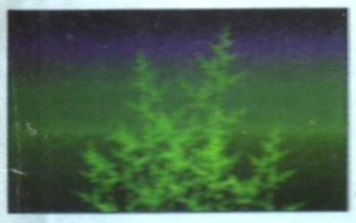


CDTV
Latest Releases
Page 60

Disk Storage
How It Works
Page 46

PD Stakeout
What's new, cheap but good Page 107

amiga user INTERNATIONAL

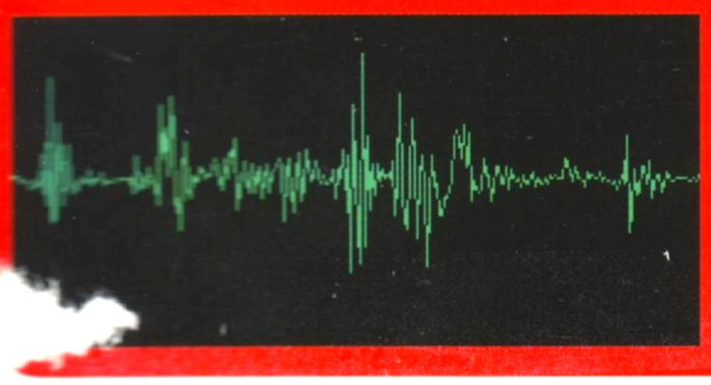
£2.95
AUGUST/SEPTEMBER 1992

THE aui SUPERDISK

AUDIOMASTER

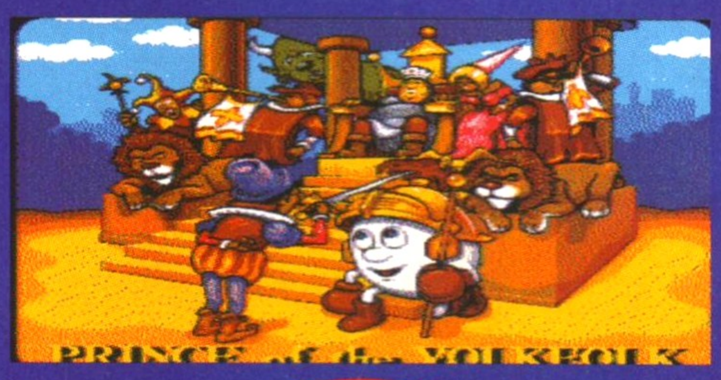
Worth £69

when it was published, this complete program is all yours absolutely FREE! Instructions for use inside this AUI. Don't miss it!



SPECIAL FEATURE
Amiga Graphics Goes Pro Standard
page 30

ENTERTAINMENT NOW



page 94

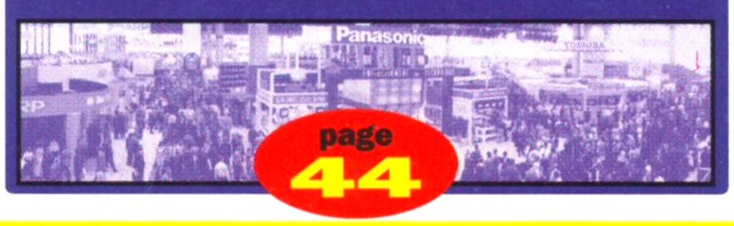
NO DISK?

Ask your newsagent.
Every copy of aui is sold with a disk attached.

HOT NEWS

Budget Video Editing
G Force • Math Vision
Mini Office For The Amiga
Neuropro to 2.0
Vidi Amiga 12 • Adpro Into Film
CDTV Changes Direction
For Whom The Smart Tolls
New Faces For Soft-Logik

Consumer Electronics Show



page 44

ADI EDUCATION

page 54

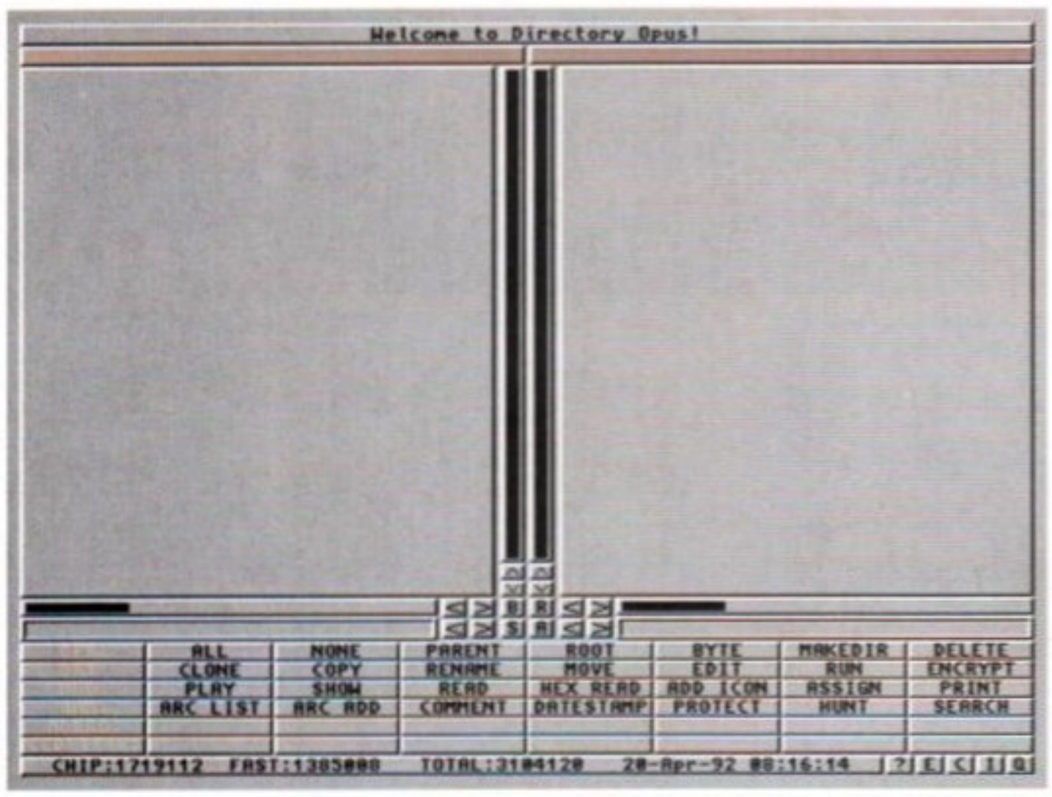
9 770955 107017 08

FROM DREAM TO SCREEN

From Dream to Screen - a great new series that can make even *you* into an expert programmer. KNOWHOW - Tips on DTP,

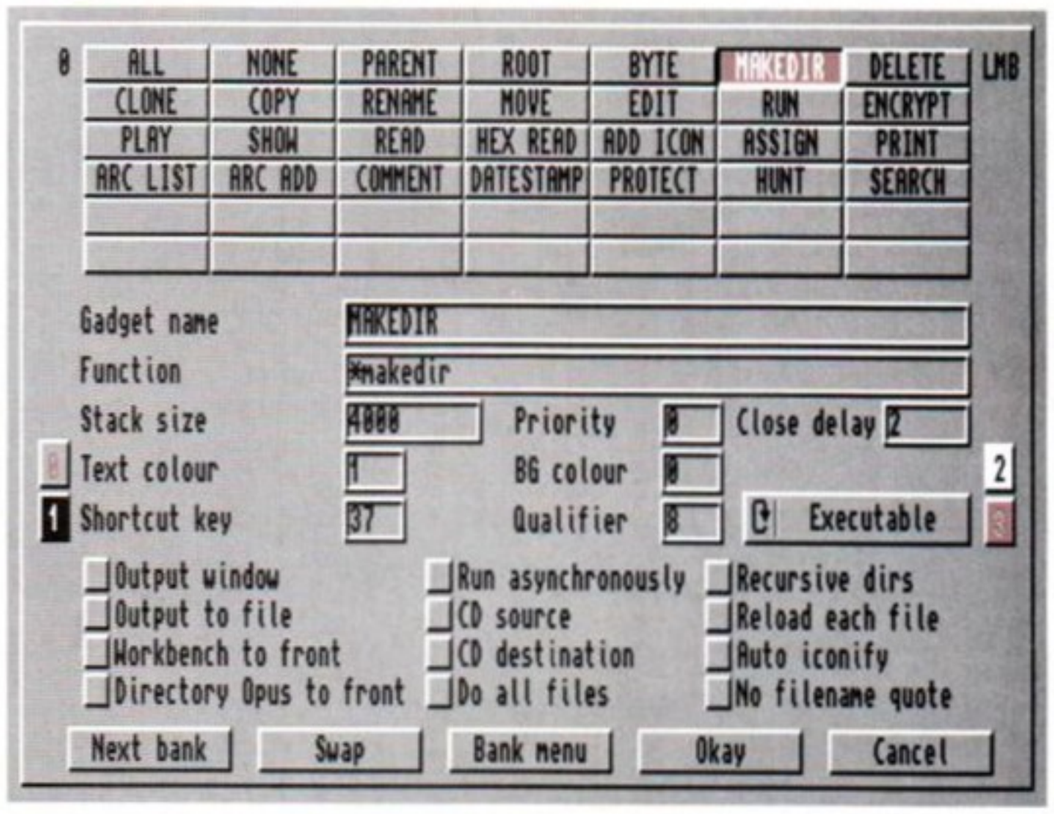
Is your directory utility dull, weak, and generally unpleasant?

Do Something About It!



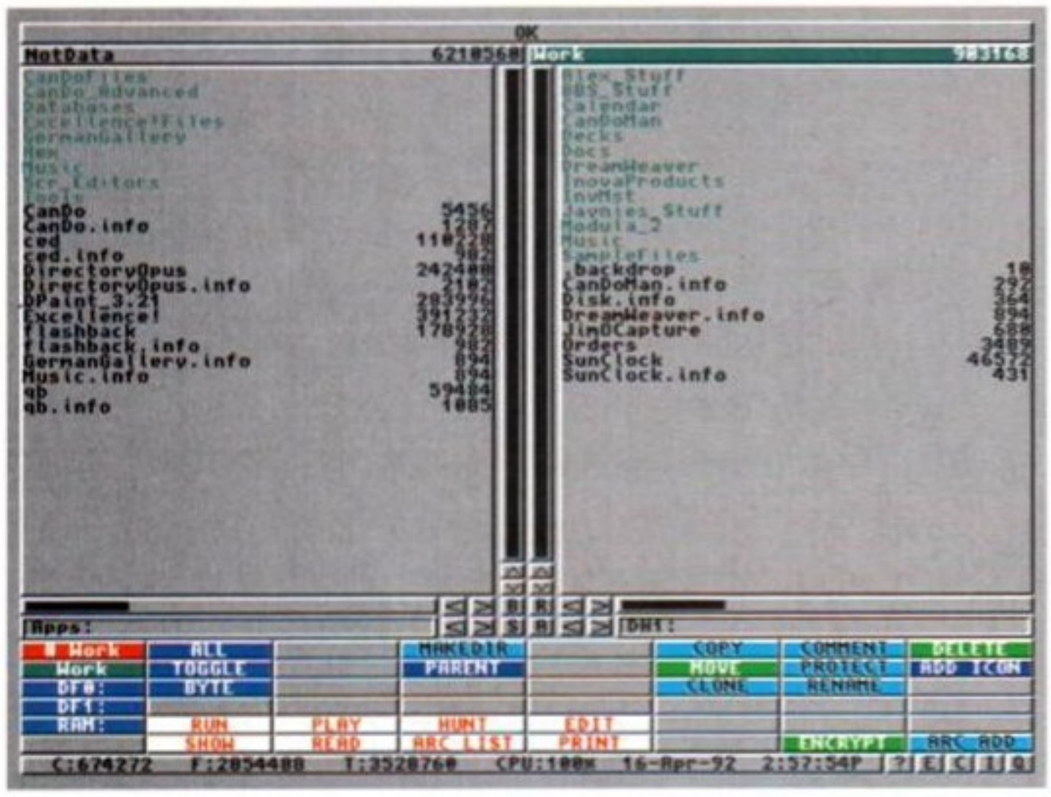
default configuration

You start out with *this...*



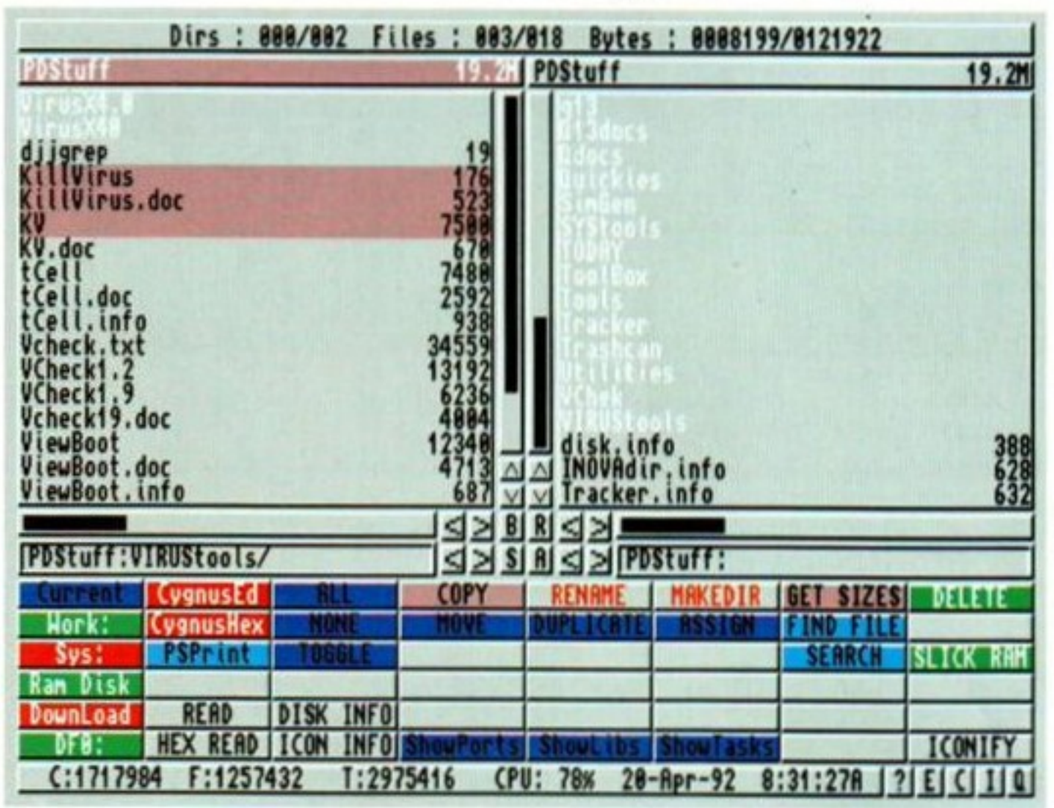
gadget config screen

then you use *this...*



One Man's OPUS

and you get *this...*



Another Man's OPUS

or maybe *this...*

But only if you have *this:*

directory OPUS

version 3.41

just £39.95!

from

INOVAtronics

Be More Productive.

OPUS: it's not just incredibly convenient, it's you.

"The extent to which OPUS is configurable is astounding. Everything, down to the action that OPUS will take when you double-click on a file, is configurable...Five Stars (highest rating)" - *.info Magazine*

Directory Opus is available at these...

First Choice 0532 637988	Digital Disks 0602 47 5166	Merlin Computers 0602 441442
SDL 081 309 5504	City Beat 0234 855666	Silica Systems 081 309 1111
Power Computing 0234 843388	Gordon Harwood 0773 856781	Centre Soft 021 625 3388
HB Marketing 0753 686000	Hobbyte 0582 45 7195	Zone Distribution 081 766 6564

...and other leading Amiga dealers

INOVAtronics, Inc.• Suite 209B, 8499 Greenville Ave, Dallas, TX, USA 75231-2499• Phone 214-340-4991• FAX 214-340-8514

Directory Opus copyright 1992 Jonathan Potter, published and exclusively distributed by Inovatronics, Inc. CanDo copyright 1992 Inovatronics, Inc. Example configurations shown. All product names shown are copyrighted to - and trademarks of - their respective owners where applicable.

IF YOU COULD ONLY HAVE ONE PRESENTATION GRAPHICS PACKAGE...

...wouldn't you still want it to do everything you need?

Presentation Master does it All!

Are you tired of exporting your file from one application to another in order to get the job done? One program for outlines, another for titling, another for charting, one more for animation, yet another for object-based images, for importing clip art, for manipulating the clip art, for displaying your show. And wouldn't it be nice to create a stand-alone slide show you could leave with a client or have played on a kiosk, have 24-bit color, color PostScript® output and Illustrator™ EPS clip art?

Now with one program, you can completely design, display and output hard copy, slide, and computer display presentations. On-screen "hot spots" let the user redirect the flow of a presentation with a click. Stand-alone shows can be created, allowing display on an Amiga without Presentation Master.

Presentation Master provides:

- Titling with loads of screen transitions and special effects
- Slide creation with bitmap or Color PostScript® output
- Business Charting with a built-in spreadsheet interface
- Object-based Structured Drawing
- Poster creation and Story-board output
- A Clip art module that handles Illustrator™ EPS files

Object-Oriented Paint System

Presentation Master can import any Illustrator™ EPS clip art image as an object-based paint file. Objects can be grouped, regrouped or broken into components for image manipulation and morphing, even point-by-point editing of objects. Export files as IFF images, B&W or color PostScript files. Standard drawing tools, plus spline curve drawing, allow user-definable line widths. Color and shape morphing helps you create outstanding images.

24-Bit Color

Presentation Master stores images internally in 24-bit color for phenomenal PostScript output results. Quick-choice palette with over 200 colors includes transparent colors for overlays.

Text and Titling

Import ASCii outlines, or create them with Presentation Master. Word-processing capabilities include word wrap and indentation levels, as well as the ability to cut/paste from one slide to another. Presentation Master handles any Amiga Font as well as a host of commercially-available fonts such as Kara® and Zuma® fonts. Color fonts are handled easily, without conflict with background images. Rescalable PolyFonts™ in faces similar to Times, Helvetica, Zapf Chancery, Palatino, and Schoolbook are included with program. PolyFonts and Intellifonts™ can be rotated, resized, and modified in the same ways as Clip Art.

Presentation Master is compatible with the 2.0 and 1.3 operating systems and both NTSC and PAL displays.

Requirements:

Amiga computer with 2 MByte RAM and hard disk, .

Presentation Master and PolyFonts are trademarks of Oxxi, Inc. Amiga is a trademark of Commodore-Amiga Inc. Adobe, Adobe Illustrator and Adobe PostScript are trademarks of Adobe, Inc. Intellifonts is a trademark of CompuGraphic Inc.

Oxxi inc.

PO BOX 90309, LONG BEACH, CA 90809
(310) 427-1227, FAX (310) 427-0971

OXXI UK LTD
171 BATH ROAD, SLOUGH, BERKS, SL1 4AE UK
(0) 753-551-777, FAX (0) 753-551-211

amiga user INTERNATIONAL
VOLUME 6 No 8/9 AUGUST/SEPTEMBER 1992

Constant Factors

5 The Amiga Dimension

Managing Editor Antony Jacobson finds electronics threatening to take over the world.

8 Cover Disk

How did we manage to cram so much software onto this month's disk? It includes Audiomaster II - the whole program, sound samples, music and much more... Gary Fenton shows you what to do.

14 Newsfile

Martin Witton and Anthony Mael have compiled the latest developments from knocking up a brain simulator using neural networks to smart cards on the road and all the hottest news on the Amiga frontier.

36 The Professional Amiga

Discover just what you are missing out on as Paul Fletcher shows how professional the Amiga can be while making Mac and PC owners green with envy.

38 The Video Column

Gary Fenton continues to excite us with what's happening in video including VideoWare's wonderful video clipart collection and Pictureware's magic box information centre.

117 Amiga Answers

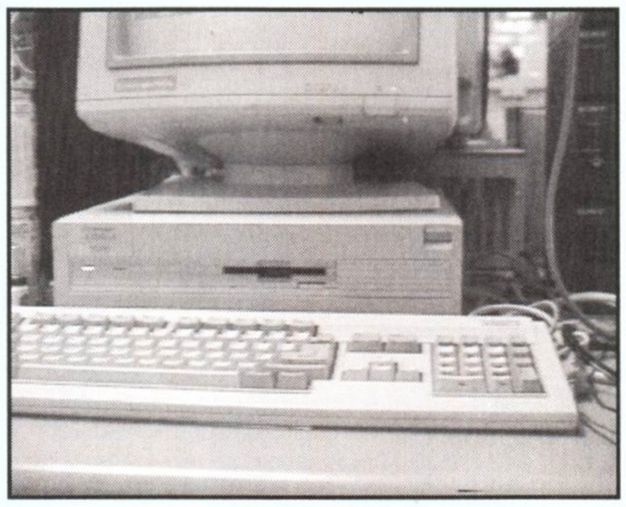
The who, what and why on your Amiga is carefully considered by Andy Eskelson in answer to your enquiries, requests and even desperate demands.

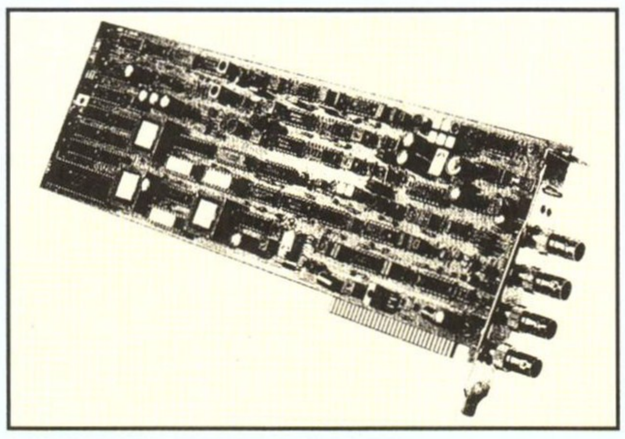
120 Write to Reply

Bud Vennos gets on his soap box and answers the multitude of letters that hit his desk.

122 The Fat Lady Sings

As ever, the Fat lady lets you have it between the ears, with this month's colourful comments on a certain Butt Venemous. Who he? Find out in the column that everyone loves to hate.





Field Reports

39 Technicoloured Tangerine Flavoured Dream - Again

It all happened in Olympia, London, at the Multimedia show. Bud Vennos is your guide through the astonishing developments that will attack your senses from all sides and in all media.

44 Consumer Electronics Show

All the gossip from the world's top computer companies, at the Chicago CES show...What no Commodore? Asks Ian Burley.

46 Fujitsu Disk-Ussion

Fujitsu...is it a martial art, or paper folding? No, it's how disk drives work and who makes them as Ashley Cotter-Cairns explains.

48 Live In The Silicon Village

Alan C. Cranleigh takes you through the phone line into a new and lively form of bulletin board.

Test Drive

54 Sound Samplers

Gideon Overhead blasts your ears with three exciting new sampler packages.

56 Miracle Piano

Now you can learn to play like a concert pianist - in your lunch break. Paul Overaa takes up the keyboard and the software.

60 AMIGA CDTV

From the wild west to the far reaches of the universe, Janet Bickerstaff takes us on a CDTV journey of discovery.

64 KCS Powerboard

Don't throw away your old PC software, now it will run on your Amiga with the KCS Powerboard. Peter Hayes guides you through it.

contents

Education

68 Martin Witton examines two programs aimed at making learning fun and useful to people of all ages - an often missed section of educational software.

User Port

88 Boot Selector

Don't give your Amiga the boot, let David Carreyette show you how to build the selector to make it that much more flexible.

92 Upgrade Your Amiga

Andy Eskelson takes you on a step by step guided tour on how to upgrade your Amiga to the quality of Workbench 2.0.

100 Surround Sound

Gideon Overhead brings the Odeon Cinema Leicester Square to a living room near you in glorious quadrophonic noise.

107 PD Stakeout

All that is great and grotty in the Public Domain is examined by Gideon Overhead.

114 Thanks for All the Lovely Fish!

Norman Stone swims through this month's collection of Fish disks.

Mentor

84 Programming Tips

Want to know the secrets of programming? Paul Overaa tells all...

95 Steve Goddard shows you how to program the dreams in your head to turn into dreams on your screen.

98 DTP Knowhow

For all you budding publishers out there, John Walker shows you how to drop pictures into your creations and make them look good.

Entertainment Now

72

Jim Power - Loriciel, **Pinball Dreams** - 21st Century, **Manchester United** - Gremlin/GBH, **Dizzy's Excellent Adventures** - Codemasters, **Microprose Soccer** - US Gold/KIXX, **Legend** - Mindscape, **John Madden American Football** - Electronic Arts, **Sim Ant** - Maxis/Ocean, **Pushover** - Ocean, **Covert Action** - Microprose, **Special Forces** - Microprose, **Smash TV** - Ocean, **Steel Empir** - Millenium/EA.

Special Feature

This month we highlight graphics products that may be changing the shape of how professionals view and use the Amiga.

28 DCTV

Barry McCarthy throws away his old painting programs and demonstrates the astonishing versatility of DCTV in some exciting developments that will make you rush to your Amiga and possibly to your bank manager too..

31 Team 4

Gary Fenton enters the world of 24-bit graphics with Team 4's remarkable Kasmin card. It brings the Amiga triumphantly into the field that is inhabited by such broadcast standard products as the Paintbox and Pastiche.

The Amiga Dimension

In the Newsfile, there is an item about truck drivers with smart cards bouncing signals into toll points on main road.s In the article on the Multimedia Show in this AUI, we report on computerised "expanded books" where you not not only read the verses but see the poets in a video picture speaking the poems. At Wimbledon, they used an electronic device that gives out a "ping" when the server overhits the ball and the service is a fault.

While waiting for the rain to stop – hearing I was going to Wimbledon a senior executive of the company had kindly wished the rain to fall all day and nearly succeeded in getting his wish – I read that there is a new bomb under development, the ElectroMagnetic Pulse Bomb (EMP). Unlike the Neutron bomb, which destroys people and leaves property untouched, the EMP takes out all electronic communications without harming people at all. The idea is, of course, that today the world, and especially its governmental and military sectors, is almost entirely dependent on electronics.

At the Multimedia Show, someone commented that when schools in this country are accused of not turning out children who can read or write correctly, is there really a need for a whole new way, as multimedia certainly is, of presenting information to them? It was ironic that such a comment should be made at a show that highlighted the drive by Commodore and Philips to get their CD-based multimedia machines into homes around the world with a strong emphasis on the "educational" side.

One of the most annoying things that can happen to me is for the printer connected to the Amiga on which I am writing this to malfunction. I started my professional writing career using a manual typewriter. It didn't offer flexibility of an electronic printer but it never went wrong. It was, like the very occasional person you meet in life but not the Wimbledon weather, entirely dependable.

The fact is that anything electronic is highly sensitive to a huge series of interacting circumstances from the most minute inaccuracy of the PCB to a massive failure of electricity generation. And the greater our dependence on electronic gadgetry and systems, the more helpless we become when they desert us. Yet the increasing electronic penetration into our lives, in peace and war, is inexorable, unstoppable. One aspect of it, Multimedia, will, whether we want it or not, create a whole new way of showering us with data for information, entertainment and interactivity. We are all becoming more and more powerful by use of electronics but unquestionably ever more dependent on it and helpless when it inevitably fails. I just hope I'm not around to see the absolute global chaos there will be if they ever drop that EMP bomb.

Anthony Jacobson
Managing Editor

stereo MASTER

When you are considering purchasing a sound sampler there are plenty to choose from. Why compromise? your choice should be the new full featured STEREO MASTER for the Amiga, with software that is designed from our top selling Amiga sampler AMAS and a package that gives you more extras than a M series BMW. By purchasing this state of the art product which combines a quality sampler with the expertise of over 10 years of software programming, you are purchasing a top quality product with the knowledge that it is not only compatible with existing Microdeal products but will also be with future ones.

What is Stereo Master

Stereo Master is a low cost, high quality sound sampler for the Amiga range of computers. The sampler cartridge included in this package plugs into the printer port at the rear of the computer and allows you to analyze the sounds coming in from devices such as Personal Cassette Players, Compact Disc Players etc, or change the way they sound using the Real Time Special Effects or record them. Once in the computer STEREO MASTERS unique editor will enable you to edit the sound in practically any way you can imagine. Once you have the sound sample how you want it, you may incorporate it into your own Demo's or use STEREO MASTERS own built in sample sequencer to play back the sample in sequence with other samples!

MAIN SCREEN

The Sampling Software

Every feature you would expect to find in a professional editing suite including:

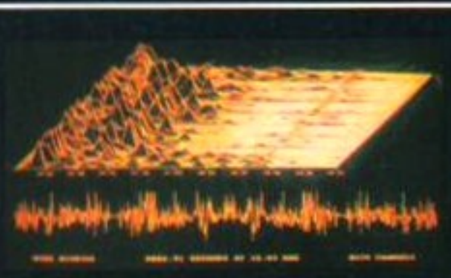
- Real time record/play ghost markers
- Cut or Delete selected sample area
- Mix sample with full or half volume
- Shrink in by 25%/50%/75% by drag or wipe
- Fade in/out with selectable degree of fade
- Filter sample with soft/medium/hard filter
- Selectable trigger volumes
- Record frequency from 3.0 to 55.9 Khz
- Full editing and control facility for left/right channels
- Playback volumes
- Decrease volume
- Increase volume
- Bounce sample
- Paste sample
- Trigger recording
- Clear left/right samples
- Loop sample

THE SPECIAL EFFECTS CONTROL PANEL

The Special Effects Software

For the first time ever you can emulate special sound effects in real time just like the sound labs can for film studios, normally the hardware to produce these effects would cost 100's of times more than this package. Features on the FX menu include:

- Built in real time special effects including Echo, Reverb, Ramp, Pitch up/down, Stereo bounce, Multi echo Chorus, Phaser, Reverse and Pitch bend.
- Fully programmable special effects so that customised effects can be recalled



3D DISPLAY OF SAMPLE FREQUENCIES (FFT)

The Analytical Software

A whole host of pro-type analytical functions include:

- 3D display of sample frequencies (Fast fourier transform)
- 3D display also includes 2D envelope display plus sample information.
- Built in Stereo spectrum analyzer
- Stereo Oscilloscopes with trigger markers

STEREO SPECTRUM ANALYZERS

STEREO OSCILLOSCOPES

THE SEQUENCER CONTROL PANEL

The Sequencing Software

Our built in sample sequencer allows you to take up to 18 samples (memory permitting) and sequence them into your own "tronic" mixes, features on the sequencer include:

- Real time entry of sequences from keypad
- Step time entry of sequences
- 2 stereo channels for sequencing
- Storyboard style editing
- Digital sequence position display
- Fast forward/rewind controls
- Program sample to keypad
- Stand alone demo player displays IFF picture whilst playing sequence
- Sequence copy function
- Loop sample
- Selectable sequence speed
- Dump/re-edit function
- Test function
- 2 octave playback
- Insert/delete sample in step time

microdeal

© 1991 MICRODEAL U.K.
ALL RIGHTS RESERVED

Other innovative features

We know this product is years ahead of its time and these additional features justify our boast:

- New style stereo cartridge
- Produces stand alone executable sample files
- Fully multi tasking
- Saves in IFF/Raw/Instrument1/3/5 Octave
- Includes walkman type cable
- PAL/NTSC full screen display
- Can create workbench icons
- Save customised settings

AMIGA STEREO MASTER ORDER FORM *AMIGA*

STEREO MASTER IS £39.95 Post & Packing £1 (All prices inc. V.A.T.)

BY PHONE WITH CREDIT CARD

(0726) 68020

BY POST

With cheque, Postal Order or Credit Cards.

Name... .....

Address .....

.....

.....Postcode.....

Credit Card Type.....Expiry Date.....

Number .....

Please allow 28 days for delivery

SEND TO: Microdeal PO BOX 68 St Austell Cornwall England PL25 4YB

VISA

PIKE'S PD

Access

Presents

THE FISH COLLECTION

"No 1 for FISH DISKS"

FISH DISKS 1 to 680+ ALWAYS IN STOCK
ONE FREE FISH DISK WITH EVERY TEN PURCHASED

ONLY

99P

A DISK

+ 60p P&P

Telephone your order through now, call 0793 432176
Send for our FISH Catalogue, FREE with any order
or just 50p with SAE

Please make cheques payable to:

PIKE'S PD, 12 Northlease Close, Swindon, Wilts SN2 3JJ

Same Day Despatch

aui

SUPE

You lucky people! Not only have you got Audiomaster II but there are also 11 sound samples, three pieces of music and much more besides. Now here's your host, Gary Fenton, to introduce you to this abundance of goodies...

We've given you Oxxi's Audiomaster II for absolutely free. Yes, folks, it's the whole program for you. No, not just a demo! Here are the instructions to help you use it. They are in Oxxi's own words with a few minor adaptations on our part. So you are getting the real thing. A program that cost £69 when it came out and was worth a lot more! Let's kick off with a quick tour.

A Quick Tour

When you start up AudioMaster the About AudioMaster requestor is the first thing you will see. It contains the version number and copyright information and it also keeps track of how much free memory is available. Select OK to put it away. The AudioMaster screen has three components:

The display is empty because no waveform has been loaded yet. The green line marks the zero volume level. You'll need to load a waveform to continue.

To load a sampled sound: Choose 'Load..To Screen Display' from the Project menu. The storage requestor will appear. Select the Sample's directory and then choose a sample. ('ItBeganInAfrica' is the only sample on the disk unless you have followed the instructions marked ATTENTION!)

The entire waveform sample will appear on the screen and the Display label on the Menu bar will change to show how much data, in bytes, is displayed. As you can see the waveforms of real-life sounds are complicated. Now, let's hear how it sounds.

To play the waveform: Select WAVEFORM from the PLAY section of the Control Panel. AudioMaster will play the sample once and stop.

AudioMaster can prolong a sound by playing it over and over in a loop. But first the "repeat" markers are needed to tell it where the beginning and end of the loop are.

To bring up the repeat markers: Select NO LOOP in the Control Panel. The button will change to LOOP ON and the repeat markers, which are vertical red bars, will appear.

Now when you select the WAVEFORM button the sound will start at the beginning of the wave and then play in a loop between the two repeat markers until you select

RDisk No. 15

STOP. You can move the red repeat markers to 'bracket' the section of the sample you want to be played.

To change the waveform's pitch: First, turn on the sound loop by selecting WAVEFORM. Choose Tune Waveform from the Special Effects menu. The Tune Waveform requestor will appear.

Drag the Pitch slider. You'll hear the sound change pitch when you release the Selection button. Clicking in the black space of the scroll bar will change the sound one pitch at a time. When you're done playing with the sliders, select OK to leave the requestor.

The Menu Bar

Here is a quick summary of each menu:

Project

The Project menu contains commands which are important in any Amiga program. You can access the storage requestor from here to load a waveform either to the Edit Window or to the Copy Buffer. A buffer is an area in memory, which you can't see. It's for "cut and paste" functions, like a clipboard in a word processor. You can also save a waveform or just a segment of it. Also, you can open the About requestor or exit the program from here. The command for sampling a sound is also here.

Edit

The Edit menu's commands are similar to those in a word processor: you can either cut or copy pieces of a waveform (or several waveforms) and combine them as a new waveform. If you need a blank area of the waveform as a workspace, you can flatten a section. The Edit Freehand command lets you use the mouse as a drawing tool to reshape a section or make one from scratch. If you're still unsatisfied with the sound you can erase all the data and start over with a blank screen.

Special Effects

Once you've defined an area of the waveform to work with you can add echoes, make it play backwards, have it change volume from beginning to end, overlay a waveform on top of it, tune it and adjust treble.

User Options

These commands let you change the automatic (default) settings. For example, if you don't want to be reminded that your action is using up memory you can turn off Enable OK Prompts. The command for setting the waveform type one, three, or five octave is also here.

The Control Panel

The Range Functions

Many of the commands in the Edit and Special Effects menu are not usable until you define a section (range) of the waveform for them to work on. For example, to cut a section, you must first enclose it in a range.

To pick a range: Put the cursor on the display and while holding the Selection button down drag the cursor in either direction. The range is highlighted in white. When the range is the desired size, release the button.

To undo a range: Click anywhere in the Edit Window with the Selection button.

Show Range

The ranged area also defines the area to zoom into. After you've chosen the range, the SHOW RANGE button serves a "zoom in" function. When you zoom in, the range will stretch to fill the screen display. You can keep zooming in until the Menu bar shows Display=599.To magnify a portion of the waveform: Choose a range of the waveform. Select the SHOW RANGE button. You'll be able to see the range in finer detail as it expands to fill the Edit Window. The magnification is not limited to just the range. Drag the scroll bar at the bottom of the screen display to see the rest of the waveform. To scroll a screen length at a time, click in the black area of the scroll bar.

When a portion of the waveform is currently displayed and you want to pick a range, ranging past the borders of the display will cause the display to scroll (unless the end or start of the waveform is reached).

Zoom Out

The ZOOM OUT button is the opposite of the SHOW RANGE button. Selecting it causes the screen display to take "one step back" to show a little more data. ▸

SUPERDisk

Show All

If the waveform is magnified, selecting this button will revert the waveform to its normal display with the entire waveform shown in the Edit Window.

Range All

If you want a menu command to affect the entire contents of the Edit Window, selecting the RANGE ALL button will include all of the window in the range. This function affects only the Edit Window, anything off-screen will not be included in the range.The PLAY Buttons

Waveform

Selecting WAVEFORM plays the final version of the waveform (as it will be saved to disk). You can leave the sound going while adjusting the Repeat Points, Volume and Pitch (found in the Tune Waveform requestor under Special Effects). Select STOP to turn off the waveform.
If LOOP is on, selecting WAVEFORM plays the waveform and then loops between the repeat points.As an alternative to selecting WAVEFORM you can press the W key to play the Waveform. Press the space bar to stop the sound.

Display

Selecting DISPLAY plays only what is currently displayed on the Edit Window. A cursor will move across the Edit Window to show what part of the waveform is playing at that instant. If the sound is stopped prematurely with the stop gadget and there is no Range inverted on the screen the cursor will position itself at the location where the sound was stopped. Pressing the D key will also play the display.

Range

If a Range is set and PLAY RANGE is selected only the ranged data is played. Pressing the R key will also play the range.

Snapshot and Recall

SNAPSHOT saves the current data and main settings to the device as selected in Set Snapshot Default in the User Options menu. It is designed for temporary saving while making changes which you may want to reverse. Select RECALL to bring the "snapshot" back to the Edit Window.

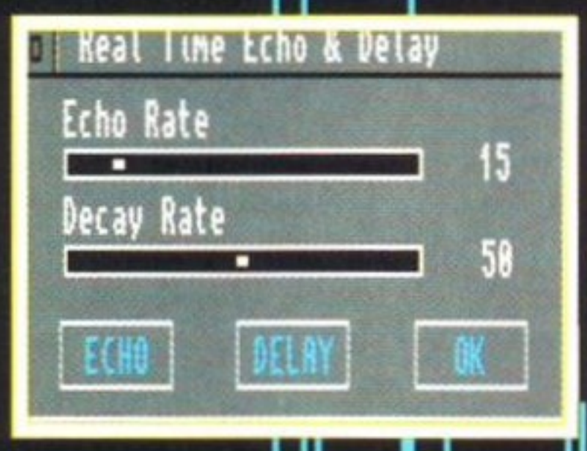
Volume

The volume slider controls the total output of the main waveform.

The Edit Menu

The Cursor

The cursor marks the insertion point for data to be pasted onto the waveform. You can see the cursor, which is a vertical white line, by clicking in the Edit Window with the Selection button. To move the cursor click on the desired position. The beginning of a range is also the cursor position. If a range is highlighted, inserting, etc. will begin at the range starting location.



Cut

Ranging an area and choosing Cut will remove that ranged portion from the display. The removed data is stored in the copy buffer (an area of memory) and the cursor is placed in such a position as to enable re-insertion if you wish to reverse the cut.
However, if Enable Cut To Buffer has been turned off in the User Options menu, data is not transferred to the copy buffer when cutting (conserves memory). That is, once data is cut you will not be able to retrieve it.
Note: When cutting data from a waveform which is larger than 100k (100,000 bytes) the data will not be stored in the copy buffer unless expansion memory is present. You can tell if a range has been copied to the copy buffer because it flashes just before being cut from the main waveform.

Copy

This function copies ranged data into the copy buffer so that you can paste it elsewhere or use functions such as Mix Waveforms.
Note: You cannot copy a waveform over 100K in size (100,000 bytes) to the copy buffer unless expansion memory is present.

Paste

This function inserts the data from the copy buffer onto the Edit Window at the cursor position (from the cursor on). After you've chosen Paste the screen display will reproportion itself to show what you originally had as well as the data just inserted.

Clear Buffer

This function empties the copy buffer to release memory otherwise tied up.

Replace

When Replace is chosen the data in the copy buffer will replace the data from the cursor position on, for as long as the copy buffer size or until the end of the waveform is reached.

Zero

You can zero the data ranged on the screen or zero the data in the copy buffer. The copy buffer is not cleared but the data in it is filled with zeros. This is useful when wishing to add some workspace to the waveform. You range a desired amount and copy. Then zero the copy buffer and Paste the blank data at the desired location.

Edit Freehand

This powerful feature allows you to Draw a desired waveform or reshape an existing sound. The waveform is displayed as a series of dots. Moving the mouse in the Edit Window while pressing the Selection button draws the waveform. Move the mouse slowly and an even line is drawn. Move quickly and a splatter pattern can be created. For best sound results, limit your drawing to just a small area of the display and then loop or copy and paste that section.
Cursor to Start & End
This moves the cursor to the beginning or end of the current display to assist when wishing to insert at the left or right boundaries.
Clear All Data
This function resets the program as though you had just loaded it. If you clear by mistake, all is not lost since you may be able to use RAM Scan to range and save the data you inadvertently cleared. However, this doesn't apply if you're using expansion memory. Only chip memory is displayed in RAM Scan.

Eeffects Menu

Echo

Echo is achieved by ranging a desired area (there is no need to copy). This area will be echoed onto the remaining part of the waveform. It may be necessary to use the Zero function to append some empty space at the end of the waveform for the sound to echo into.
Echo Rate is the speed at which the echo repeats. The speed is calculated in 1/60 seconds. A value of 10 will cause six echoes per second - that's one echo every 10/60 seconds. Echoes are stacked (that is, Echo on Echo on Echo) as occurs in real life. Setting an echo rate too low will increase calculation time considerably because the data is gone over and over again for each echo. Always ensure that you have adjusted the desired pitch before echoing because the echo rate is applied at the current sample rate.
Decay Rate determines how quickly the echo subsides. A value of 50 means each echo is 50 percent quieter than the previous one. Selecting the highest value will cause the software to try to determine its own decay rate depending on the number of echoes and the size of the waveform.
Number of Echoes determines how many times the echo occurs.

Backwards

Either a range or the copy buffer can be reversed for interesting effects. Try getting a friend to say something backwards, sample it (if you have a compatible sampler) then reverse it. It is quite amusing.

Mix Waveforms

Mixing is achieved by overlaying the main waveform with the data in the copy buffer, starting at the cursor position. Volume % sets the volume of the data being added to the Main Waveform.
Flange determines the pitch of the data being applied. Varying this value speeds up or slows down the pitch of the copy buffer by slight amounts as it is mixed with the Main waveform. Mixing a sound back onto itself with flanging has the effect of adding depth to the sound and can make some excellent effects. It

may take some experimentation but the results can be quite spectacular. Note: This function uses a great deal of mathematics, therefore it can take some time to execute.

Change Volume

The volume over a range can be altered by setting the start volume and end volume accordingly. Think of it as multiplying the data by a percentage. Fifty percent will halve the volume and 200 percent will double it (unless it will peak and cause distortion, in which case the software will automatically compensate).

Tune Waveform

By selecting the Play Waveform button before you choose Tune Waveform, you can then change the pitch as the waveform plays. The waveform's pitch is dependent on the sample rate at which it is played back. Increasing the sample rate is like speeding up an analog tape recording - it's the same waveform but pitched higher because it's played back faster.You can also enter new values in the Note and Sample Rate edit fields to change the pitch. New sample rate values will automatically be readjusted to the nearest corresponding period.

UPSAMPLE

Selecting UPSAMPLE "chops" the waveform in such a way that it then sounds a full octave higher. The waveform's size is also reduced by half, a nice feature since sampled sounds are notorious for taking up a lot of room; however, you will lose some fidelity. This function is also useful when your waveform still sounds too low after you've dragged the Octave slider as high as it will go.

Making an Instrument From the Sampled Sound

If you plan to use the waveform as an instrument in a music playing program (for example Aegis Sonix, MED) and you want it to play a melodic line correctly you must do two things. Tune the sampled sound to Middle C. Note: Sounds such as events which have no overall pitch need not be tuned using the tuning tone.Make sure that the sampled sound plays Middle C at a sample rate of 8363 samples per second. If the sound is an event make sure that it sounds correct when played at 8363 samples per second.

TUNING TONE

The pitch of the tuning tone by default (that is, unless you change it) is set to the correct tone for Middle C in the musical scale. The sample rate for this tone is 8363 samples per second, which is compatible with most music playing software.
To tune the waveform: Select PLAY WAVEFORM from the Control Panel. Select TUNING TONE in the Tune Waveform requestor. You'll hear the tuning tone in addition to your waveform. Adjust the tune controls until the pitch of your waveform matches the tuning tone. Select TUNING TONE again to toggle it off. If you want to tune the waveform to a different pitch you can adjust the pitch of the tuning tone.Choose Make Target = Current Sample Rate from the Set Target Samp Rate menu. The tuning tone will change to match the current value in the Sample Rate edit field. Note: If you can't see the Set Target Samp Rate menu, first click anywhere with the Selection button in the Tune Waveform requestor.

Resample Data

This is a powerful feature which makes it possible to take a sound sampled at, say, 20,000 samples per second (sps) and convert it to to a lower sample rate yet still sound the same (when played at the new sample rate). Not only does this save memory, it is often quite necessary to enable the sound to be played correctly by music packages.

To resample a sound: Make sure the waveform sounds correct at the present Tune Waveform settings. If you want to use the sound as a melodic instrument in a music program, retune it to Middle C.

If you want to change the target rate, enter the desired value in the Sample Rate edit field. Then choose Make Target = Current Sample Rate from the Set Target Samp Rate menu.

Select the RESAMPLE DATA button. The Working Please Wait requestor will appear. The tune controls will be set to the target sample rate but the sound will be the same as before resampling took place. If you hadn't changed the target rate the tune controls will be set to Middle C with a sample rate of 8363 sps. Select OK to close the requestor.

Low Pass Filter

This feature will filter ranged data and will act like a treble control. Aliasing (distortion) can also be reduced using this function.

Sampling

If you already have a sound sampling piece of hardware which plugs into the parallel port then it will probably work with Audiomaster. The sampling options can be selected from the Project menu and can be configured from the User Options menu.

Now you have the whole of Audiomaster at your command. Enjoy!

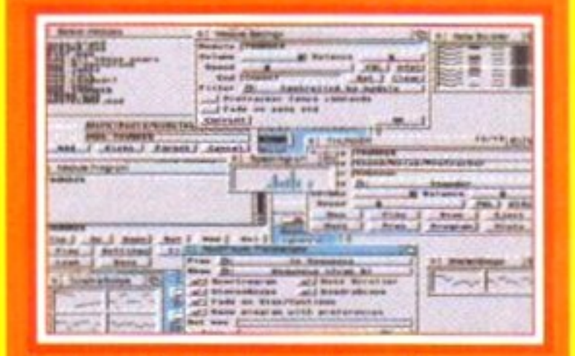
MORE SOUNDS

When you load up Workbench from the coverdisk you will see an icon called More_Sounds. This magical icon will conjure up no less than 10 more sound samples. I say 'more' because there's one already on the disk to try out straight away with Audiomaster II.

The extra 10 samples are very funny if you know where they came fro, but I'll let you work out where that was. Joining the samples are 3 modules which are compatible with programs such as SoundTracker, MED, ProTracker and so on.

Modules are tunes which have been saved with their sampled instruments so you can load them into Audiomaster and cut them out if you like. Read the section marked ATTENTION! to find out how to retrieve all the extra modules and samples.

MultiPlayer



This is the best module player that we've come across so far. It can be run from Workbench by double clicking on its icon. You can choose which module or sample to load using the file requester.

MultiPlayer sits at the top of the screen and can be expanded if you click on it with your left mouse button and then your right mouse button. Workbench 2 users can click on the expand gadget instead. Going into the Preferences menu you will find some nice touches such as oscilloscopes and waveform monitors. Full instructions are given in the documentation in the same drawer as MultiPlayer.

Fitness

Fitness is one of those programs that doesn't really do anything terribly useful. Its window bar sits at the top of the screen and every so often a little chap walks on and does some exercises. You'd better read the instructions to understand the programmer's reasons behind Fitness. Anyway, we'd thought you'd like it just for the fun factor!

Shareware

Just a brief reminder that some of the programs on our coverdisk are Shareware. This means that you can try them out but if you regularly use them and find them useful you should send a registration fee to the author. Registration fees are between # #d sometimes the author will send you the latest version in return.

DSound

DSound is a clever program which plays back samples from your hard disk in realtime without having to load the whole sample into memory first. The easiest way to use DSound is to type DSound followed by the file name of the sample into a Shell or CLI window. There are lots of parameters which are optional and you can read about them in the documentation. Using DSound in script files is a good way to make your own demos with lots of sampled sounds. DSound will also play back from floppy disks but you will be limited to a low sample rate because of the low transfer rate of floppies.

Compatibility

All of the programs on this month's coverdisk have been fully tested on an Amiga 500 with Workbench 1.3, an A500 Plus with Workbench 2 and an Amiga 3000. If you think you have compatibility problems then please check to see if you have followed the instructions exactly. (Seven out of 10 of the letters we receive are because people didn't read the instructions properly!) We have not had the chance to test the disk on an A600 but there is no reason why any of the software should trip over. (The A600's Kickstart is the same as the 500 Plus's with a minor tweak for the smart card drive.)

MORE SOUNDS

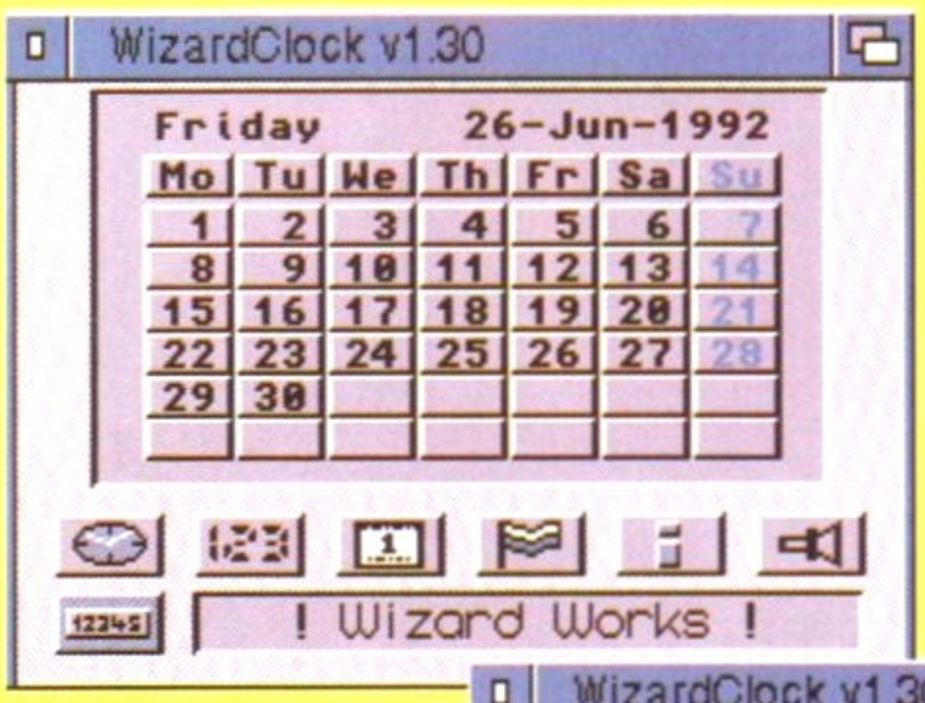
Read the Instructions!

It's best to read the official documentation that comes with the programs on the coverdisk. If you get stuck with a program you will probably find the answer in the documentation.

If you want to print out the text files, boot from your favorite word processor and load in the text files from there. Some files have been crunched using Powerpacker to conserve disk space. If that's the case then you will need to copy PPMORE from the c: directory of the coverdisk into the c: directory on your Workbench disk. You also need to copy the powerpacker.library file and the reqtools.library file from the libs: directory into the libs: directory on your Workbench disk. That way you can boot from your Workbench disk and then read the files from the coverdisk and eventually print them. (I know that tip will help out a few people. You can use the Shell to copy the files across, or ideally Directory Opus or SID.)

