df0: (return)

That is most of the system disk created. Now all that's needed is to copy over Basic, the *Balance Sheet* program and to create the necessary .bmap files and the startup-sequence.

It would be a good idea first to delete most of the contents of the ram disk (except the c directory) eg:

```
cd ram: (return)
delete devs/##? (return)
etc.
```

Next copy Amiga Basic onto the Balance Sheet disk. This is done in exactly the same way as before. Insert your Amiga extras disk and type:

```
copy df0:amigabasic to ram: (return)
insert your Balance Sheet disk
copy ram:amigabasic to df0: (return)
delete ram: (return)
```

Balance Sheet takes advantage of many of the Amiga libraries in the libs directory of your Workbench disk. Amiga basic cannot use these directly, and needs a special file created for each library which is suffixed with ".bmap". To create these necessary files, use the program on your extras disk entitled "convertFD". The libraries used in Balance Sheet are the diskfont, graphics, intuition, exec and dos libraries. These .bmap files must be present in the libs directory of your Balance Sheet disk for the program to run!

Two things remain: to create the startup-sequence, and to copy Balance sheet (the program) onto the disk. This can be done using the workbench if you prefer, otherwise go about it in exactly the same way as for copying files from the workbench disk.

To create the startup-sequence, you will need to use ED, the screen editor on the workbench disk. To make it easier, copy this file to ram. Insert your workbench disk and type:

```
copy df0:c/ed to ram:c (return)
```

Now insert your Balance Sheet disk, and type:

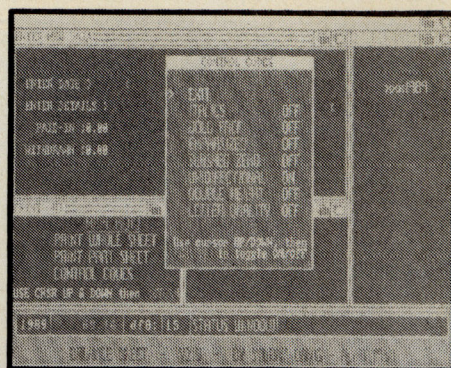
```
df0:s/startup-sequence (return)
```

Only one line need be entered to get Balance Sheet up and running:

```
amigabasic balance-sheet
```

To save it, press esc, then X (return)

That just about completes everything. Reset your Amiga and see if it works!



Using Balance Sheet

As you probably realised while typing in the program, many of *Balance Sheets* functions are obtained by use of the function keys at the top of the Amiga's keyboard (after all, that's what they're there for!). These functions are summarised below:

F1 — Load a new file
F2 — Save the current file
F3 — Delete a file
F4 — Change Balance Sheet's MAIN directory
F5 — Change current 'Year' setting
F6 — Display current sheet
F7 — Change disk drive (eg: df0: to df1:)
F8 — Edit line

The screen display consists of several windows open at once (see fig.1). These can be moved if desired around the screen except for the long one at the bottom. This is the most important window, called the status window, in which information about the current file is displayed, along with any error messages. The function of each of the other windows is indicated by its name in the windows title bar. Each window represents a main function of *Balance Sheet*. Any other functions which require input use the status window.

Once you have got *Balance Sheet* up and running, the first thing to do is to enter the year, eg: 1989. The prompt for this is in the status window. The year is added to the end of each file name when you save a file to disk. Each file will generally consist of the income/expenditure for one month, so the year is used to differentiate between two files for the same month on disk, eg: January 1989 and January 1990. If you make a mistake when entering the year then don't panic! Just press F5, and you can try again.

When you have entered the year, then the status window will become "active". From left to right will appear: the current year, your current balance, the current directory, and the number of entries in the current file. This is the "select mode", when there are no functions currently selected. It is only in this mode when the status window is active that the function keys can be used.

Sheet

Insert your Workbench disk

```
copy df0:devs all to ram:devs (return)
copy df0:fonts all to ram:fonts (return)
copy df0:libs all to ram:libs (return)
copy df0:l all to ram:l (return)
```

Insert your BALANCESHEET disk

```
cd ram: (return)
copy devs all to df0:devs (return)
copy fonts all to df0:fonts (return)
copy libs all to df0:libs (return)
copy l all to df0:l (return)
```

Note: The above assumes that only the internal drive is being used. If you have two drives, then you can miss out all the copying of files to ram, and just copy them directly between drives, eg: copy df1:devs all to df0:devs etc.

Finally, the disk must be made bootable. To do this, simply type:

DATE	DETAILS	DEBIT	CREDIT	BALANCE
	DEMONSTRATION SHEET	0.00	0.00	
	Balance Brought Forward -	0.00	55.00	55.00
04 mar	Wages - Bloggs & co.	0.00	95.50	150.50
06 mar	Lost bet on Bruno V tyson fight	100.00	0.00	50.50
09 mar	Shopping	38.62	0.00	11.88
11 mar	Wages - Bloggs & co.	0.00	95.50	107.38
12 mar	Night out with the lads	42.81	0.00	64.57
15 mar	Vets bills	21.90	0.00	42.67
18 mar	Wages - Bloggs & co.	0.00	95.50	138.17
21 mar	Overtime paid - Bloggs & co.	0.00	131.91	270.08
24 mar	Shopping	40.64	0.00	229.44
26 mar	Cheque - Super Computing Mega Stores Ltd	245.80	0.00	-16.36
27 mar	Cashed cheque in bank	10.00	0.00	-26.36
28 mar	Wages - Bloggs & co.	0.00	95.50	69.14
	BALANCE TO CARRY -	0.00	0.00	69.14

MAIN FEATURES

The "Enter New Data" window is the largest window on the display and as you might expect, the function is used to enter the details of your transactions into the program. Click inside the window. This is the way to start any of Balance Sheet's window functions. The window will respond by printing the format for the data entry in the display.

You will first be required to enter the date. This must be in the form of 6 characters, eg 25 MAY, 30 SEP. You will not need to press return. The cursor will jump to the next line where you can enter brief details of the transaction, up to 40 characters. Next you must enter the amounts to be paid in and withdrawn. These will always be of the format xxx.xx. You will not need to press return unless you use all 8 digits. 99999.99 is the highest amount that can be paid in or withdrawn. If you do not need to use either the paid in or withdrawn functions then pressing return will enter "0.00" for you.

Once you have entered the data, click the mouse in the status window at the bottom of the screen. The data will be stored and the current balance updated accordingly, returning you to the "select mode". The status window shows the balance in green or red, depending on the amount being above or below zero. If you have made a mistake then click the mouse anywhere else on the screen and the data will not be stored. Re-click in the window to try again.

Once you have entered all your transactions, press F6. This will clear the screen and present you with a tabulated display of the current sheet in a form like a bank statement. An example sheet is shown in fig.2. Click the mouse to return to the main screen.

You will probably wish to save what you have entered. To do this, press F2. You will be prompted to enter the name of the month in the status window. This takes the form of the

first 3 characters in the month, ie APR for APRIL. Once you have done this (no need to press return) the data will be written to disk. If you have loaded in a previously saved sheet and wish to save it under the same name (as you probably will do) then when you select save, just press return. Pressing return when there is no sheet in memory will simply return you to the select mode. If there is a sheet in memory, and you select the save option by accident or change your mind, then enter "===" and you will be returned to select mode.

A similar operation is followed for loading, except that you press F1. Here, a name must always be entered. Pressing return exits the load option with no further action.

You can obtain a "directory" from the disk by clicking in the directory window. This is not an actual representation of what is on the disk, but instead it lists all the files saved in the current ("MAIN") directory in the present year. Eg: If you have saved to the main directory "DEC1988", "JAN1989" and "FEB1989", then clicking in the directory window with the year set to 1989 will list JAN1989 and FEB1989.

Clicking the mouse in the printout window activates the printout option. The window shows three options: Print whole sheet, print part sheet, and control codes. Use the cursor up and down keys to move the pointer up and down, and press return to select the option. When you select the printout options, make sure your printer is switched on and on line. Selecting print whole sheet will print out a "statement" similar to option F6.

Selecting the "print part sheet" option opens a second window. here you must enter the range of records to be printed. Operation is then similar to "print whole sheet".

Selecting control codes opens another window. In it are listed several functions which you may like to use to enhance the way the sheet is printed out. Again, use the cursor keys

to move the pointer up and down, and return to turn each function on and off. The control codes in the listing work with my own printer, a Star LC24-10, and should be Epson compatible. If your printer is not Epson compatible then your manual should provide equivalent codes for the features your printer supports. Unfortunately, selecting the appropriate printer driver in Preferences will not work as I use the PAR: device for printing. The reason for this is that Basic has a useless "fprint" statement that will not send the escape code (chr\$(27)) to the printer. To go back to the printout menu, select "exit" or just press escape. If you select the printout function by mistake, then pressing escape will return you to select mode.

The final window in the display is the rename window. This is quite simple in operation. Enter first the old name of the file, then the new name. If you select rename by mistake, press return without entering anything and you will exit to the select mode.

Files can also be deleted. This is done by pressing F3. Enter the name of the file the same as for loading and saving. You will be prompted to enter Y or N just to make certain (remember to make sure you have the correct year setting).