By the way, if you get really stuck with the coverdisk then please write in, not phone! (I'm sure you'd rather we wrote next month's AUI than answered your calls all day.) Better still, we always inform you if there have been any problems on previous disks, so try to hang on until next month to see if the answer is there.

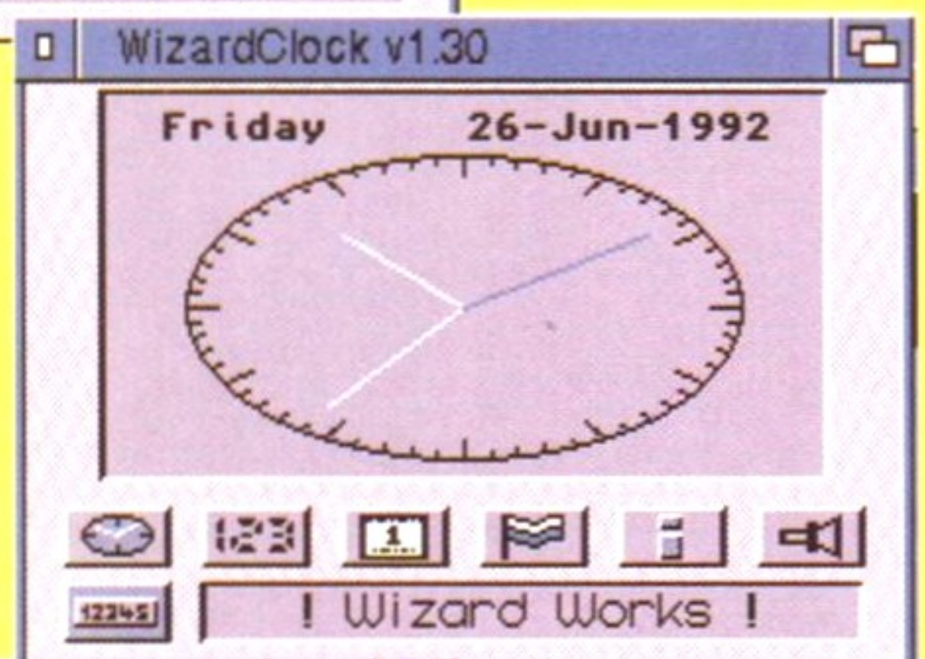
WizardClock

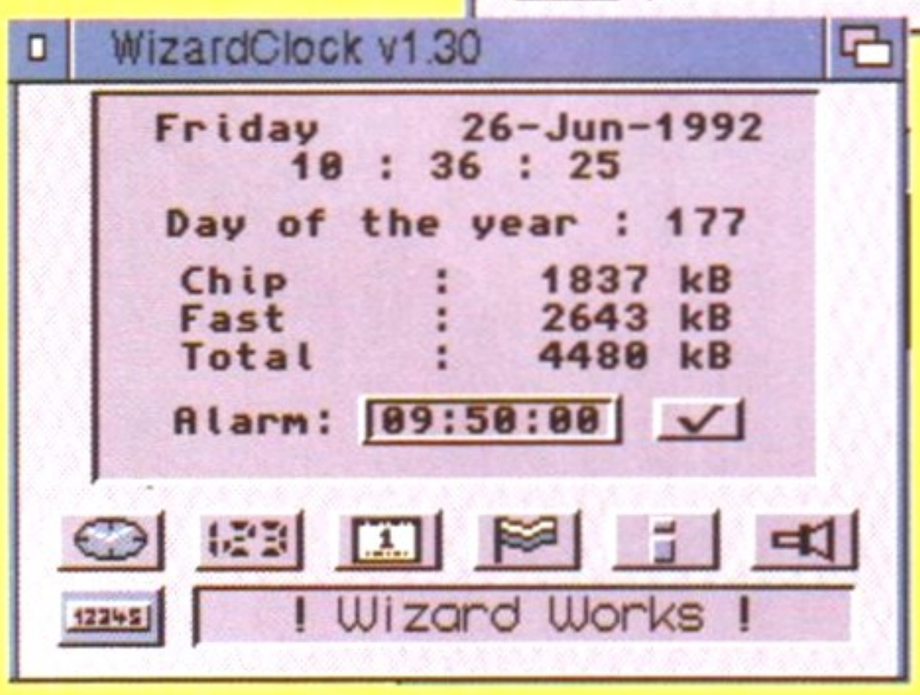


WizardClock is a handy little program which locates itself at the top of your Workbench screen. The first thing it does is display the time. So, what's new, I hear you ask. Well, Wizard Clock has an alarm feature so you never need miss an episode of Beverly Hills 90210 again! Surely there must have been occasions when you've lost all track of time while using your darling Amiga?

WizardClock will gently remind when the alarm goes off. It does other things too so have a look at the documentation.

You may find that WizardClock could crash the computer when you run it for the first time. However, it's stable when you run it for the second time. The problem appears to happen on 1.3 machines rather than 2.04 machines.





ATTENTION!

This is the monthly section that explains how to get more out of an 880k floppy disk. Extra modules and sound samples have been compressed onto the coverdisk and this is how to revitalise them:

Step 1: Format a blank floppy disk using Workbench's 'Format Disk' or 'Initialize' menu. See your Amiga's manual for details on formatting if you are unsure. (You must boot from your Workbench disk to format, not from our coverdisk.)

Step 2: Rename the newly formatted disk to AUDIO. Again, read your Amiga's manual if you don't know how to rename a disk. (Just in case of a printer's error, I'll mention the name of the disk again in quotes, but don't type in the quotes: "AUDIO".

Step 3: Reset your Amiga and boot from the coverdisk. When Workbench has loaded, double click on the More_Sounds icon. A little window will appear and keep you informed as it beavers away. You will be asked to insert the AUDIO disk after a minute, so hang around. It shouldn't take any longer than five minutes to complete.

When it has finished you should find two new drawers on the AUDIO disk. One is called Samples2 and has ten samples in it to use with AudioMaster II, the other is called Modules and has three modules for use with MultiPlayer.

Reader's Contributions

We are always looking for new and original programs to put on our coverdisk. If you would like to see your name and program feature in AUI then please contact AUI at the address given in the front of the magazine. Alternatively, give us a call if you think we would be interested in your program. (The shorter the better, under 100k.)

Burning Chrome BBS

Thanks to Simon Gardner who helped us to obtain some of this month's utilities. If you have a modem you can contact Simon's BBS on 0428 727060 (19.2K HST DS+ V32bis). This is not a voice number, it's only for modems.

Faulty Disk?

In the event that your AUI coverdisk fails to load, please return it to the following address for a free replacement. Please allow 28 days for delivery.

AUI Faulty Disks, SPDS, Unit F, Cavendish Courtyard, Swallow Road, Weldon North Industrial Estate, Corby, Northants, NN17 1JX

Don't forget to include your name and full postal address in BLOCK capitals.

ColourPic NEW!

ColourPic is JCL's best selling video digitiser. Grabbing frames from a live video source in 64,000 vibrant colours is simplicity itself. If you have struggled with a colour wheel or splitter and have had to limit your video digitising to static objects or just monochrome, you will find ColourPic pure joy. ColourPic has its own built-in 64,000 colour framestore which is constantly digitising the incoming picture in REAL-TIME. Just press a key to freeze the picture and import it into the Amiga. It couldn't be easier!

NEW! ColourPic has been upgraded to include a S-VHS (Y-C) input and is now shipped with 'Cabaret' our comprehensive 24-bit image processing software in addition to the standard ColourPic software.

- **ColourPic can capture lo-res, interlace or hi-res images and convert them to HAM, 32 colour, 16 colour and monochrome IFF files.**
- **ColourPic has RGB, composite and UHF TV outputs from its framestore to drive a second monitor.**
- **ColourPic works with all Amiga computers, even the A500P.**
- **ColourPic can be upgraded to ColourPic AniMate.**
- **ColourPic has comprehensive monochrome image processing tools.**
- **ColourPic is shipped with Cabaret 24-bit image processing software.**

ColourPic RRP £499 inc VAT
ColourPic AniMate RRP £599 inc VAT

SuperPic

SuperPic is a framegrabber and genlock in one box! It is the perfect answer to anyone who needs all the facilities of real-time colour video digitising and the ability to combine computer generated graphics with a video source. SuperPic has a built-in 64,000 colour framestore which is constantly digitising the incoming video source in real-time. Just press a key to freeze the picture and import it into the Amiga. It just couldn't be easier! The genlock built in to SuperPic has an RGB output for the finest possible results in addition to composite output and provides the Amiga user with a very stable product, ideal for titling.

NEW! SuperPic is now shipped with 'Cabaret' our comprehensive 24-bit image processing software in addition to the standard SuperPic software and a three button optical mouse with mat.

- **SuperPic can capture lo-res, interlace or hi-res images and convert them to HAM, 32 colour, 16 colour and monochrome IFF files.**
- **SuperPic can be upgraded to SuperPic AniMate.**
- **SuperPic has it's own built-in genlock for combining computer generated graphics with a video picture – ideal for titling.**
- **SuperPic allows you to switch between Amiga display, framestore and video outputs on your standard RGB monitor at the touch of a button.**
- **SuperPic is shipped with Cabaret 24-bit image processing software.**

SuperPic RRP £599 inc VAT
SuperPic Animate RRP £699 inc VAT

ColourPic Plus NEW!

ColourPic Plus, JCL's latest addition to their Amiga real-time colour video digitiser range, brings you the most powerful digitiser available to the Amiga user in its price range. A professional machine engineered to the highest standards and using the latest technology, ColourPic Plus combines all the features present in ColourPic with AniMate as standard and an impressive number of new features and new software.

The Impossible? – ColourPic Plus can do it!

Combine a framestore picture in 64,000 colours with text on an Amiga database display – without a genlock! With the optional 'Grabit' software from JCL and a prepared database control language module you can add pictures to your personnel file or parts list. Your database pictures could even be animated!

- **ColourPic Plus can capture lo-res, interlace, hi-res or hi-res with interlace images and convert them to HAM, 32 colour, 16 colour and monochrome IFF files.**
- **ColourPic Plus is shipped with 512K RAM and can be upgraded to 1MB for more animation frames and even higher resolution modes.**
- **ColourPic Plus can switch between your Amiga display and the 64,000 colour framestore picture at the press of a key.**
- **ColourPic Plus has S-VHS (Y-C), RGB and composite inputs and provides RGB, composite and UHF TV outputs for an extra monitor if required.**
- **ColourPic Plus is shipped with Cabaret Plus 24-bit image processing software.**

ColourPic Plus RRP £699 inc VAT

AniMate

AniMate, for ColourPic and SuperPic, adds a whole new dimension to video digitising – colour animation. The complete AniMate package upgrades the digitiser to 512K RAM using a special RAM expansion card with time marker control logic and includes control software and manual. AniMate provides a simple and complete method of producing short sequence colour animated images on an Amiga, where the images come from live video such as a camera or a VCR. Simply point a camera at a moving object, select ANIM RECORD/SEQUENCE and press the space bar to capture a series of real life movements.

- **ANIM SET options include frame delay and first field hold off.**
- **ANIM RECORD options include sequence record and single step record.**
- **Select ANIM PLAY/CYCLE and the recorded sequence is repeated.**
- **ANIM PLAY options include sequence, single step, mouse scroll, cycle and ping-pong.**
- **Sequences recorded from a VCR may be joined together to produce ANIM files.**
- **The interval between recorded fields can be set at any number of fields.**
- **The individual fields of an animation may be examined by using the up/down movement of a joystick.**
- **Fields from an animation sequence may be converted to standard Amiga IFF format and then built into an ANIM format file for replay.**

Upgrade your ColourPic or SuperPic for £150 inc VAT

Cabaret

CABARET the image processing package shipped with ColourPic and SuperPic provides image import facilities together with colour and monochrome image processing functions to modify existing pictures. Cabaret has a wide range of filter and masking options to enhance pictures and produce interesting effects.

- **Cabaret will import and display HAM, EHB, 32, 16, 8 and 4 colour pictures plus Monochrome and Threshold images in normal and overscan modes.**
- **Cabaret will SAVE and LOAD images in standard IFF format, plus a wide range of other formats including TARGA and AIM.**
- **Cabaret will produce X & Y flips, mirror images, multiple images, magnified parts of an image and control colour balance, contrast and brightness.**
- **Cabaret works on all Amigas with 1 MByte or more of memory.**

CABARET PLUS software, which needs 3 MByte of memory to make full use of all facilities, has all the features of Cabaret – **PLUS**

- **Extra filters including Uniform, Kuwahara, Posterize, Median and Gamma.**
- **New features including Emboss, Dropshadow and Combine.**
- **Interlace and hi-res modes AND Save in 24-bit IFF!**

For the user with less than 3 MByte of memory the Cabaret functions may be used without the 'Plus' features.

Cabaret RRP £29.95 inc VAT Cabaret Plus RRP £89.95 inc VAT

ColourPic, SuperPic and ColourPic Plus are available from selected dealers or direct from JCL.

** GOLD DEALERS AND STOCKISTS!! **

Trilogic
253 New Works Road
Low Moor
Bradford
BD12 0QP
Tel: 0274 691115

Computer Care South Ltd
499 Oxford Road
Reading
Berks
RG3 1HQ
Tel: 0734 393615

Gordon Harwood Computers
New Street
Alfreton
Derbyshire
DE5 7BP
Tel: 0773 836781

Ultima
First Floor
White Lion Walk
Guildford
Surrey, GU1 3DW
Tel: 0483 506939

Videoquip
5 Fosse Road South
Leicester
LE3 0LP
Tel: 0533 558818

Silica Systems
1–4 The Mews
Hatherley Road
Sidcup
Kent, DA14 4DX
Tel: 081 302 8811

JCL

About our framestore. . .

All of JCL's video digitisers can grab a frame from a live video source in 1/25th of a second using a 64,000 colour framestore which is constantly digitising the incoming picture in real-time. The framestore displays a picture of such high quality that you may suspect you are looking at a straight through connection from the video input, but don't be deceived, this is a digital picture, just press the Z key to see it freeze!

The framestore's 64,000 colour palette can be used to display previously digitised images stored on a disk as well as show Sculpt (and other) images in a much wider range of colours than the Amiga's HAM mode. The effect is stunning!

For your free show disk of pictures:-
Contact Carolyn on 0892 518181.

Access VISA EUROCARD

JCL BUSINESS SYSTEMS LTD.
71 St Johns Road Tunbridge Wells Kent TN4 9TT England
Tel 0892 518181 Int +44 892 518181 Fax: 0892 511772 Int +44 892 511772

news

page 14
Neuropro

Mini Office

Micro German

page 15
Updated Quickwrite

Colour Bubblejet

Vidi Amiga 12

page 16
Budget Video Editing

Clkip Sound

Amiga C Encyclopedia

A500 Com Stax Stand

page 18
Mastering Amiga C

Redesigned

G Force

Adpro Links Film Recorders

page 20
CDTV Changes Direction

MathVision

Conserving The Tone

page 22
Seikosha's New Laser

For Whom The Smart Tolls

SOFT-LOGIK'S Typeface Library

Compiled and Edited by Martin Wilton and Anthony Mael

NEUROPRO 2.0

MegageM has announced the release of NeuroPro 2.0, a neural network program for artificial intelligence applications on the Amiga. NeuroPro 2.0 has capabilities for large pattern recognition systems development and practical applications in an environment which fully exploits the Amiga's capabilities.

NeuroPro's 2.0 features include:

A 3-layer back-propagation network system with up to 256 cells per network layer (768 total network cells) and 131,072 network interconnections;

Network algorithms in math coprocessor assembly language for training speeds up to 50,000 (25mhz 68030/882) or 285,000 (25mhz 68040) network connections per second;

Flexible data formats including text, graphic objects (as IFF files) and random bit arrays;

Complete graphical presentation of all network operations and data objects in real time;

Three user interfaces: graphic user interface (GUI) Control Panel with 2.0-look 3-D push-buttons with controls for all network training, display controls and file input/output; slider controls for visible network layer sizing and selectable learning rate. It has full featured pull-down Amiga menus for most functions, with many keyboard shortcuts. Powerful ARexx interface can control all NeuroPro 2.0 operations and can also be used with MegageM's JAH command (provided for AmigaDos script operation).

Contact: MegageM, 1903 Adria, Santa Maria, CA 93454, USA. Tel: 805 349 1104.

MINI OFFICE FOR THE AMIGA

Mini Office, which is claimed to have reached sales of over 500,000 since its creation some years back on such machines as the C64, has been launched for the Amiga. It consists of five modules - wordprocessor, spreadsheet, database, graphics and disk utilities. Europress Software's Managing Director Chris Payne told AUI: "We've had so many Amiga owners, dealers and distributors ask for Mini Office on the Amiga that we just had to do it. What our development team have created is an incredible package at a sensible price."

All the facilities in Mini Office are integrated with each other. For example, information can be entered into the database, exported to the graphics module to produce a pie chart - and then included in a wordprocessed document. The icon system, which is common to the wordprocessor, database and spreadsheet means a quick response to the user's commands.

Mini Office works on all Amigas with one meg RAM, can read Amiga IFF files and for users in the USA fully supports the NTSC standard. Price will be around the £75 mark.

Contact: Europress Software, Europa house, Adlington Park, Macclesfield SK10 4NP. Tel: 0625 859333.

MICRO GERMAN

To mark the onset of the single European market and the demand for foreign language skills, LCL have launched their first product for over two years - Micro German. It takes beginners up to GCSE standard in spoken and written German and covers business German as well.

This complete course of spoken and

FULL COLOUR BUBBLEJET

Canon's BJC-800 Bubblejet is a full-colour printer offering, say Action, exceptional print quality in both colour and mono modes. It is available from Action at £1549 (MRP £1,999) including 12 months on site warranty.

Claimed as ideal for DTP and CAD applications, it has a built-in sheet feeder which handles paper up to A3 size, print speed is 300 cps in NLQ mode and 170 cps in LQ mode and there are three internal fonts.

Output is from four separate colour cartridges - cyan, majenta, yellow and black - which can be individually replaced as they run out, and automatic printhead cleaning, say Action, makes for easier maintenance.

Contact: Action Computer Supplies, Alperton House, Bridgewater Road, Wembley, Middlesex, HAO 1EH. Tel: 0800 333 333.

written German is, say LCL, suitable for travellers, students, enthusiasts and business people as it includes a program that generates business letters automatically.

LCL claim that it de-mystifies German and makes it fun (you should tell that to my old German master, Mr Proudfoot!) with graphics adventure games and puzzles. (Puzzles? Games? He used to thrash the desk with the cane and shout "Schweinhund!)

These fun programs, LCL say, have 'superb' graphics and music and they are alternated with serious programs (on verbs and grammar) to motivate the student to move through the course.

Priced at £24 (+99p P&P). Micro German is available from major educational and software stockists, or direct from LCL Telephone 0491 579345.

UPDATED QUICKWRITE

New Horizons Software has announced an upgrade to QuickWrite, their entry level word processor. The new features in QuickWrite include automatically saving your work at timed intervals to ensure you always have an up-to-date version of your document in case of a mishap. (What a great idea! All W/Ps should include it.)

The new Load Settings and Save Settings commands allow the user to set up the default working environment and save it for future use.

QuickWrite now sports a new 3D look, according to Rick Unland, Director of Marketing for New Horizons. This new look works under versions 1.3 and 2.0 of AmigaDos and follows the guidelines established by Commodore's Workbench 2.0 release.

QuickWrite also supports public screens in accordance with AmigaDos 2.0. QuickWrite can open its windows on any public screen, allowing the user to use QuickWrite in conjunction with other products in a more seamless fashion.

Macro and AREXX enhancements have been added to QuickWrite, giving more control over QuickWrite's internal functions. QuickWrite's "Macro" menu and function keys can also be customised by the user.

Registered users of QuickWrite 1.0 can upgrade to the new version for $10.00 + P+P.

Contact: New Horizons Software Inc, PO Box 43167, Austin TX 78745. Tel: (512) 328 6650.

VIDI AMIGA 12

Rombo has announced their latest product - a colour digitiser for the Amiga at under £100.

Some of the many interesting features are: multi-tasking software; advanced error diffusion stippling; cut and paste with masking; capture into a user definable window; load and save IFF ILBM and ANIM files; grab flipped on a X or Y axis; multi frame store with animated playback; composite or S-Video input.

It supports several screen modes: 4096 HAM mode; 64 EHB mode; 32 colours; 16/8/4/2 shade mono; 262000 HAM-E mode; 256 colour EREG mode; Overscan/Interlace/Hi-Res.

Rombo says that: "With image processing and enhancement it has sharpen/smooth/negative/quantise/thresholding/solarization/mosaic/edge detection/brush selected area." Which sounds interesting but must be the longest sentence around! Vidi-Amiga 12 is Workbench 2.0 compatible. Rombo is one of the few British - well in this case Scottish - companies that can match international standards of Amiga products. This latest product looks like their past ones - deserving of success. The Vidi-Amiga 12 Price £99.95.

Contact: Rombo, Baird Road, Livingstone Scotland. EH54 7AZ. Tel: 0506 466601.

newsfile

BUDGET VIDEO EDITING

MediaPhile 2.0SA is the newest addition to the MediaPhile family of video deck controllers from Interactive MicroSystems. When used together with the MediaEditor program, it provides automated edit control from Amigas for $395 (about £220).

The unit provides complete control over Sony camcorders and videodecks equipped with "remote" control ports. It also works with Cannon and Ricoh camcorders. The MediaPhile 2.0SA controller has one remote control port input, an infrared control output, an input for Sony "S-port" and JVC "swap-port" control and one SMPTE time code input. It plugs into the computer serial port. Available from Interactive MicroSystems, Inc, Red Roof Lane, Salem, NH 03079 USA. Tel: (603) 898 3545.

CLIP SOUND

Well, why not? If you can have clip art, why can't you have sound that you can use in the same way? Walkabout Music, a company specialising in sound sample libraries for both the studio and the home musician is launching some sample collections for the Amiga which let you have just that.

As Amiga users themselves, the people at Walkabout Music say they soon became aware of the lack of quality sample collections for the computer and they hope their range of sample disks will go some way toward rectifying this.

From their existing library of over 5000 samples they have compiled various collections. The range includes a large selection of ethnic sounds, rock/pop percussion, guitars, orchestral sounds, brass, sound effects and so on.

Each disk is compiled from a studio recorded master and, say Walkabout, is sampled on the Amiga at twice the sample rate of public domain sample disks. Walkabout Music claim that this ensures the highest possible sound quality is achieved while still retaining compatibility with all popular commercial and PD tracker and sequencer programs.
Each disk in the collection costs £2.50.

Contact: Walkabout Music, Trenovissick Farm, The Mount, Par, Cornwall. Tel. 072681 3807

AMIGA C ENCYCLOPAEDIA

For those who can't know enough about C - or those who want to know what it means - there may finally be the answer to their problems. DATRA, an Amiga C Club in Sweden - a C Club in Sweden? Now that sounds like an exclusive club to belong to, doesn't it? - are bringing out a 3.0 Version (whatever happened to the first two?) of a C Encyclopaedia on disk, or rather disks. For there are 12 disks in total. This, say the publishers, will save weeks of work since you do not have to type in the examples. You can directly run the already compiled programs or immediately start to experiment with the source code.

The encyclopaedia is claimed to be the largest collection of documents, examples and utilities in C for the Amiga. It consists of six manuals with more than 40 chapters, 175 fully executable examples complete with source code, several utilities and other goodies. It is, say DATRA, a complete work on how to program in C on the Amiga and has taken more that four years to create.

The programs are written in SAS(Lattice) C V5.10 but will compile perfectly, it is claimed, with older versions as well as with other C compilers. It is also compatible with 1.3 and 2.0 AmigaDos and can be installed on a hard disk and will run on any Amiga with 512K or more.

The price is £30.
Contact: DATRA, Amiga C Club, Anders Bjerin, Tulevagen 22, 181 41 Lidingo, Sweden

A500 COM STAX STAND

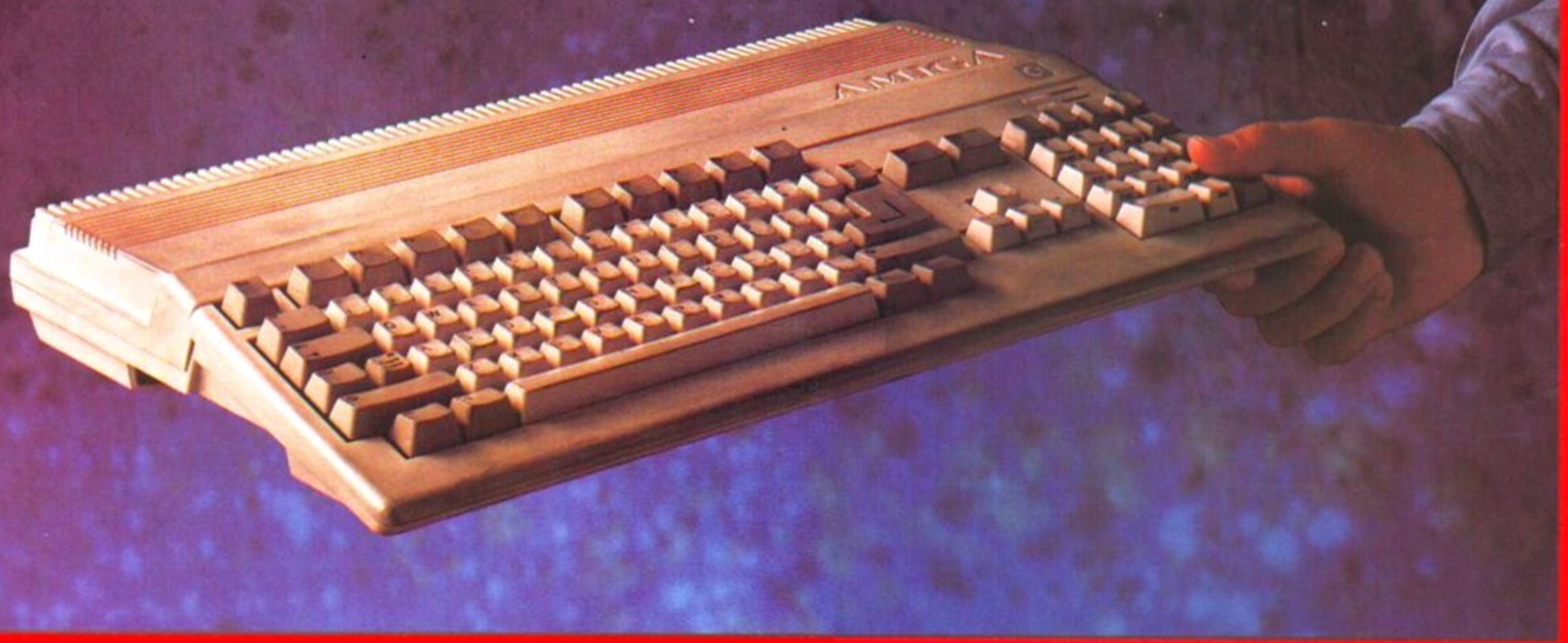
Com-Stax computer stands are unusual in that they are designed to accommodate a particular computer. Because of this the design of the product is simple and neat with optional features available such as castors, printer shelf, paper trays or a copy-holder to create a unique and compact workpoint.

The Amiga 500 model is the latest in Com-Stax's range and will accommodate the Amiga in a space of less than a quarter of a square metre. The cluttered, borrowed dining table could be a thing of the past, (I wish) with cables kept neatly out of sight giving an added bonus of safe storage.

Supplied flat packed, assembly is, they say, easy. (We know what that generally means! But in this case it appears to be true.) The stands come in a choice of grey, black or white and the basic stand with mouse board is priced at £55.95 inc VAT and P+P. The optional overhead printer shelf is £27.95 inc, locking castor set £14.25 inc, chrome paper tray £11.45 inc, chrome copy-holder £11.45 inc, extra mouseboard £11.45 inc.

Contact: Com-Stax on 071 373 4979

AMIGA CDTV.
£200 OFF IF YOU PAY WITH PLASTIC.



The plastic in question being your trusty Amiga 500, of course. Because if you take it along to your local stockist and trade it in, we'll exchange it for a new generation Amiga CDTV multi-media computer pack for only £399.99.* That's £200 less than the normal retail price. And remember, that includes an Amiga CDTV player with keyboard, mouse, floppy disc drive and a 12 month warranty - the whole shooting match. This fantastic offer to our Amiga customers closes at the end of September. So hurry, as they say, while stocks last. And don't forget the plastic.

AMIGA CDTV

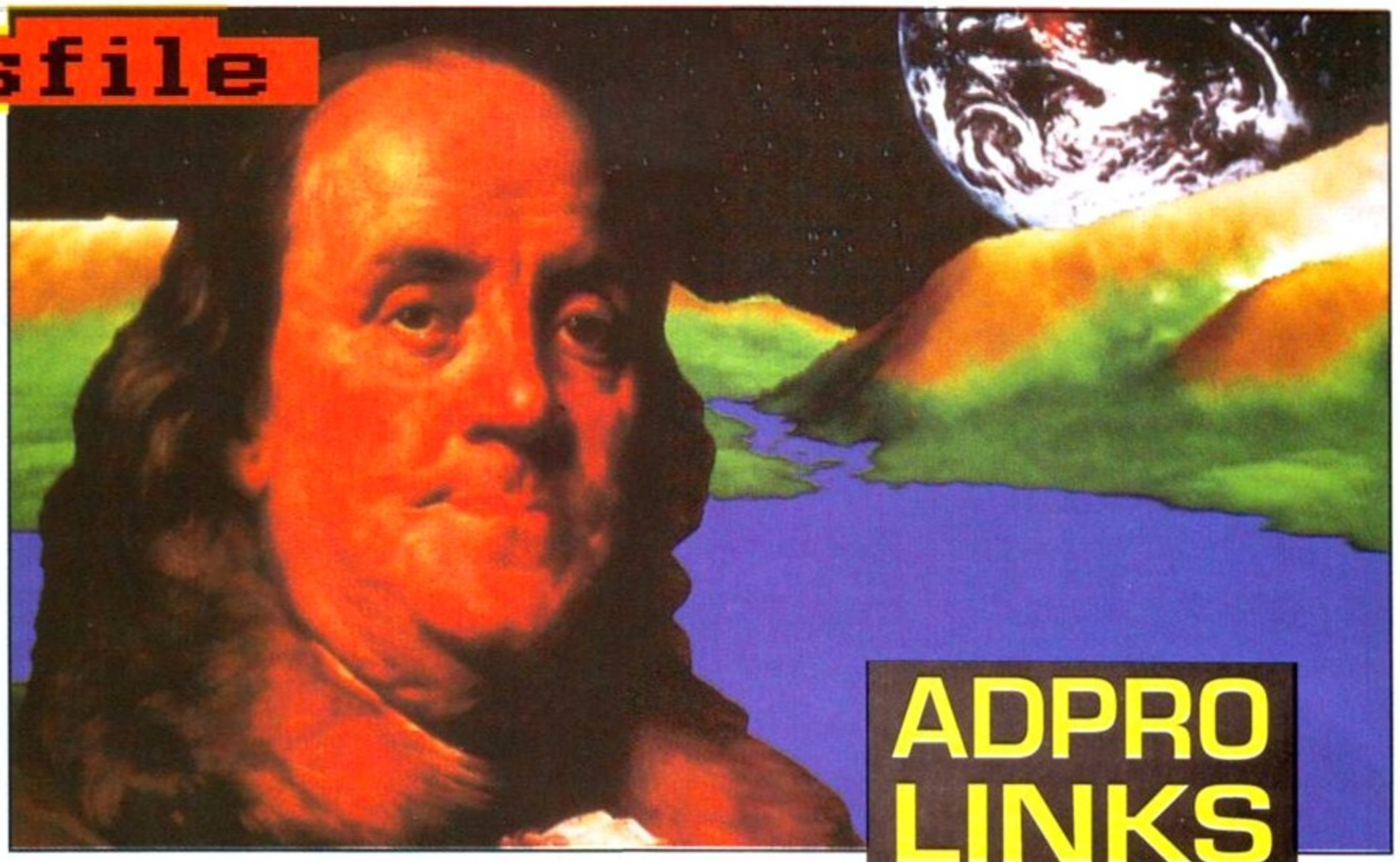
*TRADE-IN MACHINES MUST BE COMPLETE AND IN WORKING ORDER. OFFER ENDS 30TH SEPTEMBER 1992. AVAILABLE AT SELECTED HIGH STREET STORES INCLUDING DIXONS AND SPECIALIST INDEPENDENTS. FOR DETAILS OF YOUR LOCAL STOCKISTS CALL FREE ON 0800 686868.

MASTERING AMIGA C

Bruce Smith Books have published a full system programming tutorial with examples in C with a free support disk.

Serious Amiga programmers use the Amiga's operating system to write legal, portable and efficient programs. Paul Overaa (Now where have I heard that name before? Ah, yes in the pages of this very magazine...) introduces the reader to system programming in the C language and encourages the user to communicate with the system. He also helps the reader learn how to handle tasks, processes and work with libraries to incorporate IFF graphics into their own applications. Skeleton programs are designed to serve as templates for the user's own ideas. Paul Overaa guides the newcomer through a step by step approach as he explains devices and custom chips and to provide the most effective routes to practical programs. The accompanying free disk contains both source code and runnable versions for all the programs discussed in the text.

Price £29.95



ADPRO LINKS FILM RECORDERS

ASDG, who develop colour image processing solutions for the Amiga, have increased their support of Polaroid film recorders with the introduction of a module linking their Art Department Professional (ADPro) to film recorders. The LFR ($8,750) and LFR PLUS ($13,750) film recorders have built a solid reputation for image quality and dependable operation, they claim. Both film recorders provide a 35mm camera back as standard equipment but other camera backs including 4x5", 8x10" and pin registered motion picture camera backs are available. The motion picture camera back is of particular interest due to ADPro's strength as a multimedia assembly, edit and processing engine. Used in conjunction with ASDG's animation controller, FRED, animations including wipes, dissolves and digital compositions can be written to film automatically.

The LFR film recorders are SCSI based. To use them, a SCSI DIRECT compatible SCSI controller with an external connector is required. Three controllers from Commodore (the A590, A2091 and A3000 built-in SCSI) have been certified for use with the Lasergraphics devices.

Price $250 (about £160).

REDESIGNED G-FORCE

GVP has redesigned the Combo accelerator series. GVP has launched G-Force 030 with a new layout of the boards for greater performance, they claim. The 22Mhz version of the Combo board has been replaced with a 25 Mhz version, which features a built-in SCSI controller, a 25Mhz 68EC030 CPU and a 25Mhz 68882 FPU. The board comes installed with 1MB of 60ns 32-bit wide RAM and is expandable to 13MB. The 40Mhz version replaces the Combo 33. Like the 25Mhz board, this upgrade system also features a built-in SCSI controller. Also included are a 40Mhz 68EC030 CPU and a 40Mhz 68882 FPU. This board comes installed with 4MB of 32-bit wide 60ns RAM and is expandable to 16MB. A choice of factory installed 120 or 240MB Quantum drives transforms this accelerator into the hard card.

Gerard Bucas, President of GVP, told AUI: "The G-Force 030 series was designed with every A2000 user in mind. There is no reason to look beyond G-Force 030 for performance or price - no matter what your accelerator needs." And as Gerard would tell you, he's not biased in any way! GVP now tell us that they are the world's largest third party supplier of peripherals for the Amiga. The Amiga community generally acknowledges that it owes a lot to them for the way they have supported the Amiga with constantly advancing products. The new Combo board looks like keeping up that support.

Contact (UK) Silica Systems 081 309 1111.

Marcam LIMITED

THE GENLOCK PEOPLE

Do you want to overlay computer graphics or titles onto your videos? If so, you will need a Genlock. Rendale Genlocks are built to a very high standard, and are used widely in the professional environment.

**62 Tenter Road,
Moulton Park
Business Centre,
Northampton,
NN3 1AX,
England**

**Tel: (0604) 790466
Fax: (0604) 647403**

RENDALE 8802 £139 –

The Rendale range of Amiga Genlocks begins with the 8802. This is a Genlock, which, when attached to an Amiga computer and a suitable video system, will allow you to mix video and computer graphics. It offers all the functions that you need, such as:
* RGB feed through, allowing for a preview monitor.
* High quality output video, which in default mode provides video with overlaid computer graphics.

RENDALE 8802 FMC £178 –

It can be supplied with a device which will allow you to fade between computer graphics and the video source, and also a mode control unit so that you can move between Amiga only, video only, background mode and keyhole modes 1 & 2.

RENDALE SUPER-8802 £499 –

The Rendale Super-8802 is a development of the basic 8802 unit, it performs the same functions, but has the added capability of also working with Super-VHS signals. The unit will allow the user to cross fade between the Amiga and video signal. In addition, some basic wipe patterns are provided, and also a fade to black option. Mode control is also provided via hardware.

NEW! RENDALE FMC £45 – fitted

8802 FMC Unit
This is a brand new piece of kit which will improve the capabilities of the popular Rendale 8802 Genlock. This unit allows you to cross fade between the Amiga and video signals, so that you can gently fade computer titles in and out. Also, the ability to switch between the various modes offered by the 8802 is provided. The required mode is selected by a push switch, giving smooth, flicker free transformations.
The FMC unit does need to be soldered into the 8802, we can do this at our factory if required.

8802 UPGRADES £45 – £400 –

UPGRADES PATHS
Rendale Genlocks are designed to be flexible, and the ability of your Genlock to grow with your system was deemed to be of paramount importance in our design process.
As a consequence, existing 8802 users can follow one of two upgrade paths. The fade and mode control unit (FMC unit) can be purchased independently, and fitted to your 8802 genlock by our engineer. We would only require your unit for around two days.
The other upgrade path is the move from a purely composite 8802 to the Super-8802. This can also be done simply, although we do have to perform the upgrade work at our factory. We would only require your unit for around two days.

PRICES INCLUDE VAT AND DELIVERY. ACCESS AND MASTERCARD ACCEPTED.

MATHVISION

MathVISION is an Amiga-compatible package that allows users to enter and edit equations and recursive routines in a screen window, then graphically display the full colour mathematical constructs resulting from execution of those routines. The software is designed to appeal to both mathematicians and numerically-orientated artists. Specific library disks are also available from Seven Seas. These include an art development guide based on work by C William Henderson, Mandelbrot theory fractal manipulation and graphics support of complex and polar arithmetic analysis. These disks contain both colourful IFF images and the formulae used to create them.

Seven Seas is offering a free bonus library disk to the first-time MathVISION buyer. The library disks contain sample formulae, pictures and hooks that allow the main program to be applied to special purpose applications. There are four library disks to choose from depending on whether the user's interest is in artistic or mathematical work.

Contact: Seven Seas Software Inc, PO Box 1451, Port Townsend, WA 98368, USA.

Tel: (206) 385 1956.

CONSERVING

Do you throw away toner cartridges from Laser Printers once they are empty? At up to £95 a cartridge this is a costly and unnecessarily wasteful and anti-conservationist practice. Last year over 10 million were disposed of in Europe alone. (Shame on us!) Laser Printers are a highly beneficial but expensive overhead to the modern business. But it is now possible to reduce their running cost by at least 50 percent and cut your toner cartridge disposal by 80 percent, say Beach Imaging. After intensive testing, the Perma Jet Long Life Toner system is now available in the UK. The system consists of the original brand new cartridge modified so that it can be used five times.

THE TONE

When the toner runs out, the cartridge can be filled with one of the recharge bottles provided. The system, claim Beach Imaging, is simple to use and there is no risk of spillage/ Interestingly, the, output quality is claimed as better than that of the original cartridge as the recharge is a high grade Graphics Quality toner. The system is suitable for most laser printers. RRP is £190.00.

Contact Beach Imaging Ltd, 205 Glenesk Rd., Eltham, London SE9 1RD. Tel: 081 850 8344.

CDTV CHANGES DIRECTION

The price of Commodore's CDTV - now called the Amiga CDTV - has officially come down to £499. But if you look carefully through the pages of AUI you can see, for example, First Choice advertising CBM's CD machine at a mere £399.00. It may be some sort of special offer but it's also a straw in the wind of the usual price direction of electronic wizardry - downward.

The official change might be a response to the launch of Philips' CD-I but Commodore can also be now benefiting from cheaper production as larger volumes of the Amiga-based black box are manufactured.

Another indicator of Commodore's thinking is a trade-in offer that may stir up Amiga owners. No, we are not talking about the long-heralded A570 drive that could turn your Amiga into a CDTV which is once again mooted for the end of this month as a launch date - as has been the case again and again since last October. No, not even if that gives some shreds of credibility to the magazines that have been carrying hysterically premature "exclusive" coverage of the drive month after month...

This trade-in offer is potentially much more interesting. From this month, A500 owners can take their machine into dealers and trade it for CDTVs with the additional payment of that magic £399.(Are CBM superstitious about that figure?)

Actually, that doesn't sound altogether a bad deal if you realise that what is being offered isn't just the CDTV but what CBM calls its "Multimedia Pack". That pack consists not just of the CDTV but also keyboard, mouse and disk drive. In goes your old A500 and out comes - yes, your brand new A500 and all you need to make the CDTV a fully equipped Amiga. Now, if you are smart, of course you won't trade in your own A500 but pick an old one up cheap on the second hand market (£100? Even £50?) and put that in instead. No-one has apparently said that it has to work... And who doesn't want two Amigas?

Long in the past - in computer terms that's about three or four years ago - Commodore did similar trade-in offers with both the Plus4 (remember that?) and the C64. History repeating itself...

The Multimedia Pack idea seems to indicate strongly that Commodore is changing its tack - or positioning as it is called in the marketing business - of the CDTV. It's going to be presented not as some consumer magic box but as a computer in line with the multimedia world into which we are all entering and with which AUI readers have long been familiar. It's a change of positioning that most Amiga users would say is substantially overdue.

By the way, Commodore say they have sold around 15,000 of CDTVs in the first year. Not many? Well, they also say that was approximately the number of A500s sold in the UK in its first year. Will we see in a few years time a million+ CDTVs gracing British living rooms? No doubt CBM hope we will.

Whatever information you want on CD, CD-Simulator can handle it.

The CD-Simulator is a complete in-house CD-ROM development solution, which creates, optimizes and simulates CD-ROM images. It is capable of handling: CD-ROM, CD-ROM Mixed Mode, CD-Digital Audio, CD-ROM XA, CDTV and Multi media PC.

As add on you can use our unique CD-Write Once System for low volume replication.

Elektroson services include consultancy, feasability studies, complete project handling, system maintenance/support and CD-Write Once services.

Elektroson continuously expands the scope of its products to meet your requirements for tomorrow.

CD-Simulator

ELEKTROSON

Velderseweg 25
5298 LE Liempde
The Netherlands
Tel: +31 (0) 4113 3021
Fax: +31 (0) 4113 2763

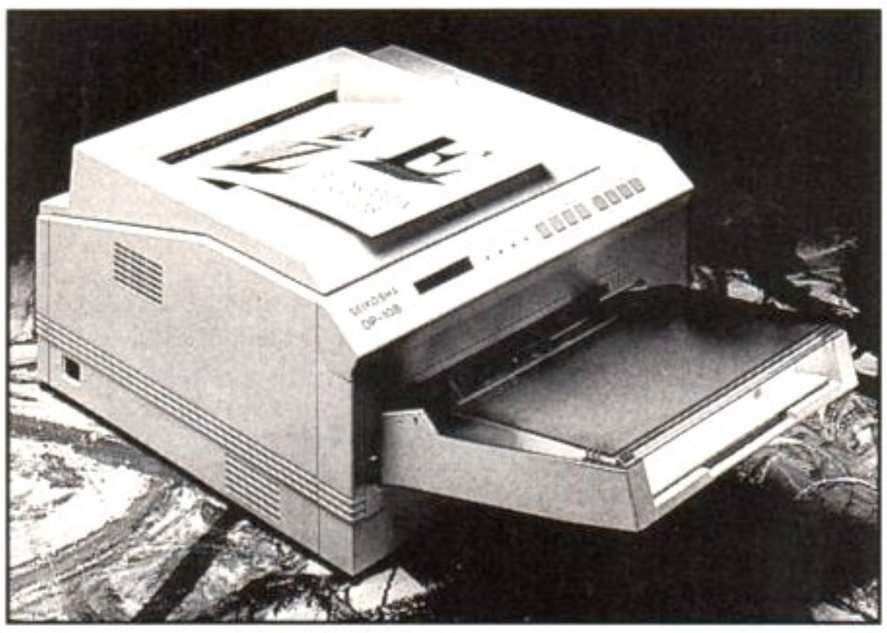
Distributors:

Microboards, Inc.
Chiba 273
Japan
Tel: (81) 474 37 9811
Fax: (81) 474 37 9819

Optical Publishing, Inc.
Fort Collins, CO 80525
USA
Tel: (303) 226 3466
Fax: (303) 226 3464

MacByte
Brentford Middx, TW8 8LG
UK / Ireland
Tel: (44) 81 569 9819
Fax: (44) 81 569 8431

newsfile



SEIKOSHA'S NEW LASER

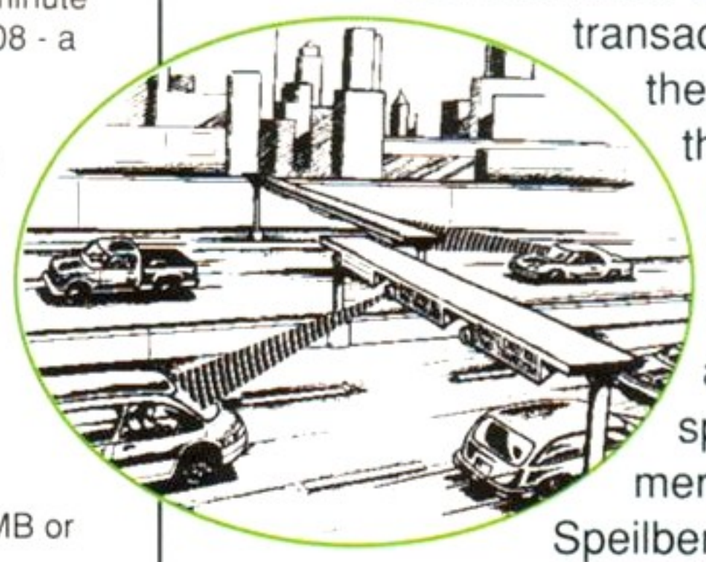
Seikosha have entered the eight page per minute printer market with the arrival of the OP-108 - a high performance laser printer with all the latest features, including Edge Enhancement Technology (EET). (Which was exactly what you were waiting for, wasn't it?)

The desktop laser printer, the OP-108, combines a printing speed of 8ppm, HP Laser Jet Series III (PCL5), Epson and IBM standard emulations, 14 Bitmap fonts, eight scaleable fonts and an optional PostScript emulation cartridge.

The OP-108 also comes standard with 1 MB memory which can be upgraded by means of 1 MB or 2MB memory modules to 5MB. Measuring 395x405x220mm, the OP-108 is compatible with most computers and networks, having parallel and serial (RS-232C or RS-422A) interfaces as standard.

FOR WHOM THE SMART TOLLS

Using an electronic toll collection system created by AT&T and Lockheed, drivers in the USA can now merely insert a personal smart card into a small dashboard-mounted radio transponder as they approach a highway toll-collection area. Receivers fixed above or in the road itself communicate with the transponder noting the locations where the car entered and exited the highway, or where the toll was paid. The toll amount is transmitted back to the dash-top communicator and a record of the transaction is written onto the smart card. Perhaps the saving in time will persuade those truck drivers who are always charging along at or above the speed limit and menacing cars like in the Speilberg movie "Duel" that they could drive in a more civilised fashion - or better still get off the road and drive an environmentally friendly train.



SOFT-LOGIK'S TYPEFACE LIBRARY

Soft-Logik, creators of Pagestream, the renowned Amiga DTP program, have announced that they are launching a new typeface library which contains more than 600 fonts.

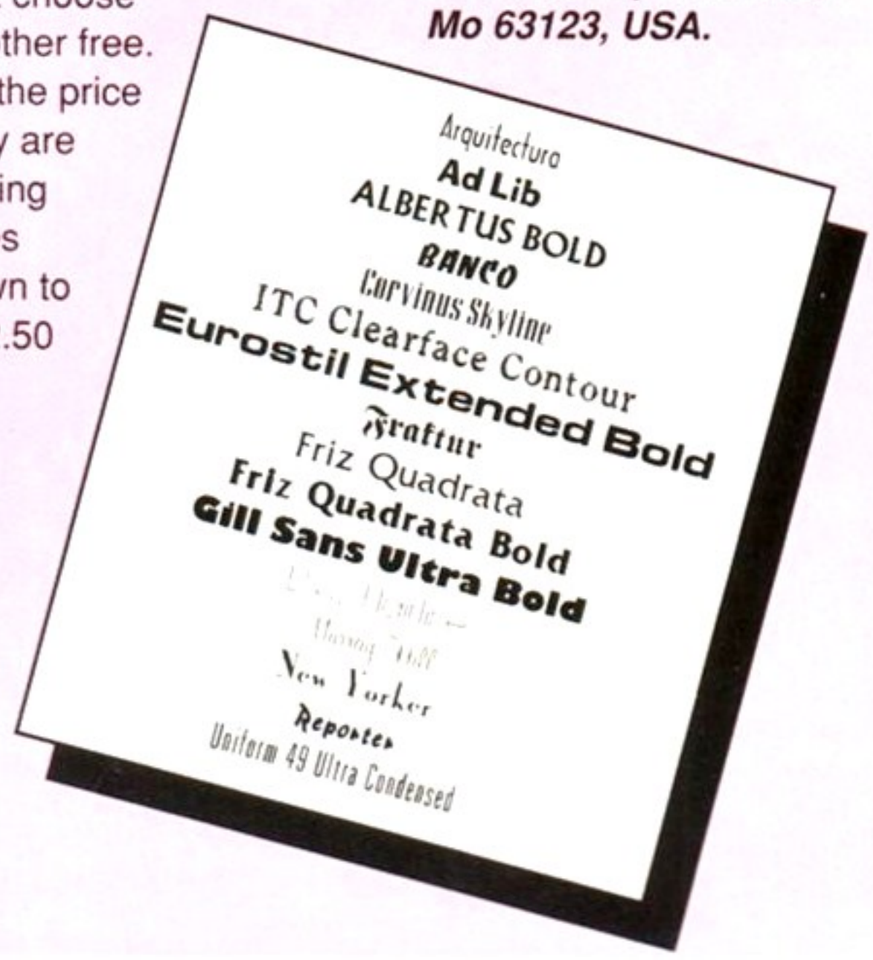
Soft-Logik has licenced professional quality fonts from Image Club, a leading Macintosh developer, allowing it to claim now to be the "foremost publisher of PostScript fonts for the Amiga".

The 600 fonts are in PostScript Type 1 format, suitable for use with Pagestream 2 and any PostScript font compatible application. Soft-Logik say that with Pagestram 2 even dot matrix, inkjet and non-PostScript laser owners can use these fonts. And they are happy to tell the world that the font selection that Macintosh owners have long enjoyed is finally available to Amiga users.

A few fonts, however, are in PostScript Type 3 which means that they can only be used with PostScript printers. Sogft-Logik have put selected fonts into four bundles. The other fonts are sold in families. Each weight/style of a family costs $25 (about £17).

And as a special launch offer, Soft-Logik is letting buyers purchasing one font choose another free. So the price they are asking goes down to $12.50 per PostScript font which must be about as cheap as you can get today.

Contact: Soft-Logik Publishing, 11131F S.Towne Sq, St Louis, Mo 63123, USA.



Credits
Managing Editor and Publishing Director (AUI): Antony Jacobson.
Editorial Co-ordinator: Catherine Masters.
Technical Co-ordinator: Gary Fenton.
Contributors: Graham Baldock, Janet Bickerstaff, Ian Burley, David Carreyette, Ashley Cotter-Cairns, Andy Eskelson, Paul Fletcher, Rico Gusman, Peter Hayes, Anthony Mael, Barry McCarthy, Andy Moss, Gideon Overhead, Paul Overaa, Bud Vennos, John Walker, Martin Witton.
Advertisement Sales Director: Alan Talbot.
Advertisement Manager: Richard Vaughan.
Assistant Advertisement Manager: Liz Edgar.
Production Controller: Rachel Dixon.

Publishing Director: Wendy Palmer. Deputy Managing Director Consumer Magazines & Marketing Services: Ray Lewis. Managing Director Consumer Magazines & Marketing Services: Peter Welham.

Copyright
HHL Publishing
Editorial & Advertising: Greater London House, Hampstead Road, London NW1 7QQ.
Editorial telephones: 071 388 3171 extns 6219 and 6056.
Advertising telephones: 071 388 3171 extns 6167 and 6057.
Subscriptions Address: HHL Subs Dept, Lazahold Ltd, PO Box 10, Pallion Ind Est, Sunderland SR4 6SN.
Subscriptions Telephone: 091 510 2290.
Published by Headway, Home & Law. Distributed by: COMAG, Tavistock Road, West Drayton, Middx.
Origination and Colour Reproduction by Ford Graphics, Fordingbridge, Hants. Covers printed by Spottiswoode Ballantyne. Printed and bound by BPCC, Colchester. Disk Duplication by Stanley Precision Data Systems, Corby, Northants.

Amiga User International - an independent magazine for Commodore computer users - is not connected in any way with Commodore Business Machines UK. It is published 12 times per year by Headway, Home & Law Publishing on the second Thursday of every month. The publishers do not accept any liability for any incorrect statement or errors contained in material from independent sources or authors which may be produced from time to time.

Printed in the UK.

Checkmate - The Amiga only Developers

Try WorkBench 2.0, It's well worth the upgrade.

Hardware

Programing

Graphics

Graphics - 24 Bit cards for everybody

Avideo 24 bit graphics from Archos!

What other card could compete with the AVideo even if the AVideo 24 card was over £1000.

Features:-

768 x 580 Broadcast Pal resolution.
Full 16.8 million RGB colours on screen at once.
Overlay Amiga graphics and animation.
Fully genlockable with all tested Genlocks.
High speed HiRes 12 bit Animation upto 18 fps.
Includes the Amazing TVPaint 1.7

All this for ONLY £ 599.00 inc Vat

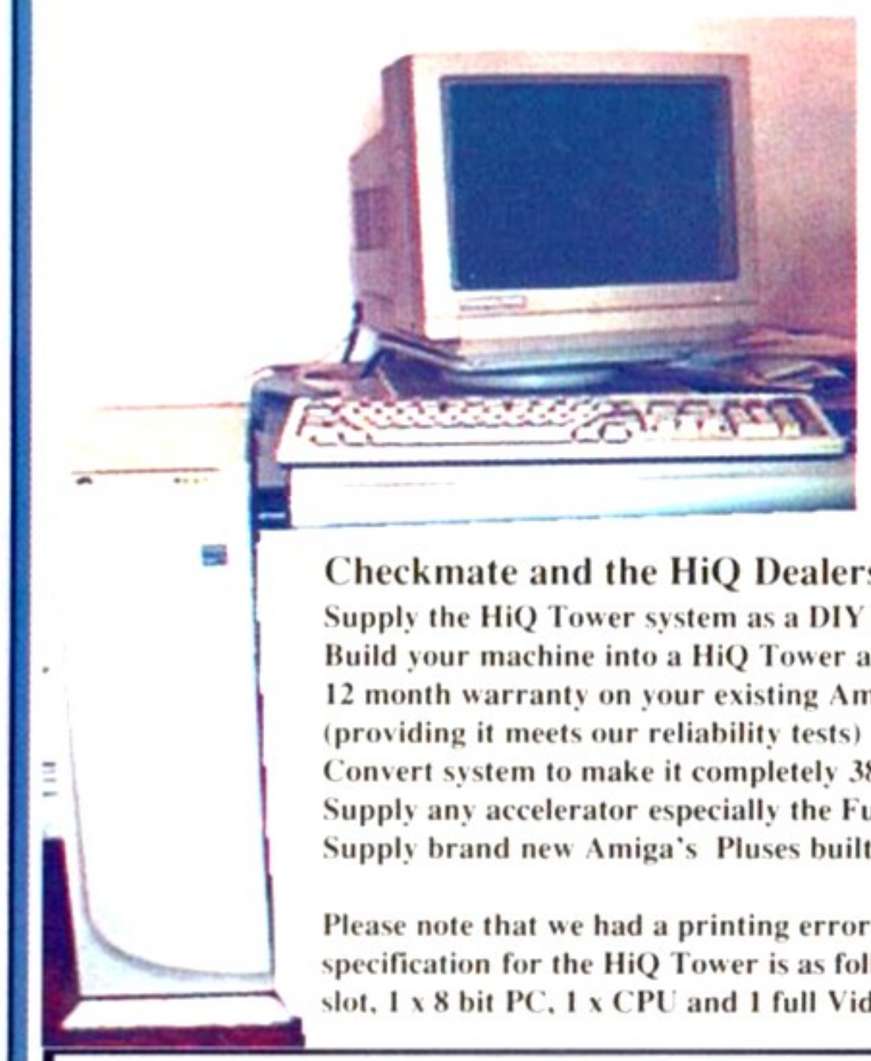
PIP 24bit

Only £ 599.00

A1500

Checkmate's Original A1500 upgrade for the Amiga A500 Just won't go away!
The original maverick Amiga product is still available and is being improved all the time. We try to stop making them but our customers just won't let us. It accepts 68040/030/020 cards, flicker fixers, Avideo 24, hard drives and floppies etc. And still starts at only £199.00

HiQ 68040 Power System



The HiQ Tower can now be purchased from Checkmate Digital direct or through a dedicated and growing Value added dealer network who aim to provide the very best in backup. Due to demand outstripping supply, advertising will be held back for this month, we will however have a list of your local dealers hopefully next month.

HiQ Tower for the Amiga A500 options:

Checkmate and the HiQ Dealers offer the following:-

Supply the HiQ Tower system as a DIY kit	£ 449.00
Build your machine into a HiQ Tower and give a 12 month warranty on your existing Amiga, (providing it meets our reliability tests)	£ 499.00
Convert system to make it completely 386SX compatible.	call now!
Supply any accelerator especially the Fusion 040 system.	
Supply brand new Amiga's Pluses built into HiQ Tower	£ 799.00
Limited Stock of A500 pluses	

Please note that we had a printing error in the last couple of adverts, the specification for the HiQ Tower is as follows:- 4 x B2000, 1 x 16 bit PC slot, 1 x 8 bit PC, 1 x CPU and 1 full Video slot. Sorry for the error.

Hardware best prices

Fusion Forty 68040 accelerator, for the Amiga A2000/A1500 or A500 with HiQ Tower. This card gives about a 35 times speed increase and just under 20 Mips. Card is sold without ram (fit upto 32mb) Now supports 16 bit ram and TVPaint 1.7

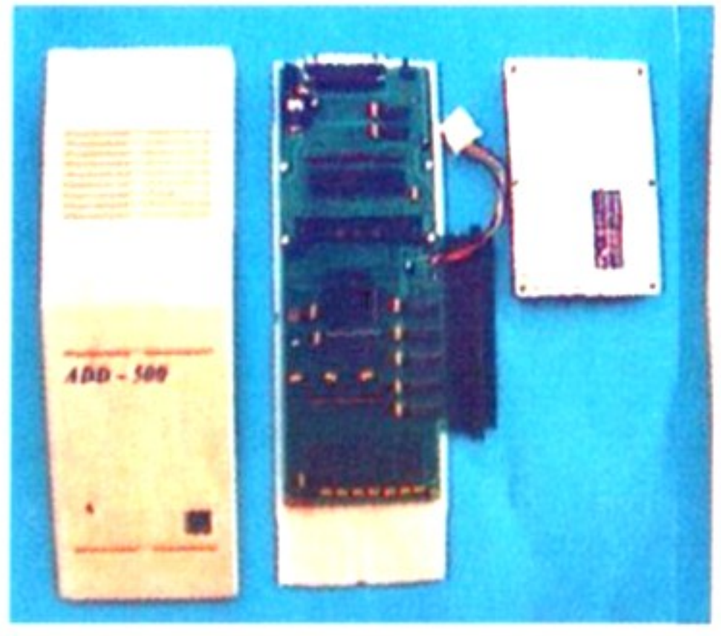
Only £ 899.00 unpopulated

add £ 160.00 per every 4mb Ram

Other Quality Archos Products.
ADD500 SCSI Hard drive system.
770 kb/s transfer (Test Diskspeed)
Upto 4mb Zips ram can be added.
Low power CMOS design
Very economical

52 mb Only £ 329.00 0mb ram
105mb Only £ 429.00 " "

A600 4mb Fast Ram card call for prices.



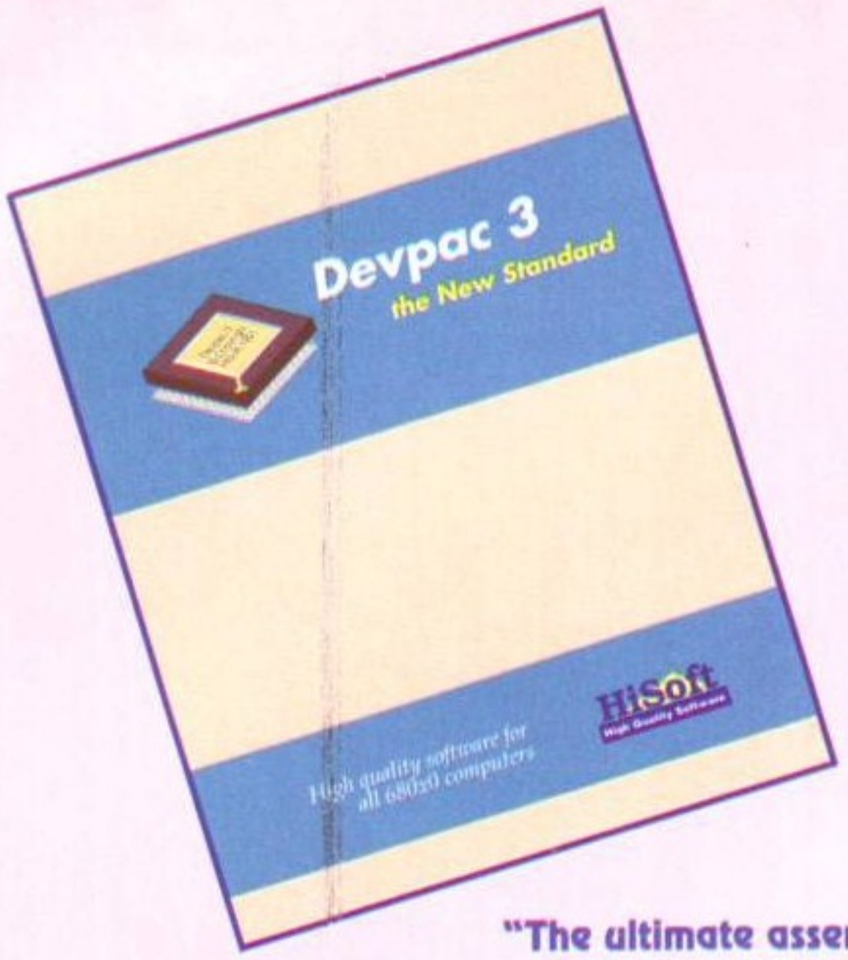
Checkmate

CHECKMATE DIGITAL LIMITED

Tel +44 (0)71-923 0658
Fax +44 (0)71-254 1655
BBS +44 (0)71-923 2608
80 Mildmay Park
London, N1 4PR, UK

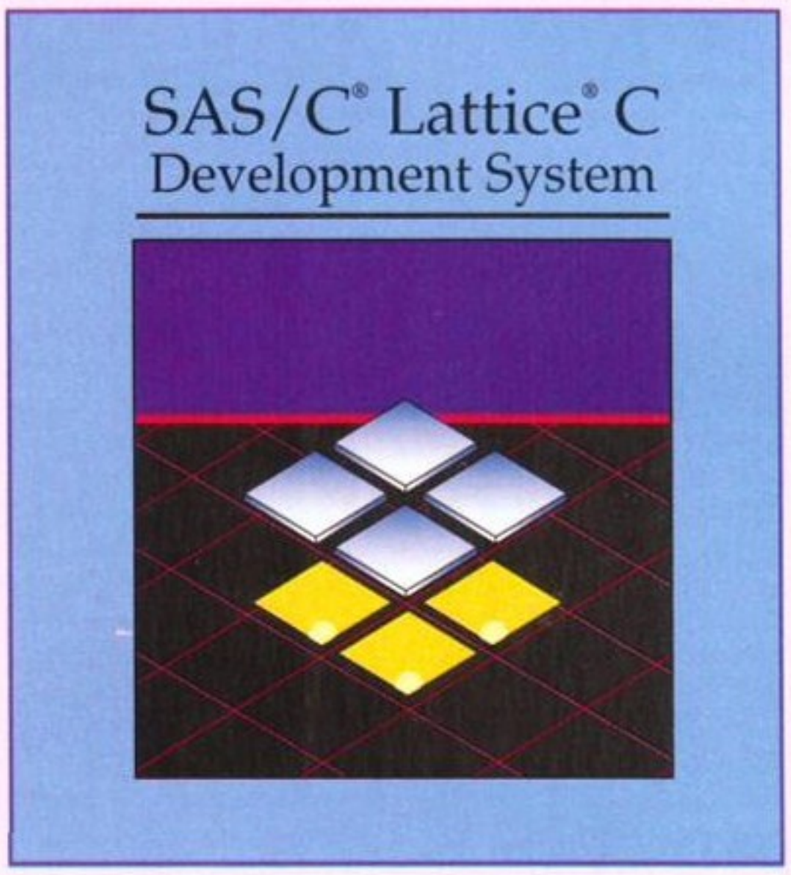
Some reasons to be cheerful

HiSoft is renowned for its range of language systems, utilities and entertainment programs on the Amiga. We have been writing for the Commodore 680x0 computers since they were first introduced into the UK and thus we know both the hardware and software intimately. Our company policy is always to offer the highest quality software at an affordable price with a complete range of backup support options - in these uncertain, difficult times, we'd like to put a smile on your face.

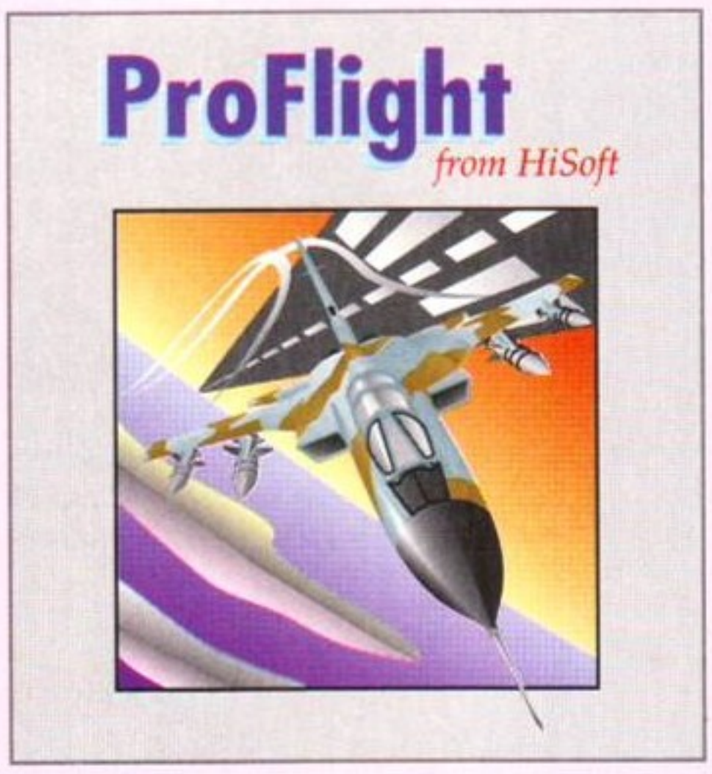


"The ultimate assembler language system"

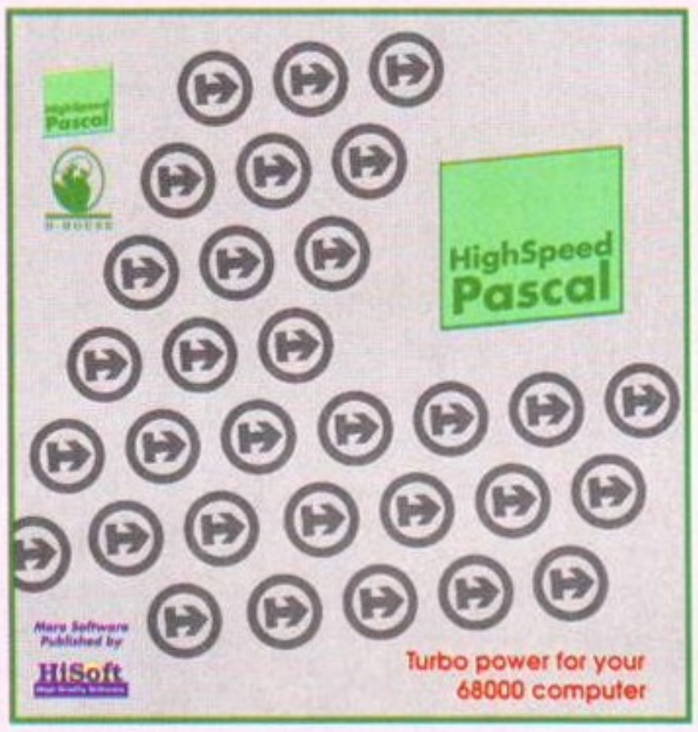
Amiga Format Gold 4/92



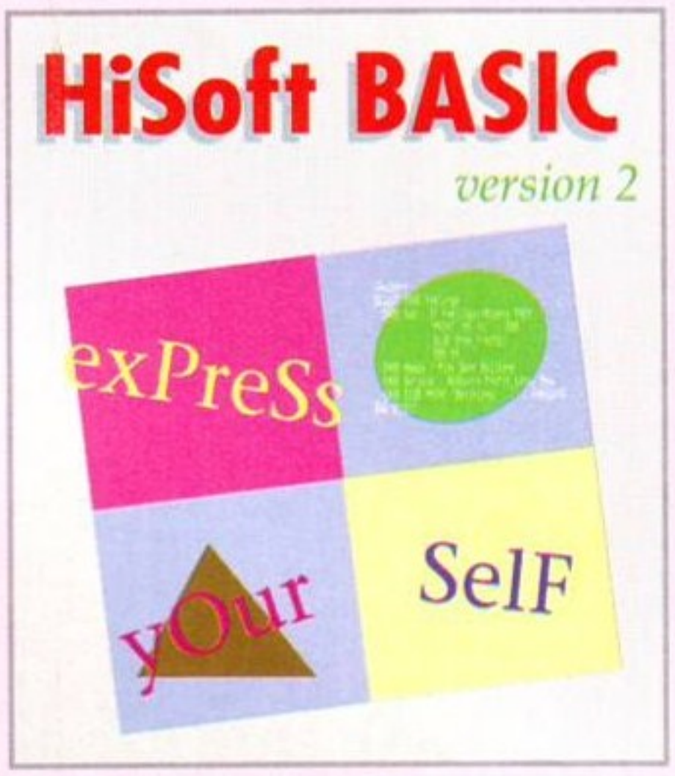
The professional C development package
includes free Silver Support service



The most accurate flight sim yet ...



The new Pascal compiler with Turbo Pascal® compatibility



Coming soon to an Amiga near you!

Free gifts!

(subject to availability)

HiSoft Software is available from all good computer shops. If you should have difficulty in obtaining any HiSoft product, you can order directly from HiSoft using this order form. You can pay by post/fax/telephone using Mastercard/Access/Visa/Switch/Connect etc. or simply send us a cheque/PO. Some free gifts are available for direct purchasers. Prices include P&P and VAT within the UK.

SAS/Lattice C 5.10b inc ss	£229.00	☐
HighSpeed Pascal	£99.95	☐
HiSoft Devpac 3	£69.95	☐
Power BASIC	£39.95	☐
HiSoft BASIC 1.05 inc Extend	£59.95	☐
ProFlight Tornado flight sim	£39.95	☐
K-Spread 4 spreadsheet	£89.95	☐
K-Data database	£39.95	☐
ROM Kernel - Includes & Autodocs	£36.00	☐
ROM Kernel - Libraries	£36.00	☐
The AmigaDOS Manual	£24.00	☐

Name:

Address:

Please send me the software/books that I have selected, together with my free Managing with Fax book (worth £12.95) and disk wallet (worth £2). I wish to pay by:

☐ Cheque/Postal Order ☐ Credit card ☐ Debit card

Card No

Signature

Expiry Date

HiSoft
The Old School,
Greenfield, Bedford
MK45 5DE

HiSoft
High Quality Software

for more information on any of our products, please call HiSoft on 0525 718181, or fax us on 0525 713716 or write to us at: The Old School, Greenfield, Bedford MK45 5DE UK.

Stop-Press

We are delighted to announce that, following an exclusive agreement with Kuma Computers Ltd, we have taken over the distribution, support and development of their popular Amiga products. Existing Kuma customers should write to us or call us for details of our support schemes and information on our plans for the future of Kuma software.

At the moment we have the popular K-Spread 4 spreadsheet and K-Data database available (see our order form on the right).

We also have stock of all the 3rd Edition Amiga ROM Kernel manuals from Addison Wesley, together with the excellent 3rd Edition of The AmigaDOS Manual (Bantam Press).

CITIZEN

DOT MATRIX INK JET AND NOTEBOOK PRINTERS

ALWAYS A GOOD IDEA

Silica presents some great offers on the award winning range of high quality matrix printers from Citizen. Each Citizen printer is built in the UK to exacting standards, ensuring superb reliability and output. Our confidence in Citizen's quality is such that we are pleased to include a 2 year guarantee with every printer. Plus, if you buy a Citizen printer (not inkjet) from us, we will give you the Silica Printer Starter Kit (worth £29.38), ***FREE OF CHARGE!***

FREE DELIVERY
Next Day - Anywhere in the UK mainland

FREE STARTER KIT
Worth £29.38 - With every Citizen printer (excluding inkjet) from Silica.

2 YEAR WARRANTY
Silica offer a 2 year warranty (including the dot matrix printer head) with every Citizen printer.

WINDOWS 3.0
Free Windows 3.0 driver. Included with the Silica Starter Kit.

FREE COLOUR KIT
With every Prodot 9, Swift 9 & 24e and 224

FREE HELPLINE
Technical support helpline open during office hours.

MADE IN THE UK
Citizen printers are manufactured to high standards.

LOW PRICE 9 PIN PRINTER

144 CPS **80** COLUMN

- *Citizen 120D+ - 9 pin - 80 column*
- *144cps Draft, 30cps NLQ*
- *4K Printer Buffer + 2 Fonts*
- *Parallel or Serial Interface*
- *Graphics Resolution: 240 x 240dpi*
- *Epson and IBM Emulation*
- *Pull tractor & bottom feed*
- *FREE Silica Printer Starter Kit*

£115
+VAT = £135.13 ref: PRI 2120

RRP £199
SILICA STARTER KIT £25
TOTAL VALUE: £224
SAVING: £109
SILICA PRICE: £115

The Citizen 120D printer comes supplied with a parallel interface as standard. If you require a serial interface instead, please state ref: PRI 2125 when placing your order with Silica.

9 PIN PRINTERS

300 CPS **80** COLUMN

- *Citizen Prodot 9 - 9 pin - 80 column*
- *300cps Draft, 60cps NLQ*
- *8K Printer Buffer + 3 Fonts*
- *Parallel Interface*
- *Graphics Resolution: 240 x 240dpi*
- *Epson and IBM Emulation*
- *FREE Colour Kit*
- *FREE Silica Printer Starter Kit*

RRP £189
COLOUR KIT £41
SILICA STARTER KIT £25
TOTAL VALUE: £255
SAVING: £66
SILICA PRICE: £189

£189
+VAT = £222.08 ref: PRI 2319

192 CPS **80** COLUMN

- *Citizen Swift 9 - 9 pin - 80 column*
- *192cps Draft, 48cps NLQ*
- *8K Printer Buffer + 3 Fonts*
- *Parallel Interface*
- *Graphics Resolution: 240 x 240dpi*
- *Epson and IBM Emulation*
- *FREE Colour Kit*
- *FREE Silica Printer Starter Kit*

RRP £239
COLOUR KIT £38
SILICA STARTER KIT £25
TOTAL VALUE: £302
SAVING: £113
SILICA PRICE: £189

£189
+VAT = £222.08 ref: PRI 2209

192 CPS **136** COLUMN

- *Citizen Swift 9x - 9 pin - 136 column*
- *192cps Draft, 48cps NLQ*
- *8K Printer Buffer + 3 Fonts*
- *Parallel Interface*
- *Graphics Resolution: 240 x 240dpi*
- *Epson and IBM Emulation*
- *Colour Option Available*
- *FREE Silica Printer Starter Kit*

RRP £329
SILICA STARTER KIT £25
TOTAL VALUE: £354
SAVING: £105
SILICA PRICE: £249

£249
+VAT = £292.58 ref: PRI 2309

24 PIN PRINTER

PRINTER + SOFTWARE + COLOUR

- *Citizen Swift 24e - 24 pin - 80 column*
- *216cps Draft, 72cps LQ*
- *8K Printer Buffer + 6 Fonts*
- *Parallel Interface*
- *Graphics Resolution: 360 x 360dpi*
- *Epson, IBM & NEC P6 Emulation*
- *FREE Colour Kit*
- *FREE Silica Printer Starter Kit*
- *FREE Lotus AMI 1.2 Word Processor and DTP package*
- *FREE Adobe Type Manager V1.15*

Lotus + Adobe software is for PC only on 3½" disk

RRP £369
COLOUR KIT £38
SILICA STARTER KIT £25
LOTUS AMI 1.2 WP/DTP PACKAGE £95
ADOBE TYPE MANAGER V1.15 (Fonts) £79
TOTAL VALUE: £606
SAVING: £337
SILICA PRICE: £269

£269
+VAT = £316.08 ref: PRI 2544

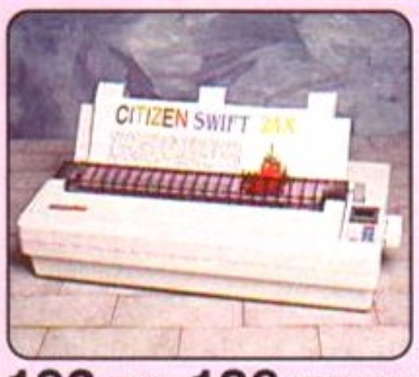
24 PIN PRINTERS

192 CPS **80** COLUMN

- *Citizen 224 - 24 pin - 80 column*
- *192cps Draft, 64cps LQ*
- *8K Printer Buffer + 4 Fonts*
- *Parallel Interface*
- *Graphics Resolution: 360 x 360dpi*
- *Epson and IBM Emulation*
- *FREE Colour Kit*
- *FREE Silica Printer Starter Kit*

RRP £269
COLOUR KIT £38
SILICA STARTER KIT £25
TOTAL VALUE: £332
SAVING: £133
SILICA PRICE: £199

£199
+VAT = £233.83 ref: PRI 2484



192 CPS **136** COLUMN

- *Citizen Swift 24x - 24 pin - 136 column*
- *192cps Draft, 64cps NLQ*
- *8K Printer Buffer + 4 Fonts*
- *Parallel Interface*
- *Graphics Resolution: 360 x 360dpi*
- *Epson, IBM and NEC P6 Emulation*
- *Colour Option Available*
- *FREE Silica Printer Starter Kit*

RRP £489
SILICA STARTER KIT £25
TOTAL VALUE: £514
SAVING: £165
SILICA PRICE: £349

£349
+VAT = £410.08 ref: PRI 2574

INKJET PRINTER

360 CPS **80** COLUMN

- *Citizen Projet - inkjet - 80 column*
- *360cps Draft, 120cps NLQ*
- *50 Nozzle Head - Whisper Quiet 47dB(A)*
- *8K Printer Buffer + 3 Fonts*
- *Optional HP Compatible Font cards*
- *Parallel Interface*
- *Graphics Resolution: 300x300dpi*
- *HP Deskjet plus emulation*

RRP £496
TOTAL VALUE: £496
SAVING: £137
SILICA PRICE: £359

£359
+VAT = £421.83 ref: PRI 2090

NOTEBOOK PRINTER

64 CPS **80** COLUMN

- *Citizen PN48 Notebook Printer*
- *Non-impact Printing on Plain Paper*
- *53cps LQ - 4K Buffer + 2 Fonts*
- *Rear and Bottom Paper Loading*
- *Parallel Interface*
- *Graphics Resolution: 360 x 360dpi*
- *Epson, IBM, NEC P6 & Citizen Emulation*
- *Powered From Mains, Battery or Car Adaptor*
- *FREE Silica Printer Starter Kit*

RRP £325
SILICA STARTER KIT £25
TOTAL VALUE: £350
SAVING: £101
SILICA PRICE: £249

£249
+VAT = £292.58 ref: PRI 2100

FREE! STARTER KIT

This starter kit will help you to get you up and running with your new Citizen dot matrix or notebook printer from Silica Systems. Plus, for a limited period only, we are including a Citizen Print Manager for the Amiga free of charge as part of the Silica Starter Kit, bringing the total value of the free kit up to £44.33.

- 3½" Disk - Amiga & ST Drivers
- 3½" Disk - Driver for Windows 3
- 2 Metre Parallel Printer Cable
- 200 Sheets of Continuous Paper
- 100 Continuous Address Labels
- 5 Continuous Envelope
- Amiga Print Manager

The Amiga Print Manager dramatically enhances printed output. Provides drivers for all Citizen printers and replaces Amiga's normal printer preference system - printing is quicker, colours more vibrant, graphics less fuzzy. Easy to use with instructions.

Features include:

- Improved Image Smoothing
- Gamma/Colour Correction
- Image Scaling
- Colour Separation
- Reduces/Eliminates Banding

STARTER KIT £29.38
AMIGA PRINT MANAGER £14.95
TOTAL VALUE £44.33

ACCESSORIES

SHEET FEEDERS

PRA 1200	120D	£71.38
PRA 1215	124D/224/Swift 9/24	£88.70
PRA 1228	124D/224/Swift 9/24	£42.00

SERIAL INTERFACES

PRA 1189	120D+	£56.45
PRA 1209	Swift 9/9x/124D/224	£32.25
PRA 1709	Swift 24/24x/24e	£26.38

32K MEMORY EXPN

PRA 1753	124D/224/Swift 24	£13.16

PRINTER STAND

PRA 1242	124D/224/Swift 9/24	£24.03
PRA 1274	Swift 9X/24X	£30.66

ORIGINAL RIBBONS

RIB 3520	120D/Swift 9 Black	£2.91
RIB 3949	Swift 9/9x Black	£7.15
RIB 3924	124D/Swift 24 Black	£4.70
RIB 3936	224/Swift 9/24 Colour	£15.63
RIB 3248	PN48 Single Strike	£3.61
RIB 3348	PN48 Multi Strike	£3.61

COLOUR KITS

PRA 1236	224/Swift 9/24/24e	£35.25
PRA 1240	Swift 9x/24x	£35.25

PN48 ACCESSORIES

PRA 1148	PN48 Battery	£51.70
PRA 1155	PN48 Cable Extn	£ TBC
PRA 1162	PN48 Car Adaptor	£ TBC

Accessories prices inc. VAT & delivery

SILICA SYSTEMS OFFER YOU

- ***FREE OVERNIGHT DELIVERY:*** On all hardware orders shipped in the UK mainland.
- ***TECHNICAL SUPPORT HELPLINE:*** Team of technical experts at your service.
- ***PRICE MATCH:*** We normally match competitors on a "Same product - Same price" basis.
- ***ESTABLISHED 12 YEARS:*** Proven track record in professional computer sales.
- ***BUSINESS + EDUCATION + GOVERNMENT:*** Volume discounts available **081-308 0888.**
- ***SHOWROOMS:*** Demonstration and training facilities at our London & Sidcup branches.
- ***THE FULL STOCK RANGE:*** All of your requirements from one supplier.
- ***FREE CATALOGUES:*** Will be mailed to you with offers and software/peripheral details.
- ***PAYMENT:*** By cash, cheque and all major credit cards.

Before you decide when to buy your new printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Systems we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE
081-309 1111

SILICA SYSTEMS

MAIL ORDER:	Order Lines Open: Mon-Sat 9.00am-6.00pm	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX No Late Night Opening	**Tel: 081-309 1111** Fax No: 081-308 0608
LONDON SHOP:	Opening Hours: Mon-Sat 9.30am-6.00pm	52 Tottenham Court Road, London, W1P 0BA No Late Night Opening	**Tel: 071-580 4000** Fax No: 071-323 4737
LONDON SHOP:	Opening Hours: Mon-Sat 9.30am-6.00pm	Selfridges (1st Floor), Oxford Street, London, W1A 1AB Late Night: Thursday until 8pm	**Tel: 071-629 1234** Extension: 3914
SIDCUP SHOP:	Opening Hours: Mon-Sat 9.00am-5.30pm	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Late Night: Friday until 7pm	**Tel: 081-302 8811** Fax No: 081-309 0017

To: Silica Systems, AMUSR-0892-55, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND A BROCHURE ON THE CITIZEN RANGE

Mr/Mrs/Miss/Ms: ..... Initials: ..... Surname: .....

Address: .....

..... Postcode: .....

Tel (Home): ..... Tel (Work): .....

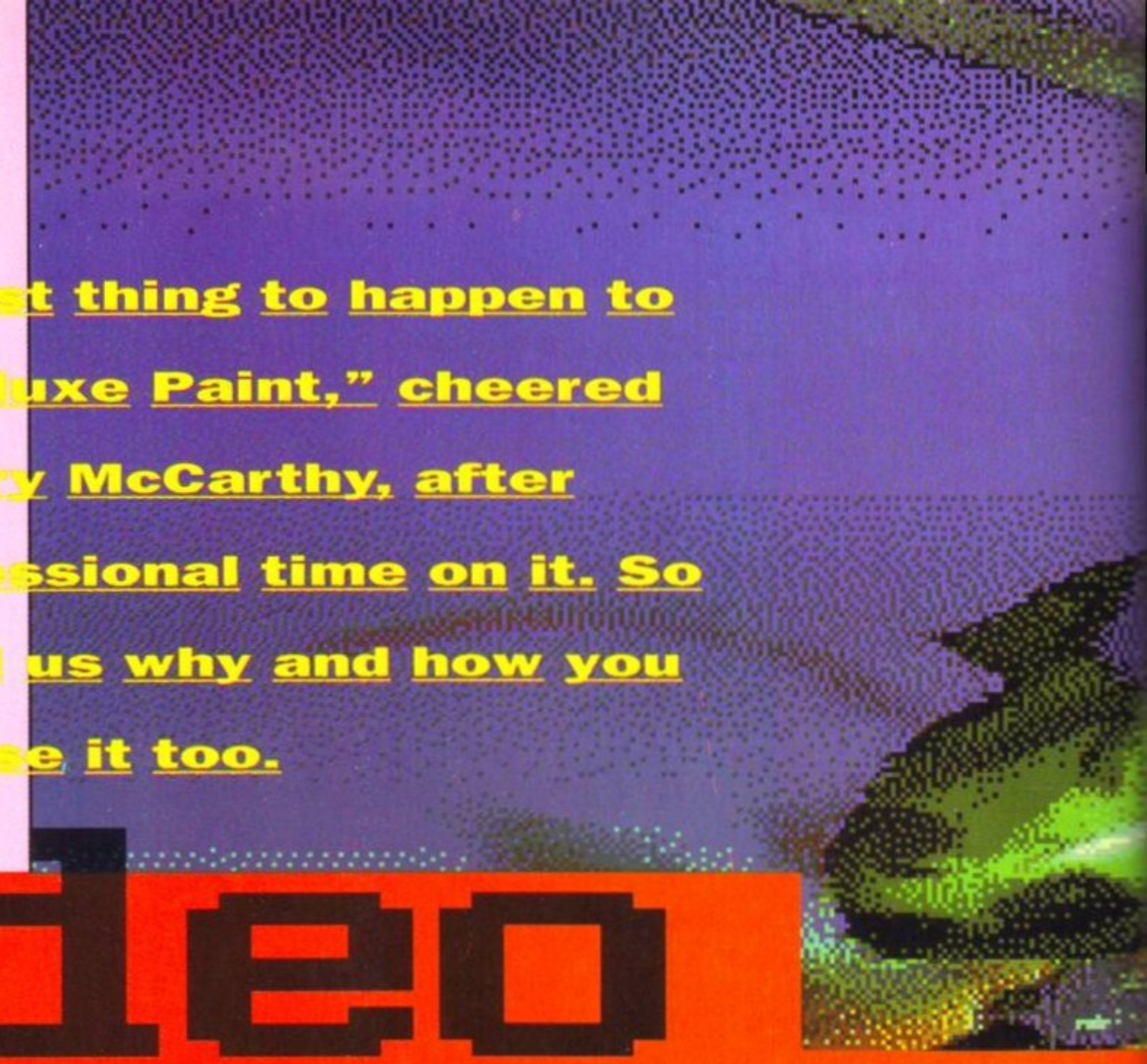
Company Name (if applicable): .....

Which computer(s), if any, do you own? 55G

E&OE - Advertised prices and specifications may change - Please return the coupon for the latest information.

Special Feature

"The DCTV is the best thing to happen to the Amiga since Deluxe Paint," cheered Amiga artist Barry McCarthy, after spending some professional time on it. So we asked him to tell us why and how you might use it too.



video painting for the Masses

How can I possibly justify this outrrrrrrrrageous statement?

Why has it changed the way I use my Amiga?

Why have I thrown away nearly all of my old painting programs?

Why don't I just get on with the ***ing article?

This is not a review of the DCTV. This is an idea of how it can be used. It is also an outlet for my own frustrations at certain reviewers and writers of various magazines who don't seem to understand the real intention behind devices such as the DCTV. To understand my initial statements, you have to look at the DCTV `in context'. In other words, what is it for and who will use it?

A typical commission might be where the final result is an animation that will form part of a video production. The animation is to include a company logo (accurate in form and colour) and it is to follow a story board.

There are a number of processes or stages that you will have to go through, so we'll split this up into its component phases as follows:

1. Digitising and Processing images.
This is to grab the logo and any textures and pictures used as backdrops and brush maps in a 3D program. Different uses require that images are in different formats.

2. Painting.
Some images may need to be touched-up or composited before use.

3. Animation.
This is where the animation is designed and rendered.

4. Construction and Embellishment.
Rendered frames are assembled and any extra painting is added.

5. Record.
The final animation is played and recorded to tape.

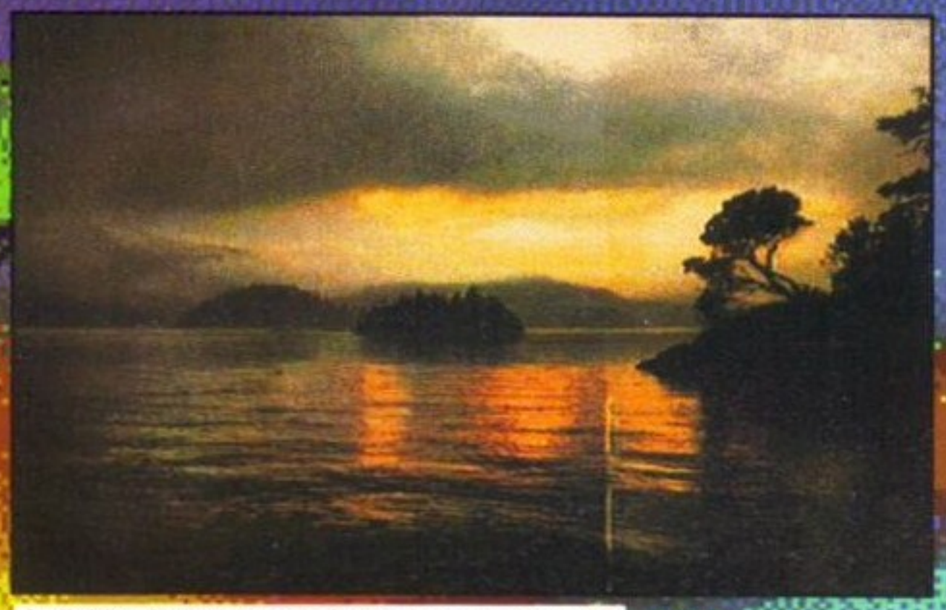
Digitising and Processing

Before I start designing the animation from my story-board, I require a collection of images in various formats.

The company logo needs to be digitised in hi-res with each colour represented by a single computer colour. This will be converted from 2D to a 3D object using either IFFto3D convert within Imagine or Pixel 3D, which is probably the preferred method. (It takes a little longer and adds an extra stage but is far more flexible, adjustable and reliable F.A.R.!) The company logo also needs to be in 24bit format for use as a picture wrap on a 3D object.

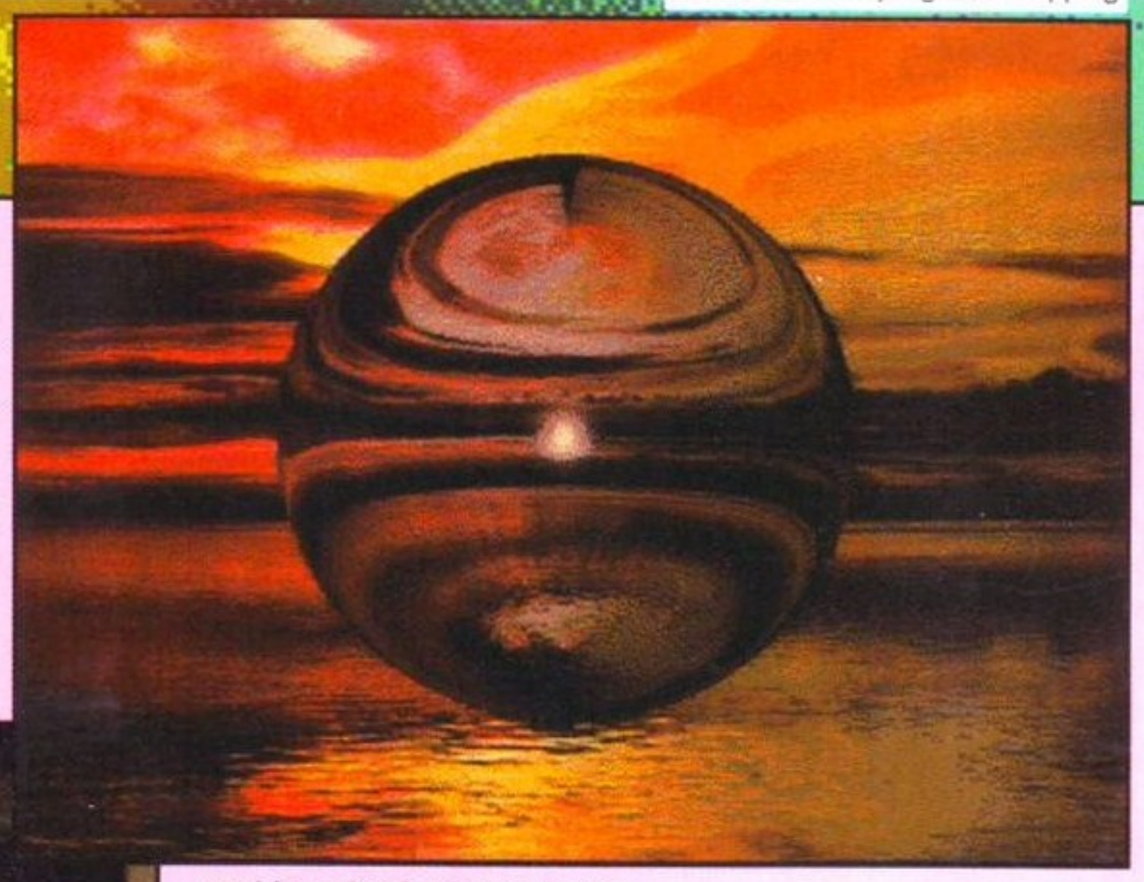
Next up on the table is a photograph of a landscape that can be used as a backdrop to the animated action and as a `Global Map'. A global map is essentially a sphere with a picture wrapped onto the inside and your 3D scene placed in the middle. The global map is invisible to the camera but reflective objects will show this global reflection. This is how those impressive chrome effects are created as chrome is

Cut and paste in DCTV



A digitised photograph (page break removed)

Terminator II style global mapping



DX

essentially a mirror and is only visible when reflecting something else! This is also, interestingly enough, how the `liquid' Terminator was made to look so realistic in Terminator 2.

The final images needed are those that will be used as brush maps to create interesting surface textures in the 3D modeller. These need to be in both 24bit and grey scale. The grey scale images are used as bump maps, where the lightness of each pixel determines the height of that part of the object above the surface. This is a wonderful way of creating immense amounts of 3D detail without having to model it physically point by point. Real 3D and Imagine both use bump (or altitude) maps impressively but they do need a lot of memory.

DCTV has a built-in digitiser that will happily grab full colour images from any colour video source. The only limitation is that the image must be completely still or that your VCR has a perfect still pause or digital freeze. The digitiser takes a few seconds to grab the picture.

A typical commisioned story board

HINT

When you choose a camera, make sure that it has a macro for close-up work and get the highest lens resolution that you can afford. All those flash gadgets like picture in picture, adjustable ear-lobe tickler and extendable dandruff vacuum are a waste of Shekels in this game. Ideally, get an S-VHS or Hi-8 format camera.

Special Feature

DCTV Video Paintbox

DCTV's digitised images are of exceptional quality, with all the usual sharpness, brightness and other controls. All of the format conversions are also done from within DCTV in its CONVERT module. This will convert from 24bit to any native Amiga resolution in any number of colours and at any size. It works without a hitch and produces surprisingly impressive IFFs.

HINT

Digitise at 736x566 and save all 24bits at this resolution. You will find that DCTV has a slight problem with image sizes that are under its default setting. They are saved with a black left and right edge that will show up clearly in your 3D renderings! To overcome this, you will have to crop the 736 wide image in Art Department Professional, down to a 704 wide image and re-save it in 24bit. This eliminates the edges and is now in the correct size for hi-res overscan in Deluxe Paint IV.

Painting

The painting section is by far the most impressive part of DCTV. It provides the artist with true artists' tools and a real painting `feel' that I have only ever come across on the Quantel Paintbox.It is here that any touch-ups can be applied, such as removing staples, coffee stains and annoying page breaks from fabulous photographs. The best tool for this is a size 3 brush using watercolour paint, picking colours from under your magnifying glass and adjusting the flow of paint to make it mix with the underlying hues. You could even turn it into a night scene with a dark, transparent wipe or add storm clouds and rain.

You can also create your own photographs from a composite of digitised and painted images cut and pasted together.

Animation

Time to create our actual 3D animation in one of the popular 3D packages. Real 3D 1.4 and Imagine 2.0 are both suited to the job, providing you with a range of brush mapping techniques and output to 24bit. Imagine 2.0 though does have a specific DCTV output which works quickly. It also has effective global mapping and the ability to have up to four brushes mapped onto one object. This is useful for such things as a logo mapped onto a bumpy surface, requiring 2 maps.

Art Department Professional is useful here again as backdrop pictures need to be exactly the right size for each size of rendering. It may well be that the same picture will have to be resized, cropped and saved as several different versions.

Now it is time for bed. While you sleep soundly, dreaming of the ultimate Amiga (if you happen to be that sad), your animation frames are being rendered.

HINT

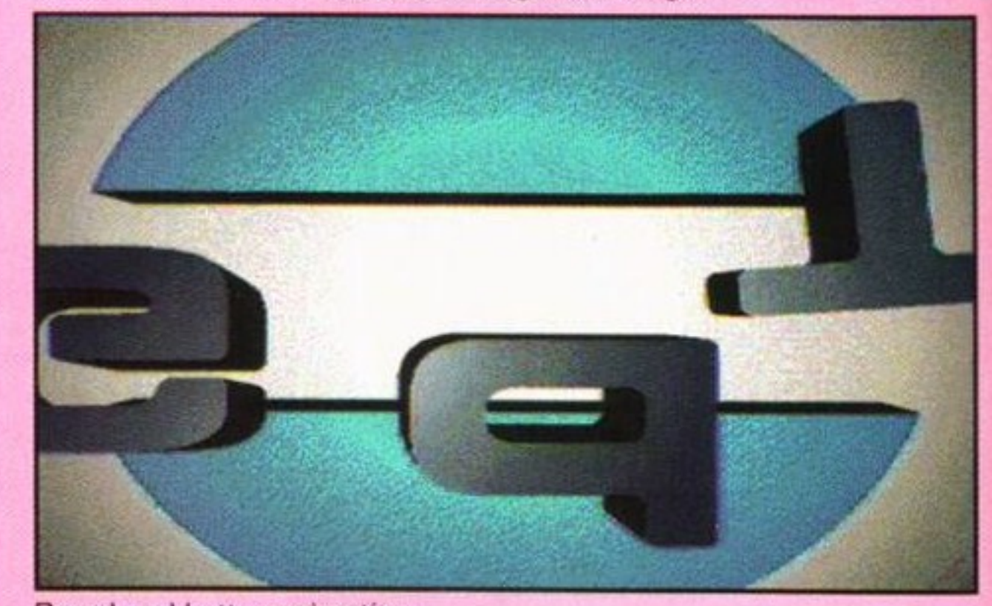
Shadows look nice in raytraced images but boy, do they take an age to render?! DON'T use full trace if at all possible. Use the mode that is one down from trace or switch off shadows. I know it's a shame but honestly, you rarely need them in a production and when you count the overall cost in time it can take between eight to 10 nights instead of one night to render. This is counter-productive and simply not viable for most commissions. Alternatively you can buy a 68040 accelerator or ideally a Rembrandt board at between £1,500 and £8,000.

Construction and Embellishment

When your frames have been rendered you may have several hundred pictures in either 24bit (several hundred megabytes!!!) or if you were using Imagine 2.0, in DCTV format (around 10 megabytes or so). This is where we are starting to find out why DCTV impresses me so much.

We now have the job of converting our frames to the correct format and choosing the number of bit planes to use.

The story board comes to life through the Amiga



Bread and butter animation

HINT

DCTV uses a picture format that is essentially a hi-res IFF with a bit of extra information tacked onto it. As the image goes out of the RGB port, on it's way to the monitor, the DCTV detects this extra information and re-routes the new DCTV format picture out of the composite hole in its box. What is not commonly stated is that there are two basic formats: 16 colour and 8 colour versions (both special DCTV display formats that give you millions of colours). The lower colour version seems the same but actually provides you with slightly less of a range of colours than the full 16 colour format. What you should bear in mind, is that fewer colours means greater speed in an animation. It is at the expense of smooth gradations of colours and tones. Just make sure that your images are fairly rich in texture and colours and you will not be able to see the difference.

HINT

The other thing that slows down animations a great deal is having a lot changing from frame to frame. A moving or panning camera is guaranteed to produce the most alarming speed decrease (around 3 or 4 frames a second even with a 68030 card). Try to design your animations so that they don't include too much camera movement, or if they do, then use a large number of frames for the movement so that it will at least be smooth.

This leads us onto the job of file manipulation. The images can all be cut from 4 to 3 bit planes and even have interlace removed to make your final animation as fast as possible. You could load individual images into DCTV and convert them by hand but this is ever-so-slightly tedious. The ideal tool is Diskmaster 2.0 or Directory Opus. Use the custom commands that they have and a DCTV utility called IFFtoDCTV and all this work can be automated while you type out the invoice for your last job.

HINT

To use IFFtoDCTV with Diskmaster 2.0 type the following into the new command box: IFFtoDCTVm3, 30, scrnback; extern dh10:ifftodctv -w704 -h283 -d3 odh10:converted %s; scrnfront
This means: the command's name, colour, where the command is and what it's called, its width, height and number of bitplanes, where the converted file will be sent... and so on.

There are instructions for setting up Opus in the DCTV manual but make sure that you are using a recent version of Opus, or it may not work.

The last possible addition before final assembly of the animation is to decide whether any of it needs a bit of embellishment. If your time and budget allow, it really can be the cherry on the cake. Try adding smoke, flames, sparks, lightening, explosions... (frame by frame of, course)

Brushes can be created in DCTV paint or imported from Deluxe Paint. The finished frames are then saved over the originals and the animation is finally loaded into Deluxe Paint IV (704x283 or 704x566), using the Load Picture of frames' option.Now you can play your animation at the selected speed and the DCTV box will convert each frame to a multi-million colour image on-the-fly.

I'm justified...

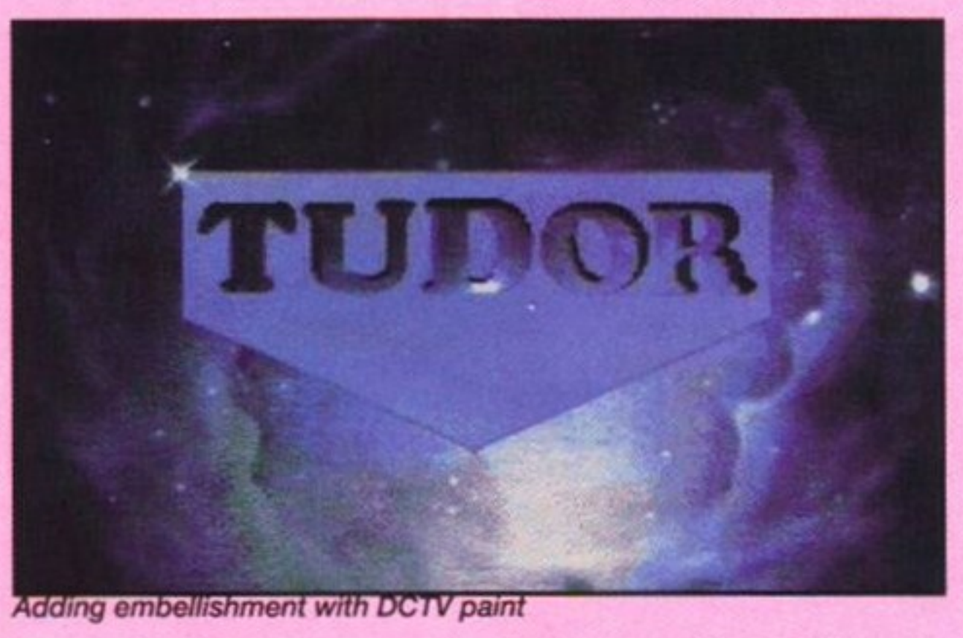
So what makes DCTV so stunningly super?