A feature similar to the "Enter New Data" function is the EDIT function. This allows the sheet to be edited should the need arise. It is activated by pressing F8. You will be requested to first enter the line (record) number that needs to be edited. A window will open in exactly the same format as for the "Enter New Data" option. Pressing return will retain the original contents. To change the data, just enter in the new text or amounts. (remember that pressing return for paid in and withdrawn will only enter "0.00" if it was the previous contents. The edit function quits once the withdrawn data has been entered.

Other Key Functions

Only from select mode.

Pressing escape will clear the current sheet from memory, and ask you to re-enter the year again.

F4 — will enable you to change the current directory from "MAIN" to any other four character name. This is for when more than one person may be using Balance Sheet, so each person's files can be kept separate in their own directory. (The directory must, of course, be present on the disk, eg: if a second directory was to be called "MIKE", then the directory to be created on the disk would be "SHEET.MIKE".

F7 is useful if you either wish to keep your files on a separate disk or run Balance Sheet in drive df1 from the workbench. Balance Sheet first runs with the current drive default setting as df0. Pressing F7 allows you to specify any other drive number you choose to become the current drive for loading and saving files.

Finally, when in select mode, pressing **Shift and Q** together will quit the program and return you to the CLI or workbench, depending on how you loaded the program. You will be asked to enter Y or N to make sure.

That completes *Balance Sheet's* instructions. May it help you keep the bank manager at bay.

YA


```

WINDOW CLOSE 1 *** Add this line last **

** OPEN LIBRARIES *

LIBRARY "diskont.library"
LIBRARY "graphics.library"
LIBRARY "intuition.library"
LIBRARY "dos.library"
LIBRARY "exec.library"

** GLOBAL FUNCTIONS *

DECLARE FUNCTION opendirfont& LIBRARY
DECLARE FUNCTION openfont& LIBRARY
DECLARE FUNCTION move& LIBRARY
DECLARE FUNCTION asksoftstyle% LIBRARY
DECLARE FUNCTION setsoftstyle% LIBRARY
DECLARE FUNCTION examine% LIBRARY
DECLARE FUNCTION exnext% LIBRARY
DECLARE FUNCTION lock& LIBRARY
DECLARE FUNCTION allocmem& LIBRARY
DECLARE FUNCTION ioerr% LIBRARY

** DIMENSION ARRAYS *

DIM balance(30), balance$(30), wdrawn(30), wdrawn$(30)
DIM paidin(30), paidin$(30), wd$(30), pd$(30), dat$(30),
details$(30)

** GLOBAL VARIABLES *

DIM SHARED dir.name$ (50)
DIM SHARED counter%

-----

** SUB PROGRAMS *

SUB move (x%,y%) STATIC
e&=move&(WINDOW(8),x%,y%)
END SUB

SUB menuoff STATIC
MENU 1,0,0,""
MENU 2,0,0,""
MENU 3,0,0,""
MENU 4,0,0,""
END SUB

SUB style (dr%) STATIC
bits%=asksoftstyle% (WINDOW(8))
news%=setsoftstyle% (WINDOW(8),dr%,bits%)
END SUB

SUB mode (mode%) STATIC
CALL setdrmd (WINDOW(8),mode%)
END SUB

SUB shadow (text$,x%,y%,c%,s%) STATIC
** Takes a string as input and prints it with a shadow*
** x% & y% = x,y pixel locations; c%=foreground colour,
mode 0:sx%=x%+2:sy%=y%+1:COLOR s%,0
move sx%,sy%:PRINT text$;
move x%,y%:COLOR c%,0:PRINT text$;
END SUB

SUB pointer (r%,c%,top%,bot%) STATIC
** r% & c% = row & column locations where pointer is
to be positioned *
** top% = max height for pointer; vice versa for bot% *
SHARED row
top:
LOCATE r%,c%
PRINT ">"
xloop:
p$=INKEY$
IF p$="" THEN xloop
IF p$=CHR$(27) THEN
row=0
CLS
EXIT SUB
END IF
IF p$=CHR$(13) THEN
LOCATE r%,c%
PRINT " "
row=r%-(top%-1)
EXIT SUB
END IF
IF p$<CHR$(28) OR p$>CHR$(29) THEN xloop
LOCATE r%,c%
PRINT " "
IF p$=CHR$(29) THEN
IF r%<bot% THEN
r%=r%+1
ELSE
r%=top%
END IF
ELSE

```



```

menuoff " Cancel amigaBasics menu bar
COLOR 2,6
CLS
border 4,0
font "diamond",12
LOCATE 3,6
shadow "BALANCE SHEET - V2.0 - BY STUART DAVIS
- April 1989",82,37,3,7
LINE (0,0)-(631,41),1,b:LINE (6,5)-(625,19),7,bf
LINE (5,4)-(626,20),1,b:LINE (256,4)-(381,20),1,b
LINE (55,4)-(55,20),1:LINE (160,4)-(160,20),1:LINE (215,4)-(215,20),1
LINE (382,5)-(625,19),2,b
move 260,17
COLOR 5
PRINT "STATUS WINDOW";
mode 1
GOSUB setcolours
RETURN

screenoff:
FOR loop = 0 TO 7
  PALETTE loop,0,0,0
NEXT
RETURN

setcolours:
PALETTE 0,3,3,5:PALETTE 1,1,1,1
PALETTE 2,1,0,0:PALETTE 3,0,7,0
PALETTE 4,0,0,9:PALETTE 5,9,7,0
PALETTE 6,45,45,45:PALETTE 7,0,0,0
RETURN

noborder:
border 0,0
RETURN

getyear:
WINDOW OUTPUT 2:font "topaz",9
loop2:
COLOR 3,7:LOCATE 2,40
PRINT "ENTER YEAR > <"
inkey 4,2,52,1,1
IF LEN(k$) <> 4 THEN loop2
year$=k$
GOSUB clearstat
GOSUB status
RETURN

clearstat:
WINDOW OUTPUT 2
font "topaz",9
LOCATE 2,40:PRINT "
"
RETURN

status:
IF f=0 THEN lab
FOR I = 1 TO f
  temp=(paidin(I)-wdrawn(I))+balance(I-1)
  balance(I) = temp
  bl$=STR$(balance(I))
  num=LEN(bl$)
  IF num=2 THEN bl$=RIGHT$(bl$,1):bl$="00"+bl$
  IF num=3 THEN bl$=RIGHT$(bl$,2):bl$="0"+bl$
  num=LEN(bl$)
  num=num-2
  bl$=(LEFT$(bl$,num)+".")+RIGHT$(bl$,2))
  IF LEFT$(bl$,1)=CHR$(32) THEN
    c=LEN(bl$)
    bl$=RIGHT$(bl$,c-1))
  END IF
  IF balance(I) < 0 AND LEFT$(bl$,1) <> "-" THEN bl$="-"+bl$
  balance$(I)=bl$
NEXT I
lab:
COLOR 1,7
LOCATE 2,2:PRINT year$
IF balance(I) > 0 THEN
  COLOR 3,7
ELSE
  COLOR 2,7
END IF
LINE (58,8)-(110,18),7,bf
LOCATE 2,1:PRINT TAB(16-LEN(balance$(f)))balance$(f)
COLOR 1,7
LOCATE 2,18
PRINT cd$
LOCATE 2,23
PRINT " "
LOCATE 2,23
WRITE f
RETURN

initvar:
" * INITIALIZE VARIABLES *

f=0:balance(f)=0
balance$(f)="0.00"

cd$="MAIN"
year$=""
drive$="d:"
FOR I=1 TO 7
  code(I)=0
NEXT I
code(5)=1
ccode$(1)="4":ccode$(2)="G"
ccode$(3)="E":ccode$(4)="~1"
ccode$(5)="U1":ccode$(6)="w1"+CHR$(27)+"A"+CHR$(17)
dx$=" DATE DETAILS WITHDRAWN"
heading$=dx$+" PAID-IN BALANCE"
dc$="DATE DETAILS WITHDRAWN"
pheading$=dc$+" PAID-IN BALANCE"
RETURN

changedir:
WINDOW OUTPUT 2
loop3:
LOCATE 2,40:COLOR 1,7:PRINT "DIRECTORY: > <"
COLOR 3,7:inkey 4,2,52,1,0
IF LEN(k$) <> 4 THEN loop3
cd$=k$:GOSUB status
RETURN

changedrive:
WINDOW OUTPUT 2
COLOR 1,7
loop5:
LOCATE 2,40
PRINT "ENTER NEW DRIVE : "
inkey 2,2,58,1,1
IF VAL(k$) > 3 THEN loop5
drive$="d:"+"k$+"
GOSUB clearstat
RETURN

enter:
" * This routine accounts both for entering new details, *
" * and for editing existing details. *

f=f+1
WINDOW 4
IF set4=0 THEN
  set4=1
  LINE (0,0)-(480,109),1,b:LINE (1,1)-(479,108),5,b
END IF
COLOR 5,7
edenter:
LOCATE 4,3:PRINT "ENTER DATE > <"
LOCATE 6,3
PRINT "ENTER DETAILS > <"
LOCATE 8,3:PRINT " PAID-IN : "
LOCATE 10,3:PRINT " WITHDRAWN : "
COLOR 1,7
inkey 6,4,15,1,0
IF set3 AND k$="" THEN
  LOCATE 4,15
  PRINT dat$(f)
ELSE
  dat$(f)=k$
END IF
inkey 40,6,18,1,0
IF set3 AND k$="" THEN
  LOCATE 6,18
  PRINT details$(f)
ELSE
  details$(f)=k$
END IF
inkey 8,8,14,1,1
IF set3 AND k$="" THEN
  LOCATE 8,14
  PRINT paidin$(f)
  GOTO labs
END IF
paidin$(f)=k$
IF LEN(paidin$(f)) < 4 THEN
  LOCATE 8,14
  PRINT paidin$(f)
  paidin(f)=0
ELSE
  zz=LEN(paidin$(f))
  xx=8-zz:zz=5-xx
  paidin(f)=VAL(LEFT$(paidin$(f),zz)+RIGHT$(paidin$(f),2))
END IF
labs:
inkey 8,10,14,1,1
IF set3 AND k$="" THEN
  LOCATE 10,14
  PRINT wdrawn$
  GOTO labt
END IF
wdrawn$(f)=k$
IF LEN(wdrawn$(f)) < 4 THEN
  wdrawn$(f)="0.00"
  LOCATE 10,14
  PRINT wdrawn$(f)
  wdrawn(f)=0
ELSE
  zz=LEN(wdrawn$(f))
  xx=8-zz:zz=5-xx
  wdrawn(f)=VAL(LEFT$(wdrawn$(f),zz)+RIGHT$(wdrawn$(f),2))
END IF
labt:
IF set3 THEN RETURN
font "diamond",12
shadow "Click in the STATUS WINDOW if O.K.",50,98,1,2
mode 1
font "topaz",8
dummy=MOUSE(0)
WHILE MOUSE(0) = 0
  WEND
LINE (49,87)-(330,99),7,bf
IF MOUSE(2) < 160 THEN
  f=f-1
  WINDOW 2
  RETURN
END IF
WINDOW 2
GOSUB status
RETURN

display:
MOUSE OFF
WINDOW 3, (0,0)-(631,242),0,1:border 7,0
COLOR 3,7:CLS
move 0,8:PRINT heading$
LINE (0,0)-(631,251),1,b:LINE (2,10)-(629,10),1
LINE (1,1)-(1,250),1:LINE (630,1)-(630,250),1
LINE (61,0)-(385,251),1,b:LINE (60,0)-(386,251),1,b
LINE (469,0)-(541,251),1,b:LINE (470,0)-(540,251),1,b
move 0,18
FOR I=1 TO f
  COLOR 1,7
  PRINT TAB(2)dat$(I);
  PRINT TAB(9)details$(I);
  PRINT TAB(50+(8-(LEN(wdrawn$(I))))wdrawn$(I);
  PRINT TAB(60+(8-(LEN(paidin$(I))))paidin$(I);
  IF balance(I) < 0 THEN
    COLOR 2,7
  ELSE
    COLOR 3,7
  END IF
  PRINT TAB(70+(8-(LEN(balance$(I))))balance$(I)
  dummy = MOUSE(0)
  WHILE MOUSE(0) = 0
    WEND
  WINDOW CLOSE 3
  WINDOW 2
  RETURN

fsave:
disk$="SAVE ."
GOSUB getdisk
IF k$="@@" THEN GOSUB clearstat:RETURN
IF LEN(k$) < 3 THEN
  GOTO msave
ELSE
  nm$=drive$+"SHEET."+cd$+"/"+k$+year$
END IF
msave:
GOSUB clearstat
IF nm$ <> "" AND f > 0 THEN
  COLOR 3,7
  LOCATE 2,40:PRINT "SAVING..."
  OPEN nm$ FOR OUTPUT AS #2 LEN=255
  WRITE #2, f
  FOR I = 1 TO f
    wd$(I)=STR$(wdrawn(I))
    pd$(I)=STR$(paidin(I))
    WRITE #2, wd$(I),pd$(I)
    WRITE #2, dat$(I),details$(I),wdrawn$(I),paidin$(I)
  NEXT I
  CLOSE #2
END IF
GOSUB clearstat
RETURN

fload:
disk$="LOAD: "
GOSUB getdisk
IF LEN(k$) < 3 THEN GOSUB clearstat:RETURN
nm$=drive$+"SHEET."+cd$+"/"+k$+year$
GOSUB clearstat
LOCATE 2,40
COLOR 3,7:PRINT "LOADING..."
OPEN nm$ FOR INPUT AS #2 LEN=255
INPUT #2, f
FOR I = 1 TO f
  INPUT #2,wd$(I),pd$(I)
  wdrawn(I)=VAL(wd$(I))
  paidin(I)=VAL(pd$(I))
  INPUT #2, dat$(I),details$(I),wdrawn$(I),paidin$(I)
NEXT I
GOSUB clearstat
CLOSE #2
GOSUB status
RETURN

getdisk:
WINDOW 2
LOCATE 2,40