1 Well, for a start, you are constantly working on a composite picture. This looks a bit blurred and smudgy. Great?! Wouldn't RGB be a little clearer? Ah yes, but what is the medium that your final work will be used for? Video. Likely as not, you will have to convert your RGB output to composite output. At this stage, you will lose the sharpness and clarity of RGB and you see why video is such a dodgy medium.

You have to be careful to use unsaturated colours. (Highly saturated colours like pure red will `bleed' all over the screen). Make sure that there are no fine, contrasting lines or intricate patterns in contrasting colours because these will cause wobbly distortion effects.

It all depends on your final medium and if this is video, then you simply have to follow these rules.

This is what makes working in composite so useful. You can immediately see which colours and patterns will and will not work. I can't think of a more useful and efficient way of working. This also means that to record your animation you simply connect the composite out on the DCTV to the composite in (video in) on your VT and press record. No genlock or encoder needed. The image on your video is almost exactly the image that you have been working with. No horrible surprises, as you often get when converting RGB to composite.



Adding embellishment with DCTV paint

HINT

When you paint pictures or design 3D objects keep your colours below the following levels: In ranges of 0-15 (for example, Deluxe Paint III) don't go above 12.In % ranges (for example, Deluxe Paint IV) don't go above about 74.In 24bit ranges (for example, Imagine. 0-255) don't go above 191.

The storyboard lines

2 The DCTV works internally in 24 bits so you have access to the full 16 million colour palette. The display is in the realm of 8 million colours, so there is a little quality loss. But the real benefit is the size of the files. Each picture is the same size as an ordinary hi-res file. This means quick loading and saving and plenty of space left on your hard drive. The most impressive benefit though, is the ability to compile pictures into animations that run at the same speed as normal hi-res animations, take up the same memory and the same space on your hard drive BUT display 8 million colours!

NB: The palette is always the same for every DCTV picture, animation and brush. This means no palette or remap problems.

I've Changed!

Because of the DCTV I now use a completely different set of Amiga programs. Out go all the HAM ones. (Who needs 4096 colours when you can have several million?). Out go all the different 32 colour programs in favour of one standard: Deluxe Paint IV (although to be totally honest I am disappointed with this program. DPIII was a lot quicker and easier to use. DPIV has lost a lot of its fluidity and intuitiveness and WHY is HAM soooo slow?!)

These seems to be the ideal combination of programs for DCTV work:
Deluxe Paint IV, Art Department Professional 2, Imagine 2.0 (Real 3D 1.4), Pixel 3D 2, Diskmaster 2.0 (Opus), DCTV paint, digitise and convert. Oh, and Workbench and Kickstart 2.04.

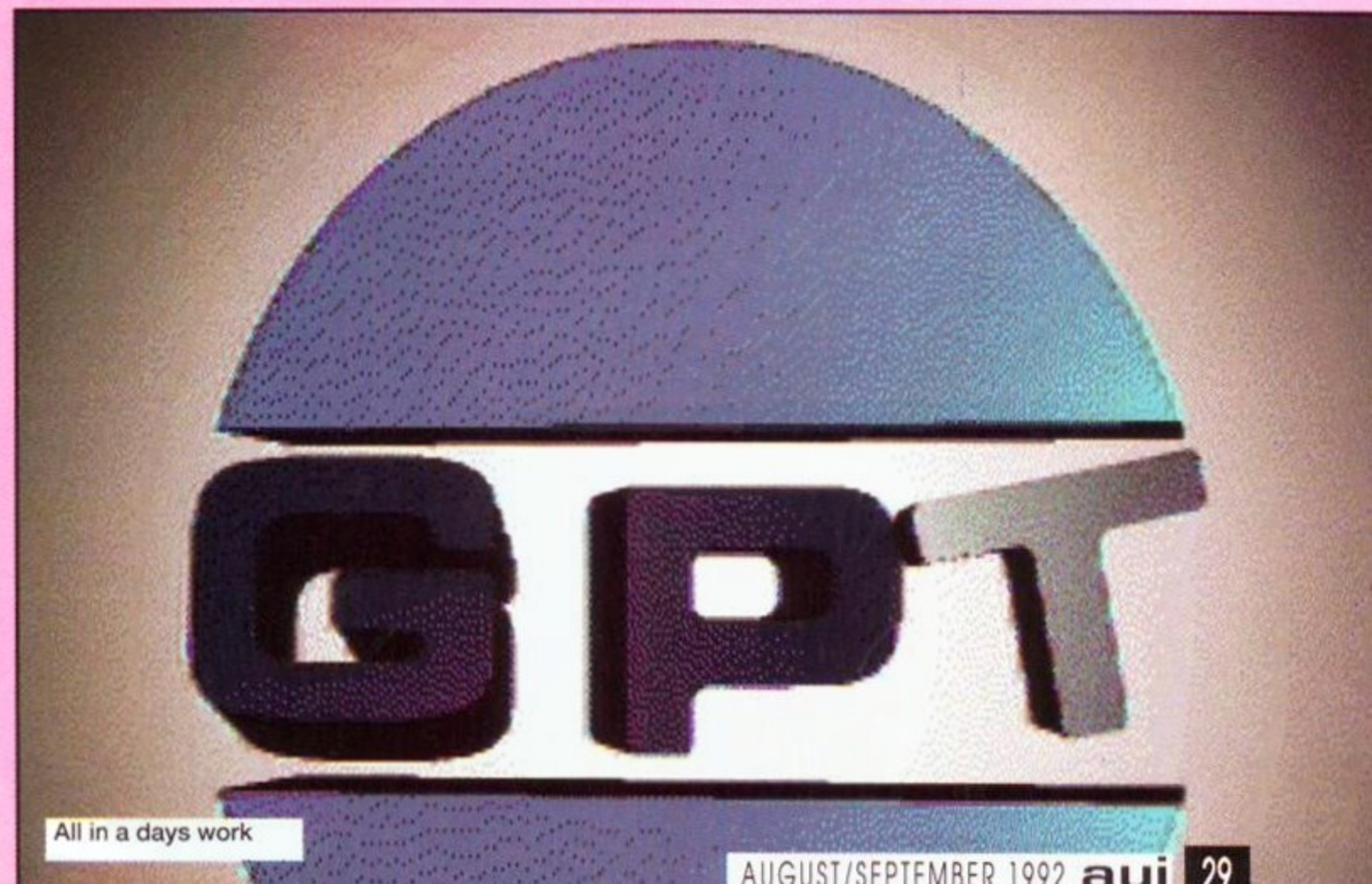
And this is the ideal (minimum) hardware platform:

Amiga 1500/2000 (they are exactly the same), 100 MB hard drive, 68030 accelerator card (with 68882 maths processor for 3D), 9 MB of RAM (ideally 32 bit RAM attached to the accelerator).

HINT

HINT 6: You may have noticed that when you play an animation ONCE from start to end, there is a jump as the animation stops playing. This is incredibly annoying and can either ruin a production or make it necessary to edit over the jump point and loose a generation on tape.To cure this, simply add as many frames as you like at the end of the animation using `add frame'. It is quite possible to add 9000 frames without using any more memory, as they are simply copies of the last frame. Deluxe Paint uses Delta compression for animations, which only saves the `differences' between the frames. No differences = no information saved.

All you have to do to record your animation is to connect the output of DCTV to a video recorder, press record and play your anim.

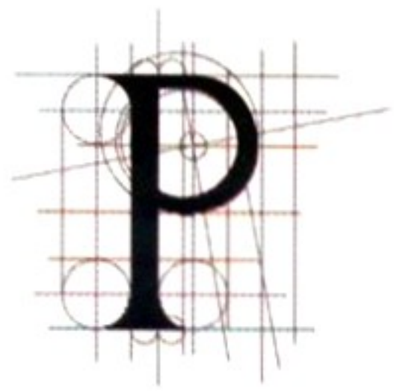


All in a days work

7 Steps to Excellence

PageLiner

ART EXPRESSION



HotLinks »

1 START WITH A POWERFUL TEXT EDITOR

PageLiner makes typing easy, with a real WorkBench 2 interface and powerful formatting options.

2 USE THE BEST AMIGA ILLUSTRATOR

You should turn to the best Amiga illustrator to create your drawings. Art Expression combines features like auto-tracing, text-in-shape and blend to give you total creative freedom.

3 PUT THEM TOGETHER WITH PAGESTREAM

Other programs claim to be the ultimate in desktop publishing, but only PageStream constantly leads the way with more features than any other program. And PageStream 2.2 is the best release yet!

4 CAN YOU COUNT TO 600?

Desktop publishing is nothing without fonts, and we have more than anybody else. The Soft-Logik Typeface Library has 600 PostScript Type 1 fonts!

5 SO YOU CAN'T DRAW.

Let's face it, some of us shouldn't be allowed to use pencils or brushes. That's why we're introducing the Soft-Logik Graphic Library, with 15 volumes of amazing PostScript graphics.

6 TOUCH UP PICTURES

BME is an amazing new program to crop and edit bitmap pictures. Zoom in and clean up your scans pixel by pixel!

7 HOTLINK YOUR DTP SYSTEM!

Software tools are great, but it's time they started working together. That's why we've created HotLinks for the Amiga. HotLinks is an Inter-Program Communications system which lets your programs exchange data in real time, on one computer and across networks. So instead of spending time importing text and graphics, you can spend more time being creative.

"the Amiga desktop publishing king of the hill." — AmigaWorld
"a jewel of a program." — Amazing Amiga
"PageStream delivers outstanding performance at an outstanding price." — .info
"the heavyweight champion." — AmigaUser International

The choice for professional publishing is the Soft-Logik Publishing System.

For a PageStream authorized dealer near you contact:
HB Marketing 0753-686-0000 or SDL 081-300-3399

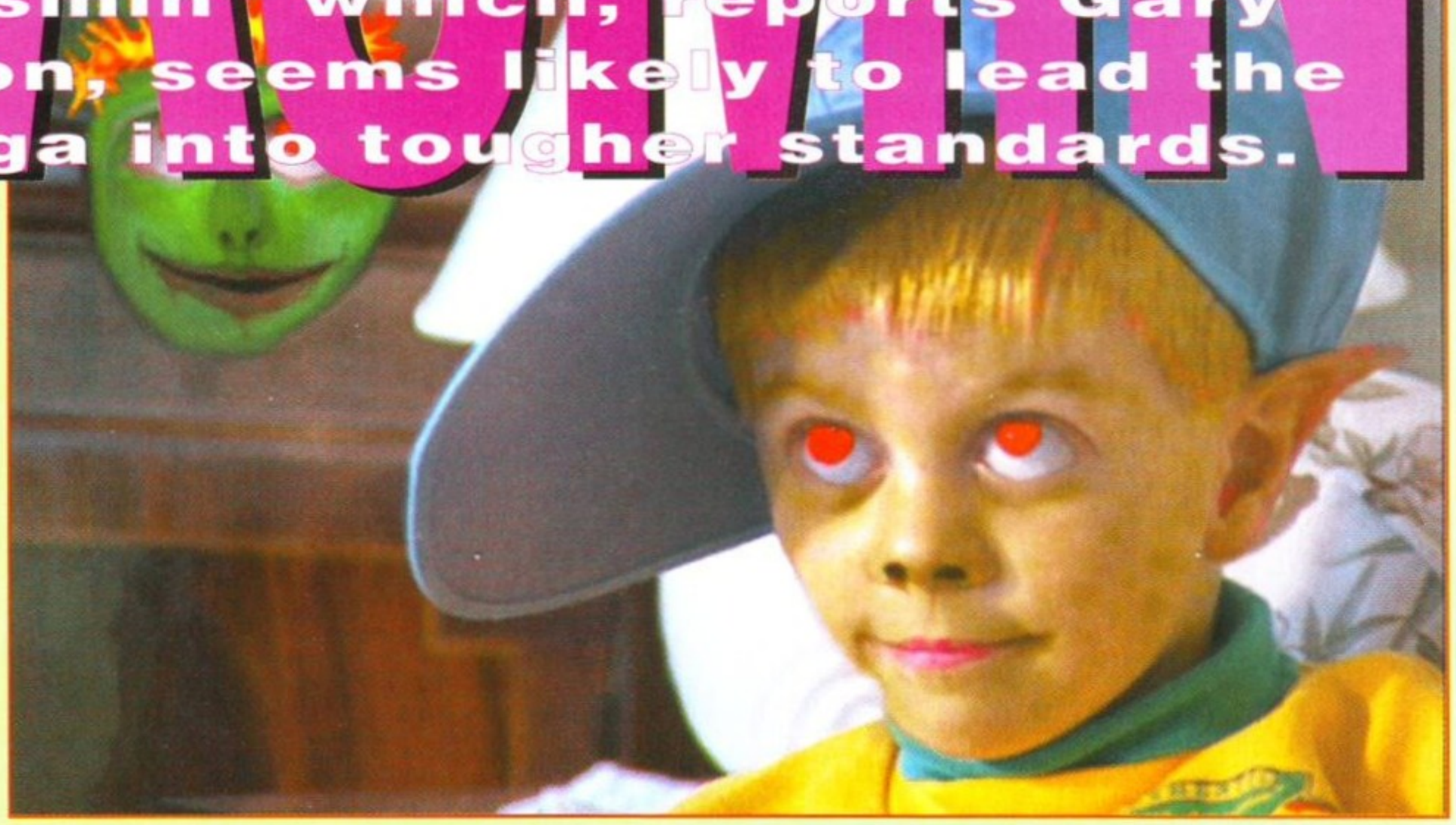
Soft-Logik Publishing Corporation • *We give you the tools to dream.*

PageStream 2.2, HotLinks, BME and PageLiner: Winter '91. Art Expression: coming soon.

Special Feature

KASMIN

The Amiga has enjoyed a rapid wave of cheaper 24 bit graphic cards. While these cards have been impressive to most Amiga users, professionals are concerned about the image and video output quality them. Now Team 4 are releasing "Kasmin" which, reports Gary Fenton, seems likely to lead the Amiga into tougher standards.



Team 4 are well known suppliers to the professional video market and have been awarded 'Dealer of the year' by Television Buyer for the second year running. The programmers behind Kasmin were also, they say, responsible for the famous Pastiche graphics system. Pastiche had similar features to Quantel's now legendary Paintbox but, in my opinion and that of many graphic artists, the Pastiche out-performed the Paintbox on features and equalled it other fields. If you saw the BBC's UK election '92 program then you may have seen the graphics such as the "Swingometer" which was created on the Pastiche.

Now Team 4 are moving the Amiga up toward those demanding professional standards. Kasmin is an internal plug-in card which boasts a transputer running at 25Mhz. 25Mhz may not sound fast but Megaherz is not always an accurate way of judging speed. In real terms the transputer is many times faster than the Amiga 3000 and believe me, it needs to be to handle 32 bit graphics the way it does! Additional transputers can be added, each one doubling the overall speed of Kasmin. (Wouldn't it be nice if you could do that with an ordinary Amiga?)

The T800 transputer can address the 4MB of on-board DRAM while a further 4MB is for the video display, called VRAM. Having so much memory means that it can support two high-res simultaneously. (Comparing it to DPaint, you can flip between the two screens and use one as a scratch pad). Further RAM can be added to Kasmin for even higher resolutions or more screens. Double buffering is possible with two 32 bit screens or four 8 bit screens which leaves the door wide open for animation in the future.

On the card you'll find a SCSI interface for fast loading of pictures. A hard drive or optical drive can be plugged in which bypasses the Amiga totally for that extra bit of speed.

Kasmin can be controlled by mouse but from a professional artist's point of view, a graphics tablet and electronic pen is preferable. You'll find it far more natural to draw with the pen than with a mouse. The tablet and pen is available for around #or an A4 version, plus VAT.

Video Output

The standard video display is made up from 768 x 576 pixels with each pixel represented by 32 bits. That's 24 bits (16.8 million colours) plus 8 bits for the alpha or key channel. The alpha channel is important which allows parts of a display to be masked off so new images can be placed on top without destroying what's underneath it. In it's most primitive form you can compare it to the stencil feature on DPaint but Kasmin has 256 levels rather than 1 which DPaint has.

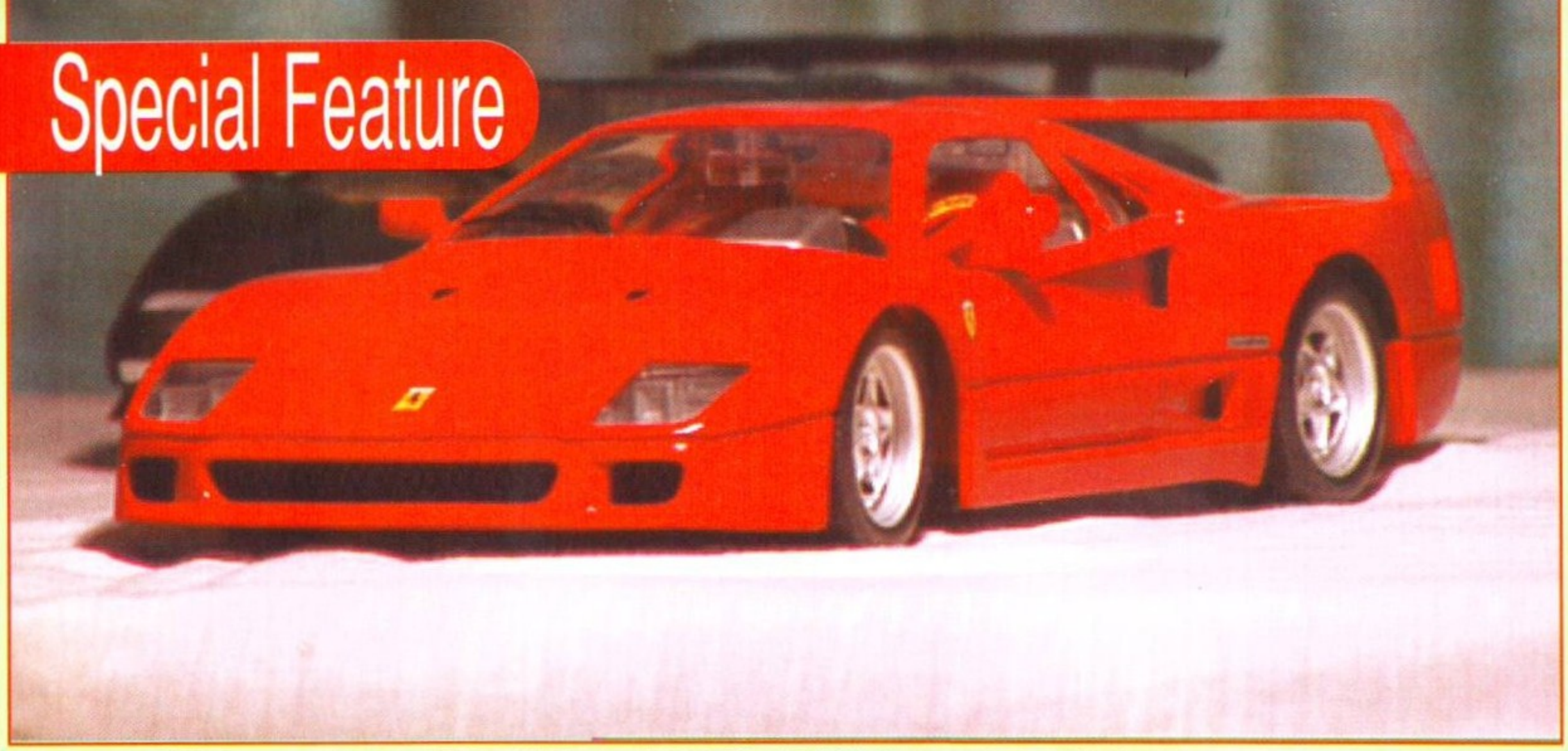
Just for the record (and for the pros reading AUI) Kasmin's video output is designed to be compatible with RS343A and RS170 video signals. Their optional PAL coder will output broadcast quality video. Incidentally, the American station MBC is using Team 4's PC version of the coder during the televising of the Olympics this summer.

Be Totally Grabbed

To warrant the asking price for Kasmin you'd expect a realtime full colour RGB frame grabber. That's exactly what Team 4 have included onto the card. Plugging a video camera into one of three sockets on the back of Kasmin will give you a realtime display from the camera on Kasmin's monitor. The quality of the image is so good that you would find it hard to believe that it's being digitised at the rate of 50 fields per second. Once you have a picture that you're happy with you can save it or go straight ahead and use it without any further ado.

I was using Kasmin with a professional Sony monitor and each and every Kasmin image was so remarkably clear. No Amiga card and digitiser that I've seen so far has come remotely close to the clarity I got from Kasmin's display.

I guess Kasmin owes a lot to it's predecessors and distant cousins, such as Patiche and Paintbox, for it's architecture and library routines. I honestly couldn't find fault with its hardware so ▶



let's press on with the software.

Kasmin Paint

Funnily enough, Kasmin does not come with any software at all. You have to pay extra for that and at the moment you have a choice of Kasmin Paint and Picture Wizard. Kasmin Paint is the only paint package so I reckon that's a good thing to buy first!

The version of Kasmin Paint I used had a rather peculiar menu system. Wiping the pen off the side of the tablet brought up an on-screen menu (nothing new there). The menu items were listed down a strip using full words like "rotate". There were no tick boxes or anything which could have told you what functions were on and what the current settings were. This was a little strange if have previously been working on a Paintbox or Amiga. However, I was told that "designers" like that menu system. I won't argue with that but I personally much prefer either clear icons (a la Dpaint) or text with tick boxes, sliders and other informative gadgets. Team 4 said they are looking at other menu systems for a future release of Kasmin Paint.

Menus aside, there are a lot of nice features included. Everything in Dpaint can be found on Kasmin Paint with many more sophisticated effects. There are 16 levels of magnification with realtime hardware scrolling (immensely impressive!).

The airbrush is wonderful and blows paint onto the screen just like a real airbrush would.

Anti-aliasing can be turned on or off which is a good option to have. Font wise, there are 15 vector fonts (rescalable) and 15 raster fonts (bitmap). Font control is good and the vector fonts can be resized in any direction without any loss of resolution.

The palette can be viewed by wiping off the top of the tablet. The default palette selection covers just about every colour (about 256) but you have to go to the palette menu if you want to change any of them. An RGB slider or a palette mixing box would be ideal but unfortunately Quantel have a patent on the mixing box. (DPaint IV and TV Paint has a mixing box!)

The brushes are controlled by the transputer which means they are fast and keep up with the pen.

There are several different drawing modes including air, blend, user (cut out brush), trace, wash, tint, chalk, and my favourite - smudge. Smudge is sometimes called smear or shift in other packages and does exactly what its name suggests. It's perfect for touching up images. Take a look at one of my victims in the baseball cap and notice the Vulcan (Mr Spock) ears.

The pen is not of the pressure sensitive type because Quantel (again) have a patent on that too. (Why don't they just patent breathing and sue us all!) It's unfortunate for Kasmin because a pressure sensitive pen would have gone down very well with the airbrush.

At the time of writing the review the alpha channel had not been fully implemented into the software. Stencils aren't currently available which means irregular shapes can't be cut out and pasted and masking is not available either. However, Team 4 said they will be releasing an upgrade with stencils using the alpha channel around August time.

Conclusion

The quality and performance of the hardware is unmatched by any other card for the Amiga currently available in the UK and at the time of writing. Thanks to the transputer the user can enjoy a fast response from the computer without waiting for operations or even the brush to catch up with your pen!

Image manipulation is superb with every function I needed available for everyday work. The feel I got from Kasmin was not too different from the one I got when I was working with the up-market Pastiche last year. Team 4's Kasmin deserves a close look from professionals who want a "main" graphics computer or in particular an off-line graphics system for pre-production.

Please note that the pictures on these pages have been shrunk to fit on a single disk and as a result may lose quality.

INFO

Product:
Kasmin

Product:
Kasmin Paint

Contact:
Team 4
Tel: 081 998 8818

FED UP WAITING?

JUST ADD £2.00 TO YOUR TOTAL ORDER FOR A GUARANTEED NEXT DAY DELIVERY TO YOUR DOOR

(*ORDERS MUST BE PLACED BEFORE 3.30pm excluding Weekends)

COMPUTER MATES

Fastest Mail Order Company on Earth

COMPUTER MATES (UK) LTD.

CHEQUE/POSTAL ORDERS TO:
COMPUTER MATES (UK) LTD.
PINEWOOD STUDIOS, IVER HEATH
BUCKS, SLO ONH
TEL: 0753 553535 (3 Lines) FAX: 0753 553530

ALL PRICES INCLUDE V.A.T & DELIVERY

MITSUBISHI BRANDED DISKS

BOX/10	5.25 M-2D	5.25 1.6 Meg M-2HD	1 MEG MF-2DD	2 MEG MF-2HD
1-5	5.00	7.00	7.00	14.00
6-10	4.50	6.50	6.50	13.00

FREE GIFTS
when you buy MITSUBISHI BRANDED
1 BOX — MOUSE MAT — 5 BOXES — 50 CAPACITY STORAGE BOX

NEW JUST APPOINTED DEALER

GOLD MASTER BRANDED
2 FOR 1 LIFE TIME WARRANTY

	1 MEG MF2DD	1 MEG MF2DD RAINBOW	2 MEG MF2HD	2 MEG MF2HD RAINBOW
1 BOX	6.50	7.50	13.00	14.00
2-5 BOXES	6.00	7.00	12.50	13.50
6-10 BOXES	5.50	6.75	12.00	13.00

Rainbow Colours — White, Red, Green, Orange, Yellow

3.5" MITSUBISHI BULK MEDIA LIFE TIME WARRANTY

3.5"	DSDD	DSHD
50 Disks	£23.00	£32.50
100 Disks	£43.00	£63.50
200 Disks	£84.00	£125.50
500 Disks	£184.00	£295.50
1000 Disks	£340.00	£580.50

£2.00 off when ordering with storage boxes – including labels.

5.25" BULK DISKS
Packed in 25's with Envelopes, Labels, Lifetime Warranty

	48tpi	96tpi	HD
25 Disks	£8.50	£8.75	£12.00
50 Disks	£16.00	£16.25	£23.00
100 Disks	£28.00	£27.25	£36.00
1000+ PLEASE CALL			

COLOURED DISKS LIFE TIME WARRANTY

5.25"	48/96tpi DSDD	1.6 Meg DSHD	3.5"	1 Meg DSDD	2 Meg DSHD
25 Disks	£9.00	£16.00		£13.00	£20.00
50 Disks	£17.50	£30.00		£24.00	£35.00
100 Disks	£31.00	£51.00		£44.00	£68.00

Includes labels, for available colours please call.
Normally Red, Green, Yellow, White & Orange

COMPUTER MATES BRANDED DISKS
2 FOR 1 LIFE TIME WARRANTY

3.5" DISKS

	DSDD	DSHD	COLOURED DSDD	COLOURED DSHD
50 Disks	£21.00	£35.00	£24.00	£38.00
100 Disks	£41.00	£69.00	£43.00	£75.00
200 Disks	£80.00	£137.00	£83.00	£143.00
500 Disks	£182.00	£325.00	£815.00	£331.00

MICE/TRACKERBALLS

PC/XT/AT MOUSE	£20.00
PS2 MOUSE	£21.00
AMIGA/COMMODORE	£19.00
ATARI MOUSE	£19.00
ATARI/AMIGA TRACKBALL	£22.00
PC/XT/AT TRACKBALL	£22.00
MOUSE MAT	£2.50
MOUSE POCKET	£2.50
MOUSE STAGE	£10.00
MOUSE MAT HARD	£3.50
PAPER TRIMMER	£5.00

STORAGE BOXES

3.5"		5.25"	
120 Cap	£9.50	140 Cap	£8.75
100 Cap	£7.90	120 Cap	£8.25
80 Cap	£7.50	100 Cap	£7.50
50 Cap	£6.50	50 Cap	£6.50
40 Cap	£6.00	20 Cap 3.5"	£4.00

ALL ABOVE BOXES LOCKABLE + 2 KEYS.
£2 OFF BOXES WHEN ORDERING 100 DISKS OR MORE

10 Cap	£1.50	10 Cap	£1.50
5 Cap	£1.15	5 Cap	£1.00
1 Cap	£0.50		

SPECIAL OFFERS THIS MONTH

LOOK SAVE YOUR EYES

12" or 14" COLOUR OR MONO FILTER SCREEN
SAVE YOUR EYES ..... Only £13.99
12" or 14" TILT & TURN WITH HANDY KNOB MONITOR STAND £15.95
A4 DESK TOP COPY HOLDER £8.00

PRINTER STANDS 5 DIFFERENT TYPES

PRINTER STAND (Feet)
80 OR 132 COLUMN £8.00
IBM PRINTER LEADS £5.00
..... JOYSTICKS ALL MACHINES P/C

LABELS 5.25" OR 3.5" (5.25 WITH W/P)
100 £1.00, 1000 £8.00
SINGLE OR MULTICOLOUR AVAILABLE

DUST COVERS

PC XT, AT+MONITOR	£6.00
12" or 14" MONITOR	£6.00
80 or 132 PRINTER	£6.00
LAZER PRINTER	£6.00
84 OR 102 KEYBOARD	£6.00
TOWER CPU	£6.00

CLEANING ACCESSORIES

MINI VACUUM CLEANER	£7.00
HEAD CLEANER 3.5" OR 5.25"	£2.50
MONITOR CLEANING SOLUTION	£3.00
ALL THE ABOVE & MORE	£11.00
3" CLEANING KIT	£3.00

DATA SWITCH BOXES

CENTRONICS OR SERIAL

2 WAY	15.00
4 WAY	20.00
DATA SWITCH LEADS	8.00 each

SORRY! SORRY! SORRY!
WE DO NOT PRICE MATCH BUT WE DO GIVE QUANTITY DISCOUNT, WITH SERVICE, QUALITY AND BACKING FROM THE LARGEST DISK MANUFACTURERS IN THE WORLD. IN ADDITION OVER 200 LINES OF PERIPHERALS IN STOCK. ASK FOR OUR COLOUR CATALOGUE & PRICE LIST WITH YOUR ORDER OR SEND 24p S.A.E.

CALL SAM OR PAT NOW!
ON 0753 553535

BLUE BOX PRODUCTS

ALL BLUE BOX PRODUCTS ARE COMPLETELY PACKAGED IN PRINTED CARDBOARD BOXES WITH LABELS. 100% GUARANTEED

BAMBI-2DD 1 MEG
25 DSDD 3½" IN 25 CAP STORAGE BOX

1 BOX	£14 00
2+	£13 00
5+	£11 00

MF-2DD 30's 1 MEG
30 DSDD 3½"

1 BOX	£14 00
2+	£13 00
5+	£11 00

MF-2DD 10's 1 MEG
10 3½" DSDD

1 BOX	£6 00
2+	£5 00
5+	£4 50

M-2D 48TPI 10's
10 DSDD 5¼"

1 BOX	£4 25
2+	£3 75
5+	£3 25

M-2DD 96TPI 10's
10 DSDD 5¼"

1 BOX	£4 75
2+	£4 25
5+	£3 75

BAMBI-2HD 2 MEG
25 DSHD 3½" IN 25 CAP STORAGE BOX

1 BOX	£21 00
2+	£20 00
5+	£18 50

MF-2HD 30's 2 MEG
30 DSHD 3½"

1 BOX	£21 00
2+	£20 00
5+	£18 00

MF-2HD 10's 2 MEG
10 3½" DSHD

1 BOX	£8 50
2+	£8 00
5+	£7 00

M-2HD 10's 1.6 MEG
10 DSHD 5¼"

1 BOX	£6 50
2+	£6 00
5+	£5 00

DATA CARTRIDGES

DC 2000	£18 00
DC 300 XLP	£18 00
DC 600A	£19 50
DC 6150	£20 00
DC 6250	£21 00

FED UP WAITING?

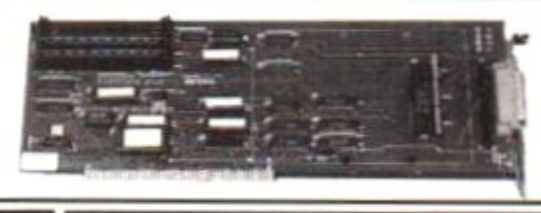
ALL ORDERS ARE NORMALLY DELIVERED TO YOU WITHIN 48 HOURS

GENLOCK LTD

Metcom House, Bradley Lane,
Standish, Wigan, Lancashire, WN6 0XQ

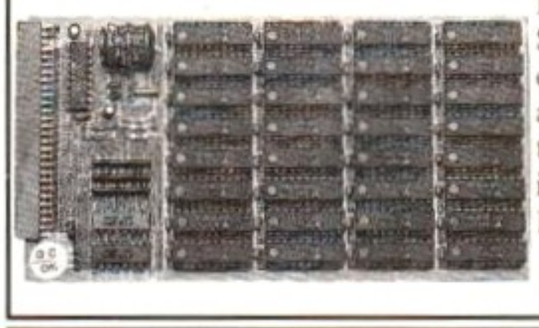
TEL: (0257) 472866/472887 FAX: (0257) 426577

AdSCSJ 2080



Transfer rates of upto 1500K/$. Supports removable drives. Cache buffering. Supports upto 8 megs of simms
52MB 11milli auto part **£349.99**
106MB 11milli auto part **£449.99**

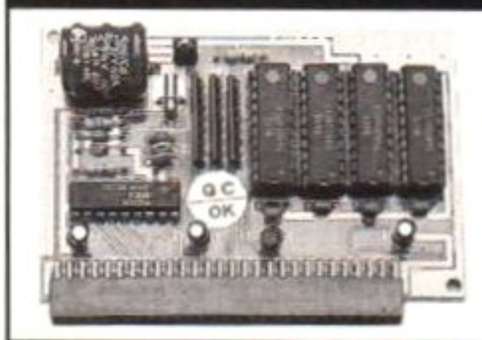
Eureka 4MB Expansion A500



Internal 4MB ram card for Amiga A500. Supports battery backed up clock and calendar. Enable and disable switch. Chip and fast ram upgrades selectable. Memory test software and fitting instructions included. 256K × 4 bit, 100 ns or faster DRAM.

2MB Populated Only £99.99
4MB Populated Only £169.99

Eureka ½MB Expansion A500



100% Amiga A501 compatible. Easy to install inside the A500. 512K Fast ram. Battery backup real time clock on board. Enable and disable switch. Small 4 chip compact design.

£24.99

CP10 PAL Encoder

The CP10 Pal encoder is a device that allows you to store all images onto video tape in three formats, composite video, HI 8 and S-VHS. Just imagine all your presentation from your favourite graphic software, business graphics, charts and even desktop publishing pages are all acceptable material. With the CP10 you can simply record these onto video tape as you create them without any quality loss. **Only £149.99**

Eureka 8MB Expansion A500

External 8MB ram expansion for Amiga A500. Full implemented auto configuring. Standard 1MB × 8 or 1MB × 9 simm modules. External power supply unit included. Memory test software included. Pass through bus design. High performance zero wait-states.

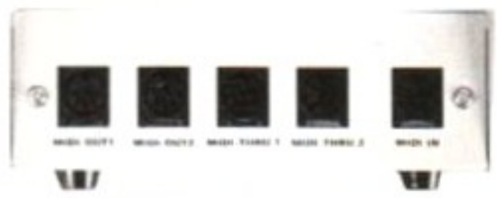
2MB Populated
4MB Populated
6MB Populated
8MB Populated

Call for prices

Amiga Mouse

Switchable Atari and Amiga compatible mouse
260DPI 2 Button Mouse **£14.99**
300DPI 3 Button Mouse **£19.99**

MJDJ Interface

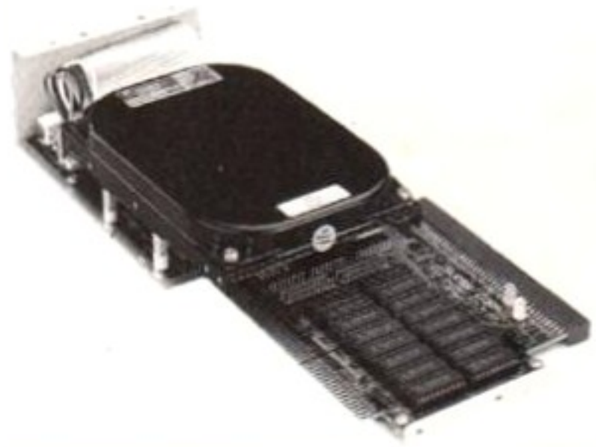


High quality MIDI interface connects directly with the Amiga serial port. One MIDI in, two MIDI out and thru. Only £24.99

Electronic Design Genlock

Built in high performance Phillips pal encoder enable perfect video fades. External colour, contrast and limminance controls allow total control to enhance video input. The built in RGB splitter allows digitised images to be grabbed from camera or recorder and fed through the genlock. Key inverter allows foreground and background to be switched in and out. Full superimposing with keyhole effect. **PAL Genlock £349.99** Also available to support Hi-8, **S-VHS £449.99**

Supra 500XP Hard Drive



High performance SCSI hard drive offering all the features and performance you would expect from a Supra product. Support of upto 9 megabytes of ram. Low profile 11ms zero noise hard drive. Small compact side fitting drive. Performance that leaves all competitors in the dark age. Bus pass through the SCSI out. External SCSI address selector. Superb software with auto format and backup software.

Supra 45MB 20milli auto park **£349.99**
Supra 52MB 11milli auto park **£399.99**
Supra 106MB 11milli auto park **£499.99**

GSJ Gold Pro YC Genlock

High performance S-VHS genlock with built in fader, key inverter. Studio quality results from a unit that has no competition at its price. Used by the French television studios and gives breathtaking quality at VHS + S-VHS level. Fully modular so that frame freeze and multi colour keying through chroma keys can be added. Total control use the video with colour, contrast and luminance. Built in RGB spliiter. £649.99

AMJ Card

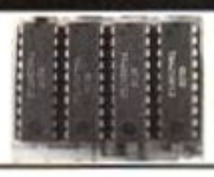
Super-Card Ami II is a hardware and software backup system that plugs into your Amiga's disk drive port. Features include:–
Fast DOS copies: copy in Amiga Dos disk in 45 seconds -
Verify option: The only hardware copier capable of verifying data!
Parameters: duplicates disk protection exactly. Gets rid of protections schemes. **£44.99**

ICD AdIDE A500

AdIDE delivers incredible speed and performance in a very small package. Features include autobooting from Fast File System partitions, A-Max II support and more.

Card only £169.99 40MB £299.99
52MB £349.99 105MB £449.99

RAM



256K × 4 DRAMS £4.99
1MB × 1 DRAMS £4.99
1MB × 9 Simms £44.99

Internal & External floppy

Direct replacement requires no case modification **£49.99**
External slimline floppy drive **£59.99** Includes free software

SOLID STATE LEISURE

HAS DONE IT AGAIN

DISCOVER

NEW PRODUCTS NEW PRICES

SEE NEXT MONTHS ADVERT FOR DETAILS

OR IF YOU CAN'T WAIT

CALL *NOW*

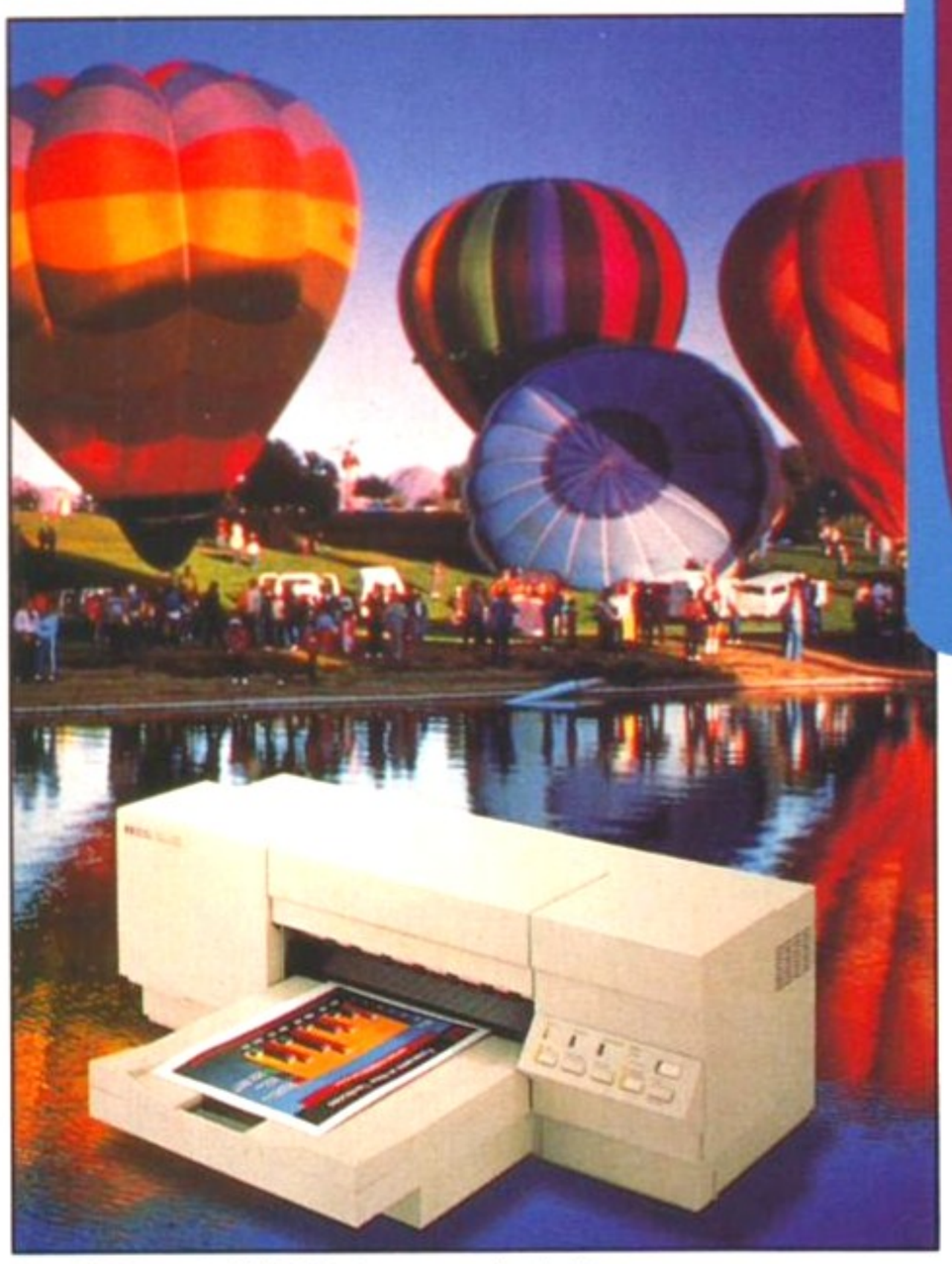
+ 44 (0)933 650677

FOR A *FREE* INFORMATION PACK

SOLID STATE LEISURE LTD., 60 FINEDON RD., IRTHLINGBOROUGH, NORTHANTS, NN9 5TZ, UK

constant factors

COLOUR



The HP PaintJet XL300 gives speed with Pantone accuracy on several million colours... but it comes with a higher price tag

The road beyond their special interest may not be travelled very far by Amiga video users, suggests Paul Fletcher. But, he explains, colour hardcopy output could prove a valuable way ahead.

Many people have bought high end Amigas for the computer's ability to manipulate and work with video. While this is understandable, there may be a whole other area of activity on which they may be missing out.

A large number of these higher end (professional) users may well have also invested in PCs and Macs to carry out some of the more mundane tasks such as desktop publishing and the like. These people are unwittingly failing to benefit from one of the Amiga's major unsung features - a properly designed, documented and used operating system.

Working on a PC or a MAC if you grab or scan an image you have to save it as a TIFF or a PICT or a PCX file, or any one of 20 or so different available formats. If you then need to produce any type of hardcopy you have to put this file through a translator to get it into into a format your wordprocessor or desktop publishing package can understand and only then you can print it. With the Amiga, you capture or create an image, it is then stored as an IFF file and it is full stop, end of story. That is, unless you are then going to display it on some other system. You can then read it directly into your wordprocessor or desktop publishing package.

To the average PC user the above scenario is unheard of, although for the typical Amiga user it is standard practice. Amiga users who are working with video, and there are a lot of them out there now, can use their systems to good advantage in creating product flyers, conceptual realisers, brochures and a whole range of other marketing tools using their Amigas, without having to translate to other systems image formats. Programs like PageStream and ProPage both offer the ability to integrate colour images with text. More important though is their ability to output to low end proofing devices such as the HP Paintjet series and also to the top end colour PostScript printers.

Both packages will also produce four colour separations allowing work of the highest quality to be produced. Additionally, and importantly, they offer the option of printing to a file rather than to a printer. This allows you to take your work to a typesetter to have it set to film for printing.

One point to remember is that you will probably need to use a utility such as DOS 2 DOS or CrossDos to format and write to an MS-DOS format disk as most typesetters will have never used an Amiga let alone have one they can employ on which to run off your films.

The HP PaintJet XL - in price terms PaintJets provide a happy medium

The A3000 - Amiga DTP packages offer some of the best typographical control available

4000 Fonts

The range of facilities now provided by the top end Amiga DTP packages is such that they equal those found in far more expensive packages on other platforms. Indeed, it is only the most recent version of PageMaker that features a built-in spell checker, whereas PageStream has already provided this facility for a number of years.

There is a huge range of fonts available for the Amiga, with PageStream also giving access to the vast number of Compugraphic and Adobe fonts (over 4000 font families in all). There is also a utility available that allows PageStream users to access to Macintosh font files.

Looking to producing promotional material, Amiga DTP packages offer some of the best typograhical control available on any platform. By typographical control I mean the ability to create and position text of any size anywhere on the page. Both the Amiga heavyweight packages offer resolution down to one thousandth of a point. (A point is a measurement used to describe print sizes - one point is 1/72 of an inch.) With most phototypesetters having an accuracy of 2400dpi (dots per inch) this is more than enough. The same level of control over the type size and position is also provided for the character spacing and leading. (The term leading originated in the days of manually set type where lead pieces were set between lines of lettering - hence the term "leading" - pronounced "ledding".)

I use PageStream as it offers the ability to be able to create simple single page items by direct editing and to cope with more comprehensive work such as magazines or newsletters by loading pre-edited text into defined areas on the page. Prior to starting using PageStream I used either PageMaker or Ventura Publisher on the PC, PageMaker for the simple page layout work, Ventura for more complex work.

The direct editing method offered by PageStream when combined with low end colour printers is invaluable for conceptualising for clients. In direct editing mode once the text has been typed in it becomes a graphic object and can thus be enlarged or reduced to fit a particular area simply by dragging the object's handles. (As an aside it can also be twisted, rotated and skewed, just like any other object - producing results ranging from spectacular to sickening!)

Pantone Accuracy

Although the quality of printing available on the HP PaintJet and PaintJet XL is relatively low (only 180x180 dpi resolution) they are very fast printers and are also well suited to producing overhead transparency material (still universally accepted as a presentation medium). For those users with a larger budget the new PaintJet XL-300 offers a similar speed, but provides up to 300dpi resolution and a high accuracy colour mixing system giving Pantone accuracy on a range of several million colours. The penalty, however, is cost. With a price tag of almost £3,000 the XL-300 can hardly be considered just another printer. The XL-300 does, however, provide results that are the equal of almost any 300dpi colour laser printer and on their way to matching those of the much higher priced Tektronix Phaser series.

The point of this article is to get the message across that although the Amiga is a fine system for video, titling and animation work, it does go far beyond that. More importantly, the road beyond video is a relatively simple one. Provided your video package can capture frames of video while processing, or your animation software can ouput single frames to a file, you already have all the basic tools. The next selection you need to make is probably between Professional Page and PageStream and will probably end up being down to personal preference.

Either package will set you back somewhere in the region of £300.

You will probably have problems finding somewhere capable of demonstrating both packages but specialist dealers such as Silica Shop and Amiga Centre Scotland should be able to help. The options on printers are many and varied ranging from £200 dot matrix level all the way up to £12,000 Textronix Phasers - the HP Paintjets provide a happy medium.

If you are using the Amiga as a video creative arts tool on a professional or semi-professional basis and need to produce hardcopy, perhaps for a mailing to keep customers up to date, it is worth bearing in mind that for probably less than the cost of a PC or MAC suitable for DTP or page layout work, you can buy the software and a printer with enough quality to impress your clients and do the work more efficiently on your existing system.

MIGA The Professional Computer

Professional types are using Macs (above) and PCs for the more mundane tasks - but they are missing out

The Video Column

constant factors

The UKs first dedicated video column continues this month with Gary Fenton

VideoGold

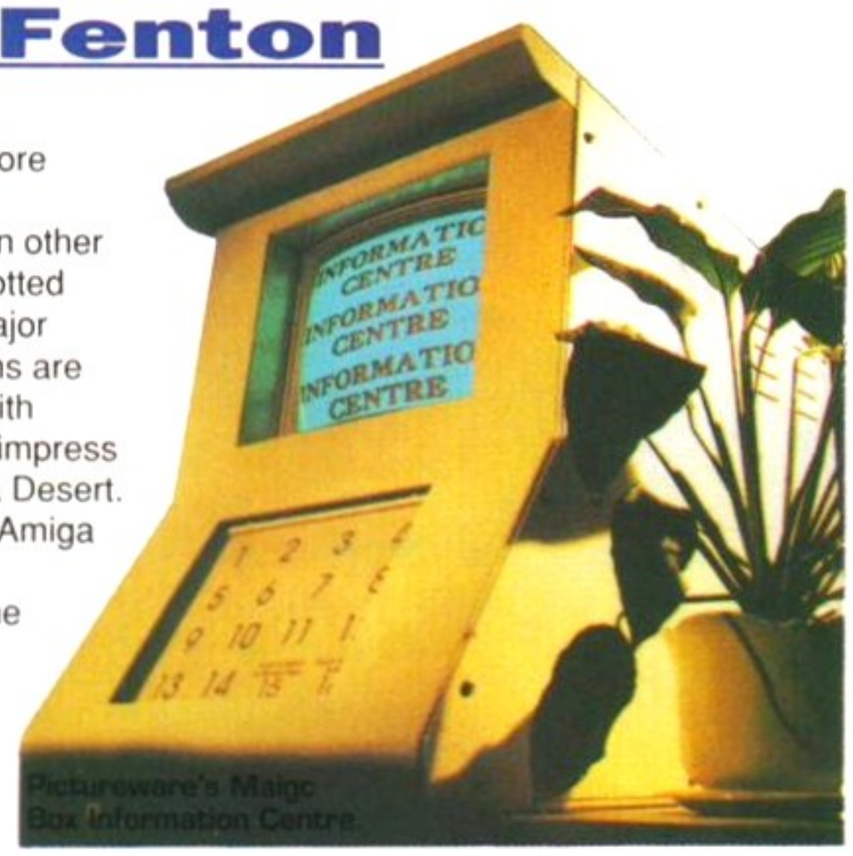
VideoWare have just released a six disk volume of clipart pictures and animations. Each volume has a different flavour: Weddings, Party Time, Festive, Children, Holiday and Places, and General.

Each volume comes complete with a tutorial showing how to get the most from the VideoGold collection. VideoWare also offer a helpline for their customers that require help or advice. The volumes cost a reasonable £5.99 each and can be obtained directly from VideoWare at 50 Heather Close, Locking Stumps, Birchwood, Warrington, Cheshire. Telephone 0925 851559.

Picture This

Nik Williams' Pictureware has recently been demonstrating its Information Centre. This is a box, about 5 feet high, and houses a monitor, Amiga and a custom keyboard with some more custom hardware.

You may have seen other information systems dotted around airports and major stations. Those systems are generally very crude with graphics that wouldn't impress a nomad in the Sahara Desert. As we know, using an Amiga gives the user the opportunity to see some very impressive graphics stored on a hard disk (or even a CD drive). The main piece of software behind Pictureware's Information Centre is Scala, used to present the whole affair.