```



```

COLOR 1,7:PRINT disk$;"ENTER MONTH > <"
COLOR 3,7:inkey 3,2,59,1,0
RETURN

wipe:
WINDOW OUTPUT 2
LOCATE 2,40
COLOR 3,7
PRINT "DELETE > <"
COLOR 1,7
IF LEN(k$) < 3 THEN clearstat:RETURN
del$=drive$+"SHEET."+cd$+"/"+k$+year$
LOCATE 2,40
COLOR 2,7
PRINT "ARE YOU SURE? (Y/N)"
inkey 2,2,60,1,0
IF k$="y" OR k$="Y" THEN
  GOSUB clearstat
  KILL del$
END IF
RETURN

rename:
WINDOW 7
LINE (0,0)-(229,60),1,b
LINE (0,31)-(229,31),1
COLOR 1,7
LOCATE 3,5
PRINT "ENTER OLD NAME > <"
COLOR 5,7
inkey 3,3,21,1,0
IF LEN(k$) < 3 THEN exitx
n1$=drive$+"SHEET."+cd$+"/"+k$+year$
COLOR 1,7
LOCATE 6,5
PRINT "ENTER NEW NAME > <";
COLOR 5,7
inkey 3,6,21,1,0
IF LEN(k$) < 3 THEN exitx
n2$=drive$+"SHEET."+cd$+"/"+k$+year$
NAME n1$ AS n2$
exitx:
CLS
WINDOW OUTPUT 2
RETURN

printer:
IF f<1 THEN
  BEEP
  RETURN
END IF
WINDOW 6
font"diamond",12
COLOR 3,7
style 1
LOCATE 1,8
PRINT "MAIN MENU"
style 0
LOCATE 2,5
COLOR 5,7
PRINT "PRINT WHOLE SHEET"
PRINT TAB(5)"PRINT PART SHEET"
PRINT TAB(5)"CONTROL CODES"
font "topaz",8
COLOR 1,7
PRINT "USE CRSR UP & DOWN then";
COLOR 2,7
PRINT " RETURN";
font "diamond",12
loop6:
pointer 2,3,2,4
IF row=0 THEN qexit
IF row=3 THEN
  GOSUB codes
  GOTO loop6:
END IF
ON row GOSUB printall,printpart
qexit:

WINDOW OUTPUT 2
RETURN

printpart:
WINDOW 8,"Print Part",(.50,143)-(206,183),0,1
COLOR 5,7
CLS
LOCATE 2,2
PRINT "FROM RECORD > <"
LOCATE 4,4
PRINT "TO RECORD > <"
COLOR 1,7
lab1:
LOCATE 2,16
PRINT " "
inkey 3,2,16,1,1
IF LEN(k$) < 1 THEN
  k$="1"
  LOCATE 2,16
  PRINT k$
END IF
min = VAL(k$)
IF min < 1 OR min > f THEN lab1
lab2:
LOCATE 4,16

PRINT " "
inkey 3,4,16,1,1
IF LEN(k$) < 1 THEN
  k$="1"
  LOCATE 4,16
  PRINT k$
END IF
max = VAL(k$)
IF max < min OR max > f THEN lab2
WINDOW CLOSE 8
GOSUB partin
RETURN

codes:
WINDOW 8," CONTROL CODES",(.223,30)-(428,170),0,1
border 2,1
COLOR 1,4
CLS
LOCATE 16,2
PRINT "Use cursor UP/DOWN, then"
COLOR 2,4
PRINT TAB(2)"RETURN ";
COLOR 1,4
PRINT "to toggle ON/OFF";
font "diamond",12
LOCATE 2,3
PRINT "EXIT"
COLOR 5,4
PRINT TAB(3)"ITALICS"
PRINT TAB(3)"BOLD FACE"
PRINT TAB(3)"EMPHASIZED"
PRINT TAB(3)"SLASHED ZERO"
PRINT TAB(3)"UNIDIRECTIONAL"
PRINT TAB(3)"DOUBLE HEIGHT"
PRINT TAB(3)"LETTER QUALITY"
y%=2:row=2
WHILE row > 1
  GOSUB update
  pointer y%,1,2,9
  IF row=0 THEN skip
  code(row-1)=NOT code(row-1)
  y%=(CSRLIN-1)
  skip:
  WINDOW CLOSE 8
  WINDOW 6
  RETURN
update:
LOCATE 3,1
COLOR 1,4
FOR l=1 TO 7
  IF code(l) THEN
    PRINT TAB(12)"ON "
  ELSE
    PRINT TAB(12)"OFF"
  END IF
NEXT l
RETURN

contcodes:
FOR l=1 TO 7
  IF code(l) THEN
    PRINT #2, CHR$(27);ccode$(l);
  END IF
NEXT l
RETURN

printall:
min=1
max=f
partin:
CLS
COLOR 1,7
LOCATE 2,6
style 1
PRINT "NOW PRINTING"
LOCATE 4,3
COLOR 2,7
PRINT "CLICK IN STATUS WINDOW"
PRINT TAB(7)"TO ABORT";
style 0
OPEN "par:" FOR OUTPUT AS #2 LEN=1
PRINT #2, CHR$(27);"@"; ****Reset Printer***
PRINT #2, CHR$(27);"x0"; ****Selects Draft for LC24-10***
GOSUB contcodes
PRINT #2, "Number of records =";f
IF min > 1 OR max < 1 THEN
  PRINT #2, "Printed from record";min;"to record";max
END IF
PRINT #2, CHR$(27);"-1";pheading$;CHR$(27);"-0"
dd=52:df=62:dg=72
FOR l=min TO max-1
  x=MOUSE(0)
  IF MOUSE(0) < 0 THEN dexit
  PRINT #2, dat$(l);
  PRINT #2, TAB(9)details$(l);
  PRINT #2, TAB(dd+(8-(LEN(wdrawn$(l))))wdrawn$(l);
  PRINT #2, TAB(df+(8-(LEN(paidin$(l))))paidin$(l);
  PRINT #2, TAB(dg+(8-(LEN(balance$(l))))balance$(l)
NEXT l
PRINT #2, CHR$(27);"-1";
PRINT #2, dat$(l);TAB(11);details$(l);

PRINT #2, TAB(dd+(10-(LEN(wdrawn$(l))))wdrawn$(l);
PRINT #2, TAB(df+(10-(LEN(paidin$(l))))paidin$(l);
PRINT #2, TAB(dg+(10-(LEN(balance$(l))))balance$(l)
dexit:
CLOSE #2
RETURN

dir:
font"diamond",12
COLOR 1,7
CLS
path$=drive$+"SHEET."+cd$
getdir path$,50
IF xerror$<>" THEN GOTO errorhandle
cc=0:r=2
FOR l=1 TO counter%
  xx$=RIGHT$(dir.name$(l),4)
  IF xx$ < > year$ THEN
    GOTO labx
  ELSE
    r=r+1
    LOCATE r,4
    PRINT dir.name$(l)
    cc=cc+1
  END IF
labx:
NEXT l
IF cc=0 THEN
  xerror$="NO FILES FOUND"
  GOTO errorhandle
ELSE
  RETURN
END IF

quit:
LOCATE 2,40
COLOR 2,7
PRINT "EXIT PROGRAM? (Y/N)?"
inkey 2,2,61,1,0
IF k$<>"y" THEN
  GOSUB clearstat
  RETURN
END IF
SYSTEM

errorhandle:
WINDOW 2
BEEP
LOCATE 2,40
COLOR 2,7
IF xerror$<>" THEN
  PRINT xerror$
  xerror$=""
  GOSUB loop8
  RETURN
END IF
IF ERR=5 THEN ON ERROR GOTO 0
IF ERR=53 THEN PRINT "FILE NOT FOUND"
IF ERR=58 THEN PRINT "FILE EXISTS"
IF ERR=61 THEN PRINT "DISK FULL"
IF ERR=70 THEN PRINT "DISK IS PROTECTED"
GOSUB loop8
RESUME main

loop8:
count = 0
WHILE count < 700
  count=count+1
WEND
GOSUB clearstat
RETURN

fedit:
LOCATE 2,40
COLOR 1,7
PRINT "EDIT WHICH LINE? > <"
ed=VAL(k$)
IF ed<1 OR ed>f THEN hexit
WINDOW 8,"EDIT",(.0,12)-(480,121),0,1
border 7,1
COLOR 1,7
CLS
set3=-1
LINE (0,0)-(480,109),1,b:LINE (1,1)-(479,108),5,b
tempstore=f
f=ed
GOSUB edenter
set3=0
f=tempstore
ed=0
hexit:
GOSUB clearstat
WINDOW CLOSE 8
WINDOW 2
GOSUB status
RETURN

breaker:
RETURN
END