Pictureware's Maigc Box Information Centre

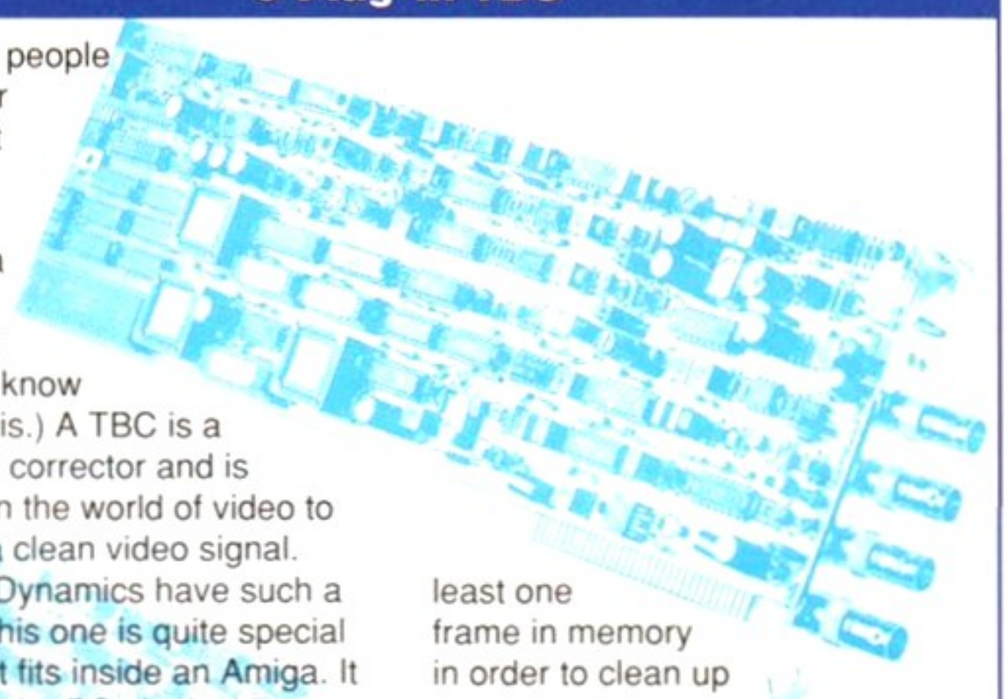
A relatively less well known feature of Scala, is that it loads and displays HAM pictures. Indeed this is not even documented in the manual. This feature enables the Amiga to play a sound when a button is selected and function keys can prompt a page change.

The brains at Pictureware have created a piece of hardware which connects to the Amiga and acts as a large keypad. The large keys on the Information Centre are numbered 1 to 16 and can be replaced by different keyboard overlays for different purposes.

The most impressive thing I saw was a handheld TV with a 2 inch screen and keyboard linked to the Information Centre. This allows teachers, tour guides or anyone else in charge of the Centre to have total control over what the Centre does. The tiny TV screen means that a person does not have to be in front of the Centre to control it, but can stand next to it looking at the handheld screen.

It's certainly a very flexible system which you may find turning up in your local shopping centre or train station. I'm sure if the people in charge of large public places have the vision, then they will realise how much potential the Information Centre has. (It even appears to be vandal resistant!) To find out more about Pictureware's magical box of information, give them a call on 0792 470503 or write to them at Apect House, 21 Brynmill Crescent, Swansea, SA2 0AL.

● Plug-in TBC



Not many people using their Amigas at home will have a need for a TBC. (I'd guess not many will know what one is.) A TBC is a time base corrector and is required in the world of video to produce a clean video signal.

RGB Dynamics have such a TBC but this one is quite special because it fits inside an Amiga. It plugs into the PC slot inside an Amiga 3000, 2000 or 1500. No PC emulator is required, it's just convenient to employ a PC slot which won't usually get used inside an Amiga.

Conventional TBC's use knobs and buttons to control the levels of correction. Clearly you are limited here by the number of knobs you can get onto a piece of hardware. The clever thing about using a computer for any purpose is that you can have far greater control over something using software. As a result of this little bit of theory, RGB Dynamic's TBC can not only clean up video pictures but it can also control colour balance. Technical people will know that a TBC has to be able to store at least one frame in memory in order to clean up the video timings. RGB Dynamics have taken advantage of this and have given the user the option to freeze a frame and save it as a picture file. Bingo, a frame grabber thrown into the bargain!

Sockets on the TBC include S video in and out (full 5.5Mhz bandwidth), composite in and out and some specialist connections. For more information on RGB Dynamics's Personal TBC and other Amiga video products, such as a waveform oscilloscope, give them a call on 0525 377340.

VIDEO NEWS

If you have news regarding video, or have been using the Amiga for video and have a story to tell, then write in to the Video Column or give us a call. There are no prizes, just publicity! But it may help you make your fortune!

”

What you want is something *brilliant* but simlpe and is just a part

”

of everything else

The Techni-coloured Tangerine Flavoured MM Dream - AGAIN

Bud Vennos enjoys - endures? - a mind-blowing experience at Olympia, London, June, 1992.

Don't read this. Imagine it. You are not holding a two dimensional - or three dimensional if you include its thickness - magazine and looking at a flat page. You are on the receiving end of a multimedia message.

Now keep in mind the statement by the communications philosopher Marshall McLuhan that the medium is the message. What he meant, I think, was that how a message, a communication, reaches you has a tremendous effect on the way you understand the content of that message. So, if you are not receiving the message I am sending you merely through reading text but also, if you have sufficient imagination, taking it in through your eyes as still and moving pictures, your ears as speech, music even noise and, if we want to take it far enough with, for example, virtual reality, touch and perhaps smell, you are experiencing a multimedia version of a communication that I have created. And that changes the way you understand it. From the impressions - the messages - I received at the recent Multimedia Show - multimedia-delivered commun-ications may turn out to be radically different from the messages you get from simply reading. As radically different as the picture of the world we are given today in sound and vision is from the black and white printed media of the past which lacked the movement, the music, the pictures, the colour, which we now believe to be a natural part of the process of contemporary communication.

One major and vital difference though to established technologies is that multimedia will not only let you understand my message but allow you to interact with it. You need not only to receive but give out too. Robbie Stamp, TV Producer, Central Independent Television - Multimedia - A TV Producer's Perspective Presentation, Olympia, London, June, 1992.

So what you would be able to do is not just test with your mind the validity of the statements I make on this page, judging whether what I write is possible, probable or believable, but also actually demand the information not only that I chose to give you but that which you require for your own purposes, either for understanding or subsequent use. That information may be text, pictures, film, or sound.

QUOTE
"The facility to create image-based, interactive electronic media is a technological revolution in information and mass communication comparable to the achievement of photo reproduction in print media or the development of television."

AGAIN

field report

What data do you require, master? (Use HAL-like computer voice)

Where was the Show held?
Olympia, London.

How many people attended?
I'm afraid I don't know. (Next time do your homework, Vennos.) Say about 10,000, probably double the attendance of last year.

Who were they?
Mostly professionals in multimedia though there were representatives of large companies like BT who were spying out the land to see how MM would affect their business.

What could you see there?
Well, for a start, Commodore with loads of CDTVs and Philips with an equal amount of CD-Is. And Apple blowing the trumpet of their Quicktime MM authoring program. And multitudes of PCs - sorry MPCs (M for guess what...) showing what looked like live TV and video clips, especially that of Madonna squirming and squalling in and out of bed.

Now go back over those words. Helicopter - you could hire one at the show for filming - circles over Olympia and camera shoots entrance. Steward asks you to register. You arrogantly brush by waving your press card and camera tracks through, up stairs to press room. Wait, you want to go straight in to the Show. You can. Check on the organisers' database for numbers of attendees.

See the multimedia presentation that was created for the final conference of the show. Hear and see the familiar features of Jim Maconockie of Commodore tell you of the wonders of CDTV. Then see and hear the forceful and attractive Julie Davies of Philips insist that CD-I is the "world standard". **(No, you can't touch her, this is MM, not VR yet.)**

Actually though the videoed speakers were fine, neatly appearing in a corner window of the screen, the final presentation was crap. A total waste of the (multi)media by a couple of trendy designers (you know they are trendy because they wear tee-shirts, sneakers and that street-cred necessity a baseball cap back-to-front in a formal presentation. Plus they did too much talking themselves and hadn't put enough thought or effort into capturing the comments of the very well-informed people at the show. Their idea of interactivity was to throw tee-shirts to the audience.
I got the Trendies' message as a default which was that imagination and talent will be as important in MM as in any other medium. And if the Trendies had imagination and talent they weren't showing it. Certainly not in the mercifully quick but confused video of their own work.

But you get the idea.

If you were interactive, using your imagination through the helpful technology, it would be a matter of you asking the questions, in all the different media ways, that you want to have answered about that particular event. Not just receiving my selective and highly personal impressions, especially of something as irrelevant as the way someone wears his baseball cap when what you really want to know about is what was happening to the

QUOTE

"Very recently we learned from IBM that the official word we shall all be using is ULTIMEDIA. Playing with words is certainly a way to hide a lack of depth in theory."
Mark Manahem - Multimedia Markets Presentation - Olympia, London, June, 1992

Amigas at the show or how the developments there are going to affect you and your computer and your world... **(Track back and cut out the Trendies section.)**

(There were quite a few Amigas there - fade in A3000 demoing Progressive Peripherals' Rambrandt graphics board and gaping onlookers. Show stunning animations. Cut to Applications Gallery and sound in first of ugly football crowd noises. Pan across to Amiga CDTV showing live video of football hooligans attacking police car and cut to presentation by John Eary of the National Computing Centre showing prize-winning Amiga-based multimedia network system for police training. **Would you like to ask Mr Eary any questions?) No?**

Once you had (have) been round the Show and seen the hardware - mostly hotted up MPCs, though there were the JVCs and Rolands, etc - and the software, encyclopaedias and language learning dominated; training, particularly using videodisc, one of Phillips' not so successful inventions, is already deeply and rightly into MM. (Hyperjump along the Mac stack back to the history, brief though it may be, of MM and you find that the Shape of Things to Come - see quick view of AUI June Special Supplement - is certainly, at least as of now, five inches in diameter, a CD and it has Random Access Memory and you can't write to it. Forget the videodisc, Phillips nearly has.)
For the curious, the show with its stands mainly exhibiting the joys of live video on CD or hard disk. For the even more curious - me and therefore you among them, the conference with its presentations. (Don't cut back to trendy back-to-front baseball cap but to moody shot of Virgin Games' boss Tim Chaney, eyes closed, soaking up the future in a darkened auditorium as the talk comes down to the cash that can be made from MM.
Over to still of Richard Branson in balloon, fade in "The Seventh Guest" forthcoming Virgin game that will, I kid you not, probably need to be on two CDs and contains, so you are told, as you gaze at it on

ULTIMEDIA
ULTIMEDIA
ULTIMEDIA
ULTIMEDIA
ULTIMEDIA
ULTIMEDIA
ULTIMEDIA

the big presentation screen, 30 minutes of live video of movie quality. (That's what you are going to see on your Amiga, Xmas, 1993?)
Use Scala - very quick, almost subliminal cut to Commodore stand and ex-CBM Director of Multimedia Barry Thurston, now Scala (Show AUI May special offer? No, don't bother) honcho knocking the crowds' socks off - and you can forget zooming in on his feet - with Scala's new product - yes, to preview demo on AUI October(?) coverdisk to make a professional-looking wipe to next quote

QUOTE

"By 1991, over two million CD-ROM drives were installed worldwide and new delivery platforms such as CDTV and CD-1 have expanded the market further." *Ewan Macgregor. Reaching the Consumer Presentation - Olympia, London June, 1992*

"At, say, £75,000 development cost we have to sell 16,164 of the consumer product to break even..."
Perspectives on Multimedia Development fort the Consumer Market Presentation - Steve Clark, Virgin Games Ltd - Olympia London, June, 1992

Anything else you want know?

What about some products? What you mean is applications.
Applications? Don't say that to a consumer. They won't buy it, you are told, - or multimedia. What you want is something brilliant but simple that is just a part of everything else. Not MM as some hi tech mystery (Commodore made that mistake with the launch of CDTV) but something that comes in like a CD player or a remote control TV and avoids technofear. Easy to use and for the living room. Or MM is for a professional product, like a training program, "a niche product" which the same Steve Clark - show his moving face in window in corner of screen, picture in picture Gary Fenton calls it, with Grolier Encyclopaedia or Virgin's North Pole program as overall background, bring up small to large moving picture of one-to-one language lesson into another window, plenty of language sound here, real Babel - now enlarge Steve Clark till he fills the screen and voice comes up in volume - saying: " We only have to sell 98 of that niche product at £1,762.49 (including VAT?) to get that £75,000 development cost back."

So it's consumer versus niche.
But as was forcefully pointed out at the last session, a round table - **forget King Arthur... but we could have some mediaeval music maybe** - it will only be the big, glitzy product - show that damned Madonna video, if you must - that will get the public wild about MM. Now bring in the Beatles "Love Me Do" as an example of the first CD to grab real international success.
(Quick text spot about Philips getting royalty payment on every CD sold? Maybe not.)
One small but beautiful application. Please. **(For God's sake, it's only on Apple's Powerbook portable and how many Amiga users have got them? Do we really need this bit...?** Yes, we do!
It's about a genuine and cheap application - sorry, product and if Apple get their way with Quicktime and they are sinking real cash into it, they even have their own Venture Fund to invest in MM projects, the Mac will be the development platform for all MM. Ha ha, say CBM, Philips and IBM who are confusingly in some sort of secret-that-eveyone-knows partnership with Apple, developing software yet...) Quick cut back to Powerbook before everyone forgets. Show Voyager's Expanded Book project where real books are scanned into computer - Apple, of course - and video added. That is, book of poetry with the poet reading the poem in window at side of screen. It took, said the presenter, only a day or two to make and sells 3,000 at $30 a throw. Forget the dice and zoom in on poet speaking. Hear him mutter his immortal words. Use search facility of Powerbook to find his biography and how many times in the book he uses rude words. (He was as intro **says** to you a **Beat** poet.) Five seconds music from The Doors? One problem with MM is intellectual copyright.

Samplers get sued nowadays.
Yes, MM may change our view of the world. That is one message I got from Olympia, London, June 1992. For if, as has been said, Gutenberg opened up new aspects by presenting communication, reducing it, to a single dimension, MM may well return us to another much wider multi-sensory world. As they said about the country yokel soldiers of the First World War: "How you going to keep them down on the farm, now that they've seen Paree?" Once you've had colour TV, you don't want black and white. Once you've had communication offered you in many media, are you going to settle happily back to just one? (Split screen effect as seen on clever CDTV travel clip on Commodore stand. Use different parts of screen consecutively to give impression of FMV - full motion video, the show's second big buzzword.
And if we have been largely conditioned to receiving information, in a single medium, in a purely textual way with just a little help from our friends the pictures, what will it do to our minds - or more importantly our children's and their children's minds - to be on the receiving end of a bombardment of stimulii of MM, MM, MM, MM, MM? **(Sample that please and multiple repeat of still pic of atomic explosion).**

(And this too) *I don't know..I don't know...I don't know...I don't know.*

Maybe at Olympia, June, 1993.
You will be asking the questions and making up the answers.

Just a minute, what was the first show buzzword?

Show train pulling into station. Intercity. No, better get French TGV, it's faster.

What's that for?

Platforms.

Idiot. You may have MM facilities but don't be too literal.
The argument about platforms is which one. CDTV. CD-I. MPC. Apple. CD-XA, CD-ROM. And so on. If the MM professionals are confused and indecisive imagine what the public will be. And you are the public. And you can't sell MM - or anything else - to a confused buyer.

Show your own face with doubt in your eyes zooming up to FMV screen. Hear your own voice and mine echoing off.

Platforms? Platforms? FMV?

DREAM AGAIN

PENTIRE DEPT. AUI

10a Hag Hill Lane, Taplow,
Maidenhead, Berks SL6 0JH
(0628) 666641

99p per disk. 5 or more 95p each
P&P 90p per order
European add 25p per disk
Worldwide add 50p per disk

TITLES MARKED (P) ARE ALSO COMPATIBLE WITH A500+

GAMES

G295 Aliens (P)
G300 Air Ace II (P)
G240 Blizzard (P)
G144 Drip
G138 Flaschbler
G303 Grey Slayer (P)
G294 Jetman (P)
G125 Megaball (P)
G175 Paranoid
G139 Pipeline (P)
G106 Pom Pom Gunner (P)
G110 Puggles (P)
G292 Quadrix (P)
G169 Quick and Silva
G137 Return to Earth (P)
G302 Sea Lance (P)
G297 Smash Telly (P)
G142 Star Trek (2) (P)
G274 Star Trek Arcade (P)
G140 Stone Age (P)
G301 Survivor (P)
G306 Wastelands (P)
G136 Wet Beaver Games (P)
G160 Wheel of Fortune (P)
G281 Wizard World (P)
???? Truckin On (2)
G314 Smash TV Rip Off
G319 Flag Catcher (P)
G320 Classic Games Vol 1 (P)
G321 Golden Oldies (P)
G322 Parachute Joust (P)
G323 Yum Yum (P)
U513 Game Tamer (P)
U156 LSD Trainers
G279 Just Hints I (P)
G225 Just Hints II (P)

EDUCATION (P)

Pack 1
5 disks of programs aimed at under 10's
Pack price £4.00

Pack 2
5 disks of programs aimed at children over 10
Pack price £4.00

ART (P)

Graphics Pack
5 disks containing paint program and loads of utilities to create your own master pieces.
Pack price £4.00

PRINTERS (P)

A 5 disk pack with all you'll ever need for your printer. Loads of drivers and utilities. Brill!
Pack price £4.00

UTILITIES

U358 8 Track s/tracker (P)
U312 Ami Base (P)
U225 Clerk (P)
U129 CLI Tutorial (P)
U400 D-Copy (P)
U134 Direct Action (P)
U126 Diskmaster (P)
U147 Dope Intro Maker
U117 ESA Utilities (P)
U207 Flexibase (P)
U155 Ghost Writer (P)
U424 Hack Pack (2)
U221 Hard Disk Utils. (P)
U204 Hot Stuff
U163 Icon Manla (P)
U164 Jazz Bench (P)
U224 M-Cad (P)
U255 Med (P)
U154 Messysid (P)
U434 Modem Utilities
U239 Pair-It 90 (P)
U394 Q Base (P)
U227 R.I.M. (P)
U153 Slideshow Cons. (P)
U460 Disk Const. Kit
U464 Kefrens Utils (P)
U465 Assassins Utils
U466 Xenon Utils (P)
U467 Start-Up Utils (P)
U469 A-Render
U470 D-Lux Draw
U471 Mega Dos
U472 Zodiac Compacter
U473 Disk Salvage
U474 Full Force
U475 Desk Bench Icons
U476 Full Force Vol 2
U477 Geneology (1 Meg) (P)
U478 Ant-Flicka
U479 Mandel Mountains
U480 Red Devils 6
U481 Red Devils 4
U482 Power Logo
U483 Sys Exerciser
U484 Boot Bench V2
U485 Catalogue W/shop 1 (P)
U486 Catalogue W/shop 2 (P)
U487 GFX Utils 1
U489 Loadsaicons
U490 Analyticalc (2) (P)
U492 Cross Dos
U493 600 Letters (P)
U499 Desksid
U500 Textplus V3
U505 Windows Bench (P)
U508 Mobed II
U511 Ed Word
U501 Zercon Utils (P)
U497 Graphics Conkit

DEMOS

D265 Franklyn Fly (P)
D130 Iraq Demo
D248 Batman Music
D182 Luxo Teenager (P)
D206 Justify My Love (1.5Mb)
D207 Rescue Me (P)
D131 Madonna III (3)
D171 Open Your Heart (P)
D257 Phenomena Enigma (P)
D175 Probe Anim (P)
D174 Puggs In Space
D166 Robocop (P)
D190 Simpsons (P)
D196 Chips Are Up (P)
D230 Viz Slideshow
D300 Mr Potato Head
D301 Fillet The Fish
D187 Cronics Hardwired (2) (P)
D277 Crusaders Euro Chart
D250 Donald Duck (P)
D201 Fenntastic 3 (P)
D147 Stealth Bomber
D318 Madonna Immaculate
D319 At the Movies II (4) (P)
D327 Digi Show (2) (P)
D330 Short Modules (P)
D331 Anarchy (P)
D197 Total Destruction
D184 Flight Anim (P)
D238 Krionic Neverwhere
D267 Phenomina Inter Space
D298 Ghostpool (P)
D288 Space Ace (P)
D317 The Run (P)

Alcatraz Oddessy
A brilliant 5 disk space epic, has to be seen to be believed!
Pack price £4.00
Not Plus

Rebels Mega Demos
4 disks of various demos from this superb group. A must for any demo collector.
Pack price £3.75
Not Plus

Phenomena
5 disks of great demos incl. Eces, Joyride, Interspace etc.
Pack price £4.00
Not Plus

Digital Concert
Pack of 5 disks. The very best in house music. Excellent series.
Pack price £4.00
Not Plus

HUMOUR

D178 Total Recount (P)
D198 Total Respray (P)
D176 Total Restyle (P)
D164 Total Retrial (P)
D275 Viz Jokes (2) (X)
D185 Dating Game (2)
A168 Delerious (2) (X) (P) (2 Drives)
D179 Eau Madonna (P)
D173 Porky Pig
G171 Lame St Ports
D258 Safe Sex (P)

GLAMOUR

A172 Bo Derek (P)
A171 Blonde Beauties (P)
A164 Sam Fox (2) (P)
A101 Girls Girls Girls (P)
A130 Girls 2
A176 Kathie Lloyd
A102 Madonna
A103 Maria Whittaker (2) (P)
A173 Sam Fox Vol 2
A160 Utopia (2) (P)
A182 Sabrina (P)
A105 Slides 1 (P)
A125 Puzzles (P)
A158 Slides 2 (P)
A159 Slides 3 (P)
A188 Rosana Arquette (1 Meg)
A189 Cindy Crawford (2 Drives) (2 disks)

FRED FISH

F580 World Data Bank (P)
F595 Preader (P)
F594 Cube 4 (P)
F589 Term (P)
F580 World Data Bank (P)
F561 Ppmore (P)
F558 Disdf (P)
F536 Pblanker (P)
F533 Dos Manager (P)
F498 Freecopy (P)
F460 Jmenu (P)

T-BAG

T52 Activator (P)
T46 Keymapped (P)
T43 Lharca (P)
T42 Iff2exe (P)
T40 Pcopy (P)
T38 Vicusx 4.0 (P)
T33 Menu Runner (P)
T32 Power Packer 2.2A (P)
T28 Virus Trap (P)
T22 Sid (P)

Due to the sheer number of programs of Fish & T-bag it is impossible to guarantee compatability of all programs, however most will run within CLI or SHELL.

HOW TO ORDER: Make cheques/postal orders (sorry, no credit cards) payable to Pentire PD and send to the address above stating titles and disk numbers required. Please note prices are per disk and not per title. Titles with a number in brackets denotes the number of disks. Note: we do not stock pornography, so please don't ask for it.

CATALOGUE DISK 75p
1500 TITLES
CONSTANTLY UPDATED

FRED FISH
AND T-BAG
COLLECTIONS STOCKED

TO ORDER GLAMOUR
PLEASE STATE
OVER 18

WE ALSO STOCK A
LARGE RANGE OF
PC SHAREWARE

AMIGA PERIPHERALS

GVP
GREAT VALLEY PRODUCTS

QUALITY AMIGA PERIPHERALS WITH A 2 YEAR WARRANTY

Silica Systems are pleased to present the GVP range of peripherals. GVP are the world's largest third party manufacturer of peripherals for the Amiga range and have a reputation for high specification, quality products. The company was founded only four years ago by a man who knows about the Amiga, Commodore's ex-Vice President of Technology. He, along with a team of Amiga experts including other ex-Commodore staff, understand the add-on requirements of Amiga owners better than anyone. Not only do GVP provide peripherals that Amiga owners want, they also offer peace of mind, with a 2 year warranty on the products they manufacture. So, if you are looking for the very best in peripherals for your Amiga computer, look no further than GVP.

GVP's HD8+ hard drive and A530 hard drive with 40MHz accelerator, represent the highest quality Amiga 500 peripherals, at very affordable prices. Each incorporates a Quantum disk drive, RAM expansion capability, custom VLSI chip and FAAASTROM SCSI driver, for unbeatable performance.

The HD8+ hard drive offers up to 8Mb of standard internal Fast RAM expansion and the A530 Combo, up to 8Mb of 32-bit wide fast RAM expansion. Both feature a SCSI controller, which supports up to 6 additional devices, and an Autoboot/Game cut-off switch. Both are available in 52, 120 and 240Mb hard drive versions.

In addition, the A530 Combo zooms the Amiga forward with an 030 accelerator, running at a blistering 40MHz. This enables your Amiga 500 to run at an incredible 12.1 MIPS, faster than an Amiga 3000! No other product in the world combines all the features found in the A530 Combo! A plug-in PC emulator option, shown below, is available for both the HD8+ and A530 Combo.

	HD8+	A530
HARD DRIVE		
QUANTUM SCSI HARD DRIVE 52, 120 & 240Mb VERSIONS	•	•
ULTRA FAST 11ms ACCESS	•	•
TRANSFER RATE UP TO 2,100K/sec* (*THE RATE OF THE 240Mb HD)	•	•
ACCELERATOR		
40MHz 68030EC CPU		•
OPTIONAL 68882 MATHS CO-PROCESSOR		•
RUNS AT 12.1 MIPS (FASTER THAN AN A3000!)		•
HARDWARE SUPPORT TO MAP KICKSTART INTO 32-bit WIDE FAST RAM FOR FASTER OPERATION (LIKE CACHING THE OPERATING SYSTEM)		•
RAM BOARD		
UP TO 8MB OF 8 OR 9-bit FAST RAM (8 OR 9-bit WIDE SIMMS - 120ns OR QUICKER)	•	
UP TO 8Mb OF 32-bit WIDE FAST RAM (32-bit WIDE SIMMs - 60ns)		•
1Mb POPULATED		•
OTHER FEATURES		
HDD/ACCELERATOR 'CUT-OFF' SWITCH FOR 100% GAME COMPATIBILITY	•	•
SCSI CONTROLLER FOR UP TO 6 ADDITIONAL DEVICES	•	•
VLSI CUSTOM CHIP	•	•
FAAAST ROM SCSI DRIVER	•	•
IDENTICAL COLOUR & STYLING TO THE A500	•	•
BUILT-IN VENTILATION FAN TO PREVENT THE UNIT FROM OVERHEATING	•	•
DEDICATED POWER SUPPLY	•	•
'MINI-SLOT' FOR FUTURE EXPANSIONS (E.G. PC EMULATOR)	•	•
REMOVABLE MEDIA SUPPORT	•	•
DIRECT MEMORY ACCESS (DMA) STYLE FOR ULTIMATE PERFORMANCE	•	•
EASY-TO-USE SOFTWARE	•	•
2 YEAR WARRANTY	•	•

WHAT THE PRESS SAY:

'Superb build, excellent aesthetics and blinding speed make this the best A500 hard drive' ... AMIGA SHOPPER

'GVP claims this is the fastest hard drive in the world and none of our tests could prove that wrong'. AMIGA SHOPPER

'Overall: Untouchable. THE choice' AMIGA SHOPPER

'Still the best hard drive' ... 92% AMIGA FORMAT

PLUG-IN OPTION FOR HD8+ & A530

- 16MHz 80286 processor
- 287 Maths Co-Processor socket
- 512K of PC RAM plus the use of Amiga RAM
- Supports Hercules, CGA, EGA/VGA (monochrome) and T3100 video modes
- Runs MS-DOS (3.2 and upwards) plus thousands of other PC programs

This powerful 286 emulator module simply plugs into the "mini-slot" of the GVP HD8+ or A530 (without invalidating the warranty). It has full access to the Amiga's resources and allows you to run PC and Amiga programs at the same time, giving you two computers in one.

£249 Ref: EMU 0500

PLUG IN HARD DRIVES & ACCELERATORS

PRICES FROM:

£379

MODEL	52Mb HD	120Mb HD	240Mb HD
HARD DRIVE HD8+	£379 Ref: HAR 0852	£499 Ref: HAR 0920	£779 Ref: HAR 0942
A530 COMBO HARD DRIVE & ACCELERATOR	£749 Ref: HAR 0962	£869 Ref: HAR 0974	£1149 Ref: HAR 0986

FOR ALL AMIGAS

AMIGA 1500 + 2000 + 3000 PRODUCTS

SOUND SAMPLER

- *8-bit stereo sampler*
- *Plugs into parallel port*
- *MIDI support for song input*
- *Extensive editing features*

For the semi-professional and audio hobbyist a high quality 8-bit stereo sound sampler that connects into the parallel port on any Amiga 500, 600, 1500, 2000 or 3000 computer. Combined with one of the fastest, most powerful and easy-to-use sound and music editing programs available. Includes 4-track soundtracker file compatible sequencer.

MUS 2500 **£59.95**

ACCELERATORS

- *68030EC/68030EC/68030 processor*
- *25/40/50MHz clock speeds*
- *68882 Maths co-processor*
- *Expands to 13/16/16Mb 32-bit RAM*
- *32-bit SCSI controller on board*

Fast 68030/68030EC accelerators with memory upgrade and SCSI interface boards. Each comes complete with a 68882 maths co-processor and RAM upgrade as standard. Kit available, to mount 1" Hard Drive on any G-Force 030 Board, GVA 4251, £39.95

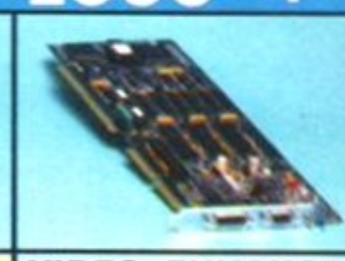
25MHz/1Mb	Ref: UPG 0110	£599
40MHz/4Mb	Ref: UPG 0430	£999
50MHz/4Mb	Ref: UPG 0533	£1399

HARD CARDS

- *Factory installed Hard Drives*
- *52, 120, 240 & 420Mb options*
- *On-board 8Mb memory sockets*
- *Add up to 6 SCSI devices*
- *Easy to install SIMMS*

The Impact II HC8 hard cards are the equivalent of the HD8+ hard drive, but for the 1500 and 2000 models. Not only are they some of the fastest hard drives available, but they also incorporate an unpopulated 8Mb RAM expansion board.

52Mb	Ref: HAR 1352	£299
120Mb	Ref: HAR 1420	£449
240Mb	Ref: HAR 1540	£699
420Mb	Ref: HAR 1542	£1299



VIDEO ENHANCER

- *768 x 580 PAL Resolution*
- *Supports comp video, S-VHS & RGB*
- *Broadcast quality genlock*
- *Now with RGB splitter*

Impact Vision 24 is the latest 24-bit Professional Video Adaptor. It features 16 million colours on screen at once, built-in genlock, flicker fixer, frame buffer, frame grabber and digital keyer. Supplied with Caligari-IV24 3D modelling and rendering software, Scala IV24 video titling software, plus Macro Paint 24-bit paint package. A1500/2000 requires additional adaptor, GVA 5224, £49.95

IV-24 - VIU SPLITTER	Ref: VID 7024	£1699
IV-24 - VIU TRANSCODER	Ref: VID 7124	£2099

RAM BOARDS

- *Up to 8Mb of FAST RAM*
- *Upgrade in 2Mb increments*
- *Supports industry standard RAM chips*
- *Diagnostic software included*
- *Fully auto-configuring*

The RAM-8 offers an easy way to upgrade your 1500 or 2000 in 2Mb increments up to 8Mb. The RAM 8 is fully auto-configuring and is supplied with peace-of-mind diagnostic software. 6Mb configuration supported for bridgeboard owners

0Mb populated	RAM 2800	£99
2Mb populated	RAM 2802	£169

REMOVABLE MEDIA

- *Syquest 44 or 88Mb removable media*
- *20ms access time*
- *GVP HC8 Controller option extra*
- *External case available for A500/3000*

GVP offer Syquest drives with or without their HC8 controller. They are available in 44Mb and 88Mb capacities and have a 20ms access time. Each drive comes with a removable cartridge.

44Mb (Bare Drive)	Ref: HAR 1554	£449
44Mb (+HC8)	Ref: HAR 1568	£549
88Mb (Bare Drive)	Ref: HAR 1678	£599
88Mb (+HC8)	Ref: HAR 1691	£699

ALL PRICES INCLUDE VAT - DELIVERY IS FREE OF CHARGE IN THE UK MAINLAND

SILICA SYSTEMS OFFER YOU

- ***FREE OVERNIGHT DELIVERY:*** On all hardware orders shipped in the UK mainland.
- ***TECHNICAL SUPPORT HELPLINE:*** Team of technical experts at your service.
- ***PRICE MATCH:*** We normally match competitors on a "Same product - Same price" basis.
- ***ESTABLISHED 12 YEARS:*** Proven track record in professional computer sales.
- ***BUSINESS + EDUCATION + GOVERNMENT:*** Volume discounts available **081-308 0888.**
- ***SHOWROOMS:*** Demonstration and training facilities at our London & Sidcup branches.
- ***THE FULL STOCK RANGE:*** All of your requirements from one supplier.
- ***FREE CATALOGUES:*** Will be mailed to you with offers and software/peripheral details.
- ***PAYMENT:*** By cash, cheque and all major credit cards.

Before you decide when to buy your new Amiga products, we suggest you think very carefully about WHERE you buy them. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals and software, or help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE
081-309 1111

SILICA SYSTEMS

MAIL ORDER:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	**Tel: 081-309 1111**	
Order Lines Open: Mon-Sat 9.00am-6.00pm	No Late Night Opening	Fax No: 081-308 0608	
LONDON SHOP:	52 Tottenham Court Road, London, W1P 0BA	**Tel: 071-580 4000**	
Opening Hours: Mon-Sat 9.30am-6.00pm	No Late Night Opening	Fax No: 071-323 4737	
LONDON SHOP:	Selfridges (1st Floor), Oxford Street, London, W1A 1AB	**Tel: 071-629 1234**	
Opening Hours: Mon-Sat 9.30am-6.00pm	Late Night: Thursday until 8pm	Extension: 3914	
SIDCUP SHOP:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	**Tel: 081-302 8811**	
Opening Hours: Mon-Sat 9.00am-5.30pm	Late Night: Friday until 7pm	Fax No: 081-309 0017	

To: Silica Systems, AMUSR-0892-68, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND A BROCHURE ON THE GVP RANGE

Mr/Mrs/Miss/Ms: ..... Initials: ..... Surname: .....

Address: .....

..... Postcode: .....

Tel (Home): ..... Tel (Work): .....

Company Name (if applicable): .....

Which computer(s), if any, do you own? 68D

field report

Gambling on the

In his perennial search for what's new at computer and technology shows around the world, Ian Burley recently stopped by Chicago and reports that the big Summer Consumer Electronics Show (CES) there was full of surprises.

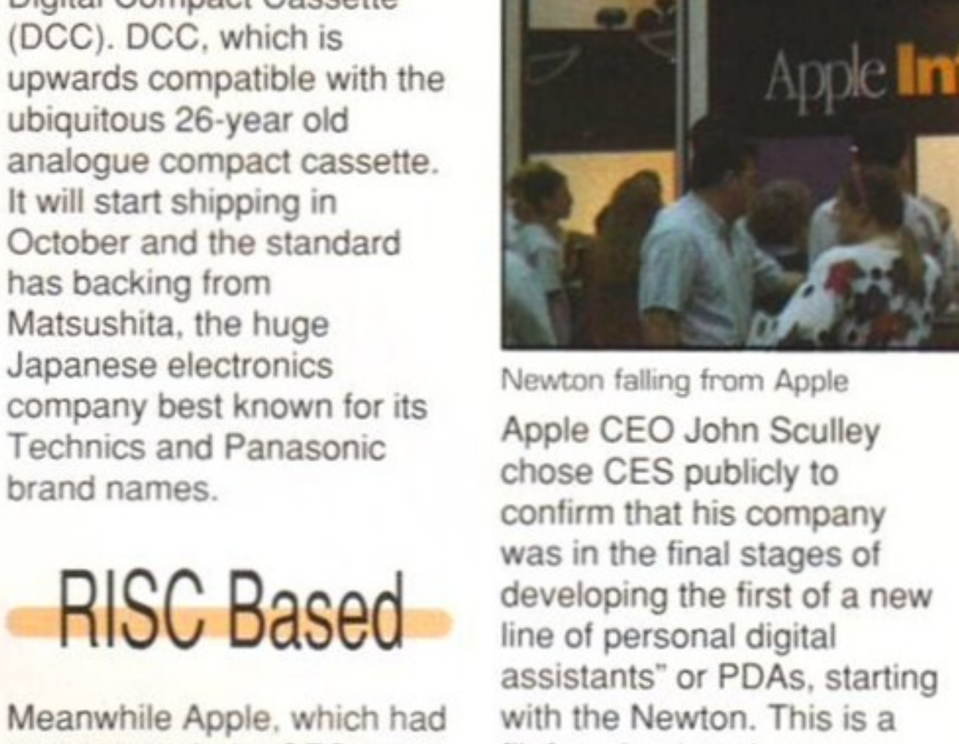
Where had Commodore disappeared to and how did Apple, at its first visit to the show, steal the limelight with a non-existent product with British technology at its core? Were a couple of questions that you might have asked this year in the Windy City.

It was here at CES in Chicago two summers ago that I attended the first official launch of Commodore's CDTV multimedia project. In recent years Commodore has usually had a large presence at CES shows, none less so than this year's winter event at Las Vegas in January. So it was with great surprise that I picked up the event's inch-thick show guide this time to find no trace of any Commodore presence at the Chicago show. This meant that 60,000 plus trade visitors and, for the first time, nearly a hundred thousand members of the public had an undistracted introduction to the rival Philips CD-I system which was at the show in a big way. Commodore's absence was considered a huge PR disaster for CDTV in the US. What is going on in the inscrutable Commodore corporate mind to miss this opportunity of impressing the influential U.S. buying public? As ever, we shall probably never know...

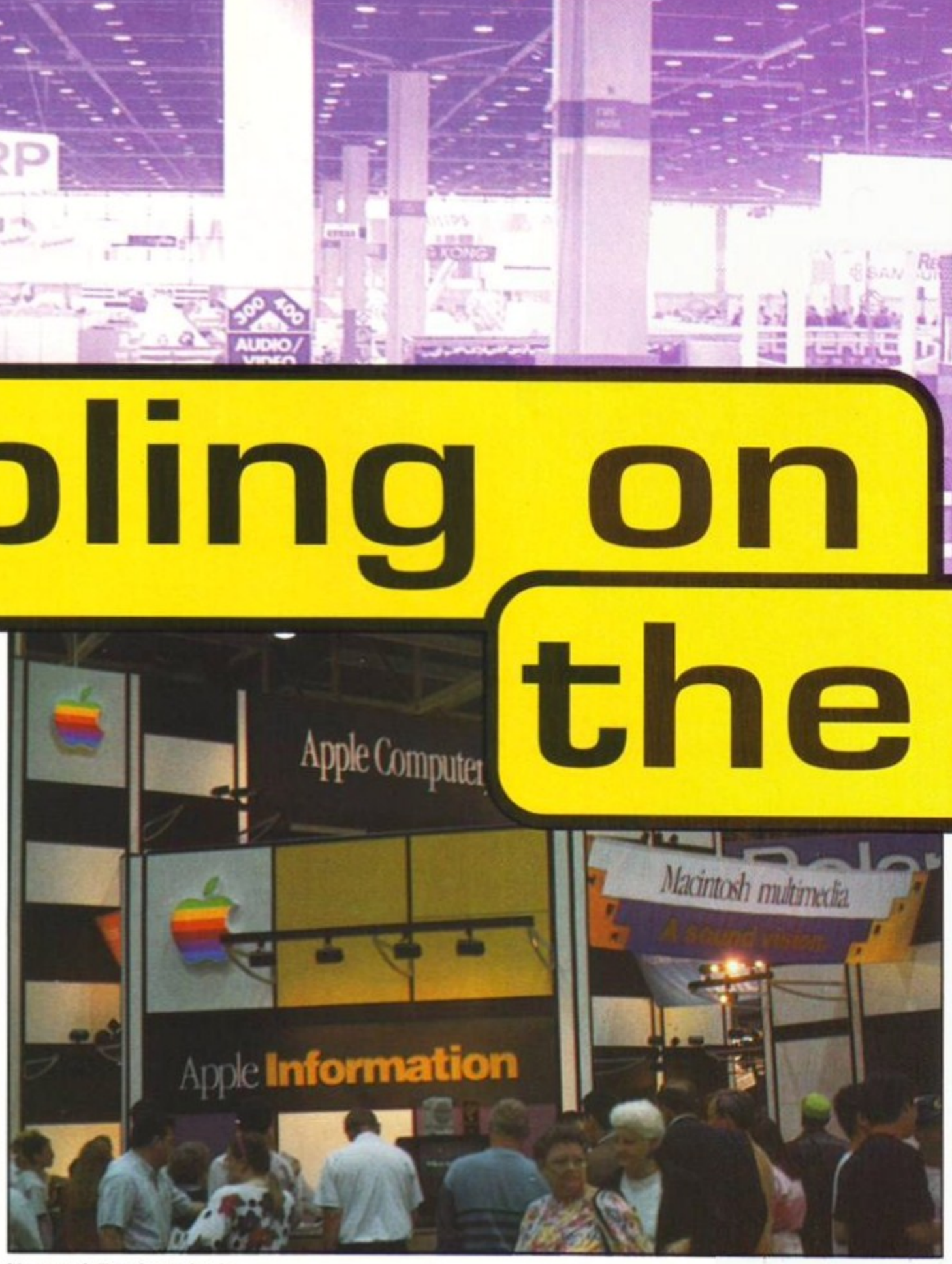
Philips made no such mistake. CD-I has been on sale in the US for nearly a year now and though Philips refuses to divulge any sales figures, they were said to be "encouraging." Philips' attitude to the show was all or nothing with a large stand not only showing CD-I, complete with continuous demonstrations of CD-I full motion video (FMV), but also Digital Compact Cassette (DCC). DCC, which is upwards compatible with the ubiquitous 26-year old analogue compact cassette. It will start shipping in October and the standard has backing from Matsushita, the huge Japanese electronics company best known for its Technics and Panasonic brand names.

RISC Based

Meanwhile Apple, which had never attended a CES show in any great capacity before, attacked on two fronts.



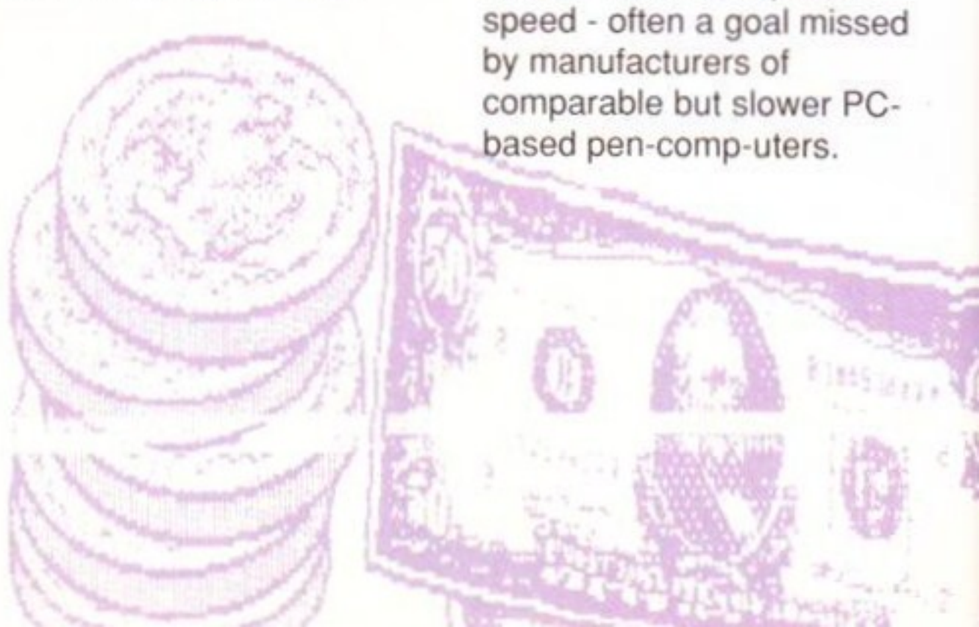
The home wide screen is coming.



Newton falling from Apple

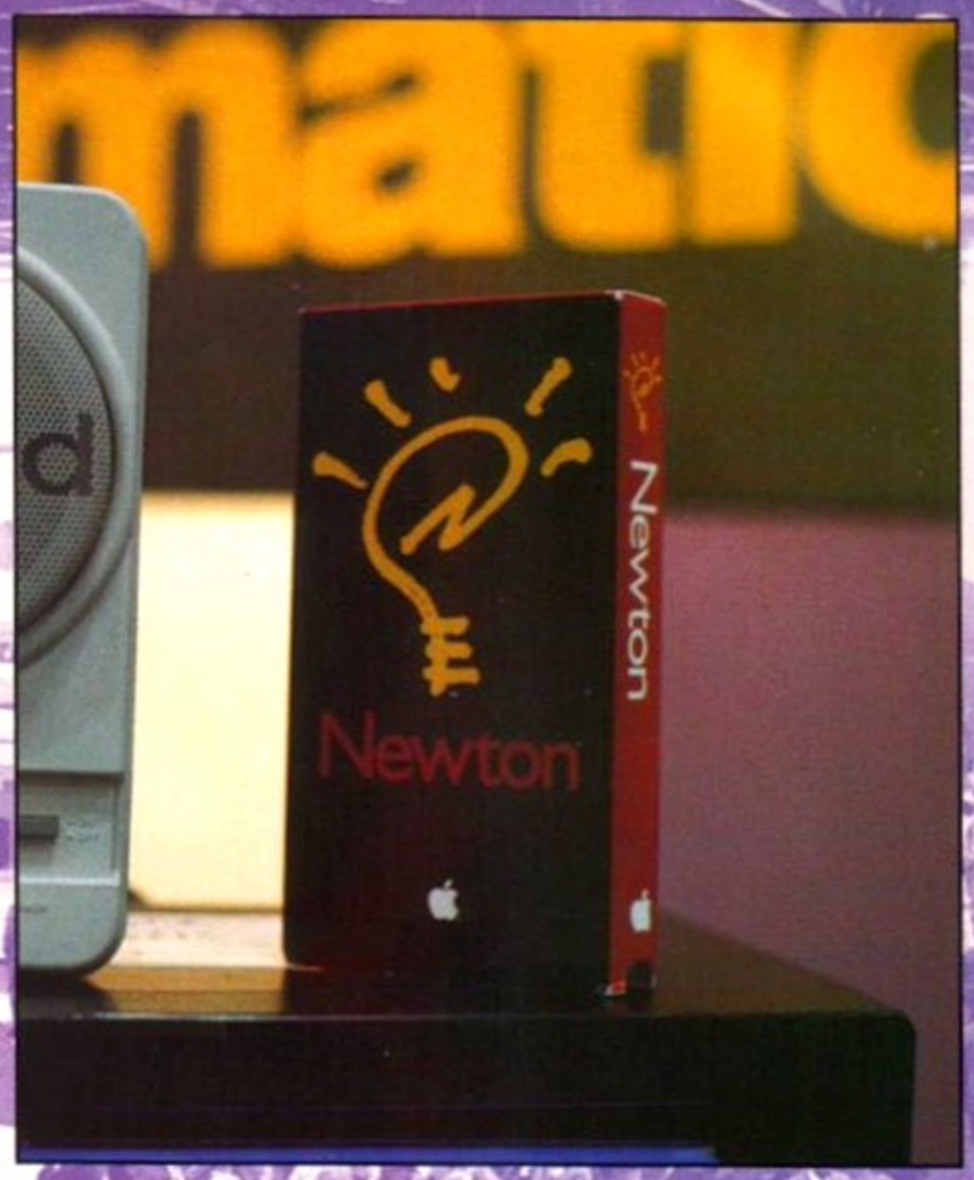
Apple CEO John Sculley chose CES publicly to confirm that his company was in the final stages of developing the first of a new line of personal digital assistants" or PDAs, starting with the Newton. This is a filofax-sized pocket computer which uses a pen-sensitive touch screen instead of a keyboard. So far this is nothing special, but the Newton's hidden weapon is its powerful RISC (reduced instruction set computer) chip developed by none other than our very own U.K. company, ARM Ltd. - an off-shoot of Acorn Computers jointly owned by Acorn and Apple as well as US chip manufacturer, VLSI Technology.

The chip in question is an ARM610 model, which is related to the chips used by Acorn in its Archimedes computers. Somebody at the show equated the power of this chip with the fastest Motorola 68030s used in top-end Apple workstations. That's quite impressive power. It makes it more powerful than the fastest Amiga 3000 for example, packed into a pocket-sized battery-powered device. Apple needs the power of the ARM chip to enable its new object-oriented operating system and pen-recognition software to operate at an acceptable speed - often a goal missed by manufacturers of comparable but slower PC-based pen-comp-uters.



Looking into the future of our electronic lives, Ian Burley reports what appeared and who didn't at the Chicago Consumer Electronic Show

Future



Apple Strudel To Come?

The Newton is being developed by a new Apple division called PIE (really!) - that stands for Personal Interactive Electronics. Roll on the Crumble and Strudel divisions... The Newton's operating system not only recognises hand-written commands, but it can interpret commands written as natural language written phrases. For example, if I wrote on my Newt (as Apple PIE people have nicknamed it) "Lunch Antony Thursday" the computer could interpret this as meaning I wanted to book lunch with somebody called Antony, on the following Thursday. It could then hunt through my built-in personal database and deduce that I mean book lunch with Antony Jacobson, AUI's Editor, at noon on Thursday. If this is 'remembered' as a regular event, it could even decide where we normally partake our midday meal.

It's quite possible that a Newton could be configured to work all the above out by itself. It would then display its conclusions for verification by the user and proceed to use built in infra-red or cellular phone communications, another core Newton feature, to send an email or fax message to Antony requesting the appointment. After receiving a confirmation, it would book a table at the hostelry in question. My Newt would also remind me that the meal would be on Antony's expense account, of course!

John Sculley, who was once a colleague of the ex-Commodore boss Tom Rattigan when they were both Vice Presidents at Pepsi Cola at the beginning of the 80's, thinks PDAs will prove to be a huge multi-billion dollar market by the end of the century. It's certainly true to say that Apple isn't alone in that view. Hewlett-Packard, AT&T, Sony and Sharp are just a few of the big names working on similar projects. Sharp is to build the first Newtons for Apple in Japan. Newton-style technology is if anything even more suited for Japanese Kanji characters and Sharp hopes a domestic version of the Newton will be a big hit.

In the West we can expect the first production Newtons to appear before the middle of next year, according to Apple. This is just as well as there were no working prototypes at CES. The target price starts at below $800, or about £450.

CD-ROM

Newton, which was launched at a big press event away from the show, wasn't even on Apple's stand. Instead Apple concentrated its activities on the show floor to promoting Macintosh multimedia. This centred around the growing number of CD-ROM titles available for the Macintosh, many of which now feature QuickTime full motion video compatibility. One company, Discis Knowledge Research Inc., even sells a complete line of `books' published exclusively on discs for the Macintosh. Apple also announced a big deal to sell cheaper Macs via high street outlets more used to selling TVs and video recorders.

Meanwhile, Sony was another company making headlines away from the show floor. Following up Sanyo's EXB-1 clone of the Sony Data Discman electronic book, Sony has updated its version to match the Sanyo's enhanced facilities including provision for simultaneous audio as well as text/graphic playback. Sony's rival to Philips' DCC, the MiniDisc or MD for short, was demonstrated in pre-production prototype form though there was still no sign of version which records as well as plays back.

Other trends at the show included PC-compatibles now dominating the computer games scene outside the console arena. Traditionally a stronghold of the Atari ST and of course the Amiga, these machines were conspicuous by their rarity at CES this time. The PC Windows multimedia standard was also much in evidence and is set for further market penetration as multimedia extensions are now standard in the latest Windows version 3.1.

Sega and Nintendo are battling it out for 16-bit video game market honours, but technically more interesting was NEC's new Turbo Technologies system based on a CD ROM unit, a development of the older 16-bit Turbo-Grafx console. To round off, there were lots of wide screen TVs - Toshiba demonstrating their sets with special wide screen video releases, complete with the enormous Batmobile from Batman the Movie gracing the stand.

As usual the Consumer Electronics Show was a stimulating glance at what might be coming our way over the next year or two. Not all the products shown there will turn into commercial reality. However others, especially those with the power of the multinational companies behind them may well come to play a role in all our lives.

What is surprising is that Commodore is seeming to opt out of that possibility. CDTV? As someone put it "No Show is No Go.." We shall see...

field report

Everyone knows what the future of disk drives holds. It's optical, isn't it? Or perhaps some sort of Flash RAM disk? Ashley Cotter-Cairns talks to Fujitsu's Joe Jura, who helps him to WORM out the truth...

I don't know about you but every time I read about some new development in the world of hard drives I begin to wonder where it will all end. Improved access rates, storage space multiplying like rabbits and actual disk size shrinking - will disk drives eventually become near-invisible, like some of today's advanced chips?

Hype versus Reality

Fujitsu's Joe Jura regularly runs courses for selected journalists to enable them to distinguish the truth behind the hype surrounding so-called leading edge hardware. Because there are always some new directions to take hardware in these latest developments tend to get the attention and thus receive the publicity.

But just because some bright spark invents a new, super fast car with fantastic body styling and amazing acceleration, that doesn't mean that the train is an any less efficient way to get from A to B. In fact, with continuing development, the train (assuming that it arrives on time, that is) may end up being a better way to travel, even if it grants less of a status boost than the car.

Joe showed me several ways in which today's technology is being modified to make it faster, more efficient and better value than, perhaps, even tomorrow's disk technology.

"It's all a matter of balancing cost against need," he explained. "Despite what the public relations people say and contrary to news stories, rigid disks - hard disks - are still the highest revenue generators in the disk market."

The cost per megabyte is low and the performance is adequate for most needs. Alternatives like Flash RAM, which admittedly are far faster, also cost from 20 to 30 times as much per megabyte.

Disks will have to become larger or more densely packed to cater for the increased need for high-speed access storage. Many oft-used programs need 30-40Mbytes of storage space these days and the entry level hard disk will soon be 100Mbytes in size. This trend towards porkier hard disks, according to Joe Jura, is all the fault of the GUI (graphical user interface).

"GUIs created the need for larger hard disks. Their overheads are very high and the space on a hard disk is soon eaten up by their associated programs and structures," said Joe.

Appliance of Science

Storage technology has limited areas of optimum usage. It's all down to striking a balance again - floppy disks may be tiny in terms of storage space, slow and relatively unreliable, but they are cheap, readily available and easy to transport. Tape drives are slow, rendered near-useless in positions where speed is vital but are a useful medium for backing up massive mainframe systems on downtime, say overnight, when access to the computer is at its minimum.

One of the buzzwords in storage technology is optical drives. These are faster than floppies, though not yet as quick as hard disks, have a large storage capacity and are portable. They may eventually take away some of the backing up work from tape drives as they enjoy random access: no matter how fast you spool it, tape still has to be wound to the right place before the drive can read the data it's looking for.

As for hard disks, they are still faster and cheaper, though not as easy to take from one machine to another, making them a better option for the fixed terminal.

WORMs - write once, read many - may be portable and can be added to. The term "write once" means that you may only write once to each part of the disk, so a half-full WORM holding, say, a database of medical records could still have data added to it if necessary, but again, cost is a major factor.

WMRM - write many, read many - is a removable medium which may be treated in much the same way that a hard disk can. It's used for long-term storage which may need amending at times and may be thought of as a virus-free, portable, random-access storage medium. Cost rears its ugly head here again. But prices are coming down fast and companies like Bernoulli and Syquest are increasingly challenging the fixed hard disk manufacturers.

Less is more

There's a magic word which, when applied to the storage market, will turn the most rigid technophile's knees to jelly and open the tightest corporate cheque books. That word is downsizing. I'll say it again. DOWNSIZING. Doesn't look all that impressive, does it? But it's a word that speaks for itself. It came from the idea that struck the mainframe users a few years ago when they found that they could get the power of mainframes from

BRIEF DISK-US

you automatically apply the factors yourself (though you probably didn't know it until five seconds ago). They are smaller size, lower costs, less power consumption, easier maintenance and higher reliability.

Many of the leading edge sciences are being applied to the development of downsizing. Much research and development budget is spent on making hard disks smaller, more reliable, cheaper and simpler to maintain and replace and therefore better value. Money is being spent on it because that's still where the money is being spent. Journalists can and do talk about 250 percent increases in optical disk sales but two-and-a-half times next to nothing still isn't very much. Hard disks are the big money winners.

Money is all very well but this is a technical subject. What are all of these R&D pounds and dollars achieving? Well, hard disks are becoming smaller and smaller. Soon, a mere 1.8" disk will hold more information - and retrieve it faster - than the A590 hard disk. And there's other areas that are being developed even as you read this.

A modern disk drive ...

Fear of Flying

a mini computer. Not too long after that they found themselves looking at workstations that matched the minis. Now they have discovered that the PCs, especially linked into networks, can do what the mainframes did. So down comes the size of the computers...

Downsizing is a single word which encompasses five vitally important factors. When you buy anything, whether it be a car, house or computer,

The distance between the drive head, which reads and writes to hard disks and the disk surface itself is known as the flying height. Currently this gap is something close to one thirtieth as large as a smoke particle, but this distance will soon narrow from even that tiny amount, until the drive heads of tomorrow will almost touch the surface of a disk.

This would cause problems with today's hard disks. That's because they are made of carefully engineered metal covered with tiny layers of magnetic media. Currently the underlying metal is a high purity aluminium, but even with this pure metal there are foreign bodies, or impurities, present. These give rise to errors which is why glass is now being used instead. But even with glass disks, lubricant needs to be added to prevent damaging friction between the disk and the head.

With the close flying heights of tomorrow's disk drives, this lubricant would cause stiction - a situation where the head would not be able to fly freely and may even stop the disk from spinning. To get around this problem the glass disks are made optically flat - to ensure that the disk has a free flight across it - but microtextured: finely engraved to create tiny depressions.

This creates a disk which is very flat but textured to allow lubricant to sit upon it. The magnetic media is then layered on top and, when the lubricant is applied, the head will still fly freely across the disk.

Head for Cover

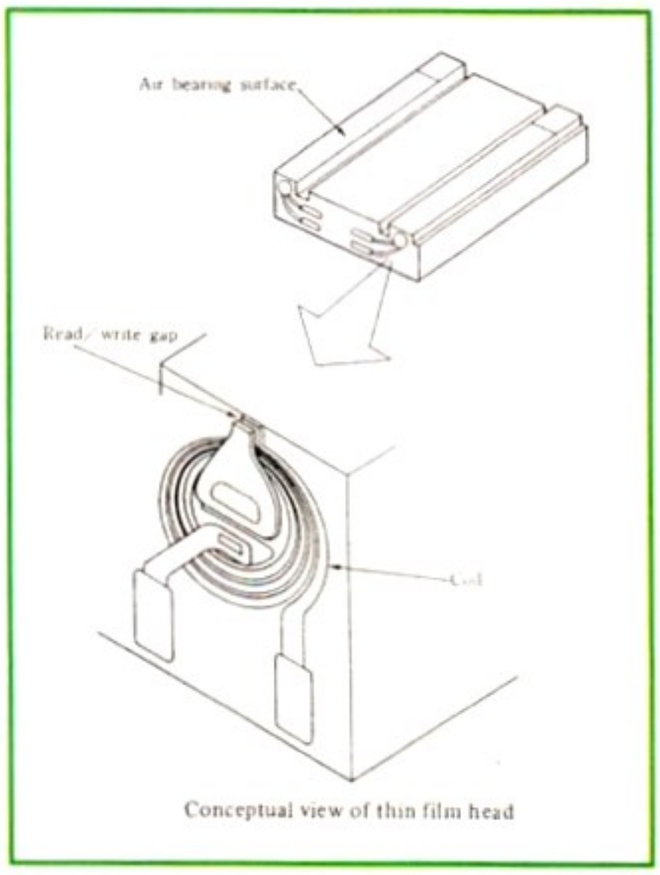
Hard disks work by the charging of magnetic media - the top, `soft' layers of the disk - using electric pulses to alter the media's polarity.

Remember science classes where you made a coil out of copper wire and put a charge through it? It created a magnetic field with iron filings on a piece of paper! Now you're there. Well, believe it or not, that's how the recording is done on a hard disk.

A composite head, the oldest and cheapest hard disk drive head, is a coil with a gap. The gap is where the electricity pulses record data to the disk and is usually filled with glass. The R&D men decided that they should look at ways of improving the old-fashioned head. MIG - or metal in gap - heads adopt an alloy to fill the gap in the coil instead of using glass. This intensifies the current and allows tighter `packing' of data on the disk by cutting down on dissipation. A MIG head will cost about 20 percent more than the older composite heads it replaces.

Thin-film technology (TFT) heads are even more precise pieces of engineering. Using very fine silicon technology to build a smaller, more controllable head, TFT heads are an exercise in downsizing in themselves. But it's not only the head and its magnetic gap that has reduced in size: flying height must also come down if they are to be effective.

The final type of head and the most advanced, is the magneto resistive head. This incorporates a head with dual functions. One part of the head `feels' the disk to find the right place to read from, while the other concentrates on writing to the correct point of the disk's media. To give this personification it's rather like a blind person reading braille then writing something in braille next to what he's read.



Conceptual view of thin film head

Data Minute

I've looked at ways in which disks may become more efficient by using better materials for the disk itself, the etching of disks to allow effective, stiction-free lubrication and the appliance of science to the head itself. But what of the data the head transmits? Is there not be a way in which the application of the data can be improved?

Longitudinal recording is the most common type. It has disadvantages in that the electricity pulses dissipate over a comparatively large area and affect the media around it. That means that the space around the area that's just been written to may not be used as data in it would be affected by the neighbouring area.

Experiments with perpendicular recording, which records the data vertically and thus cuts down on dissipation, have not been entirely successful. The flying height of a perpendicular head would have to be virtually nonexistent due to the fast dissipation of the current, which would lead to wear and damage of the disk. This system may be adopted for high density floppy drives of the future.

So much for the application. What of the data?

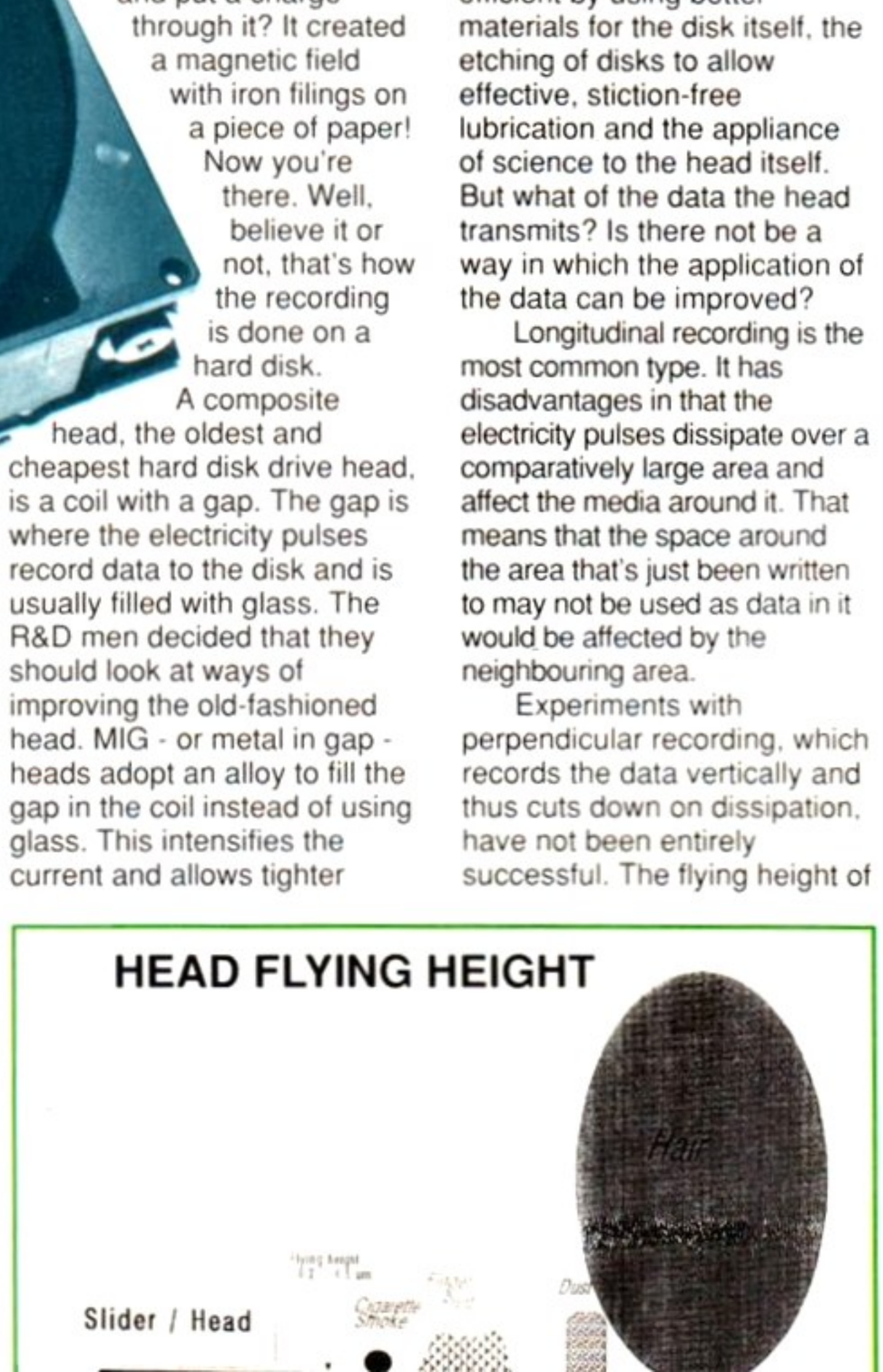
When a head writes data to a disk, it also has to mark that data with information. This allows it to find that data again when it's required, work out how much information there is in the data and what type of information it is - then of course, the data itself must be written!

Frequency modulation (FM) is simple and inefficient. It uses both clock and data bits every time it writes. Modified frequency modulation (MFM) only uses clock bits every other time that FM does. Thus it earns its nickname "double density", as it packs twice as much data onto the disk as FM. Run length limited is the latest alternative, which does away with clock bits altogether and uses careful placing of the binary data bits to restore balance.

End of the Track

That does it. You'll never respect your A590 again. But don't let this article overwhelm you. In Joe Jura's words: "Disk technology is all about gradual advances: half an inch off the diameter here, the extra few megabytes there. Very rarely are there massive leaps and even when they occur, it's doubtful if they will replace existing technology overnight, or even over a number of years."

You'll only really appreciate all of the hard work that's gone into disk developments when you're slipping your portable into your pocket in a couple of years time...



Life in Silicon Village

Alan C. Cranleigh reports on a Comms Development

Where can you go to church, meet new friends, indulge in hobbies, read reviews of such diversity as hardware, games, films and books of all types, blow up friends and read strange stories? You can probably get all this out of life by mixing into the right social circles, by buying the right publications. However, the reward may not always be worth the effort. But this all could no longer be a problem because you can do all this and more by becoming a member of The Silicon Village.

The Silicon Village (TSV) grew up as a result of several ex-Micronet editors approaching Ben Tagg who runs several viewdata services from his Hertford headquarters. When Micronet closed down in October 1991, Ben - with an agreement with John Clarke Computing of Reading - took over the role as provider of the only nationwide local access viewdata bulletin board. The target the team sought to achieve was to take all of the best aspects of Micronet - some of which British Telecom's red tape put paid to - and add to it new ideas which had emerged during Micronet's development.

There are now 1,000 members and that number is increasing all the time. But what is the attraction of the Silicon Village? What do you need to gain access to the service? What can you do once you have? And how much will it cost you?

what is TSV?

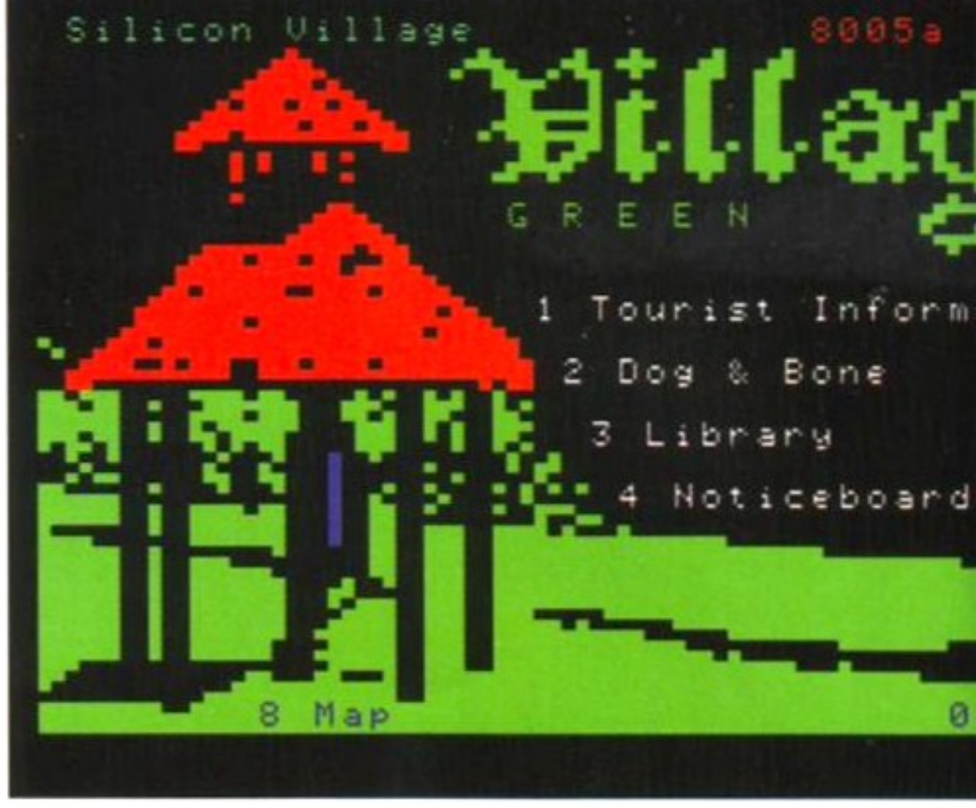
TSV is a bulletin board service which may be accessed from most areas of the country via a simple local telephone call. This sends data to your Amiga through a Mercury gateway from the main village computer. It's in Viewdata format, which means that it looks like Ceefax or Oracle and the pages of information are updated a page at a time instead of scrolling bit by bit. This format has some limitations - it's only 40 columns wide, for example - but it's colourful and can support fairly detailed graphics if edited carefully.

It's intended as a community centre for the country's computer enthusiasts. Instead of merely providing a number of different interest areas, or magazines, it is laid out in the structure of an imaginary village, with a high street, shops, a church, club buildings, an information centre, post office and a newsagent. The idea is that the villagers can find everything they need by moving about the village. This involves nothing more taxing than pressing keys to select options but it's a nice way to approach the problem of presenting a wide variety of subjects and pastimes.

what do I need to get into TSV?

You'll need a phone line, of course. It helps if you are going to use it a lot to have a separate line, so your main phone may still operate normally - but this is far from being a necessity. Then you'll need a modem and a modem cable to connect your Amiga to the phone line. This allows data to be sent and received by your computer. Ideally, your modem will be capable of handling speeds of up to 2400 baud, although it can access TSV at slower speeds. If you're reasonably near to London and have a classy modem you can even log on direct at up to 9600!

Finally, you'll have to get your modem and Amiga to talk to one another. This requires communications software capable of supporting Viewdata format. You should be able to get this from the public domain very cheaply indeed, so ask around local PD libraries.



so I'm ready to go

TSV offers a wealth of interesting reading, as well as more diverse ways to pass your on-line time...

Computing titles: There are many of these - in fact TSV can probably claim to be the most varied multi-format computer magazine around. 16-bit computing is well catered for. Amiga fans can get reading matter from two sources. There's the Amiga Zone, which deals with the serious side of the Amiga - public domain, soft and hardware reviews, news and gossip, as well as providing a forum for Amigaphiles to write in with queries or thoughts. What's more, those of you with an aspiration to write may contribute suitable articles to the Zone's editor, Nick Harlow.

For those moments when you feel a little more frivolous, the Games →

THE SURVIVAL GAME

SPECIAL 'SHOW' OFFER £19.95 (+ P+P)

WARNING!

This int could save the lives of you or friends.
Programme includes hundreds of ations and sounds written, drawn by ex-Special Service Personnel.

IT CAN HAPPEN TO YOU.

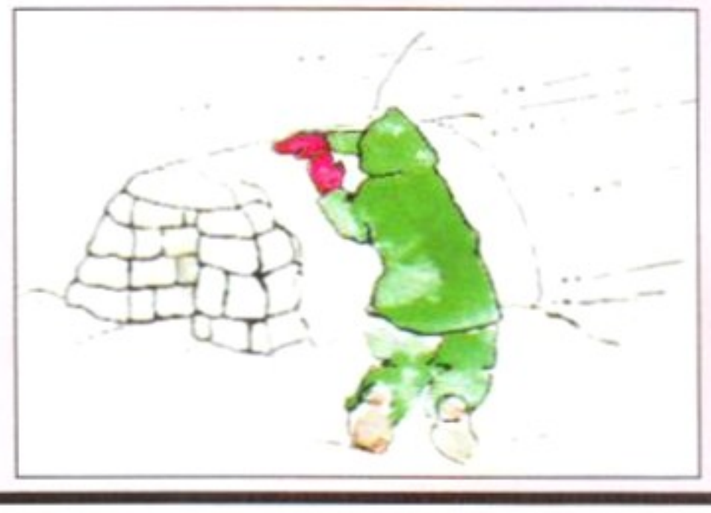
Fear and intimidation can come to anyone anywhere in the world.

* Would you know what to do to protect yourself?
* Do you really have the expertise,or are you fooling yourself?
* Would you make the obvious mistakes like everyone else?

COULD YOU COPE IF INNOCENTLY CAUGHT UP IN THESE SITUATIONS?

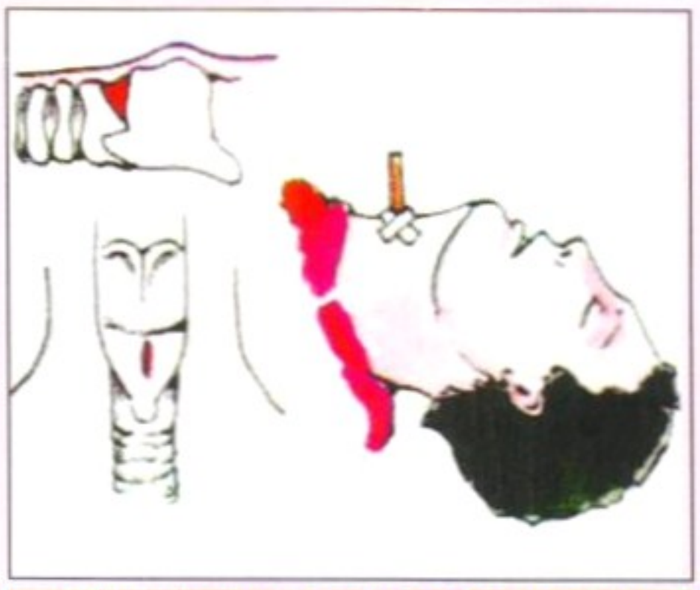
- Burning buildings?
- Terrorist activity?
- Rape,and other sexual deviancy?
- Encountering burglars and con-men?
- Storms and hurricanes?
- Car crashes?
- Riots and bar brawls?
- Air,land and sea disasters?
- Encountering savage dogs?

Our comprehensive programme will give you the knowledge to survive these,and many more situations in a way that you would never get from a book.



OUR PROGRAMME INCLUDES:-

* On screen animated self-defence course.
* Rescue from personal dangers and facing up to disasters.
* First aid and natural medication.
* Acquiring food,water,fire and shelter.
* Identification of poisonous plants and dangerous animals.
* Interactive emergency communications .
* Direction-finding (SUN MOON STARS).
* Survival psychology.



INCREASE YOUR SURVIVAL CAPABILITIES NOW.
...YOU MAY NEVER GET ANOTHER CHANCE...
CHEQUES AND POSTAL ORDERS FOR £29.95 + £2.50 p+p PAYABLE TO...
INTRACOM APPLICATIONS, UNION BUSINESS CENTRE 288,HARROGATE ROAD,BRADFORD,WEST YORKSHIRE BD2 3SP
PHONE 0274 626174 FAX (SWITCH).
ACCESS/VISA
CD AND PC VERSIONS OUT SOON!

COLOUR PRINTING ON A MONO PRINTER!

Ever wished you'd bought a colour printer instead of a mono one? Wouldn't it be nice to print out Deluxe Paint pictures in colour? Now you can with "FlexiColour Kit". Each FlexiColour kit comes complete with everything you need to print in colour, including superb software. The colour kit is simple to fit and use, will not affect your guarantee and prints AS GOOD AS A COLOUR PRINTER. If your printer is not listed below please phone. FlexiColour kits for Star LC10, LC20, all Star 24 pin. Panasonic 1080/81, 1124. Epson FX80, FX100, LQ800 etc. Citizen 120D, 120D+, NEC P6, P6+, Commodore MPS1200. COMPLETE KIT £39.95

FLEXIDUMP 2

★ Total COLOUR CONTROL (for all dot matrix colour printers)
★ Select area to print
★ Select size to be printed
★ Balance control for enhancing dark pics IFF or HAM
★ Now includes new feature to insert colour pics into word processor documents
★ Page control ★ Colour sieve ★ Ink correction
★ Pattern rotate ★ Dot pattern control
★ Automatic poster mode for larger than A4
★ Production Graphic/text labels/letterheads
★ Multiple copies control
★ Import larger than screen size files and use Flexidump to reduce (produces superb letterheads)
★ Gamma correction (fully adjustable and savable)
★ Colour/mono catalogue function. Will print a mini picture (size selectable) of a complete disc (sorted alphabetically) including titles
★ Ideal for T-shirt printing. Drives a wide range of Colour and mono printers Star LC10, LC20, LC200 Citizen Swift, NEC and many more. **£39.95**

FLEXIDUMP 2 MONO for 9/24pin IDEAL FOR T-SHIRTS, BANNERS, POSTERS ETC £19.74

UPGRADE FROM FLEXIDUMP TO FLEXIDUMP 2 £11.75 inc. RETURN MASTER

FLEXIDUMP 2 BUBBLE JET

PRINT FULL COLOUR ON YOUR BUBBLE JET PRINTER
All the features of FLEXIDUMP 2 including AUTO COLOUR SEPARATION.
Laser quality colour graphics. Flexidump2 bubble jet **£39.95**

COLOUR RIBBONS

COLOUR RIBBONS can be "reloaded" with a new ribbon loop this is simple to do and is cost effective. Comes with full instructions.
Star LC200 9pin 4 col reload **£6.11** or pack of 5 **£23.50**
Star LC200 24pin 4 col reload **£7.05** or pack of 5 **£28.95**
Citizen Swift 4 col reload **£8.46** or pack of 5 **£39.95**

T-SHIRT PRINTING RIBBONS

T-SHIRT PRINTING RIBBONS print on to paper iron on your T-shirt
4 col T-SHIRT ribbon for CITIZEN SWIFT £29.95 reload £14.95
4 col T-SHIRT ribbon for STAR 24 pin £29.95 reload £14.95
4 col T-SHIRT ribbon for STAR LC200 9pin £19.95 reload £12.95
4 col T-SHIRT ribbon STAR LC10 £14.95. Single colour BLACK for STAR LC10 £9.95, STAR 24pin £11.95, CITIZEN 120D/SWIFT £9.95 PANASONIC KXP1080/81/1124 black only £11.95, EPSON LX80 £9.95 FX80, FX100, LQ400, LQ800 £9.95 many colours and types available.

How to order cheque/PO made payable to CARE ELECTRONICS or use Access/Visa
Care Electronics 15 Holland Gardens, Garston, Watford, Herts WD2 6JN
Tel: 0923 894064 or Fax: 0923 672102 all prices include VAT & CARRIAGE

Life in Silicon Village

Zone caters for 16-bit computer software reviews. Edited by AUI contributor Ashley Cotter-Cairns it also has a letters page and covers news, reviews and occasional editorials on the 16-bit computing, in the shape of the Archimedes, slots into BBC Bits too. There is also Computing Daily, the news pages, which offer an up-to-the-minute news service covering all aspects of computing.

games scene. Again, contributions to the Games Zone are encouraged - the joy of TSV is that it's interactive; readers can get involved and see their names in lights.

Other computers don't get left out. Nick Harlow also edits the ST Cave for fans of THAT computer (joke, everyone...) PC enthusiasts should have a look at PC Bits... but you're not limited to 16-bit. The Amstrad CPC area, BBC Bits and Spectacular cover the most popular of the 8-bit machines. And 32-bit

What if you feel like giving computers a rest? There's still lots to do. You can access one of the many general interest areas. There's are many of them, but here's a taster:

* The Village Club: This area caters for a wide range of tastes, from recipes to quizzes to philosophy. One of the busiest areas, it's run by Tim Havenhand who keeps his club members in line and joins in the fun.

* Realms of Chaos: This area caters for roleplaying, science fiction and fantasy. It's diverse, offering book reviews and regular editorials, Adventure Helpline and Goal Pool (an on-line Play-by-mailbox).

* Avatar: This is a multi-user game (MUG). People from all around the country compete to gain massive power by outsmarting one another, stealing treasure and zapping each other with spells. Adventure gaming at its most fun.

* The Village Church: A brave venture to bring religion to the on-line community. (No doubt they need it!) Recently, the church held the first UK on-line service and it offers advice, editorial comment and a letters area.

* Chatlines: Not of the 0898 variety. You go to the chatline of your choice, whether it be the adult chatline, village club chatline, gamers chatline or wherever. Then fill in a message, or answer someone else's and watch your 'conversation' unfold in real time!

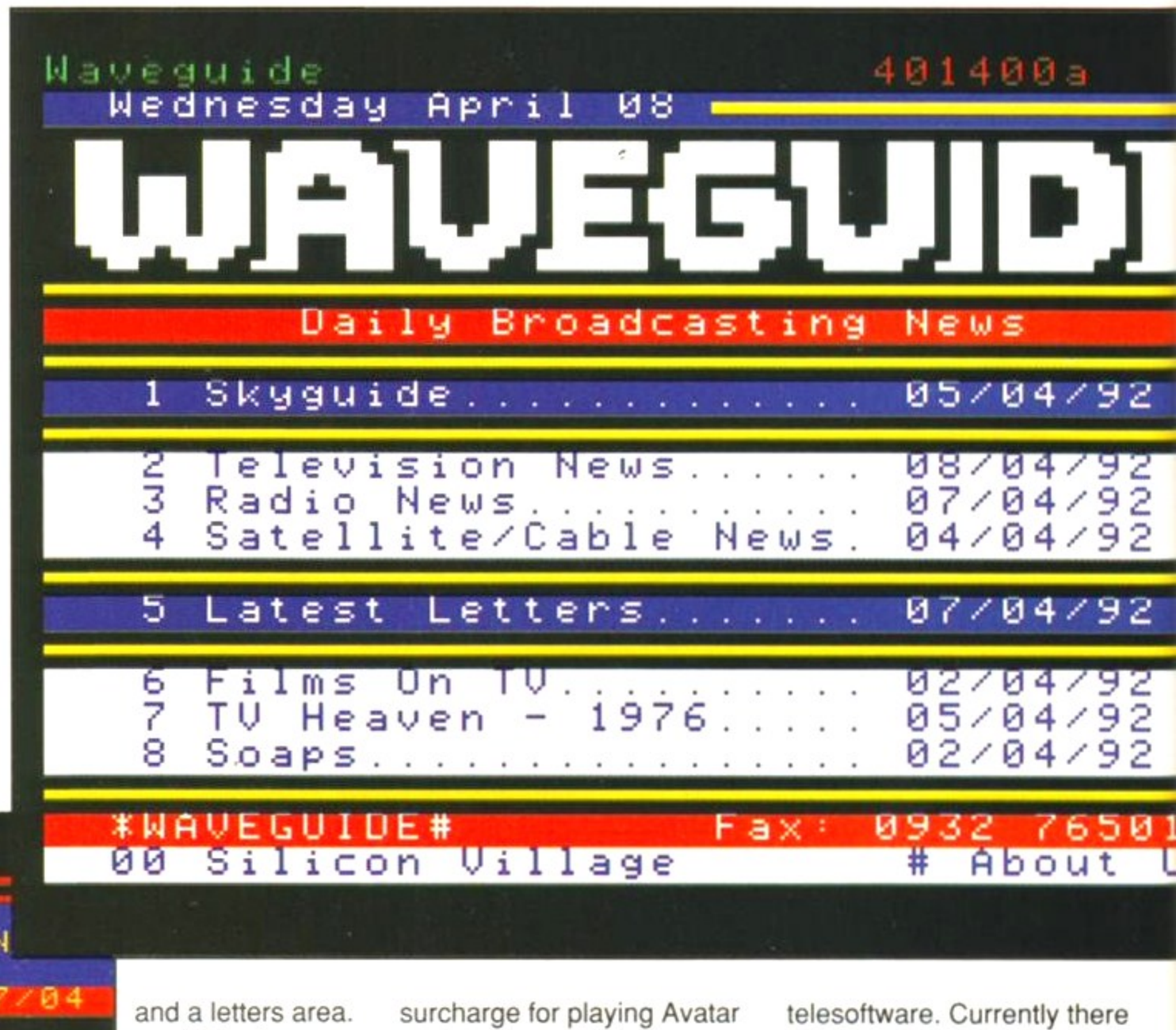
cost

Registration to TSV costs £10 for life, plus £6 per month. You must also pay a standard connection fee of 2.5p/minute and a surcharge for playing Avatar - 0.5p/minute. All these charges are subject to VAT, although you get two hours of free usage per month. On top of this you must consider your telephone charge which is added to your phone bill in the normal way. All other charges are billed to you on a monthly statement by TSV which accompanies the monthly newsletter.

is it value?

That depends on what you expect from your on-line services. TSV is meant purely as a leisure product. Don't go on looking for a business database because you'll be disappointed. Another major omission is telesoftware. Currently there is as good as no downloadable software, so look elsewhere for your free PD.

You can log on for a free taster, assuming you've already got the hardware and software sorted out.



Contact
Ben Tagg,
Telephone (0992) 586919.

16/32 Systems

Education and Your Amiga

MIX AND MATCH

The aim of this program is to teach essential pre–reading skills. By using clear and colourful pictures, friendly shapes and specially drawn letters and numbers.

COUNT AND ADD

Target Age is 4 to 7 year olds. This is an ideal first maths program for the under 7's, It teaches the basic elements of counting and adding by using lively animation, sound and speech in five carefully structured and well proven educational games.

HOORAY FOR HENRIETTA

Target Age is 5 to 12 year olds. The aim of this program is to teach students to add, subtract, multiply and divide quickly and accurately. The program has been carefully structured in line with the National Curriculum and with the parent/teacher control the program can be customised for each user.

HENRIETTA'S BOOK OF SPELLS

Target age is 7 to 14 year olds. Improve your childs vocabulary and language skills. With five different sections, three skill levels and a choice of words ranging from five to nine letters you can ensure the ideal starting point for every user.

SPELLBOUND

Target age is 7 to 16 year olds. This is an exciting arcade type adventure in which you guide Hal in finding five keys by collecting letters and words and defending Hal from all kinds of robots from the mad professors laboratory.

All programs except SPELLBOUND are also available for ST and PC

ALL PROGRAMS COST £19 each inc P&P.
If you wish all 5 then total cost is £85.

16/32 Systems
35 Northcote Road
Strood, Kent, ME2 2DH

Tel: 0634 710788
VISA + ACCESS ACCEPTED.
All Prices Include VAT

ALL PRICES ARE CORRECT AT TIME OF GOING TO PRESS. E&OE.ALL TRADEMARKS RESPECTED

TTPD

70 THANET STREET (AUI)
CLAY CROSS
CHESTERFIELD
DERBYSHIRE S45 9JF
TEL: 0246 866605

DEMOS

TD01 Classic Demos
TD02 Stealthy 11
TD03 Fleet Manoeuvres
TD04 Iraq Demo
TD05 Coyote Strike Back
TD06 Fraxion Horror
TD08 Iron Maiden Slideshow
TD09 Lotus Car Chase
TD10 Robocop 2 Slideshow
TD12 Robocop 15 Seconds
TD13 Total Recall
TD14 Evil Dead Demo
TD15 Puggs In Space
TD16 More Aerotoons
TD17 Scanners Horror Demo X Rated
TD18 Scanners Horror Demo X Rated
TD19 Popeye Meets Beach Boys
TD20 Bloodsport Demo
TD21 Nightmare On Elm Street
TD22 Creepshow 1
TD23 Total Destruction
TD24 Alpha Flight Demo
TD25 Anti Lemmigs
TD26 Enterprise Leaving Dock
TD27 Crionics Mega Demo
TD28 Fractal Flight
TD29 Silents Scroller
TD30 Utopia Cartoon Slides
TD31 Bunsen Burner
TD32 The Link Mega Demo
TD33 Ghost Pool
TD34 Scoopex Seven Sins
TD35 Disney Slideshow
TD36 Sleeping Bag Demo
TD37 System S Demo
TD38 Share & Enjoy 46
TD39 Thames TV Demo

GAMES

TG01 Missile Command
TG02 Pontoon
TG03 Jeopardy - Version of Risk
TG04 Star Trek - The Game - Disk 1 of 2
TG05 Star Trek - The Game - Disk 2 of 2
TG06 PD Games - Disk 1
TG07 Tetris
TG08 Packman 81
TG09 Monopoly
TG10 Games Glore
TG11 Games Glore Inc: Chess, Daleks & Tron.
TG12 PD Games - Disk 2
TG13 Flaschbier
TG14 Video Tennis
TG15 Holy Grail
TG16 PD Games (Disk 3)
TG17 Amiopoly
TG18 Tennis
TG19 Diplomacy
TG20 Twintris
TG21 Drip
TG22 Popeye
TG23 Eat Mine
TG24 Return To Earth
TG25 Hack
TG26 Pseudo Cop
TG27 CC Games Disk 7
TG28 Mega Games Pack
TG29 Blizzard
TG30 Wheel of Fortune

UTILITIES

TU01 Ultimate Virus Killer
TU02 Mega Utility Disk
TU03 Amibase
TU04 Q Base. Spreadsheet
TU05 Journal
TU06 Text Plus
TU07 CLI Tutor
TU08 Spreadsheet
TU09 Spectrum Emulator
TU10 A64 Emulator
TU11 Crunchers & Virus Killers 2
TU12 Games Music Creator
TU13 Insanity Tools 01
TU14 D Copy
TU15 Fredfish 340
TU16 Speedbench
TU17 P Copy V3
TU18 C Light
TU19 Jazzbench
TU20 Label Designer
TU21 Biorthms
TU22 North C V1.2
TU23 M Cad
TU24 Hackers and Hacking
TU25 Darkstar 2
TU26 Darkstar 3
TU27 Darkstar 4
TU28 Sid V1.6
TU29 ST Emulator
TU30 TSB Vector, Designer V1.1
TU31 PE Utils V.5
TU32 T Bag 43
TU33 Sidney & Friends
TU34 ESA Utilities
TU35 A68K Assembler
TU36 XLS Disk 1U037
The Magician Utils
TU38 Red Devils Utilities 4
TU39 Running Man Update
TU40 Pendle Europa Utilities
TU41 ICPUG Printer Utilities
TU42 System Checker
TU43 Tetra Copier
TU44 Redsector Demo Maker
TU45 Red Devil
TU46 Cryptic Utils
TU47 Label Maker
TU48 Cad V
TU49 Clip Art
TU50 Anti Virus
TU51 The Dope Intro Maker
TU52 Intro Maker
TU53 Visicalc Spreadsheet
TU54 U Edit Word Processor

MUSIC

TM01 Debbie Gibson. Electric Youth Disk 1
TM02 Debbie Gibson. Electric Youth Disk 2
TM03 Madonna - Hanky Panky
TM04 Pet Shop Boys - Always On My Mind
TM05 Jean M. Jarre - Docklands
TM06 Music Invasion 11
TM07 Betty Boo 1
TM08 Betty Boo 2
TM09 Vogue & Justify My Love

85p per Disk for 3 or more
95p EACH per Single orders
All + 25p postage & packing.
Despatch within 24 hours

FREE catalogue with every order.
No minimum order. VIRUS FREE.
If you can not see the Disk you are looking for send us details and we will get it for you for no extra charge.

Make Cheques & Postal Orders Payable To: TTPD

AIR WARRIOR

Fly the most accurate flight simulator ever created. Fly against the most deadly opponent known, real people! From bi-planes of WWI to jets of the Korean War, know what it was really like to fly. Air Warrior simulates the world of the real ACE.

"... best flight simulator ever." Amiga Format

"thrilling ... the greatest experience in flight simulator history." PC Format

"unparalleled ... amazing ... huge." NCE

"game dynamics impossible to duplicate in conventional computer simulation." Omni

"incredibly realistic flight simulator." What PC

Amiga, Mac Color & Mono, PC and ST £34.99

Air Warrior includes: Two comprehensive manuals, Campaign Map, Terminal/Off-line Trainer, Data disks, Free Host membership. £30 of connect credit. Modem offer

For further information call On-line on 081-558 6114.
642a Lea Bridge Road, London E10 6AP.
Host 081-539 6763.

SYNTRONIX

DESKTOP VIDEO PRODUCTS

EDITMAN *pro*

Computer Video Editing System

Compatible with JVC Professional equipment and soon available for use with Umatic, Betacam and MII. Features include importing of graphics and titles from your computer during the editing process. An automatic editor featuring 999 scenes can be programmed and saved to disk. Optional upgrades include animation, programmable dissolves, FX and much more. PC, Amiga, MAC and Atari versions.

EDITMAN – super

The Editman Super - is a low cost video editing system for use with Sony and Panasonic Camcorders and VCRs. This is the latest version of the Editman, first launched in 1991. Editman is now established as the No. 1 computer video editing system for use with the Amiga computer. The new model is now available for use with other computers.

EDITMAN Animator

A single frame animation controller for use with the JVC BR605 professional S.VHS VCR. Its low cost and friendly interface makes animation programming not only possible but affordable. Other VCR's will also be catered for.

GENMAN DTV Genlock

This definitive DTV Genlock will be immediately appreciated by those already experienced in the use of Genlocks. Available in rack mount and console designs, with programmable versions for use with Editman Pro. If you demand the best - NO OTHER GENLOCK COMPARES!

Please check for availability - Strict allocations

SYNTRONIX Hotline 0332 - 298422

Syntronix Systems, Burlington House, Prime Industrial Park, Shaftesbury Street, Derby DE3 8YB Tel: 0332 298422

FREE CATALOGUE

COMPLETE & RETURN THE COUPON BELOW
FOR A FREE 64 PAGE COLOUR AMIGA CATALOGUE

FREE! FROM SILICA

When you buy your new Amiga computer from Silica Systems, we will give you an additional £359.73 worth of software FREE OF CHARGE, including some great entertainment and productivity programs. These free gifts will introduce you to the world of computing and help you to get off to a flying start with your new Amiga. Plus, with every Amiga from Silica we will give you 16 nights FREE holiday hotel accommodation for you and your family to enjoy a break at home or abroad.

16 NIGHTS HOLIDAY HOTEL ACCOMMODATION

Every Amiga 500 and 600 from Silica comes supplied with a free 72 page colour brochure with accommodation vouchers. These entitle 2 people to stay up to a total of 16 nights in any of 250 hotels with accommodation FREE. All you have to pay for are your meals (prices are listed in the brochure).

ARCADE ACTION PACK:
10 Superb entertainment titles:

ASTERIX	£24.99
CHESS PLAYER 2150	£24.95
DRIVIN' FORCE	£19.95
LIVE AND LET DIE	£19.99
ONSLAUGHT	£24.99
PIPE MANIA	£19.99
RICK DANGEROUS	£24.99
ROCK 'N' ROLL	£19.99
SKWEEK	£19.99
TRIVIAL PURSUIT	£19.95

PRODUCTIVITY:

PHOTON PAINT 2.0	£89.95
The recommended paint package	
GFA BASIC V3.5	£50.00
A power basic interpreter	
TOTAL VALUE:	£359.73

WORTH NEARLY £360!

Commodore AMIGA

AMIGA 500 WITH BUILT-IN NUMERIC KEYPAD

- 512K AMIGA 500 COMPUTER
- BUILT-IN 1Mb DRIVE
- A520 TV MODULATOR
- MOUSE CONTROLLER

PLUS!
FREE FROM SILICA:

- PHOTON PAINT 2.0
- ARCADE ACTION GAMES PACK
- GFA BASIC INTERPRETER V3.5
- 16 NIGHTS HOLIDAY HOTEL ACCOMMODATION

£299
INC VAT & DELIVERY REF: AMC 0550

CARTOON CLASSICS

• 1Mb AMIGA 500 PLUS	£399.99
• BUILT-IN 1Mb DRIVE	FREE
• A520 TELEVISION MODULATOR	FREE
• THE SIMPSONS - BART v SPACE MUTANTS	£24.99
• CAPTAIN PLANET AND THE PLANETEERS	£25.99
• LEMMINGS	£25.99
• DELUXE PAINT III	£79.99
PLUS! - FREE FROM SILICA	
• PHOTON PAINT V2.0	£89.95
• ARCADE ACTION GAMES PACK	£219.78
• GFA BASIC INTERPRETER V3.5	£50.00
TOTAL PACK VALUE:	£916.68
LESS PACK SAVING:	£557.68
SILICA PRICE:	£359.00

PLUS!
16 NIGHTS FREE HOLIDAY HOTEL ACCOMMODATION

£359
Ref: AMC 0600

NEW! AMIGA 600

The A600 has a built in 1Mb drive, TV Modulator, internal IDE hard drive interface, Smart card slot for ROM, RAM or game cards, easy to access mouse/joystick ports (on side) and modified expansion slot underneath for extra RAM and battery backed clock.

	0Mb HD	20Mb HD
• 1Mb AMIGA 600	£399.99	£399.99
• 20Mb HARD DISK	N/A	£299.00
• DELUXE PAINT III	£79.99	N/A
• 'MYSTERY' GAME	VARIABLE	N/A
• 1 YEAR HOME SERVICE WARRANTY		
PLUS! - FREE FROM SILICA		
• PHOTON PAINT V2.0	£89.95	£89.95
• ARCADE ACTION GAMES PACK	£229.78	£229.78
• GFA BASIC INTERPRETER V3.5	£50.00	£50.00
TOTAL PACK VALUE:	£849.71	£1068.72
LESS PACK SAVING:	£450.71	£569.72
SILICA PRICE:	£399.00	£499.00

NO HARD DISK £399 Order Ref: AMC 0666
20Mb HARD DISK £499 Order Ref: AMC 0720

NEW! CDTV DRIVE

Commodore have announced their new CDTV drives for the Amiga 500 and 600 computers. Simply plug the drive onto your Amiga and you have the power to:

- **USE THE SUCCESSFUL RANGE OF CDTV SOFTWARE.** A vast array of titles are available now and more are being released all the time. With the CD's ability to retrieve 540Mb of data (over 610 Amiga floppy disks!), it is the ideal media for entertainment, music, education and more!
- **PLAY NORMAL AUDIO CDs.** The CD Player (8 x over sampling) outputs top sound quality. The CDTV drive allows you to select random play, pre-set play order and much more, all with on-screen options.
- **PLAY AND SEE CD+G** (Compact Disk + Graphics) **CDs** show graphics on screen (on the track theme, or lyrics) as the track plays.

To use the A670 CD-ROM drive, your Amiga must have 1Mb of chip RAM. All A600s and A500 Plus models are fitted with 1Mb of Chip RAM as standard. If you have a non-plus version of the Amiga 500, your computer will require an internal modification which Silica can perform for you. Please call quoting ref: REA 1000.

There are two versions of the CD-ROM drive:
Amiga 500 (all models) - Ref: CCD 0570
Amiga 600 (avail Sept) - Ref: CCD 0677
PLEASE CALL FOR STOCK AVAILABILITY.

£399
A570 - CCD 0570 - for A500
A670 - CCD 0677 - for A600

ALL PRICES INCLUDE VAT - DELIVERY IS FREE OF CHARGE IN THE UK MAINLAND

SILICA SYSTEMS OFFER YOU

- ***FREE OVERNIGHT DELIVERY:*** On all hardware orders shipped in the UK mainland.
- ***TECHNICAL SUPPORT HELPLINE:*** Team of technical experts at your service.
- ***PRICE MATCH:*** We normally match competitors on a "Same product - Same price" basis.
- ***ESTABLISHED 12 YEARS:*** Proven track record in professional computer sales.
- ***BUSINESS + EDUCATION + GOVERNMENT:*** Volume discounts available **081-308 0888.**
- ***SHOWROOMS:*** Demonstration and training facilities at our London & Sidcup branches.
- ***THE FULL STOCK RANGE:*** All of your requirements from one supplier.
- ***FREE CATALOGUES:*** Will be mailed to you with offers and software/peripheral details.
- ***PAYMENT:*** By cash, cheque and all major credit cards.

Before you decide when to buy your new Amiga computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Amiga, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Systems we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE 081-309 1111

SILICA SYSTEMS

MAIL ORDER:	Order Lines Open: Mon-Sat 9.00am-6.00pm	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX No Late Night Opening	**Tel: 081-309 1111** Fax No: 081-308 0608
LONDON SHOP:	Opening Hours: Mon-Sat 9.30am-6.00pm	52 Tottenham Court Road, London, W1P 0BA No Late Night Opening	**Tel: 071-580 4000** Fax No: 071-323 4737
LONDON SHOP:	Opening Hours: Mon-Sat 9.30am-6.00pm	Selfridges (1st Floor), Oxford Street, London, W1A 1AB Late Night: Thursday until 8pm	**Tel: 071-629 1234** Extension: 3914
SIDCUP SHOP:	Opening Hours: Mon-Sat 9.00am-5.30pm	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Late Night: Friday until 7pm	**Tel: 081-302 8811** Fax No: 081-309 0017

To: Silica Systems, AMUSR-0892-80, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND A 64 PAGE AMIGA COLOUR CATALOGUE

Mr/Mrs/Miss/Ms: ..... Initials: ..... Surname: .....

Address: .....

..... Postcode: .....

Tel (Home): ..... Tel (Work): .....

Company Name (if applicable): .....

Which computer(s), if any, do you own? 80B

test drive

sound

Gideon Overhead sets out to test two apparently different recent sound sampling packages and discovers that there is a very close family resemblance indeed.

Sound sampling is converting analogue data into digital form through a software/hardware interface. The favoured hardware for this is a cartridge-style plug in box. To carry out this conversion process is likely to be a similar operation no matter which sound sampler you use. However, as would be expected, there are generally obvious differences between samplers, at least in the software. Different company's samplers would be created by different programmers using varying techniques. Or at least that is what you would think...

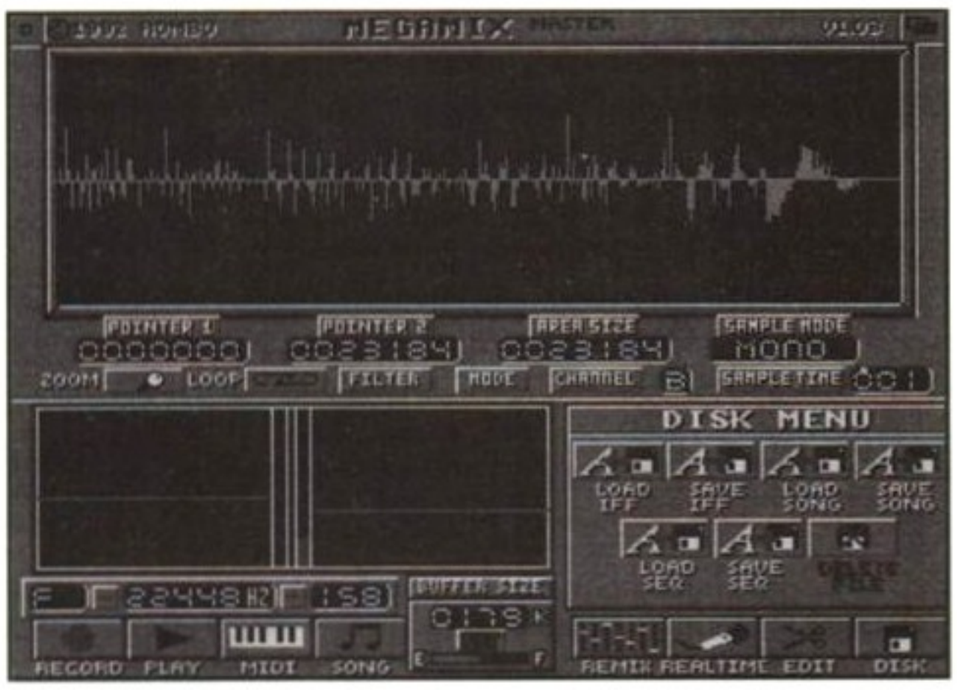
But upon loading TechoSound and then Beatstudio, I was rather surprised to see that both programs had been written by the same person, Jon Wheatman.