```


The word professional often conjures up an image of overpriced and overweight packages from complacent US software houses. Andy Brown sees if Superbase Professional fits the same bill?

Superbase Professional

■ **Fitting in above the Personal range** from Precision Software but below the price of Superbase 4 for the PC, Superbase Professional is aimed squarely at the advanced business user, preferably one with a knowledge of Basic programming. The package has a great deal in common with the Personal 2 release that I reviewed in these pages recently, which is not surprising, as according to Precision, Personal 2 is a cut down version of this program. For this reason this review will concentrate on the significant differences between the two databases.

The first major difference is the presence of a programming language called DML. This is akin to Basic, but is rich in file management commands, but lacking graphics support. The facilities offered are certainly powerful, but I would question the need for the average user. Most users will in fact probably only use DML for writing start-of-day programs, and for automating tiresome tasks like producing reports at the end of the month etc. I would much rather have a good macro facility, with DML available as an add-on. Adding DML this way would have the added benefit of freeing up RAM for the user.

Whilst on the subject of RAM, Superbase now requires at least 1Mbyte to run. I would suggest that 2Mbyte, or more is the optimum. Why should this be the case?

A relational database has, by definition several files open at once. This means that speed of access to your data, or *response time* to use the mainframe jargon, becomes crucial. Unfortunately the Amiga runs at the speed of a demented slug when it comes to file access, so go-faster techniques are required if you want efficient data management. Hard disk users with the FFS on Workbench 1.3 should be better off, but even so I would recommend using as much RAM as possible either as a disk cache or RAM disk storage. A 68020 would also be nice.

The most significant difference between this version of Superbase and Personal is the so-called Forms Editor. Why they called it that I do not know, because the program is a complete front-end for Superbase. This front-end adds the ability to process multi-line

transactions. A transaction is the most common type of record in the business world, where a header, such as customer information, is followed by a list of items, such as in a till receipt. Doing things this way speeds things up a lot because you no longer have to enter each row of a transaction as a separate record. It is also more intuitive, as data entry can be made to resemble real paper forms more closely. This makes it possible to easily train new users as data entry can resemble methods that they are already used to.

The forms editor is also a more sophisticated report generator than the one

why the examples given are so trivial. Even so most of the information needed is there, if you can find it. The manuals also contradict themselves on one or two points, so watch out. What is needed, and I would have thought reasonable for the price, is a tutorial with fully worked examples, as well as an introduction to the DML programming manual, once again with fully worked examples.

Reading my comments above, you may come to the conclusion that I have some strong criticisms of Superbase Professional. That is true, but it is also a very powerful product, and really the only Amiga database

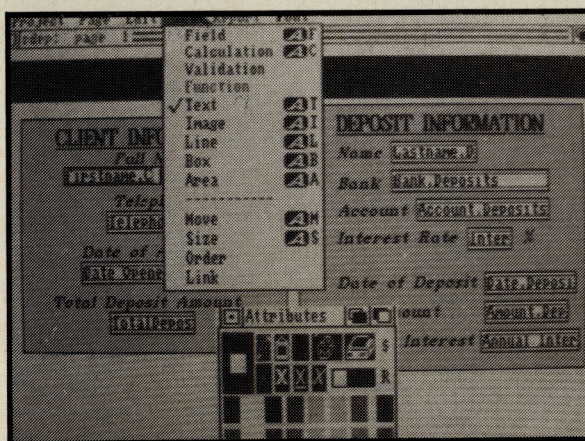
provided with Superbase itself, but it still does not provide Postscript capability, and thus output is restricted to low quality dot-matrix printers. The ability to make use of the DML language without having to write DML programs is another feature of the forms editor.

Read All About It

The two manuals provided with Superbase Professional are still in the cryptic, and slightly muddled style that software houses like Precision seem to adopt in the mistaken opinion that users prefer to be permanently confused. I still can't work out why Query is dealt with right at the back of the manual, and

to contend for the title 'Serious'. What Precision should do is to resolve the conflict between being the program being a 'programmers' database, and an 'easy to use' system for average computer users, who I would assume would be the people wanting to use a database in 'professional' circumstances. I would also like to see the possibilities of Database Publishing being opened up by getting on the Postscript bandwagon. A Superbase compiler, such as the Clipper compiler for Dbase III in the IBM world should be added so that run-time versions can be distributed for the ordinary user.