There were fewer features on Beat studio, and indeed it was cheaper, but the graphics and design were almost the same. CityBeat, programmed by Jon Wheatman at New Dimensions, told me they had wanted to sell their own version and so New Dimensions had made a separate custom version for Pandaal to market.

Both the New Dimensions' TechoSound,and Citybeat's BeatStudio hardware are similar, apart from a slight shape difference.

The Beatstudio cartridge looks slightly less expensive as it has merely a photocopied label stuck to it which does not give a very professional impression.

Both are supplied with a cable with left and right phono sockets that plugs into the sampler on one end. On the other is a mini-jack, suitable for personal stereos or CDs.



Real Time Effects

The original TechnoSound had been around for a few years before the Turbo version came out. This new version has a few bugs ironed out and contains many new features. The most exciting of these is the inclusion of some real time effects.

There are five preset synthesis effects which are really novelty features but are fun to use. They are Exterminator, Intoxication, Voice synthesis, Legless and Dalek. It is difficult to describe exactly how your voice sounds like when it is processed by each of these. Both Legless and Intoxication vary the tone of your voice. I think it fair to say that the other three are variations on the Dalek theme. That is if you know what a Dalek sounds like. (Of course, you do!)

Other real time gadgets include various echo effects, vibrato, and phasor. As well as real time effects, samples in memory can be processed using the gadgets in the FX and EXTRA menus. Although they cannot be processed to resemble the synth effects, there are other effects available. The sample can be shifted up and down an octave, amplified if it is too quiet and even faded in and out.

Sound Quality

TechoSound is constantly monitoring input from your source and you can see this quite clearly on a stereo oscilloscope at the bottom of the screen. There are also two VU meters to show the signal strength. This is vital so as not to have too loud a signal entering the cartridge and distorting the recording. All three samplers deliver good sound quality, and there is also an impressively low amount of background noise. Of course, the higher the sampling frequency, the better the sound quality. But good results can be achieved at lower sampling rates by using the soften or filter effects in the processing menus.

You set the range of the sample to be played or processed by using the left and right mouse buttons. Left for the starting point and right for the ending point. I found this difficult to get used to as when you have the range just right, you may click accidentally with the wrong mouse button and the wrong range marker will move.

This is probably because I am used to using Audiomaster which just uses the left mouse button. I'll get over it!

Both programs have a special super loop function which allows you to repeat a sample at a particular point. So the sample plays once then loops from the loop marker which can be put anywhere within the sample.

TechnoSound's graphic displays are helpful and well laid out. Beat Studio's are slightly less helpful (especially the editing gadgets) and probably someone who is not familiar with sound sampling programs will be a little daunted at first. The same applies to the manuals. Beat Studio's manual is let down slightly as it has been rather badly photocopied and bound. It also does not go into enough detail. This is not

ling

Special Offer!

New Dimensions have told us that TechnoSound can be bought for £27.99 in a special offer running throughout the summer by Firecrest Distribution. They can be reached on 0873 850028.

3 OFF

ABOUT SAMPLERS

surprising as it is only eight pages long. TechnoSound's rightly has been properly printed.

Anybody wishing to upgrade their original TechnoSound to the new Turbo version can do so by sending proof of purchase and £6 to New Dimensions. Another update is in the pipeline and may include such features as direct sampling onto hard disk and some additional real time effects. The current TechnoSound was apparently used by a pop group in Holland called CBF and is credited on their latest album! A twelve bit sampler is also expected later this year.

Also included in the TechnoSound package is an IFF sound library catalogue. There are 67 disks available, each contains an average of 25 samples. The disks are priced at £4 including postage and packing.

Well. So why has it been necessary for two separate companies to produce sound samplers that do not differ greatly and indeed from our tests give very similar results, and even more oddly, seem to have software largely written by the same person? It certainly appears strange that with all the programming talent around it is likely that two separate samplers have been created with very similar technology and possibly the same programmer. Was he so brilliant and unique that no other could be found? It does not do the industry much credit also to market under two different named products which seem so much alike. While they may not be setting out to confuse the poor consumer, the choice the companies are offering does not seem to help buying decisions and indeed may well make the potential buyer retreat to other samplers. For with these samplers, it seems like: "You pays your money but you don't take your choice!"

INFO

Beatstudio
Price: £20.40
City Beat Ltd
PO Box 575
Kempston
Bedford
MK42 7YZ
Tel: 0234 857777

TechnoSound Turbo
Price: £39.99
New Dimensions
Brooklands House
Bryngwn, Raglan
Gwent
NP5 2AA
Tel: 0921 690933/690901

MegaMix Master

MegaMix Master

Rombo Enter The Sound Scene

The first thing you notice about Megamix Master is the different style hardware. Apart from being substantially smaller, a metre of cable runs directly into it and a small jack is attached to the end. This is on the whole not a very practical idea because at one metre it is almost certainly not long enough. However, you can buy a £1.99 lead from Tandy. But at least you don't have to hunt around for a lead every time you want to use it.

Rombo's sampler is also unique as it is the only cartridge that has a printer through port. This allows you to use your printer without constantly unplugging the sampler. The gadgets are easy for the beginner to recognise as they have nice little pictures on them. For example for the echo gadget there is a picture of some mountains and for the "make louder" gadget there is a picture of a big mouth. The way the synth effect works is interesting. When you have clicked on the gadget you are then presented with two sliders. One is for depth and one is for the speed you can then vary the effect to sound like you are either in a closed room or in a large church.

The echo gadget works in a similar way. Instead of depth you can vary the delay. Instead of speed, there is volume. Just try using this when you have headphones on, the delay on your voice is quite amazing. It is also difficult for you to speak when your voice is played back to you a split second later.

It is also possible to process your sample so that it fades either in or out. The program does this smoothly and the effect is impressive.

To summarise, this is a professional looking package that has everything needed to sample and edit sounds. It is fast in processing samples, has plenty of features and is excellent value for money. The sampling hardware is as good as any in this price range and delivers good quality sound.

MegaMix Master
Price: £39.95
Rombo Productions
2 Baird Road
Kirkton Campus
Livingston
West Lothian
EH54 7AZ
Tel: 0506 414631

Professional musician and midi buff Paul Overaa tests out the Miracle Piano Teaching System.

Really a Miracle?

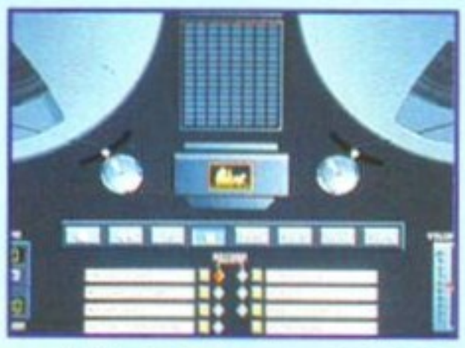
I'd heard quite a bit about the Miracle Piano Teaching System but I must admit that until a few weeks ago I hadn't seen the package in operation. Now that's changed, so here are my impressions.

Documentation

The Miracle system comes with just two small manuals, one of which deals with the general Miracle system issues, the other with Amiga specific material. The reason for the absence of a massive manual is easy to explain - you simply don't need it because the whole Miracle system is based on interactive computer-based teaching. After 10 minutes reading about the system most people will be ready to plug in and get going!

The Hardware

I didn't exactly have a good start here because my review keyboard arrived with something thumping about inside it - it didn't take too long to discover that one of the two internal speakers was loose inside the unit. Presumably this happened in transit but, knowing additionally that some review models do take quite a bashing (from `over enthusiastic' reviewers), I wasn't very concerned about this initially.



I think, however, it is fair to point out that, once the unit had been examined more closely, my opinion hardened and I'm now convinced that the main hardware supplied with the Miracle system, namely the piano/synth keyboard (plus a `volume pedal'), is probably not so well made as, say, a typical budget Yamaha synth. But The Miracle keyboard does have in its favour a touch-sensitive keyboard (most budget synthesizers do not). However, since the Miracle keys are unweighted you are still left with a relatively cheap feeling unit.

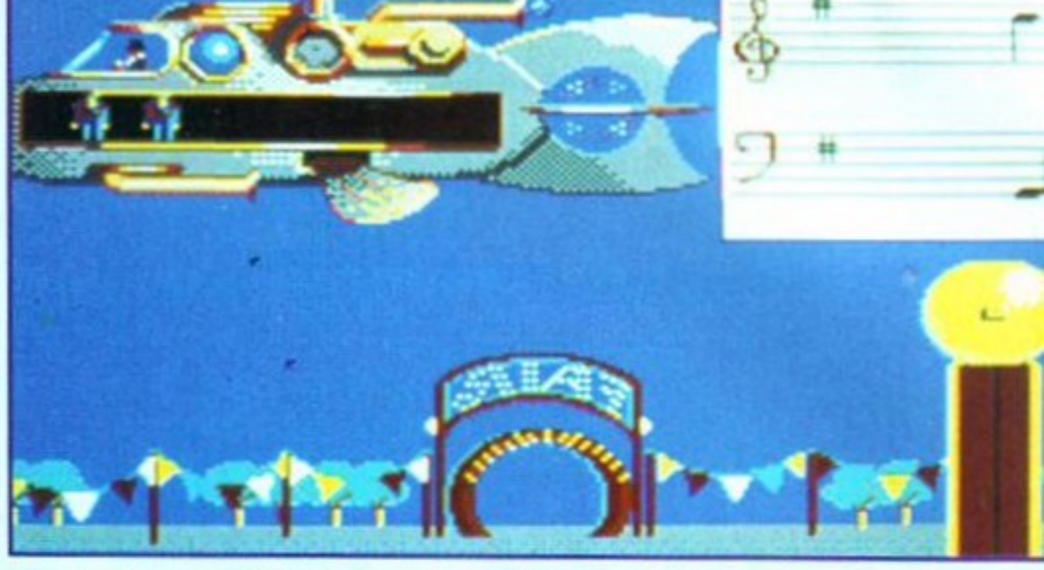
Four Octaves

The Miracle keyboard is a four octave version and has both a customised serial interface and conventional midi in/out terminals. Incidentally, you cannot use the midi terminals while the Miracle teaching system is in operation and presumably this was a conscious design decision aimed at eliminating piracy of the exercises and accompaniments. There are 128 synth voices on the Miracle unit and, as with most synthesizers, there is the usual range of good and not-so-good sounds (in its favour and to my surprise, the quality of one or two of

the piano voices was exceptionally high). one thing did become obvious very quickly once the system was in use: a one meg, two drive system really is the bare minimum for use and even then some disk swapping is inevitable. You don't realize quite how good the Miracle system is until you see it running on a hard-disk machine!

The Software

Now it's time to say some nice things. Blue Ribbon SoundWorks have been involved with the Amiga implementation and so it's not surprising that the Miracle package comes across as being very user-friendly. The idea of having `rooms', such as the `studio' and the `practice room', where certain types of activities are carried out, is excellent. If, for example, you wish to add or delete users from the system you'll intuitively go to the administration room within minutes of using the package.



You can even play games to help you learn

Learning to play with this system is going to be enjoyable because the system can provide additional backing to make your efforts sound good right from the word go. The graded lessons that allow you to work at your own pace are about as good as you'll get without going to a real live tutor.

I was very impressed with the organisation and ease of use.

The course itself has around 40 chapters and each of these may contain as many as 25 lessons. Both the material and the overall approach really is very good indeed and the Miracle System comes across as just that... a `user-guideable interactive learning system' to be used in much the same way as you'd expect a CDTV type audio-visual learning system to work.

During the lessons flashcards appear to test your understanding of what has been learnt. The system monitors your performance, reports on your progress and it can even adjust the exercises to take into account a particular user's weakspots. There were a few occasions when the response of the system puzzled me but on the whole I was impressed with the organisation and ease of use (bar the disk swapping on the floppy-based machine).

Conclusion

The software, and the ideas behind it, are excellent and to my mind there is only one thing that will stop the Miracle System catching on in a big way and that's the dependence of the package on the Miracle Keyboard. I think it is a great shame that the system was not built around conventional midi use, not least because without a special keyboard the cost of the package could possibly be cut by 50 percent or more. At the moment I'd suspect that some potential users may be put off buying the system simply because they already have a midi keyboard and do not want to spend their hard-earned cash buying another. I also think, however, that to some extent you do need to bear in mind that with the Miracle package you are not just buying a piece of hardware and the software that goes with it. You are buying an idea, a novel interactive piano-teaching environment that (from the point of view of the user) has been well thought out. The bottom line then is that from the `interactive learning' viewpoint, which is what the philosphy of the system is all about, the Miracle package gets some high marks indeed. Shame about the hardware!

Price £299.00

You don't realize quite how good the Miracle system is until you see it running on a hard-disk machine!

Simply take a computer and only 10 hours of music lessons and your entire family will enjoy a Miracle For Only £299.00

Here's how . . .

A revolutionary musical instrument that actually teaches you how to play it, thanks to an ingenious interactive keyboard that's unlik anything you've ever laid eyes, or fingers on. It's called The Miracle Piano Teaching System.

Each lesson starts off easy. Then, step by step, the program gets more challenging as The Miracle's artificial intelligence system customizes every lesson to meet the player's individual needs.

The Miracle isn't just child's play; adults find it to be miraculous, too. In fact, for the price of only 10 hours of conventional music lessons, your entire family can experience the joy of learning and playing music.

Best of all, The Miracle, creates its lessons by drawing from its own extensive library of classical, pop and show tunes. All carefully selected to maintain your oryour child's interest and enthusiasm.

Maybe that's why even the most easily distracted adolescents have been known to spend hours completely absorbed in a Miracle lesson.

What Goes Into The Making Of A Miracle.

The Miracle hooks up quickly and easily to any Nintendo Entertainment System,® Commodore Amiga,® IBM® PC or compatibles.

The Miracle keyboard, even without its amazing software, rivals piano keyboards that cost twice as much. The full midi-keyboard has a sustained pedal. Full sized velocity sensitive keys. An output jack that you can plug into a stereo for even bigger sound. And stereo earphones, in case the family terrier isn't too crazy about "Ode to Joy."

Add the software to this astounding keyboard and you have a remarkable music teaching system. One that patiently teaches children and adults alike how to read notes, understand rhythm and, best of all, make music.

The exciting Shooting Gallery game, for example, will instruct you to tell a C sharp from a B flat. Other games teach fingering, rhythm and timing. Flash cards will even appear on the screen for testing music theory.

And, during all this, The Miracle is constantly modifying and personalizing the program to fit the player's individual needs.

So the better you or your children get at playing these games, the better you'll get at reading notes. Keeping rhythm. And then ultimately, playing the piano.

To discover your Miracle, simply send your cheque/postal order made payable to HHL Publishing for £299.00 which includes postage and packing - Today.

Amiga User International
Miracle Piano Teaching Offer
Greater London House, Hampstead Road,
London NW1 7QQ

FREE VIDEO

The Miracle story is told in this magnificent 1½ hour VHS video which also offers step by step tuition and is yours

AMIGA USER INTERNATIONAL

Miracle Piano Teaching Offer
GREATER LONDON HOUSE
Hampstead Road, London NW1 7QQ

I'd love to be able to play the piano . . . please send me a Miracle and my Free Vide

Name

Address

Post Code

Telephone No: (In case of queries)

I have enclosed my cheque/postal order for £299.00 which includes postage and packing, ma payable to HHL Publishing.

You can buy a Miracle Piano Teaching System by Access/Visa Credit Card by Telephoning

VIDEO USERS!

VIDEOWARE PRESENTS A NEW AND INNOVATIVE CONCEPT IN VIDEO TITLING

THE VIDEOGOLD COLLECTION

THIS IS THE PRODUCT YOU HAVE BEEN WAITING FOR!

Six volumes of superb animations to transform your videos into professional looking productions instantly – designed by graphic artists to a professional standard, the volumes cover WEDDINGS, BIRTHDAYS, PARTIES, SPORT, CHILDREN, HOLIDAYS and much more.
Mix and match the animations with your own text – or use our specially designed brushes and animbrushes supplied with each volume to give you ENDLESS variations and cover EVERY occasion. The Animations have been designed to run on 1 Meg machines and require DPaint 3 or 4. Each volume comes complete with a twelve page user guide on how to get the most from your VIDEOGOLD collection – so even if you have NO graphics experience at all – you can't go wrong with VIDEOGOLD!

AND THE PRICE? JUST £5.99 PER VOLUME! (EACH VOLUME CONSISTS OF 2 DISKS)
(or order all six volumes for just £30.00 inc. P&P)

VOL 1 – WEDDINGS *(inc. Engagements, Anniversaries, Animated Wedding Album, etc.)*
VOL 2 – PARTY TIME *(inc. Birthdays, Disco, Karaoke, and much more)*
VOL 3 – FESTIVE *(inc. Christmas, New Year, Halloween, etc.)*
VOL 4 – CHILDREN *(inc. Children's Parties, Christenings, Playing, etc.)*
VOL 5 – HOLIDAYS & PLACES *(no matter where you've been – there's something here to cover it!)*
VOL 6 – GENERAL *(inc. Special Occasions, Gardens, Copyright Messages, Sport, etc.)*

Disks require DPaint 3 or 4 and any other graphics or multimedia program supporting anims or animbrushes and 1 Meg minimum.

COMING SOON!

2+ MEG VERSIONS

The VideoGold Collection of Anim Fonts
The VideoGold Special Effects Pack
The VideoGold Tutorial *(supplied on Videotape – this full tutorial will show you how the experts design Logos & Animations)*

PLUS! How to set up your video system & Genlock – Editing – Audio Dubbing and much more –

Please make cheques/P.O.s payable to VIDEOWARE and send your order stating volumes required to:

VIDEOWARE
DEPT (AUI)
50, HEATHER CLOSE
LOCKING STUMPS
BIRCHWOOD
WARRINGTON WA3 7NX
or telephone 0925 851559 for further information, help or advice

The CDTV Scene

Janet Bickerstaff tests out four of the new arrivals on the newly named Amiga CDTV...

I looked at four more titles for the Amiga CDTV, as it is now accurately called. All were interesting. Two were outstanding.

Town with no name

This is another title from Online Entertainment, this time set way out West. As the story unfolds you are presented with option screens, action screens - when you may have to shoot a moving target - and many animated cartoon sequences. The cursor is a gun. You are up against Evil Eb whose youngest brother is killed at the start of the story. Sounds good fun for the kids, doesn't it? (If they are of the violent disposition, as all kids are...) One problem is that you don't live very long yourself and before you can restart the game you have to sit through another boring four minutes of introductory credits. The concept of the title is good, if only the loading time between screens had been cut. And why NTSC?

Verdict:
This will probably prove enjoyable for some but Online will create better titles...

Online Entertainment
Entertainment - for all ages
RRP £29.99

With relief I turned to...

Heroic Age of Spaceflight

NASA.. The 25th Year

This is history in more ways than one. It is the first title which I have seen with quarter-screen video, CBM's vital window of moving pictures - and moving, breathing video is

John Bickerstaff and Betty Clay dwarfed by Saturn V Rocket Engines

what the pundits say will make multimedia come alive for the masses.Troika used Commodore's CDXL to produce the quarter-screen, 10 frame per second digital motion pictures in stereo sound and a great enhancement to still CDTV stuff it certainly is. As the the title suggests it covers 25 years of spaceexploration from the first space satellites, the Gemini and Apollo missions, to the present Shuttles and the plans for Space Station Freedom in the future.

Although purchased from Metropolitan Computer Products in Dallas,Texas, following a visit to NASA Mission Control at Houston, theversion I have is PAL. There are no pauses or blank screens and the seek and find is instantaneous. At the start you are given the choice of viewing the whole 50 minutes CDXL sound movie or selecting specific segments of it. The main menu has 12 sections covering the history of the exploration of space. Each section has sub-menus covering varying topics and giving text and pictures on screen. You can re-live the magic of the Apollo moon-landing and hear again those thrilling words: "The Eagle has landed. That's one small step for man. One giant leap for mankind."

Copyright prevents the reproduction of screens from The Heroic Age of Spaceflight but, as a reminder of the enormity of space exploration, here are photographs taken at NASA, Houston, Texas.

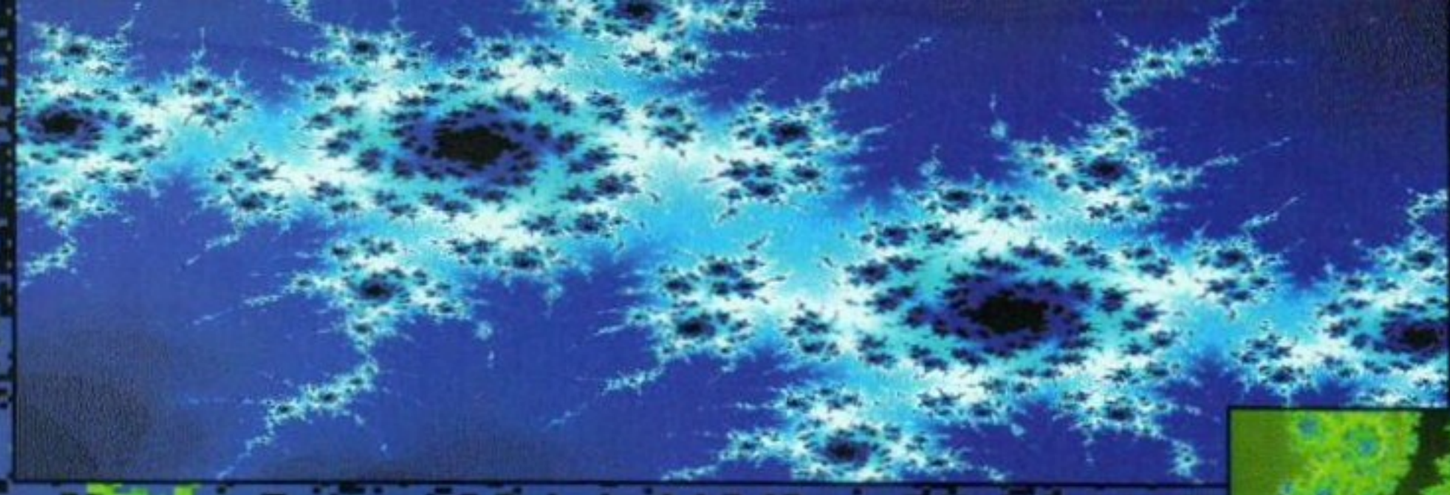
Verdict:
Excellent. A part of history.

Troika Multimedia Inc.
Education - and entertainment - for all ages
RRP £24.99

Fantastic Voyage

Based on the film of the same name, and recently released as an Amiga computer game,

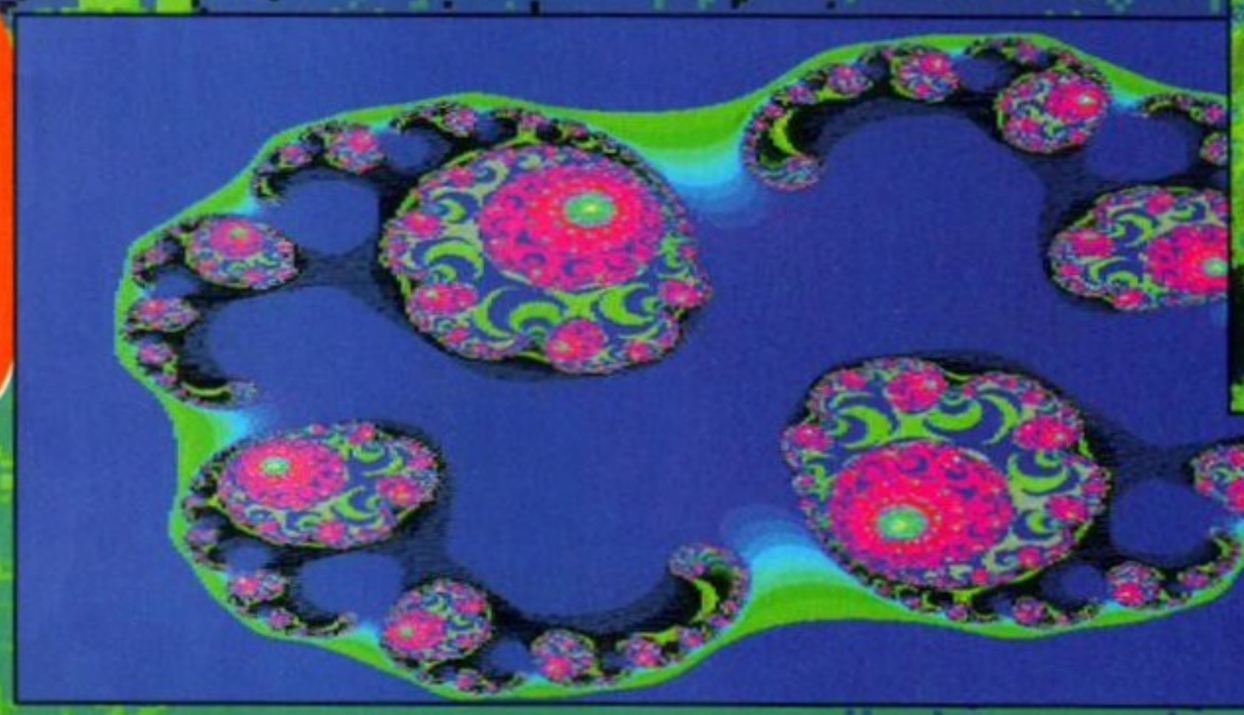
you are in the miniaturized spacecraft "Proteus". Your task is to remove a clot in the brain of an American Scientist. As with many "zap 'em" type games, you must shoot or dodge the obstacles before they get you. Also you have to collect nine pieces of circuit board to make your laser operate in the brain. It looks good and



Fractal Universe _ is it art?

A Julia - a type of fractal

A mandelbrot



The presentation is polished. The first-rate commentary is narrated by Alec Linstead of the Royal Shakespeare Company and the title is dedicated to Amiga developer Kevin Hall who, sadly, died in January this year.

sounds good. However, when it came to playing the game I was exterminated in the first minute or two every time. Maybe you can succeed where I failed!

Verdict:
It's a challenge - try it.

Centaur Software Inc.
Entertainment - for all ages
RRP £29.99

Fractal Universe

And so to my best buy...

From Almathera Systems, this title was written by ICPUG members David Annal and Jolyon Ralph and programmed by Jolyon. The Art Gallery has 400 pre-generated fractal images. You can spend hours generating your own fractals and Mandelbrots. The choice of colours is yours, or by a press of a button you have colour cycling. There is a section on the history and mathematical formulae of fractals, an explanation of different types of fractals and you may travel on an amazing journey, zooming-in to the heart of the Mandelbrot.

The question is asked: "Are fractals art?" To my mind there is no doubt - the colours, shapes and forms are truly beautiful.

Verdict:
It's the tops - buy it and see for yourself.

Almathera Systems Ltd.
Education and entertainment - for all ages
RRP £29.99

K2 Software

K2 SOFTWARE
35 EDGEHILL STREET
READING
BERKSHIRE
RG1 2PU

RING OPENING HOURS
Mon-Sat 9.00 a.m. - 10.00 p.m.
Answerphone operates outside these hours.

0734 583063

ACCOUNTS	
Arena Accounts	102.95
Cashbook Combination	55.00
Cashbook Controller	45.00
Final Accounts	23.95
Home Accounts 2	39.95
Personal Finance Man.	23.99
System 3	37.95
System 3E	49.95
EDUCATIONAL - Best selection in this magazine!!	
Alphabet	16.99
Answer Back J.Quiz	15.20
Answer Back S.Quiz	15.20
Better Maths 12-16 yrs	16.98
Better Spelling B-Adult	16.98
Chemistry	15.99
Donalds Alphabet Chase	19.99
First Letters	6.95
First Letters & Words 3-5	19.95
French Mistress AB	15.20
Fun School 2 (6, 6-8, over 8)	14.99
Fun School 3 (5, 5-7, over 7)	16.50
Fun School 4 (5,5-7,7-11)	17.50
German Master AB	15.20
The Italian Tutor	15.20
The Spanish Tutor	15.20
Magic Maths 4-8yrs	16.98
Maths Mania 8-12yrs	16.98
Micro English	19.95
Micro French	19.95
Micro Maths	19.95
Puzzle Book 2	16.98
Sesame Street - Letters & Watch	16.98
Sesame Street - Numbers Count	16.96
Spell Book 4-9yrs	15.20
Things To Do With Numbers	14.95
Things To Do With Words	14.95
GRAPHICS	
Animation Studio (Disney)	78.50
Deluxe Paint 4	64.86
Deluxe Video 3	68.95
Dr T's KCS V3 Lev II	162.45
LANGUAGES	
Amos Creator	33.95
Devpac 2	42.99
GFA BASIC Compiler	23.45
GFA BASIC Interp	29.99

MUSIC/SOUND	
Deluxe Music Cons Set	49.99
Bars and Pipes Professional	198.95
Master Sound	31.45
Music X 1.1	68.95
SPREADSHEETS	
Advantage	67.99
Professional Calc	129.99
K-Spread 4	79.99
Maxiplan Plus	52.95
UTILITIES	
BBC Emulator	29.95
GB Route Plus	57.95
Mavis Beacon Typing	25.95
DATABASES	
Hyperbook	44.95
Infofile	39.95
K-Data	39.99
Prodata	63.95
Superbase 4	199.00
Communications	
K-Comm 2	24.90
HARDWARE	
Amiga A600HD Machine	459.95
Amiga A600 Machine	369.95
Amiga 1MB Cartoon Classics Plus	355.95
Amiga 1500 8MB Ram Card	210.45
Amiga 1500 AT Bridgeboard	599.95
Amiga 1500 CPU Only	525.25
Amiga 1500 Hard Drive	499.95
A1011 Disk Drive	76.95
A520 TV Modulator	26.95
A590 Hard Disk Drive	290.95
Amiga Light Pen	29.95
Naksha Upgrade Mouse	25.99
A500/A520 Computer Only 1.3v	290.00
A500 Computer with Software 1.3v	£310.00
1084S Commodore Monitor	220.00
Amiga 0.5M Upgrade+Clock+KO.II	36.99
Amiga 0.5M Upgrade+Clock (16)	27.99
Amiga 1.5 Meg Upgrade	88.95
Dustcover Amiga/ST	3.50
Disk Box 3.5" for Ten Disks	1.50
Disk Box 3.5" x 40	7.50
Disk Box 3.5" x 80	9.99
Slimline 1 Mg Diskdrive	59.00
GVP SERIES II HARDRIVES FOR A500	
52Mb	350.00

GVP SERIES II HARDRIVES FOR A1500/A2000	
52 Mb	295.00
120 Mb	476.00
200 Mb	755.00
We can also quote for packs to suit you!	
EMULATORS	
At-Once PC Emulator	124.99
At-Once Plus PC Emulator	208.00
CDTV	
CDTV	464.95
Genlock	134.95
64K Memory Card	74.99
And CDTV Software available!	
We sell a great deal more - just call!	
DESKTOP PUBLISHING	
Gold Disk Type - Decorator	28.95
Gold Disk Type - Designer	28.95
Gold Disk Type - Publisher	28.95
Gold Disk Type - Video	28.95
Pagesetter 2	44.45
Professional Draw	93.56
Professional Page 3 *NEW*	147.95
WORDPROCESSORS	
Excellence 2	68.50
Kindwords 2	34.99
Pen Pal 1.3	57.99
Interword	39.99
Protext 4.3 SPECIAL OFFER	39.99
Protext 5	99.99
Wordworth	87.45
INTEGRATED	
Power Works	56.95
Gold disk Office	64.95

Send a S.A.E. for our FREE catalogue

Name _____

Address _____

Please supply	Qty	Price
VISA	Total	

SHAROW ELECTRONICS

3 1/2" Unbranded Disks (Boxed in 10s)	£4.60
3 1/2" Unbranded Disks HD (Boxed in 10s)	£6.10
5 1/4" Branded Disks (Boxed in 10s)	£7.50
5 1/4" Disk head cleaners.	£2.20
3 1/2" Disk head cleaners.	£1.99
3" Disk head cleaners.	£1.99
6mm Mouse Mat.	£2.99
8mm Mouse Mat.	£3.80
Mouse House	£2.75
Moving Copy holder.	£9.90
Desk Copy Holder.	£6.70
Computer to Television FLY Leads.	£1.70
Parallel Printer Cables (IBM)	£3.99
Quickjoy Joystick.	£9.99
Foam Cleaner.	£2.10
Switch Cleaner.	£2.20
Tape/Disk Head Cleaner Fluid.	£2.30
Small Printer Stand.	£4.00
Amiga Dust Cover (500/500+ Models)	£2.75
PC Dust Cover (ALL MODELS)	£3.90
A4 - Plain Paper (Single Sheet) 500 Sheets.	£3.10
AMIGA A500 - Games Pack	£355.00
SEIKOSHA SP-2400 Super Printer	£165.00
CITIZEN SWIFT 24E - FREE COLOUR KIT. * 24 PIN*	£340.00

MORE PRODUCTS AVAILABLE - CALL NOW
REPAIRS TO ALL MODELS TAKEN - WE ALSO SUPPLY SPARES.

Orders to: **SHAROW ELECTRONICS**
Freepost LS2842, Ripon,
North Yorkshire, HG4 1BR
Telephone: (0765) 607887 Fax: (0765) 606625
Carriage: £1.00 on Disks etc £5.50 on Computers Hardware.

SALES AND REPAIRS OF ALL AMIGA PRODUCTS AND ADD ONS

Reach the top with..... LCL Self-Tuition Courses

NATIONAL CURRICULUM

World leaders ● Hons graduate/teacher authors ● In educational software charts. ● Excellent reviews ● £5 off total for 2, £10 off for 3, £17 off for 4.

MICRO GERMAN (Beginners - GCSE & Business) NEW

New complete course of spoken and written German with graphics adventure game and German business letter generator, 24 programs, book and manual £24

MICRO FRENCH (Beginners - GCSE)

Complete course with real speech & graphics adventure game, 24 programs + a book and a manual. £24

MICRO ENGLISH (8 years - GCSE)

New complete course teaching spelling, reading, writing and oral with real speech, 24 programs and a book and a manual. (Also for EFL) £24.

MICRO MATHS (11years- GCSE)

Best selling GCSE maths course in UK. For ages 11 upwards in 24 program options plus a book and manual. £24

READING WRITING COURSE (3 - 8 years)

NATIONAL CURRICULUM (A.T. 1-5) 24 program course teaching reading, writing & spelling with a book, manual and voice tape £24.

PRIMARY MATHS COURSE (3 - 12 years)

Complete course with full screen colour graphics. NATIONAL CURRICULUM (Levels 1-4). 24 programs + a book and a manual £24.

MEGA MATHS (A level course) Step-by-step course of 24 programs + a book and manual. Full screen graphics for calculus £24.

All Micro courses have superb graphics and music
Most LCL courses run on most computers (PC, ST, BBC, Arc)
(* All appropriate LCL courses are compatible with the N.C. in so far as it has been finalised)

A500 PLUS OR AMIGA

Send coupon and cheques/PO's (+99p P&P) or phone orders or requests for free colour poster/catalogue to:

LCL (DEPT AMI) THAMES HOUSE, 73 BLANDY ROAD, HENLEY-ON-THAMES, OXON RG9 1QB

VISA **or ring 0491 579345 (24 hrs)** PHONE NOW FOR IMMEDIATE DESPATCH

COLOUR PRINTS FROM YOUR AMIGA

UP TO 24 BIT (16.8 MILLION COLOURS)

"DPAINT" AND MOST OTHER PAINT PACKAGES SUPPORTED

SIZED TO, A4 £3.00, A3 £6.00

SECOND PRINTS A4 £1.00, A3 £2.00

AMIGA IBM

DIGICOPY
26 MILBURN ROAD GILLINGHAM KENT ME7 1PQ
0634 572688
0634 841226

SAVE YOURSELF £££'S ON AMIGA SOFTWARE TITLES. For a FREE list of pre-owned games and utilities, all boxed originals and guaranteed in mint condition, send SAE to: Softscan (Dept AUI), PO Box 84, Station Approach, Hereford.

COMMODORE ATARI CITIZEN STAR AMSTRAD CUMANA PHILIPS GOLDEN IMAGE NAKSHA ABACUS SEGA DIGITA

Orders Taken Until 12.00 Midnight

You are welcome to visit our 1000 Sq ft retail shop which is packed with Computer Hardware and Software. Make a dayof it, in oneof Englands loveliest Old Towns.

DISCS...DISCS...

Phone for latest Prices

FULLY GUARANTEED BULK DISKS
DOUBLE SIDED DOUBLE DENSITY 135 tpi
100% Certified – UNBRANDED
USUALLY SONY, TDK or MITSUBISHI etc
GUARANTEED AND SUPPLIED WITH LABELS
DO NOT CONFUSE WITH INFERIOR UNCERTIFIED
PLEASE PHONE FOR LATEST PRICES

20 DSDD £9.99 25 DSDD £12.99
50 DSDD £22.99 100 DSDD £42.00
200 DSDD £82.00

Disk Boxes
Flip Top Disk Holder Holds 12 ..... 99p
40 Disk Holder, Lockable, Top Quality, Anti-static, with Dividers & 2 Keys £3.99
80 Disk Holder, Lockable, Top Quality, Anti-static, with Dividers & 2 Keys £5.99

Disks & Disk Box Offers
Pack of 20 in our Top Quality, Lockable 40 Disk Holder £13.99
Pack of 50 in our Top Quality, Lockable 80 Disk Holder £28.99

Posso Box
Drawer Type Box – Can be stacked horizontally or vertically – Holds 150 Disks £16.45

Disk Labels
Four Assorted Colours
60 for £1.00
200 for £2.00

PRINTER RIBBON RE-INK

Simply open your plastic ribbon case, spray over the ribbon, replace the lid and leave for 24 hours.
BETTER THAN A NEW RIBBON
Guaranteed – Restores dozens of ribbons to new for just £11.99

DISK DRIVES & EXPANSIONS

CUMANA CAX354 1Mb 3.5" Single disk drive – Enable/disable switch – Thru port – Power ex Amiga £52.99
POWER PC880B DRIVE incorporates Anti-click Board, Blitz Back up system software and built in Virus blocker £67.99
REPLACEMENT A500 Internal disk drive, fully compatible and with full instructions. £41.99
MEMORY EXPANSIONS & SYSTEM UPGRAGES 512K RAM Expansions with Clock and On/Off Switch £23.99
1Mb MODULE FOR A500 PLUS Gives 2Mb Chip Memory £44.99
ROM SHARERS
Switching from Mouse £24.99
or 2 position Toggle switch £19.99
KICKSTART ROMS
V1.3 Kickstart Rom £29.99
V2.04 Kickstart Rom £49.99

P.C. EMULATOR
K.C.S. Power PC Board - Fits into Ram Exp. Slot under computer. Does not invalidate warranty £199.99
Adaptor for 1500/2000 ..... £64.99

AMIGA 1500/2000 PERIPHERALS

GVP 52Mb Fast Access Hard Drive with 8Mb RAM Board £264.99
GVP 120Mb Fast Access Hard Drive with 8Mb RAM Board £409.99
GVP - 2Mb SIMMS for above £59.99
Fitted FREE if required
COMMODORE A2300 Internal Genlock £99.99
Amiga 1500 Unpopulated RAM Board £84.99
With 2Mb SIMMS £142.99
52Mb Quantum Hard Drive with SCSI Controller £249.99

C.D.T.V.

Complete with Hutchins Encyclopaedia, Lemmings and Welcome CD Disk £399.99
C.D.T.V. Keyboard £49.99
C.D.T.V. External Amiga Disk Drive £79.99

DUST COVERS

Top Quality Amiga Colour Dust Covers. Tailored, Monogrammed and with Bound Edges.
Protect Your Investment

Amiga Keyboard £4.99
Citizen 120D Printer £4.99
Citizen Swift 9/24/124D £4.99
Commodore Monitor £4.99
Philips Monitor Mk II £4.99
Amiga 1500 Two Part Cover £8.99
Star LC10 Printer £4.99
Star LC200 Printer £4.99
Star LC24/200 Printer £4.99

AMIGA's

OUR LOWEST AMIGA PRICES EVER!!!
ALL OUR AMIGA PRICES INCLUDE
FREE NEXT WORKING DAY DELIVERY

AMIGA A500 PLUS,ONE MEG CARTOON CLASSICS PACK
Latest pack from Commodore featuring: Kickstart V2 & Workbench V2.04, Built in 1 Meg RAM, TV Modulator & Mouse, plus Lemmings, Simpsons, Captain Planet and Deluxe Paint III.
Our best price including Next day delivery £329.99

NEW AMIGA A600
NEW COMPACT DESIGN - Kickstart/Workbench 2.05 Internal 3.5" Disk Drive & IDE Hard Disk Controller, Built in TV Modulator, Composite Video Output, Smart Card Slot, 2 Joystick/Mouse ports. FREE Ability to use Memory Cards of 0.5Mb to 4Mb. Introductory price including One year On-Site Maintenance for In-Home Service & Deluxe Paint III and Free Game £374.99

NEW – AMIGA A600HD
Similar to above but with Built in 20Mb Hard Drive. Introductory Price including One year On-Site Maintenance for In-Home Service £474.99

ESSENTIAL ACCESSORIES PACK
Top quality 40 disk holder, 10 best quality disks with labels, quality mouse mat, mouse holder, tailored monogrammed dust cover.
Special Price £21.99

Extra special price if bought with any Amiga.... £19.99
Ring for details and latest quote.

AMIGA 1500 STARTER PACK
Amiga 1500 Dual drive with 1Mb RAM, Mouse, Manuals and Amiga DOS. The Works - Platinum Edition, Deluxe Paint III, Home Accounts, Elf, Toki and Puzznic.
Total RRP £699.99 ..... ***Audition Price* £549.99**

AMIGA 1500 STARTER PACK
Plus 1084S Stereo Colour Monitor.
Total RRP £959 ..... ***Audition Price* £774.99**

AMIGA 2000 PLUS MS-DOS AT EMULATION
Amiga 2000 Dual drive with Commodore A2286 AT Bridgeboard and 5.25" MS-DOS Floppy Drive.
Total RRP £1,449 ..... ***Audition Price* £899.99**

AMIGA 2000 PVP VIDEO PRESENTATION SYSTEM
Amiga 2000 Dual Drive with 52Mb Quantum Fast access hard drive, SCSI High speed controller, A2300 Internal Genlock, Deluxe Paint III, Scala Presentation Software, Video Cables and Presentation video.
Total RRP £1,299 ..... ***Audition Price* £1049.99**

SERIOUS SOFTWARE

Wordworth v1.1 from Digita £74.99
Scala 500 ..... £89.99
Scala (Needs 1.5Mb Ram & Hard Drive £159.99
Gold Disk Office £63.99
Pen Pal £53.99
GB Route Plus £59.95
Design Works £57.99
Quarterback £46.99
Quarterback Tools £59.99
Home Accounts £19.99
Home Accounts 2 ..... £36.99
X-Back up pro £35.99
Pagesetter II £39.99
Amos £32.49
Amos Compiler £19.49
Amos 3D £21.49
Turbo Print Pro £44.99
Easy AMOS £25.99
Pagestream 2.2 ..... £139.99

SOFTWARE SPECIALS

Infofile Database £29.95
Amiga Logo and Talking Turtle £14.99
Music Mouse £14.99
Rombo RGB Colour Splitter £59.95
Outline Fonts £99.99
Deluxe Print II £34.95
Photon Paint £9.99
Lets Spell at Home £9.99
Photon Paint II £24.99
GFA Basic Interpreter £24.99
TV SHOW/TV TEXT Video Titler and special effects
RRP £159.99 ..... SPECIAL PRICE £49.99
AMIGA VISION Presentation and Multimedia Software
RRP £111.99 ..... SPECIAL PRICE £49.99
PERSONAL WRITE Amiga Plus compatible Word Processor with Spell Checker, Ideal for beginner £24.99

AMIGA 500 HARD DRIVES

GVP 52Mb Hard Drive PLUS 8Mb RAM Board £339.99
GVP 105Mb Hard Drive PLUS 8Mb RAM Board £439.99
GVP COMBO 40Mhz Accelerator Plus 52Mb Hard Drive PLUS 8Mb RAM Board, all in one case £689.99
GVP - 2Mb SIMMS for above £59.99
GVP 16Mhz PC286 Emulator - Plugs inside GVP Hard Drive £229.99
Fitted FREE if required

PRINTERS

We are **CITIZEN SUPER DEALERS** and Authorised to offer their Full 2 Years Guarantee on all CITIZEN Products.
This Guarantee covers all parts and labour including Printer Head.

FREE WITH ALL OUR PRINTERS:
Exclusive Printer Starter Kit Comprising Of:
★ 200 Sheets Quality Paper ★ 200 Sheets Continuous Paper
★ 200 Tractor Feed Address Labels ★ 2 Metre Amiga Printer Cable
★ Special Amiga drivers disk to match your Amiga perfectly to any of our printers.
Free Next working day delivery on all Printers

CITIZEN SWIFT 9 COLOUR *£199.99*
CITIZEN 224 COLOUR *£249.99*
CITIZEN SWIFT 24 COLOUR *£299.99*
CITIZEN PROJET *£399.99*
STAR LC20 MONO *£139.99*
STAR LC200 COLOUR *£199.99*
STAR LC24/20 MONO *£229.99*
STAR LC24/200 MONO *£234.99*
STAR LC24/200 COLOUR *£269.99*
PANASONIC KXP1170 ..... *£149.99*
PANASONIC KXP1124I *£239.99*
NEW PANASONIC KXP2180 Very high quality 9 Pin Colour Printer, 6 Near Letter Quality Fonts, Fast & Super Quiet *£249.99*
NEW PANASONIC KXP2123 Very high quality 24 Pin Colour Printer, 6 Near Letter Quality Fonts, 1 Super Letter Quality Font, Fast & Super Quiet *£299.99*

INKJET PRINTERS
HEWLETT PACKARD DESKJET 500 Colour Inkjet Printer £569.95
CANON BJ10EX Portable Bubble Jet Printer with 3 fonts, Cable etc £259.99
CANON BJ10E Ink cassette £17.99
COMMODORE MPS1270 Ink Jet Printer Special Price £129.99
COMMODORE MPS1270 Ink Cassette £14.99
PANASONIC KXP1124i Very high quality 24 Pin Printer with 7 Letter Quality fonts and 1 Super Letter Quality font. Easy to use Liquid Crystal Display Panel
Special Price including **FREE** Starter Kit *£249.99*
NEW STAR LC24/20 Versatile Low Cost 24 Pin Letter Quality Printer - 10 Fonts - Easy to use Liquid Crystal Display. Special Price including **FREE** Starter Kit *£229.99*

AMIGA BOOK SPECIALS

Amiga Advanced Systems Prog Guide £29.95
Amiga Applications £16.95
Amiga Assembly Language Program £12.95
Amiga BASIC Inside & Out £18.95
Amiga C for Beginners £17.95
Amiga Companion £16.95
Amiga Desktop Video Power* £24.95
Amiga Desktop Video Guide £16.95
Amiga Desktop Video Workbook * £29.95
Desktop Video Production £13.95
Amiga DOS a Dabhand Guide £14.95
Amiga DOS Inside & Out Revised Edition with Disk £23.95
Amiga DOS Manual - 3rd Edition £18.95
Amiga DOS Reference Guide 2nd Edition £5.95
Amiga DOS Reference Guide 3rd Edition £17.95
Amiga DOS Quick Reference £8.95
Amiga Graphics Inside & Out £29.95
Amiga Machine Language £14.95
Amiga Printers Inside & Out £28.95
Amiga Programmers Guide £16.95
Amiga Programmers Handbook Vol 1 ..... £23.95
Amiga Programmers Handbook Vol 2 ..... £22.95
Amiga 3D Graphics Programming in BASIC £16.95
Advanced Amiga BASIC £16.95
Becoming an Amiga Artist £16.95
The Best Amiga Tricks and Tips * £24.95
Elementary Amiga BASIC £14.95
First Book of the Amiga £16.95
Second Book of the Amiga £16.95
Get the Most Out of Your Amiga Vol 2 ..... £9.95
Get the Most Out of Your Amiga Vol 2 * £13.95
Screen Play £9.95
Screen Play 2 ..... £9.95
Inside the Amiga with C £19.95
Inside Amiga Graphics £16.95
Kids and the Amiga – 2nd Edition £14.95
Making Music on the Amiga * £29.95
Mapping the Amiga £19.95
Mastering Amiga DOS 2 – Volume 1 * £21.95
Mastering Amiga DOS 2 – Volume 2 ..... £17.95
Using Deluxe Paint – Second Edition £18.95
Programming the 68000 ..... £22.95
68000 Assembly Language Prog £21.95
MC68000 Programmers Reference Man £8.95
C: A Dabhand Guide £14.95
Learning to Fly with Flight Sim £12.95
Amiga for Beginners - New version W/B 1/3 & 2.0 ..... £12.95
New Version W/B 1/3 & 2.0 ..... £12.95
Using AREXX on the Amiga Plus * **£29.95**
More Amiga Tricks & Tips £18.45
GFA Basic Interpreter with Disk £19.99
Learning C: Programming Graphics on the Amiga £16.95
Amiga ROM Kernel Ref Manual 3rd Edition Includes and Autodocs £34.95
Amiga ROM Kernel Ref Manual 3rd Edition Devices £32.95
Amiga ROM Kernel Ref Manual 3rd Edition Libs £31.95
Amiga Hardware Reference Manual - 2nd Edition £10.00
Amiga Hardware Reference Manual - 3rd Edition £25.95
Computer Viruses & Data Protect £16.95
Mastering Amiga Beginners £19.95
** = With FREE Disk*

ACCESSORIES

ZY-FI Amplified Speaker System. New Twin Speaker each with three drivers to give full Hi-Fi Quality Sound from your Amiga. Supplied with Power Supply £39.95
TRACEY Mouse Drawing Aid. Attaches simply to side of Mouse and features precision moulded crosshairs to enable you to trace any picture into your graphics package. With full colour instruction manual £7.95
SCREEN, CASE & KEYBOARD CLEANING KITS
Consisting of:
10 Anti-Static Wet/Dry Screen Wipes
20 Microwipes Non Woven Cleaning Cloths
1 Anti-Static Foam Cleaning Aerosol
25 Safebud Cotton Bud Sticks
Brings your computer up like new !!!!
Full Instructions £14.99
AUDIO LEADS – Connect your Amiga to your Hi-Fi
3 Metre Stereo Audio Leads £4.99
5 Metre Stereo Audio Leads £5.99
Premier Control Centre
Sits over Amiga as Monitor Stand & Second Disk Drive Holder. Colour Matched to Amiga and supplied with extension Plugs and Sockets to bring Ports forward to front side. £45.99
Quality Soft Mouse Mat £2.99
Mouse Bracket (to hold mouse) £1.99
3.5" Disk Drive Head Cleaning Kits £1.99
Twin Joystick/Mouse Extension Lead £5.99
Joystick/Mouse "Y" Lead £5.99
Joystick/Mouse Auto Sensing Switch Box by Robo £16.99
3 Metre Joystick Extension Leads £4.99
Aerial Switching Boxes, fit in TV lead to eliminate constant disconnection and wear on TV £3.99
Surge Protector Plugs £11.99
Printer Cables £7.99
Modulator Extension Lead Stops Your Modulator falling out!!! Plugs into Modulator port and Modulator and allows Modulator to sit along the back of the Amiga instead of projecting. Approx 12" cable length £10.99
Naksha Mouse with FREE Mouse Mat, FREE Mouse Holder and Operation Stealth Game £22.99
SQUIK Mouse - same spec as Naksha but without extras £14.95
Techno Plus Mouse Microswitched 300DPI!! £17.95
ZYDEC Handy Scanner £99.99
POWER Scanner £99.99
GENITRAC 200DPI Trackball £44.99
GEIUS Triple Mouse High Quality 350DPI Mouse with FREE Mat and Pocket £16.99

EDUCATIONAL SOFTWARE

Fun School 2 – Under 6 ..... £12.45
Fun School 2 – 6-8 Years £12.45
Fun School 2 – 8 and Over £12.45
Fun School 3 – Under 5 ..... £15.45
Fun School 3 – 5-7 Years £15.45
Fun School 3 – 7 and Over £15.45
Fun School 4 – Under 5 ..... £16.45
Fun School 4 – 5-7 Years £16.45
Fun School 4 – 7 and Over £16.45

KOSMOS
Answer Back Junior £14.45
Answer Back Senior £14.45
Fact File 500 – 20th Cent. History £7.95
Fact File 500 – General Science £7.95
Fact File 500 – Know England £7.95
Fact File 500 – English Word £7.95
Fact File 500 – Natural History £7.95
Fact File 500 – World Geography £7.95
Fact File 500 – First Aid £7.95
Fact File – Spelling £7.95
Fact File – Sport £7.95
Fact File – Arithmetic £7.95
Fact File – Association Football £7.95
The French Mistress £14.45
The Italian Tutor £14.45
The German Master £14.45
The Spanish Tutor £14.45
Maths Adventure £19.99

L.C.L.
Micro English (GCSE) £18.95
Micro French (GCSE) £18.95
Micro Maths (GCSE) £18.95
Mega Maths (A Level) £18.95
Primary Maths (3-12) £18.95
Reading & Writing (3-8) £17.95

MISC
Amiga Logo £14.99
Better Maths (12-16) GCSE £16.99
Better Spelling (8-Adult) £16.99
Lets Spell at Home-SPECIAL £9.99

MONITORS

PHILIPS CM8833 Mk II Colour Monitor. High Resolution, Twin Speaker Stereo complete with all Leads and One Year on-site Warranty with FREE F19 Stealth Fighter Simulator £209.99
Commodore 1084S Monitor High Resolution Colour Monitor, Twin Speaker Stereo inc Leads £229.99
NEW COMMODORE 1085 SDZ Stereo Colour Monitor £229.99
GOLDSTAR Colour 40 Channel Monitor/TV with Full remote control and includes Amiga Scart Leads £179.99
Genuine Philips Tilt & Swivel Monitor Stands £16.99
Please note that all our Monitors are official UK Specifications. We do not sell Grey Imports of any kind
All our monitors include FREE next working day delivery

AUDITION COMPUTER SERVICES

Dept AUI, 35 Broad St, Stamford, Lincs, PE9 1PJ
Tel: 0780 55888 Shop Hours 0780 720531 Out of Hours
Switch Cards Welcome

Telephone direct to our mail order hotline. All major credit cards accepted. Quote your number and expiry date. Same day despatch.