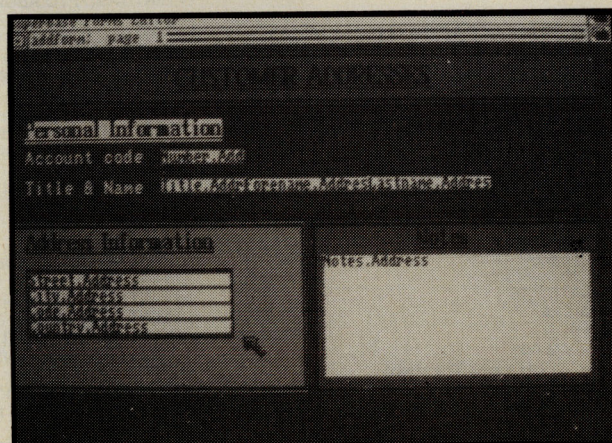
YA



FactFile

Title: **Superbase Professional**
Supplier: **Precision Software**

6 Park Terrace
Worcester Park
Surrey
KT4 7JZ
Tel: **01-330 7166**
Price: **£249**



EMMANUELLE



■ **Ooh la la! Un saucy game pour le** computer from over la Manche. *Emmanuelle* from *Coktel Vision* is based on the soft porn book and film that rose to prominence in the Seventies.

Written by the same people who gave us *20,000 Leagues under the Sea*, *Emmanuelle* is a sort of graphic adventure mixed in with a certain amount of arcade-style action. No, not that sort you disgusting little pervert.

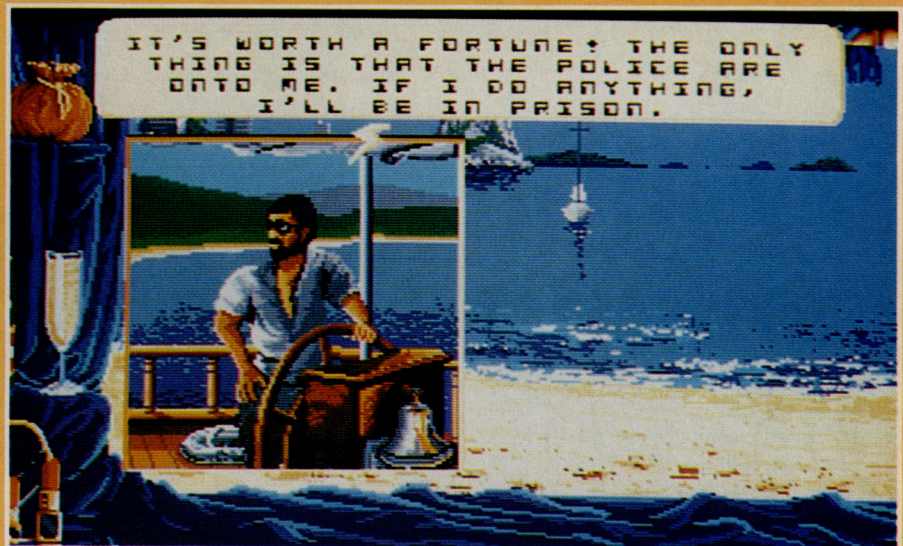
Set in Rio, your task is to meet up with *Emmanuelle* when your erotic potential is sufficiently high. Increasing your potential is no easy thing. Although there are many women more than willing to faire le bonk avec vous, this is not sufficient and will in fact lower your potential. No, instead, you must indulge in what the French would call erotic but us narrow-minded Brits would probably refer to as kinky pastimes.

There are three laws of eroticism for you to come to terms with. There must always be an odd number of partners, you must never see your partner's face and you must have multiple relations with the same partner. As you wander round Brazil, you must acquire three statuettes, each representing one of the laws.

Progressing through the game is a matter of talking to everybody that you meet in the hope of gaining either new information or new experience. Various thoughts enter your head and it is up to you decide on which approach you think will prove most profitable. Chat up lines vary from the romantic to the blunt. At worst, a girl can only say no. There are aphrodisiacs and potions to find, helicopters and boats to catch, various exotic and not so exotic locations to visit and keyholes to peep through. What the French call voyeurs, we still refer to as peeping Toms.

Information has to be paid for, as do plane tickets and sundry other purchases. Extra money can be obtained from the roulette table although if you are too obnoxious to the

guests, they will have no hesitation in turfing you out of the casino. There is a fair chance that you will end up in a fight. The fighting action is a send up of all the karate games. Your



Do sex and computing really mix? Gordon Hamlett attempts to interface

only weapons are sneaky ones. Either point up to the sky or pull your adversary's shorts down before administering a violent slap to the face.

Emmanuelle is an unusual game and one, I would guess, most likely to appeal to the sort of person who enjoys computerised strip poker. Although it will no doubt be restricted to the over 18s, I cannot in all honesty see anybody drooling lasciviously over the keyboard as they endeavour to get their jollies. As H.L. Mencken said, 'Sex is a dangerous toy in the hands of the virtuous. It should be left to the congenitally sinful who know when to play with it and when to let it alone'. **YA**

EMMANUELLE

Title: **Emmanuelle**
 Authors: **Coktel Vision**
 Supplier: **Active Marketing**
 The Studio Centre
 1 Ranelagh Gardens
 London
 SW6 3PA
 Tel: **01-384 2701**
 Price: **£19.99**



Graphics: **16**
 Sound: **12**
 Gameplay: **15**
 Value: **13**

REVIEW

■ **Cast your minds back to the summer of 1984** (ahh them were the days... Ed). The game that everyone was talking about was *Dragon's Lair*, one of the first Coin-Ops to utilise Laserdisc technology. No, they hadn't discovered CD-ROM storage ahead of everyone else they were, in fact playing a 12" videodisc which would go to various sections of the disc when you made certain movements with your joystick.

The advantage of this system was that the "graphics", if you can call them graphics, were flawless as they were straight cartoon images penned by ex-Disney artist and film maker in his own right, Don Bluth.

The disadvantage was that because of the flowchart-like format of the game it was simply a matter of time (and money) before you could solve it as you used precisely the same movements on each level.

Shortly afterwards there was a lot of talk from various computer manufacturers about producing laserdisc players of the same format as the arcade, but, of the half dozen or so contenders, only Acorn actually came up with a player at all and they certainly weren't going to lower this sort of technology to mere games playing.

So the whole thing went quiet until now with the release of *Dragon's Lair* on the Amiga. It would seem that the game was just waiting for a machine with the graphics potential to pull the whole thing off.



It caused a sensation back in 1984 when it hit the arcade scene — will it do the same five years on for Amiga owners? Crosby the Valiant finds out

to the delight of monster lurking below. Escape couldn't be simpler. Just wait for the monster to lunge at you for the second time, use the sword and push the joystick up. No sweat.

Admittedly the final sequence is a little trickier but the principle is exactly the same.

Dirk sees the Princess imprisoned in a large crystal ball. On guard duty but asleep is the Dragon. On Dirk's left is a pile of objects which begin to topple over. Move left to stop them falling, at which point Dirk falls over a treasure chest, which awakens the Dragon. Move left again to avoid the fiery breath and left again to catch the objects I mentioned

Dragon's Lair

That's right, there's no laserdisc involved — this time it's all done within the Amiga itself.

There is, of course, a catch...

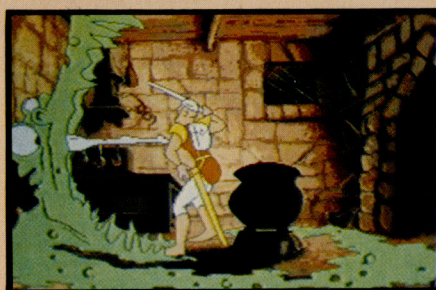
If you're an A-500 owner you need a Megabyte of memory, however A-1000 owners are okay as they can run the prog with 512K as the game just needs the workspace taken up by Kickstart 1.2/3.

Anyway, I suppose I'd better mention something about the game itself. In *Dragon's Lair* you are Dirk the Daring — a brave and noble fellow who would swash his buckles at the drop of a helmet. Dirk's been give a task that no other Knight in history has ever been given before. He has to rescue a beautiful Princess from the vile clutches of an Evil Dragon (Boo, Hiss etc).

However you can't just knock on the drawbridge and ask nicely if you can have your Princess back please. You must face numerous challenges as you journey through the castle.

The game comprises six discs each of which contains three scenes (130 Megabytes worth of data!!!). Once you've done all three screens on a disk the program asks you for the next disc although it will take into account the fact that you have a second drive which does make life easier.

Both the sound and graphics are superb. Very close indeed to the original, which is praise indeed. You have a choice of normal and multisync graphics modes. Multisync mode occupies only a small section of the screen but the resolution is better. Mind you Normal mode is pretty damn good as well, so why



worry.

The only problem with this game is the same problem the original had — NO GAMEPLAY. It's just a memory game pure and simple. Each challenge has a set sequence of six or so moves which never change.

For instance...

The first screen you encounter is a

drawbridge which collapses beneath you much earlier. The Dragon then chases Dirk behind a rock, and the Dragon grabs the rock. Move back, then back again bumping into a column and a pile of gold coins. Move right then forward towards a magic sword (the only thing that can slay the Dragon). As the Dragon breathes fire hit the fire button which deflects the flames. Go left to avoid the Dragon's tail and finally use the sword once more to vanquish the beast.

Once this is done Dirk retrieves the key, unlocks the Ball and the Princess gives him a peck on the cheek (this is set in the age of chivalry after all).

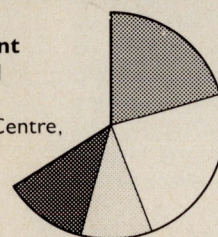
In short, a truly accurate arcade conversion and a great graphics demo for your Amiga, but not a game with lasting appeal.

YA

DRAGON'S LAIR

Title: **Dragon's Lair**
Supplier: **Entertainment International**

Unit 4, Stannets,
Laindon North Trade Centre,
Basildon,
Essex SS15 6DJ.
Tel: **0268-541126**
Price: **£44.95**



Graphics: **24**
Sound: **20**
Gameplay: **10**
Value: **12**

■ **Intuition, the Amiga's User Interface** was designed to ensure that a user's interaction with the machine is simple, enjoyable and consistent (i.e., intuitive). The tools to achieve this are provided by Intuition itself and, providing that the proper conventions are adhered to, the programmer is able to take advantage of multi-window facilities. He can also use *gadgets* (Intuition's name for icons) and many other Intuition facilities to help simplify the programming tasks.

Programs can open *virtual terminals*, areas from which they receive and deliver information. Each program regards its virtual terminal as covering the entire screen blissfully unaware that other programs may also have windows on display at the same time. The user

to be able to extract information from the structure. Here's the purpose of the various fields.....

The **ExecMessage** field contains message characteristics, such as the length of the message's body data, which are needed by the Exec. You are unlikely to want this information and you certainly should not interfere with it.

Class is a variable whose bits correspond directly with the equivalent **IDCMP** flags. You will usually check the contents of this variable against particular flag definitions so that you know what type of message you have received.

The address of the object to which the message refers is provided in the **IAddress** field. Whenever you have to find out about the

This month Amanda Jones looks at the message passing mechanism used by Intuition. If you've ever wondered how an Amiga program knows when a gadget is selected, or when the mouse is moved, here's your chance to find out.

Getting the Message

however sees a program's terminal as a window which may be moved around, resized, or even hidden completely. Intuition does in fact often handle such changes without the program ever knowing that they occurred.

Even when your Amiga is just sitting there doing nothing Intuition is active and continually listens for any information that may arrive from any of the input devices (mouse, keyboard, joysticks, serial port etc.). It will look at this data, use what it regards as useful, and then pass the rest on to any interested parties, meaning any programs which are running.

Programs can be selective about the type of events they wish to be told about. If, for instance, a program needs to know when disks are inserted or removed it can ask Intuition to send it a message about such events as and when they occur. If the same program doesn't need to worry when a user resizes a window then it just does not ask for those types of messages to be sent.

How do we ask Intuition to send us information? One of the ways in which this can be done is by using Intuition's Direct Communications Message Port system (**IDCMP**). This is built upon the Exec message system arrangement and provides a two way communication process which allows your program to both receive and transmit messages.

The IntuiMessage Structure

The **IntuiMessages** used to carry the packets of information have a standard layout which is based on an extended exec Message structure.

In order to use IntuiMessages you need

current state of Intuition objects (e.g. whether a Gadget is on or off) you'll use this address to locate the object's structure.

You'll often see the **Class** and **IAddress** variables used jointly for selecting message handling routines and, when appropriate, passing the address of the object to them.

The **Code** and **qualifier** fields depend very much on the type of message, e.g. if the keyboard device is providing raw keyboard data then the code field will contain the untranslated character and the qualifier field will tell you whether the shift or control keys were also pressed.

Each message is stamped with mouse co-ordinates and the system time. **MouseX** and **MouseY** are the co-ordinates of the mouse at the time given by the **Seconds** and **Micros** fields. The other two fields in the structure are **IDCMPWindow**, which is a pointer to the

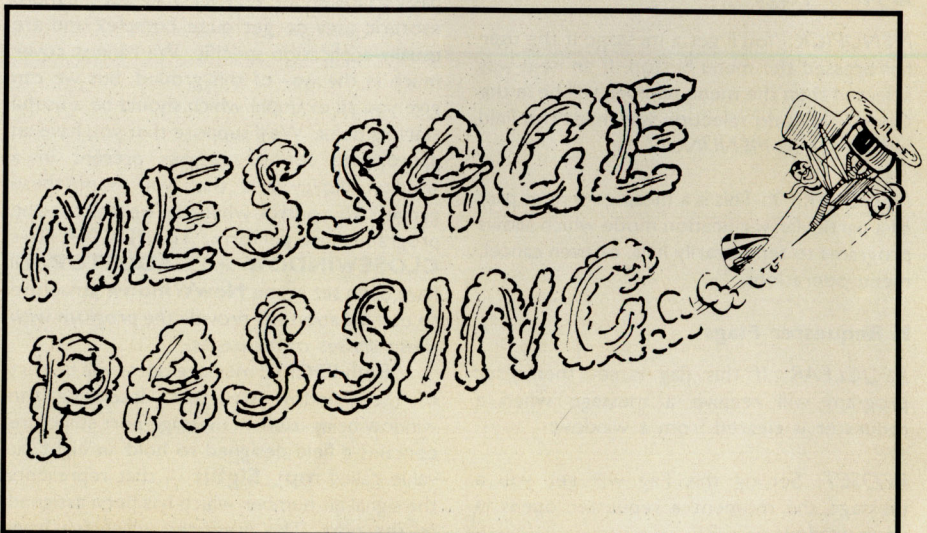
relevant **Window** structure, and **SpecialLink** which is used only by the system.

The IDCMP Flags

Standard names for the **IDCMP** flags are available in the header files. They should always be used in preference to numeric values or non-standard names. The flags are used to both select which types of messages you wish to receive and to distinguish between the various types of message that may arrive at your message port. The definitions fall into six categories:

■ Window Flags

ACTIVEWINDOW: You'll get a message when the window becomes active.



INACTIVELWINDOW: This gets you a message every time your window becomes inactive.

NEWSIZE: Is a message sent when an applications program window is resized.

REFRESHWINDOW: You will be told when your window needs refreshing.

SIZEVERIFY: Intuition will check with your program when a user tries to resize a window and will not allow it to occur until a program says that it's safe to do so.

■ Gadget flags

GADGETUP: When the user releases the left mouse button over a gadget that has the **RELVERIFY** flag set the program receives a message of this class.

GADGETDOWN: If the gadget was created with the **GADGIMMEDIATE** flag set then this message is sent when the gadget is selected.

CLOSEWINDOW: If you have a *close* gadget in your window then setting this flag will give you a message telling you when it has been selected. Intuition doesn't close anything, it leaves that up to the applications program.

■ Mouse Flags

MOUSEBUTTONS: This causes reports about mouse button events to be reported providing they do not mean anything to Intuition. The *Code* field of the message tells you which button was pressed or released. *It will contain one of four flags: SELECTUP, SELECTDOWN, MENUUP or MENUDOWN.*

MOUSEMOVE: If the window, or a gadget within the window, is reporting mouse events then this flag ensures that you receive the *XY* co-ordinate messages of the mouse's position as it moves.

DELTAMOVE: With this flag set the mouse movement is reported as co-ordinate changes rather than absolute values.

■ Menu Flags

MENUPICK: You'll get a message if the user has pressed the menu button. If an item was selected then the menu number will be in the *Code* field. If no selection was made this field will be set to **MENUNULL**.

MENUVERIFY: This is a message sent as part of a particular verification mode which allows programs to temporarily halt, or even cancel, menu operations.

■ Requester Flags

REQCLEAR: If this flag is set then your program will receive a message when a requester is cleared from a window.

REQSET: Setting this flag will get you a message the moment a requester opens in your window.

REQVERIFY: If this flag is set Intuition will ask your program if it's O.K. to put a requester up in your window. Even system requesters will be blocked until your program replies to the message.

■ Miscellaneous Flags

DISKINSERTED: If this flag is set you will be told about disks being inserted or removed.

DISKREMOVED: Again you will be told about disks being inserted or removed. Two flags are needed because when these events happen you need to know which one has occurred.

NEWPREFS: With this flag set your program will be told if the user makes any changes to the Preferences settings.

INTUITICKS: This gives you timer events when your window is active. The messages arrive about ten times a second. **INTUITICK** messages do not queue up like other messages because the moment Intuition realizes that you haven't replied to a timer message it will stop sending them.

RAWKEY: Provides messages containing raw *key codes* from the keyboard. The data is extracted from the *Code* field but, by using the *Qualifier* field, you can get extrainformation about shift key use, etc.

VANILLAKEY: This gives you the keycode information after it has been processed using the keyboard device's current character keymap.

Making a Start

The easiest way to gain access to an **IDCMP** is to specify one or more of the **IDCMP** flags when you open a window. If Intuition sees that you've set one or more of the **IDCMP** flags in the **NewWindow** structure then it will automatically create a pair of message ports for that window. One port, the **WindowPort**, is used by Intuition, the other is referred to as the **UserPort** and is for the program's use. Intuition arranges for signal bits to be allocated to the message ports and it is by looking at these signal bits that we can tell when messages have arrived.

The **IDCMP** and the Amiga's message passing facilities are very versatile, but the more esoteric uses do get quite complex and are usually application specific. We cannot cover much in the way of this ground, but we can give you an example which should be a useful starting point. We'll suppose that you have an appropriate set of gadgets present in a window display and that you want these gadgets to control whatever operations the program must perform. The **IDCMP** flags **CLOSEWINDOW** and **GADGETUP** will have been set in the **NewWindow** structure so that Intuition will provide the program with these classes of messages.

Both **IDCMP** message ports will be part of the Window structure describing the window being used. A message port structure contains a field designed to hold an eight bit value called **mp_SigBit** — that represents the signal bit number which has been assigned to the port. The messages which we have

requested will arrive at the UserPort so..... if **window** is a pointer to the **Window** structure, then the type of C code needed to refer to the signal bit number of the **UserPort** will look like this:

```
window -> UserPort -> mp_SigBit
```

We will want to examine the allotted signal bit in order to tell whether there are any messages for us. Often, when we are waiting for gadgets to be *hit* etc., the program will be just sitting there waiting for particular types of messages to occur. With the Amiga's multi-tasking system we use the **Wait()** function which allows our program to sleep until some chosen event wakes it up.

Wait() requires us to pass a parameter indicating which signal bits we are interested in and it's important to realize that the parameter which is expected is a *32 bit mask* — it is NOT the signal bit number contained in the UserPort's **mp_SigBit** field. The difference between the two representations is easily seen by looking at an example.....

To convert the **mp_SigBit** value to a mask we simply left-shift the number 1 an appropriate number of times, namely **mp_SigBit** times. In C we use the << operator to achieve this, so the code required could take the following form.....

```
shift_required = window -> UserPort ->
mp_SigBit;
mask = 1 << shift_required;
Wait(mask);
```

We can combine all of this into a single line of code and produce the succinct, but somewhat obtuse, code that you've no doubt already seen in the Amiga manuals, i.e.....

```
Wait(1<<(window -> UserPort ->mp_SigBit);
```

When this line of code is executed the program goes to sleep, i.e. becomes inactive, until an event occurs which results in a message being sent to our UserPort. When such a message is received the program needs to do several things:

- It must collect the message by using the **GetMsg()** function. This requires the UserPort address as a parameter.

- It must extract the necessary information from the message.

- It must tell Intuition that the message has been dealt with, which it does by using the **ReplyMsg()** function. The parameter needed in this case is a pointer to the message.

As far as our example goes we are interested in the part of the program which handles these messages, i.e. detects them, identifies their class, and performs some appropriate actions. There are a couple of points that need watching.... Firstly, the *message has arrived* signal actually means that **ONE OR MORE** messages have arrived, so we need a loop arrangement to handle each message. Secondly another loop arrangement is needed which continues to look for messages until such time as the program terminates. JA

LED STORM



NICE RUN
30 000 PTS
YOU CAN HANDLE
THIS CAR REAL WELL
LETS KEEP ON GOING
THE SAME WAY
GET READY FOR
NETWOOD FOREST

Gordon Hamlett takes a look at what is possibly the most realistic M25 driving simulator ever written

■ **LED Storm** from Capcom brings a whole new dimension to the idea of demolition derbies. Rather than knocking your rival cars off the road, a rather quaint, old fashioned method, you must leap on top of them instead! LED stands for lazer enhanced destruction, a strange concept as lazars (sic) do not appear to feature heavily within the game.

The idea behind the game is nothing new. You have to drive from point A to point B without your car's energy running out. Succeed and you progress to the next of the nine stages. Fail and it is automatic game over time.

What is different is some of the hazards that you meet en route. When was the last time your journey was hampered by manic frogs? These little beasties cling grimly to the back of your car impeding your progress, and only a quick waggle of the old joystick is successful in knocking them off.

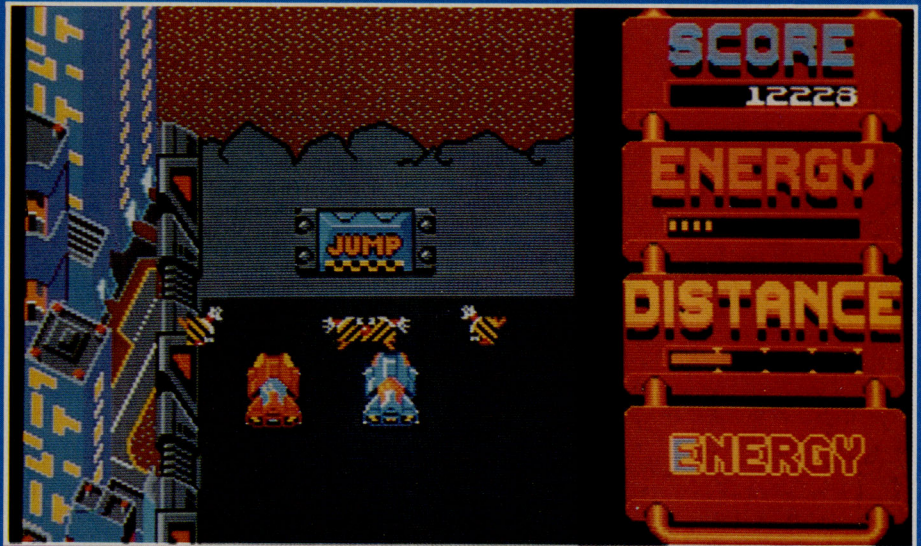
Other hazards to be encountered include mines falling from the sky, an indestructible TNT lorry (in view of the load it is carrying, it wouldn't do to have the slightest collision sending it to kingdom come!).

Several other vehicles are on the road. Collision with these reduces you to a spin i.e. it wastes your precious time and energy.

One of the cars is the computer controlled model which does its utmost to hinder you, and it is this car that you can take out by leaping on it.

There are natural hazards to be avoided too. Oil slicks and holes in the road again slow you down, but falling off a precipice is more serious and you have to wait for a replacement vehicle to appear.

There are two keys to progressing from stage to stage. The first is to know the route inside out, something that only comes with practice. The second is to make the best possible use of the natural resources that come your way. Collecting jerry cans lights up the letters of the word 'energy' at the bottom of the screen. Completing the word gives a healthy fuel bonus. Then there are energy pods



floating down from the heavens. Jump up to collect a quick boost to your power. Finally, passing spaceships drop three different types of bonus pods. Collecting these can give you extra points, energy or render you temporarily invulnerable.

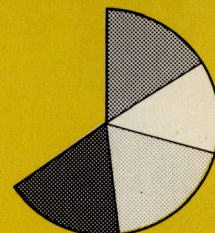
LED Storm is a fairly mindless sort of game but none the worse for that. The display

is pretty good although it is difficult to monitor your various gauges and watch the road simultaneously, with the result that the high score table tends to appear somewhat abruptly when your energy runs out. It would have been nice to leave the playing area up on the screen a bit longer in order to better assess your performance. Nevertheless, a fun game to play.

JA

LED STORM

Title: **LED Storm**
Authors: **CAPCOM**
Suppliers: **GO!**
Units 2/3
Holford Way
Birmingham
B7 7AX
Tel: **021-356 3388**
Price: **£19.99**



Graphics: **16**
Sound: **13**
Gameplay: **19**
Value: **20**



you have decided on your starting positions, you then choose the play you are going to attempt. It doesn't really matter if you don't know the difference between a double tight end and a shotgun, the computer only gives you a list of plays that are reasonable for your starting formation.

On offence, there are 11 different formations, 10 running plays, four kicks and 14 assorted passing movements. Defensive options are much more limited as, to some extent, you have to try and guess what the offence is going to try and do — pass or rush — and line up accordingly. You have the option to attempt a rush by either a defensive back or a linebacker. The outcome of all this is that there is plenty of variety within the gameplay.

Once all the tactics have been decided upon, it is time to try and execute your chosen play. The ball is snapped back to the

Touchdown, incomplete pass or will Gordon Hamlett be sacked?

■ If you understand the title of this game, then there is a pretty good chance that you will like it. American football is like cricket. People either love it or hate it. There is no middle ground.

Which is a pity because *4th and Inches* from Accolade is a very good sports simulation program, being both immediately playable and giving the novice a reasonable challenge against the computer opponent. The first American football game I played, I was losing 63-3 after the first quarter. I didn't even bother to start the second period.

Once you have decided which team you are going to play and how long each quarter lasts (5, 10 or 15 minutes) it is time to pick your starting formation. Each position has one built in substitute so you can vary the team as you see fit. You are not bombarded with a wealth of statistics regarding each player. Instead, there is a simple assessment in which players are graded as follows — speed!, fast, quick, steady, solid, strong, tough or big! As a general rule of thumb, the bigger you are, the slower you are.

4TH AND INCHES



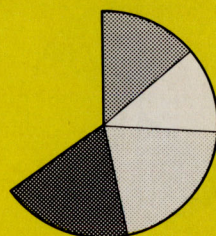
For each given play, you are presented with a list of just four different formations to choose from, selected via your joystick. Once

quarterback who is then under your control. If you have chosen a passing play, pressing fire releases the ball. If your receiver catches it, he then becomes the player under control and you can try to move upfield. This also applies if you have selected a running play. On defence, you can choose which player you wish to manipulate. One of the nice aspects of the game is that the players do actually behave fairly rationally, unlike other programs where they run up and down the field like demented chickens.

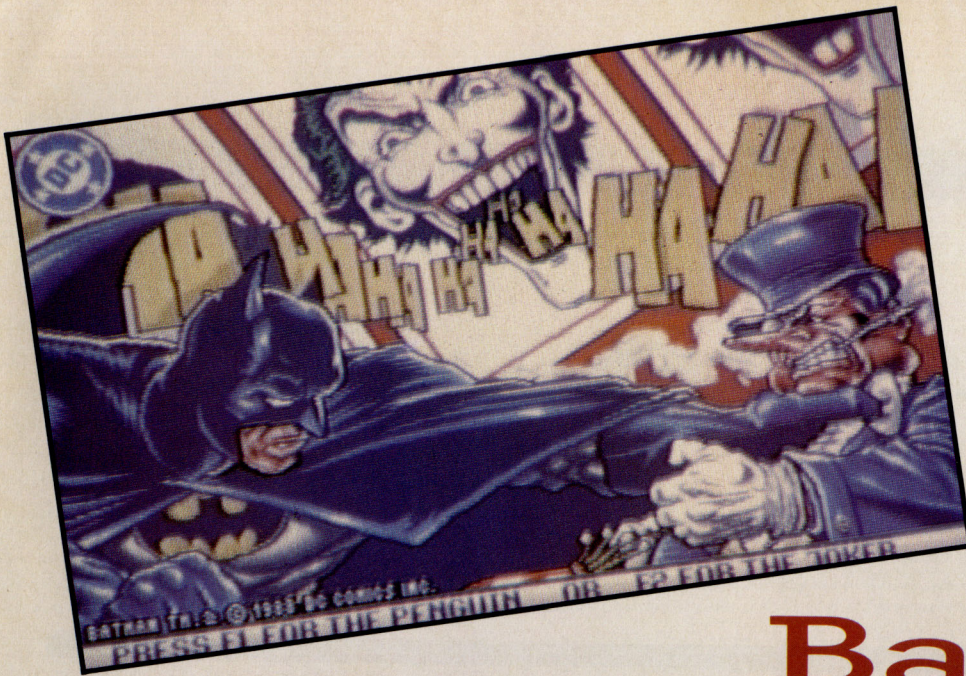
The graphics are small and not particularly detailed but they serve their purpose well enough. As far as I can see, there has been no attempt to enhance the gameplay from the eight bit version which is perhaps something of a disappointment. Having said that though, this really is a fun game to play and I can't see any American football fan not getting considerable enjoyment out of this game. *YA*

4TH AND INCHES

Title: **4th and Inches**
Authors: **Accolade**
Suppliers: **US Gold**
Units 2/3 Holford Way
Birmingham
B7 7AX
Tel: **021-356 3388**
Price: **£19.99**



Graphics: 14
Sound: 12
Gameplay: 21
Value: 21



With the impending release of Batman — The Movie, Ocean have come up with the first of two games based around The Caped Crusader

Batman

■ **This Year, as I'm sure you're aware by now,** is the 50th Anniversary of Batman. No doubt by the time you read this the shops will be laden with Batman posters, tea towels and novelty Wok sets, to such an extent that you'll be sick to death of the pointy-eared vigilante from Gotham City. Ocean has wisely beat the bat-rush and launched the first of its two games involving one of DC Comics' most enduring heroes. The second game will be launched later in the year to capitalise on the immense publicity the film will generate, and will be a straight movie tie-in

In actual fact, *Batman* is one game with two scenarios, one featuring the Joker and the other the Penguin.

A Bird In Hand

The Penguin, having been released from jail, decides to set up a seemingly legitimate umbrella factory near his Gotham City mansion, but of course it's actually a cover-up for his plans to take over the world with an army of robotic penguins. You must therefore track down the Penguin and foil his plans before the entire world falls foul of two foot high waddling birds.

As you may have surmised from the shots, this is an arcade style adventure containing hundreds of screens. The Dark Knight himself

is controled in a similar way to a Martial Arts game ie, joystick movements with the button depressed give you combat moves (kicks, punches, etc).

You can pick up objects by pulling back on your joystick with the button depressed. This causes the screen to toggle to the Utility belt section. Here's where you can use and store objects you find, as well as saving and loading your current game position and switching music on and off. The large Batman head in the centre of the screen shows your energy level. This gradually disintegrates to reveal a skull as your strength decreases.

The action in this senario begins in the Batcave and unfolds round the outside, over the top of and inside the Penguin's mansion and warehouse. Perils include Gangsters, remote control toy planes and of course those robotic birds.

Your score is in the form of a percentage which goes up each time you use one of the items correctly. No points are gained by beating up hoods, although if you hit them for long enough they run off leaving you a packet of crisps (customary behavior for gangsters I'm sure), which helps replenish your strength. Mind you, it surprises me that Batman would eat all this junk food that's left lying around. You'd expect him to have to stop off at a *Holland and Barratt* for some organic Bat-snacks or something.



A Fete worse than Death

Much the same sort of gameplay but, as I said before, an alternative senario. Robin has mysteriously disappeared (Holy Kidnappings! — Ed), the only clue being a single playing card, which can only mean one person — The Joker. So it's off to Gotham City Park, then through the sewer network to the Funfair, where poor old Robin is trapped on a rollercoaster ride.

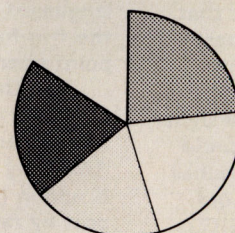
Batman features some very nice animation and graphics, as well as a respectable array of sound effects. The music is an '89 remix of the TV series theme which, although well done, does grate after a while (thank God you can switch it out). All in all a damn good game. I look forward to Ocean's next one.

YA



BATMAN

Title: **Batman**
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Graphics **23**
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relationships and might therefore be prepared to underwrite this promised one years hardware support.

I was delighted with the Amiga — until I tried to interface an external drive. After trying a number of drives (all of which worked perfectly with other Amigas). I came to the reluctant conclusion that the fault lay with my Amiga. Since the fault was immediately apparent at the first attempt to interface the external drive, it is safe to assume that the defect was present on delivery and therefore, under the sale of goods act, the unit should have been replaced.

However, on contacting Silica Shop, their returns dept. arranged for collection and subsequent repair under warranty. It was then that I learned to my horror that Commodore were not to undertake the repair, but a company called DPCE in Telford. — so this is what

Commodore mean by "hardware" support.

To cut a long story short, although the letter was accompanied with an impassioned letter explaining that this was my company's sole computer and as such, I could not afford to be without it at all, the unit still took four weeks to arrive. Thus, in addition to the indirect and unmeasurable cost to my business for these delays, direct costs in the region of £30 to £50 were incurred in telephone charges alone chasing a service advertised as "free hardware support!"

Although I have written to Commodore some two weeks ago, I have had no reply — not even an acknowledgement of receipt, so perhaps you would allow me to ask through your pages what exactly is meant when they advertised "12 months free hardware support"?

B.C.J Levett

■ Thank you Mr Levett — Our

writer, Clive Grace has had ample experience of Commodore's repair facilities (he's blown up five Amigas!) so I'll pass this one over to him!

Thanks Stuart.

Yep, I must admit that I have blown up quite a few Amigas in my time, but I have personally found the Commodore repair system to be perfectly in order — naturally should the fault lie in a computer that you purchased, and if the fault can be proved to have been existing at the time of purchase without you knowing it, then you are perfectly within your rights to complain, and ask for a replacement.

On the subject of DTPC, I have had long chats with the guys there, even though they are very busy repairing Amigas and other computer equipment. I have found that their service is thorough and very well implemented — certainly four weeks is quite a while, but other people have had their Amigas repaired in half that time, and sometimes a repair is hard to perform and the task is

time consuming at best.

It is a shame to hear that your Amiga took so long, but the repair was carried out under warranty (phone calls can hardly be expected to be performed "charge free") and the hardware support is as good — if not better — than that of Atari and Amstrad etc.

Perhaps you should think of opening up an insurance policy specifically for your computer system — they do exist whereby a user is immediately sent a replacement computer for the duration of the repair. Specific companies deal with this type of policy, and it would be a good idea to have a look around. This way should your computer go wrong you'll always be able to get your hands on a replacement machine.

I was unable to get in touch with Commodore to discuss your letter with them. Should the people concerned read this then perhaps they could write to us and share their views on the matter with us — and of course we'll pass them onto you.

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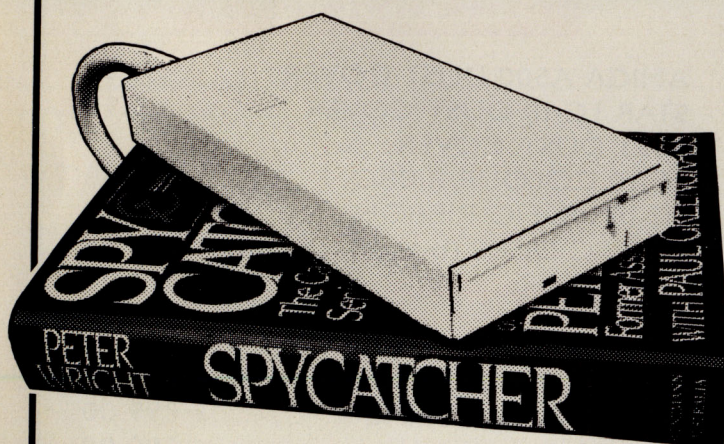
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