Send all forms of payment made payable to Audition Computer Services. With your order please send your name, address and daytime telephone number. Along with your detailed order requirements. Goods will be sent by post, free of charge immediately after cheque clearance

All our prices include FREE standard delivery on all orders over £15.00.
Next Working Day Delivery only £2.50 extra on all orders over £100.00.

ZYDEC GOLDSTAR TOSHIBA HEWLETT PACKARD CANON EPSON MITSUBISHI PANASONIC JVC DIGITA SEGA NAKSHA ABACUS GOLDEN IMAGE

COMMODORE ATARI CITIZEN STAR AMSTRAD CUMANA PHILIPS GOLDEN IMAGE NAKSHA ABACUS SEGA DIGITA

THE CLONE RANGER

Peter Hayes test drives the new KCS PC board software upgrade.

The KCS PC Powerboard has been with us for just over two years, having been produced by Kolf Computer Supplies of Holland and distributed by Bitcon Devices in the U.K.The board has provided Amiga users with a chance to run some of the vast range of available PC software in its normal MS-DOS disk format.

The board and original software was reviewed in this very magazine when it was first supplied but to summate quickly for those who missed the earlier coverage: the board plugs into the trapdoor of the standard Amiga 500 (or Plus) and can fulfill the role of a half meg memory extension, so it can remain in place indefinitely.

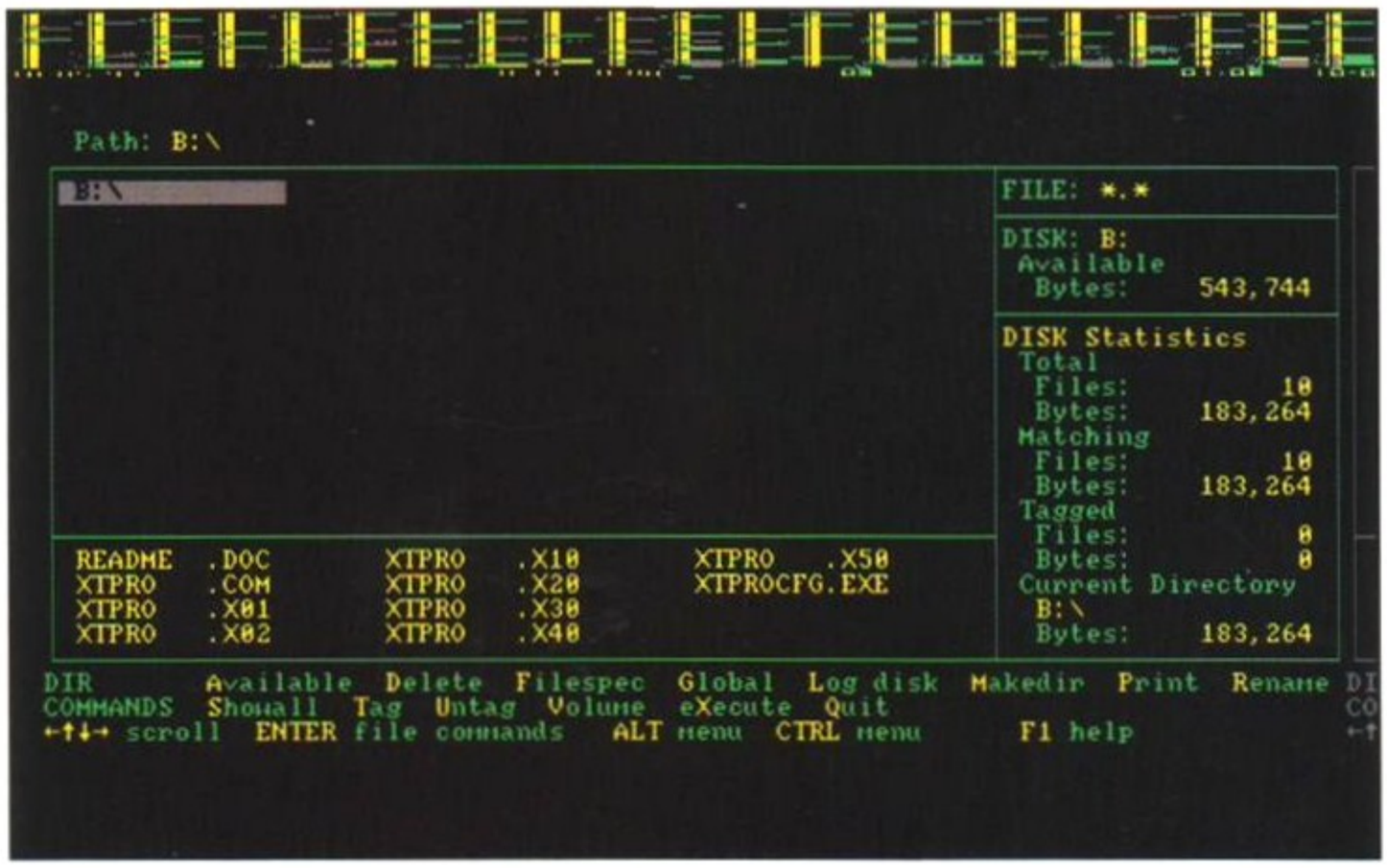
For other Amiga models (bar A600) a special extra extension unit has to be purchased but again it can remain in situ. When triggered by the provided software the Amiga becomes effectively a PC clone, able to deal with the MSDOS controlling language and still make full use of normal Amiga hardware devices, such as extra drives, mice and printer cables. By way of a bonus the board also provides a special half meg reset proof RAM disk that can be used in both the machines' guises.

While in its original form the target software range was disk packages that operated with 640KB of free memory - or less - and that ran under the screen modes MGA or CGA. With this upgrade that standard has moved on to cover all the popular screen modes, EGA and VGA among them and also to make use of any external memory expansion you may have installed. Also taken advantage of is the added power of co-processors (should you have them, naturally) and hard drive owners can now launch the board from that particular device as well.

New Manual

The optional control language MSDOS is still stuck on version 4 but those who wish to can happily upgrade this too, although only in a private capacity and not through Bitcon. There is also going to be another version of the manual available to all new and registered users which will detail all mentioned features, although this wasn't available at the time of writing.

The first thing that is worth saying is that both the Amiga and the PC are not just one machine but a whole range of machines with differing capabilities and intentions. In the board's original guise I would have had no hesitation in saying it was an attractive and space saving alternative to a cheap(ish) PC clone when running on a bare A500, but now Bitcon advertising is making more claims to its powers. The only trouble is that the board's 286 processor chip running at 10MHZ is not the ideal bedrock for power and memory-hungry utilities such as Windows and Lotus 1-2-3, unless you're got a very powerful Amiga set up indeed, and even then...



I recommend giving yourself a day or so to get a feel for the system

Those who intend to push the system to the limits should at least have a demonstration of the board and software working on their own Amiga set up, so they are quite sure of what they are getting.

With a standard Workbench front end you can choose your set up from the icon choices of Standard (Amiga 500+15000), 68020-30 (for co-processor users), Preferences (to alter the interpretation of PC software), Standard 2000 (for the plain Amiga 2000 user), 68020-30 20000 (for the co-processor Amiga 2000) and HD Set Up (for a hard drive). Having made your choice/s you can then get on with loading the normal MSDOS control disk and then in turn your target PC program.

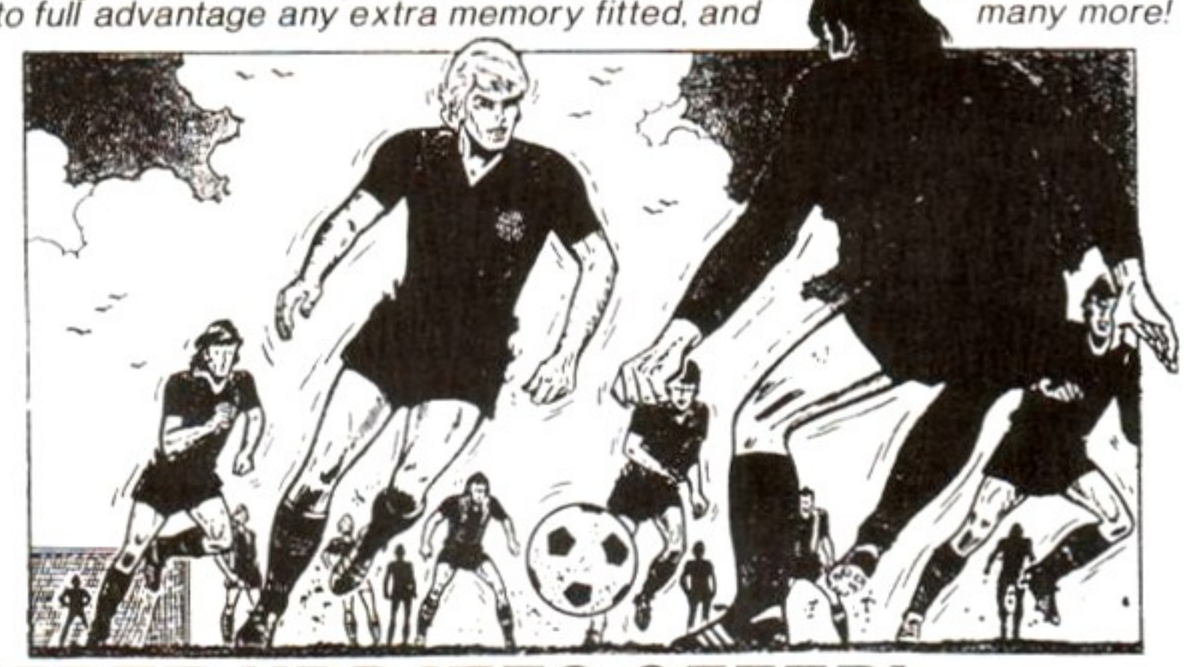
Old hands with PCs will have no trouble at this stage but many new users who are only used to the Amiga may well be confused. Those new to the format would benefit from having some PD disk exploring and →

FOOTBALL TACTICIAN

Until now, football simulations came in two categories: arcade and management. Few, if any, ever bothered with the all-important STRATEGY which a successful manager is to master, both before a match when deciding on squad selection, and during the match when high-drama, real-time decisions must be made on tactics, substitutions, set pieces and player deployment. But now, for the first time on any major computer, there is a superlative management game that encompasses all forms of soccer strategy: it is called **FOOTBALL TACTICIAN.**

Team selection, needless to say, remains a critical element in any successful campaign: and here you will be aided with a wealth of player data, never seen in any soccer program before. Gone are the days when a player was given a single skill level. Each player is now analysed in up to 20 different aspects, enabling you to select the side best suited for the match in hand. And then to the BIG innovation of **FOOTBALL TACTICIAN:** full on-line, real-time involvement during the match! For the first time ever, you will, as a manager, be able to alter your strategy : choose a defensive or offensive system, mark certain opponents, drop back some of your players if the pressure is tough, decide exactly when substitutions should be made, play the off-side trap, go for quick counters, etc... With full on-screen commentary and minute-by-minute feed-back, you're as involved in the match as any of your players! When you further consider that this game is written in 100% machine code (unlike scores of other slow-motion offerings which are written in basic), that up to twenty two users can play this game at the same time, that accurate records are kept on all 440 players in the first division, right down to their exact market valuation, that a built-in editor allows you to change any player's or manager's name, you will realise that this is no ordinary soccer manager. THIS is the REAL THING. You're in charge. You manage your side before and during the match. Nothing is left to chance. Can you rise to the challenge? Try **FOOTBALL TACTICIAN** and prepare yourself for the ultimate football experience.

Amongst the many features: intelligent computer behaviour, lively transfer market, ability to replay ANY match of the week with full commentary, three levels of commentary from highlights only to every single ball challenge with all players named, ability to retrieve any fixture from the last 21 seasons, top scorers chart, friendlies, speed control, twenty player squads including the VERY LATEST transfers right up to this very week, full European Cups program with every single European player accurately named, selectable positions, automatic and intelligent substitutions by computer opponents based on player fitness, fatigue and tactics used; computer opponents will automatically change tactics to respond to situation on the field, ability to utilize to full advantage any extra memory fitted, and many more!



FREE UPDATES OFFER! *Because Talking Birds are committed to providing the most up-to-date football manager ever, purchasers of FOOTBALL TACTICIAN will receive free update disks for a whole year! As players are transferred, injured or revalued, as managers are sacked and teams promoted or relegated, it is essential that up-to-date data disks should be made available to the serious user. Beyond the first year period, this service will be available as an optional extra.*

AMIGA and ATARI ST/STE Double-sided disk.

Please rush 1 copy of ***FOOTBALL TACTICIAN***

I own an AMIGA A500 1meg /A500+☐ A500 1/2 meg ☐ ATARI ST/STE☐

Name

Address

I enclose cheque for £19.95 ☐

My Visa number is

Visa or Access orders: same-day dispatch. Overseas please add £1 p&p

TALKING BIRDS 0702 523607

5 Minster Close Rayleigh Essex SS6 8SF

NEW UNIQUE ART TUTOR

Learn the secrets of Artists, how to draw, how to tackle perspective, get proportion right, and many, many more insights into ART.

Hundreds of savable pictures in IFF.

Powerful, simple to use Built-in Paint program.

Drop down into paint program from within tutorial.

Have a go yourself, then pop back into the tutorial at the point you left!

Complete with comprehensive, illustrated 56 page manual.

£25 (inc. p&p)

"A brave and mostly successful attempt at a difficult subject and is well priced." ST USER
"Excellent' and 'Good' Rating

"An ingenious package at a very reasonable price" ST FORMAT

"I like the program...check out Art Tutor"
AMIGA FORMAT (78% RATING)

"This is an excellent tutorial for beginners in art studies and is sufficiently imaginative to stimulate further interest in the subject." MICRO COMPUTER MART

Castlesoft

LEVENMOUTH BUSINESS CENTRE,
RIVERSIDE ROAD, LEVEN,
FIFE KY8 4LT

TEL: 0333 421243 (9.30 - 5.00)
Tel: 0333 34819 (outside hours)

launching tools to hand. I have some menu'd tools on my MSDOS working disk, although this requires some knowledge to set up. I recommend giving yourself a day or so to get a feel for the system anyway before launching into any serious work, given the slightly different way the system operates.

Special Amiga software has to interpret the board's output and transfer it into something that the Amiga hardware can understand. The only way to communicate to Amiga devices is through Amiga protocols.
This introduces another (slowing) stage to the proceedings that normal PCs don't have to go through, but to compensate it gives the user a chance to break out of any software at any time. During these breaks the board's preferences can be altered to suit the particular circumstances, although the software is quite "smart" and doesn't ask you to do too much unwarranted work. The built-in software flicker fixer automatically tries its best to keep the picture as still as it can and given that normal interlace screens can flicker anyway it's hardly the board's fault. Those that have invested in a hardware flicker fixer will benefit greatly from that investment, especially when using high definition PC screens.

I deliberately choose to test titles that I knew to be solid and non-flaky so that nobody could blame the software alone for any subsequent faults.

In the past the board has been effective with text based programs and as expected this remained true with the new software upgrade. I tried two word processors, one from the public domain and one commercial. They were both usable. The software has a special mode for text and this renders it not only solid but surprisingly quick to boot. I cannot see you having any problems with any correctly written text based programs (within memory and power limits) although getting the output onto your printer is a problem I'll go onto confront later.

Enhanced Range

The real meat of the upgrade is the enhanced range of screen modes, so with baited breath I tried a commercial paint package from Logitech. The software had to render it in slightly wobbly interlace mode but the program worked quite well, if a little more slowly than I might have liked.

The software mouse driver provided with the program drove my Amiga mouse as well, which was a bonus, although the upgrade disk does contain a proven mouse driving utility. The drawing procedure was slightly hampered by it having a slight delay in its "take", but the menus and tools all worked as expected. For those who wish to transfer images back and fourth from PC to Amiga (or vice versa), you're on your own, although the public domain does contain some tools that might suit.

One of the real pluses of this board is the chance to have a go at the whole range of public domain disks, some of which, such as the programming language COBOL, are not available for the Amiga.

When testing out established Public Domain my fortunes were mixed, although this might also be said of some real PC clones as well. Although everything text based ran as well as expected, even when using the higher definition screens, some games' screens became a garbled mess. This also happens with some commercial games (so I'm told) and should be borne in mind before any purchase, alongside questions of whether the target software will run quickly enough to please. This remains an X factor in products both sides of Commercial/Public Domain fence and one that remains highly personal. I would content myself with using the board for "serious" software while entering the normal Amiga mode for games, although the risk in public domain is negligible.

One of the problems of the board is that it can only drive serial printers and not parallel ones, which will remain a problem to the vast majority of the general public. Given that the questions of printer driver software are not fully addressed either, a lot of people are going to find it hard to output their work to their target printer. Sending text back to Amiga format via such PD utils as Multi-Dos and Messy SID is the preferred choice for a lot of people, although it does make life fiddly. Outputting your files at work or on a genuine PC elsewhere might be another obvious answer.

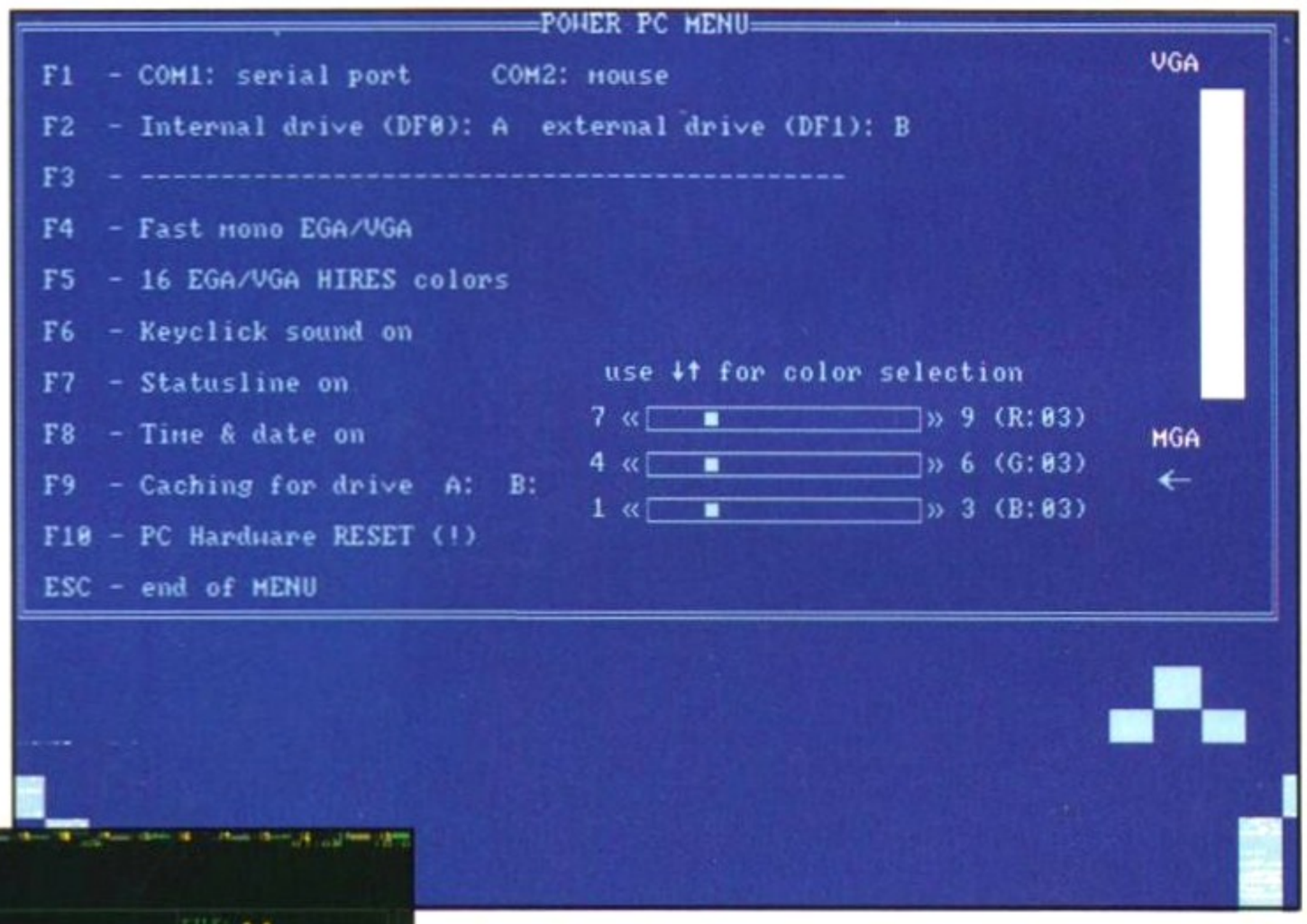
The other problem for me is that the Amiga Action Replay Cartridge 111 refuses to cooperate fully with the board. It can take IFF screenshots but after that the software crashes, which suggests it uses "tricks" rather than excepted Amiga protocol. This is a shame because it makes getting PC images onto Amiga disks tricky and also prevents the whole system been dumped to disk to pick up again later, both things I'd rather hoped for before purchase. I guess this is just the slings and arrows of two separate third party hardware manufactures.

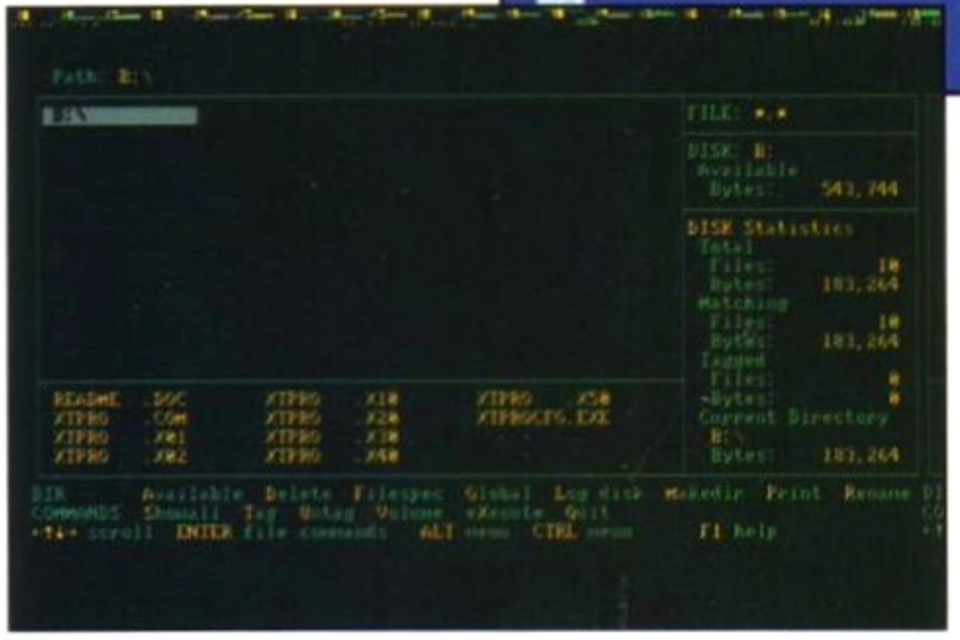
Sending text back to Amiga format via such PD utils as Multi-Dos and Messy SID is the preferred choice for a lot of people

Good Value

With the introduction of a wider range of tools and screens, the board's definitely an improvement on what has gone before and it does represent good value for money. With modest text based software it's just as good at its job as any PC at any price and that must remain the board's major selling point.

The fact that it can now display high definition PC screen modes and remain workable even on a domestic television is a testament to the software authors' programming skill and should be viewed merely as a bonus. This makes the Powerboard a good product at a modest price - which in the world of colour screen PCs is a rare statement indeed.





INFO:

BITCON DEVICES.
ADDRESS:88 BEWICK ROAD,
GATESHEAD, TYNE AND WEAR,
NE8 1RS, ENGLAND.
PHONE: (091) 490 1919

PRICE: BOARD PLUS MSDOS 4 £219.95
BOARD MINUS MSDOS £189.95
ADAPTER BOARD FOR 1500/2000/3000 £74.95
(ALL PRICES INC VAT)

KNOCK DOWN PRICES!

Subscribe to Amiga User International for 12 issues and we will knock £5.00 off the subscription rate!

Subscribe for 24 issues and we will knock £11.00 off the subscription rate!!

WHAT ARE YOU WAITING FOR? DO IT NOW!!

Fill in the coupon below and send it with your remittance to: HHL Subscriptions Department, Lazahold Ltd, P.O. Box 10, Roper Street, Pallion Industrial Estate, Sunderland SR4 6SN (The first issue of a new subscription to be delivered will be one or two issues after the one you placed your order in.)

Please send me my 12/24 month subscription to AUI at the special discount rate of £ _____
I enclose my cheque/money order for £ _____ made payable to HHLPublishing or debit my Access/ Visa card. No._____ Expiry date _____

Name _____
Address _____

_____

_____(Please enter postcode to ensure prompt delivery)
Signed._____ Date._____ AUI 0892

UK £30.40 12 mths	EUROPE £53.20 12 mths	REST OF £75.00 12 mths
£59.80 24 mths	£105.40 24 mths	WORLD £149.00 24 mths

Overseas rates include Airmail service

Education

ADI

Martin Witton examines two interesting programs covering the National Curriculum and looking at a useful aid to understanding, and using databases at home.

Are we going to see a repeat of the success of Fun School which was influential in helping to build the educational game into a force in the Amiga market?

EuroPRESS Software, The makers of the highly successful Fun School, have launched ADI for 11 to 14 year olds, and are launching ADI in the U.K. as an educational learning tool in Maths, English and French using an extra terrestrial character who guides helps and tutors the student.

ADI uses his many facial expressions to interact with students, checking their performance at regular intervals, whistling at their progress and going to sleep when bored! He tells jokes to keep them amused and helps them play games for recreation and reward.

ADI is a two part learning system. The central core of this system is ADI's basic environment. Into this can be loaded various learning applications. The program is designed to enable students to put into practice what they have learnt. The pace of learning can be set through any of the topics and ADI will offer advice and information at all stages. Clicking the mouse on ADI will get him to talk, but if you click on him too often, he may get angry!

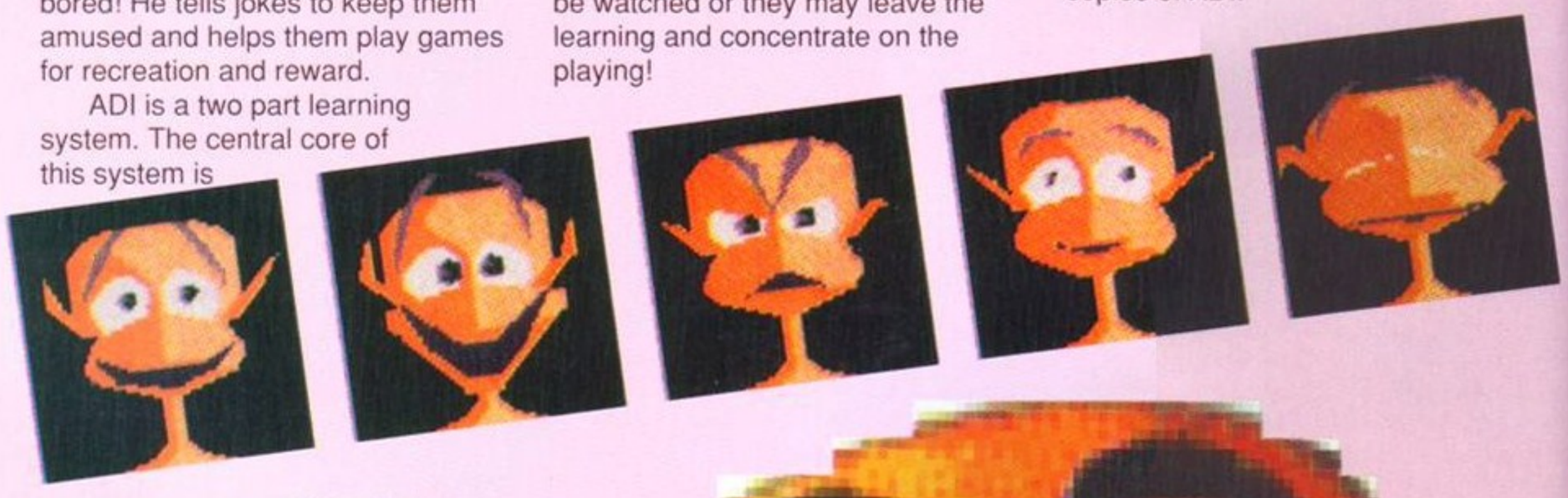
ADI Maths 11, ADI Maths 12, ADI English 11 and ADI English 12 are the first of the programs to be released. Maths and English for 13 and 14 year olds will follow in the Autumn as will French for 11 to 14 year olds. All packages, say Europress, are carefully aligned to the National Curriculum.

In addition to the work and play modes, the program includes games, either to click straight on to, or as a reward for good work. Some of them are like the ever popular Breakout games that have been around for years, But who hasn't spent hours on - as it is called on the Amiga - Arkanoid? The games themselves will prove a powerful attraction to kids. But they'll have to be watched or they may leave the learning and concentrate on the playing!

A `personal diary facility allows the user to write personal notes, kept secret by means of a password. A separate formatted disk is needed to save the diary:

Sending A Letter

The `send a letter' facility allows the student to write letters to disk which can be given to friends (with Amigas of course!) who also have copies of ADI.



You have to agree a password with the friends and remember to tell ADI what the code is. Once the letter has been saved, you can pass the disk to the friend who can read it by selecting the `read a letter' function.

One of the highlights of this program is the `Documents' option. This is a mini encylopaedia of information including for example: European atlas, illustrated proverbs and animated sequences, such as the water cycle, food chains, animals in danger, the evolution of man etc. When working with this application, choosing this function will present the user with a document which contains

The help function will throw up pictorial menus within applications which will reveal a full list of the exercises group which can be attempted.

comprehensive information relevant to the current section of the application.

Help is often a welcome addition to any program, particularly as in this case when the user may not be sure of what some of the icons or functions mean. In ADI, the help function will throw up pictorial menus within applications which will reveal a full list of the exercises group which can be attempted. Within the exercises, specific help is given to help the student complete the exercises or problems. This function can be employed when the user is not certain how to answer any question or for advice if you are confused!

The central core of ADI's teaching technique lies in the applications. A single application covers one subject for a single age group. For example English 11/12 has been designed for 1st year senior pupils - year 7.

Applications are arranged like books. Each `chapter' is made up of smaller units called sub-chapters. Once a chapter has been loaded a pictorial menu is shown. When you have discovered what a chapter contains you can load sub-chapters. Chapters and sub-chapters can be attempted in any order. Once you have loaded a sub-chapter you can skip forward between exercises by clicking on the Forward icon. However, chapters are arranged in order of difficulty and it makes sense to progress through in the order they are presented.

Each exercise is made up of a number of questions. Sometimes a group of questions will be preceded by an introductory screen. These provide useful information about the exercises. Some (such as the English applications) will be presented with accompanying text. This may provide examples which back up the work covered by the exercises or it may form the basis for comprehension and other similar types of questions.

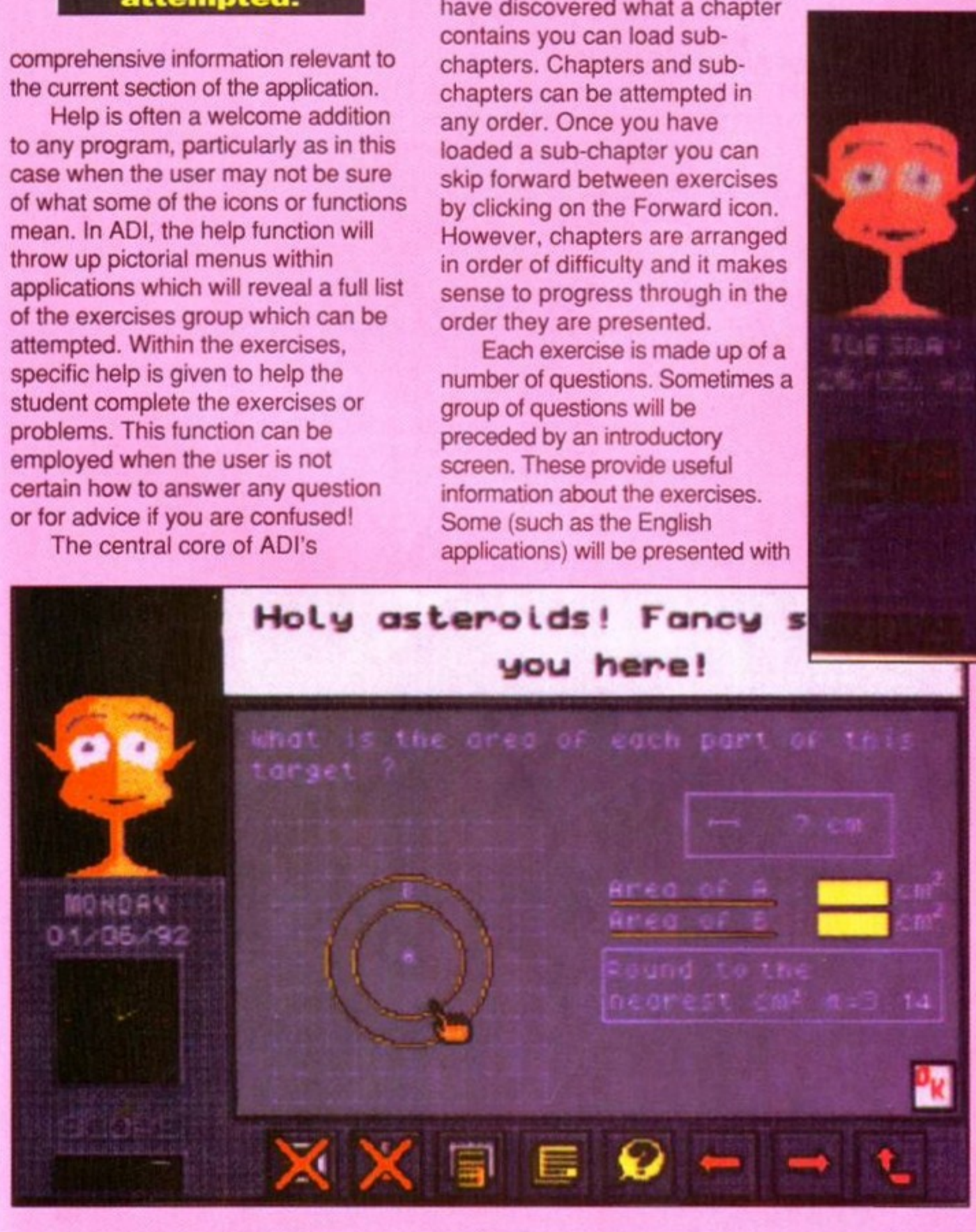
Evaluation Mode

ADI's exercises are not just designed to test knowledge. They are there to help the student progress in a subject. The program has an evaluation mode which will be activated when six exercises have been completed. The evaluation screen will give the results for the current sessions as well as your average over the preceding month.

While there have been a plethora of programs designed for younger, primary school children to fit in with the national curriculum, there are not so many on the market for the secondary school level. ADI seems designed to try to fill this gap. It is certainly a comprehensive program well presented and worth purchasing. It supplies facts and ideas without letting errors slip through and it also teaches the student to work by consulting its many available on-screen documents.

The English language version of ADI was developed, after collaboration with the French company, Coktel Vision, following discussions between teachers, psychologists and technical experts. The result is a program in which children can get used to work in and gain pleasure from learning. Combining pleasure from learning with encouragement and information is essential in any educational program and ADI gets top marks for achieving this. No doubt Europress hope ADI will turn out to be the Fun School of the 90's and they may be right.

Price £25.99



Education

HOME BASE

]Has the guy with the Jag paid his subs to the Membership Secretary?

Martin Witton finds a program that lets us learn from a program that can do what the first computers were created for and even organise ourselves in comfort.

Understanding how material can be stored and yet kept easily accessible is a useful piece of knowledge. But database programs in the past have often been far too complicated either for the home user to understand or employ for domestic needs.

Homebase is a database program which has been designed to allow the home user to store data records in a similar manner to a card index box, so making it relatively friendly to use and certainly helpful to learn from. 1 meg RAM is required and a mouse, and the program is produced using a large font which can easily be read on a TV screen.

Extended Version

The program is suitable for both beginners on the Amiga and for more experienced users. An extended version is available with more advanced features such as the facility to record sounds and pictures. A long way from the old dry just text programs...

The program is controlled by a series of buttons displayed on each screen. A gadget is activated by clicking and releasing the mouse pointer and starts with an on-scren tutorial to demonstrate the functions of the program.

Too many of us just sit down and expect the whole program to be self explanatory. But as with all far ranging programs it is essential to read the manual, which in this case is well written and presented. When used in conjunction with the tutorial screen, the scope of the program is soon obvious.

Choosing the right record keeping system is important, and Homebase could be well considered to meet a variety of needs. Using the card index system, records are held on individual files and each file can hold a maximum of 250 records. When a file is opened all its records are read into the computer's internal memory, where they can be edited, copied, sorted or deleted.

The importance of backing up files is stressed and Homebase has an additional safety feature - the back-up file. Before any current data file is written back to disk, saving the data to the same file from which it was loaded, the original file is duplicated and renamed BAK extension to its file name. Here the use of a second disk drive is useful.

Features

Features of Homebase include: adding new records, copying records, pasting records, deleting records searching for records, moving directly to records, marking a record, sorting a record, printing records and the file requester.

The disk is conveniently divided into smaller subsections called directories. These can be used to group similar files together. Directories can be nested so that an individual directory can contain not only files but further sub-directories. The sub-directories can hold more files and more sub-directories. The advantage of this feature in Homebase is the ability to access the sub-directory you require instantly.

Every household no doubt keeps records - from Christmas card lists to telephone numbers of useful contacts such as plumbers and repair specialists. People who belong to clubs or voluntary groups may need to keep membership details and the extensive facilities of this program enable the user to have fast access to information. Has the guy with the Jag paid his subs to the Membership Secretary? You can soon find out and come down on him hard if he hasn't!

With the growth in the number of people working from home, access to records is often a necessity. Finally Homebase could encourage home users to be more organised and tidy - and don't we all need it! Having all home records safely stored in one place will avoid the need to search around desperately around the house looking for Nicholas's friend Oliver's phone number or Victoria's rubella innoculation date. The only thing it won't keep tidy is their bedrooms!

DATABASES

Storing records at home is often the reason why people choose to obtain a computer. And it was in fact the original purpose for which computers were created.
A survey of people who have recently acquired a computer system showed that householders wanted a computer for word processing facilities (32%) and for record keeping (30%) as a primary reason for their purchase. Younger users said that they wanted a computer for games only, but surprisingly few said they originally considered buying a system for educational programs. Having purchased the Amiga, the survey showed the educational programs were more popular than users had originally realised while the graphics on the Amiga were commended by a staggering 90%.

COMPETITION TIME

Win an amazing holiday to DISNEYLAND

plus £300 spending money!!

0891 767 429

Fancy a Sega Megadrive pack?

It's great fun to use and could be yours if you call

0891 767 431

WIN £1,500 *Cash*

0891 767 430

How would you react with a *NINTENDO NE5 ACTION SET*

complete with light gun & games?

0891 767 432

Own a computer or console already? – why not call our fantastic computer game review line or our cheat and tips computer line! – ***IT'S TOTALLY MEGA!!! . . .***

0891 767 435 **0891 767 436**

Have a chance to *"Beadle"* around with a state of the art JVC Electronic Camcorder!

0891 767 433

Win a CRUCIAL Amiga 500 *plus* five top selling computer games.

You simply MUST have a go!!

0891 767 434

Just dial any of the above numbers – the more times you call, the better chance of winning!!!

Calls charged 36p per min cheap, 48p per min peak.ACS LTD, CA2 5ND Competitions vary but normally last only a few moments.

entertainment now!

Ashley Cotter-Cairns and Andy Moss take you on a trip through this month's exciting new games.

PINBALL DREAMS

21ST CENTURY £25.99

Pinball is one of those sports that has never quite cut it on home computers. They never seem to capture the atmosphere of the real thing. Whether it's the lack of sweaty bikers rubbing shoulders with you, the sound's toning-down or the reduced lustre of the lights I'm not sure, but I've never really been hooked by one.

Until now, that is, because Pinball Dreams is simply superb. It's got everything: the lights, the sound, the gameplay, the ball movement, the eight-player option, everything! There's a choice of four tables - Ignition, Steel Wheel, Beat Box and Nightmare - which cover the spectrum of features on the state-of-the-art tables found in today's arcades. Each has only two flippers at the bottom of the table (which I find more playable than multi-flipper tables) and a launch tube at the right.

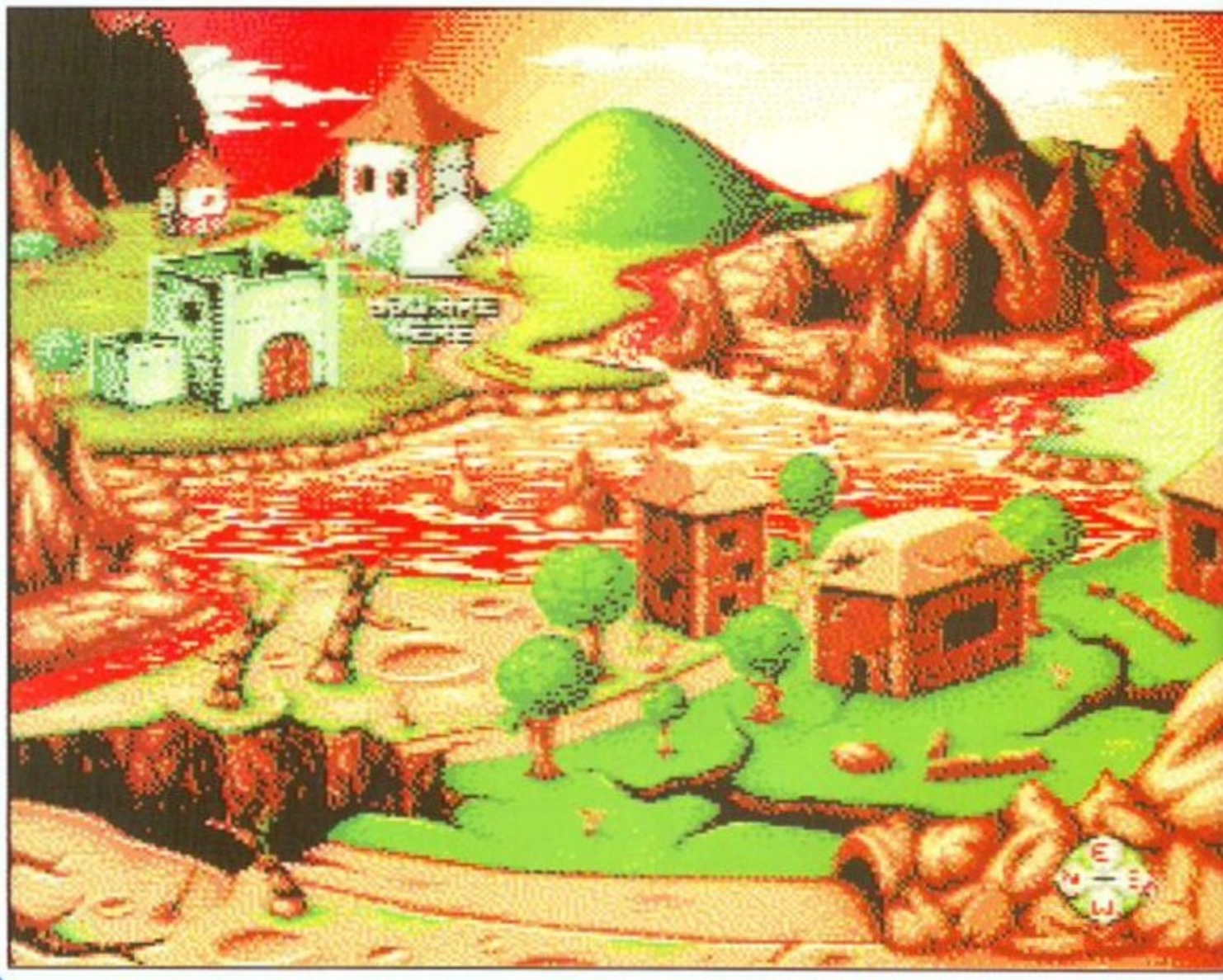
Bonuses add not only to the score but also trigger sound samples which add to the excellent music on each level, until you're flipping away in a canopy of sound! The colours have been carefully chosen to maximise the impact of the simulated lights and the overall effect is a well-polished, playable pinball simulation. Pinball Dreams takes no prisoners. I repeat, it's quite simply superb. Don't take my word for it, go and buy it now and see for yourself.

GRAPHICS: 94%
SOUND: 96%
GAMEPLAY: 95%
DIFFICULTY: 7/10
OVERALL: 94%

JIM POWER

LORICIEL

Jim Power is one of a new generation of games which are being developed with console conversions in mind. If this game was running on a Nintendo or Sega machine instead of an Amiga it would not look out of place. There will be many far-reaching consequences from this type of thinking - not least that games will become less sophisticated to enable conversion to



MANCHESTER UNITED

GREMLIN/GBH £9.99

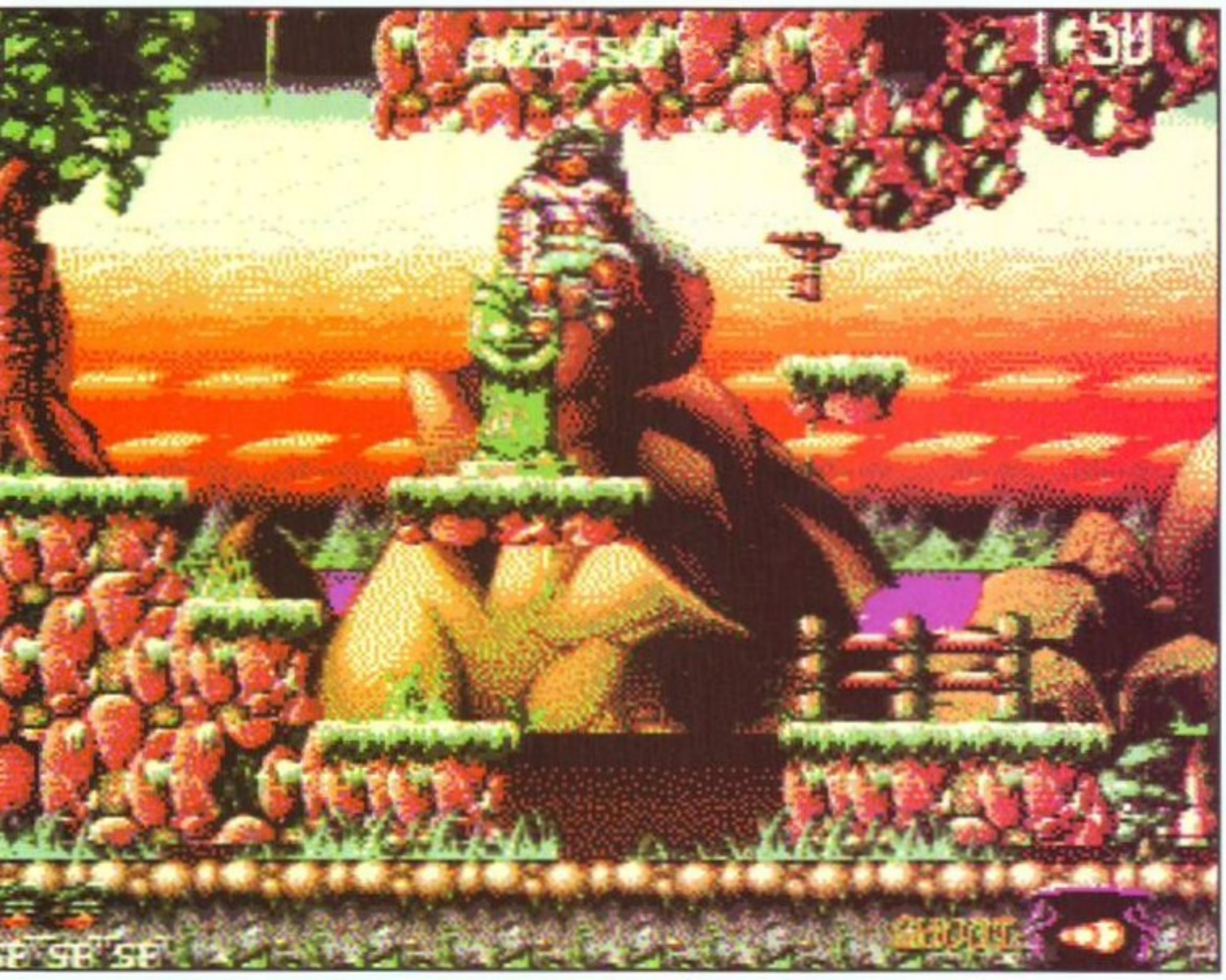
Gremlin Graphics must be fuming. They chose to release Manchester United on their budget label, GBH, when it looks like the team can't lose the League Championship. Then what happens? Liverpool beat them and Leeds win it. As far as I can remember, there has not yet been a Leeds United licence but I wouldn't be surprised if we saw one at the start of the next league season...

For Mancunian Amigaphiles, this game is probably of passing interest. It's a combination of football management and arcade games which puts you in the unenviable position of controlling the players on the pitch and making the crunch decisions off it. The management part of the game features digitised pictures of the Manchester

the less subtle hardware.

Consequences aside, Jim Power concerns himself with protecting the President. But when the President's daughter is kidnapped by aliens, Jim Power is called in to do what he does best - shoot first and ask questions later. It's a good old platforms-and-blasting-mega-weapons type of game. Jim makes progress by running anY¿d jumping to the right, avoiding hazards such as pits of spikes, collecting fruit, power ups and bonuses and shooting the weird and wonderful aliens that oppose the power of good.

When you consider that this is a game intended for the consoles, it's surprisingly bland in appearance. The graphics are well-defined (though strange by definition of the game's scenario) with some good animation on moving things. Scrolling is super-smooth and the sound suffices without being awe-inspiring. But I'd like to have seen a more imaginative use of colour. I hit the monitor a couple of times, thinking that it had developed an RGB fault. Would a console owner find it any less washed-out? I think not.



GRAPHICS: 76%

SOUND: 79%

GAMEPLAY: 84%

DIFFICULTY: 5/10

OVERALL: 78%

United squad, from two seasons ago, that is, and the main part of this is icon-driven, making it easy to use.

The arcade mode lets the game down because there's only a couple of game types that work in the football market. Kick Off was one and a pure management game like Football Director 2 is the other. Player Manager was Kick Off with management, which was nice, but Manchester United didn't cut the mustard when it was first released. It still doesn't now and not even the low price tag can make up for that shortfall.

GRAPHICS: 68%
SOUND: 65%
GAMEPLAY: 72%
DIFFICULTY: 6/10
OVERALL: 69%

games news

NEWS by Ashley Cotter-Cairns

STAVROS, IS ME MATEY PEEPS!

Stavros Fasoulas. Does the name ring a bell? If so, will you let me know what games he's written before because no one here can remember them! Whatever his past sins, the latest are his hours of work on Galactic for fledgling company Terramarque. The game claims to feature many elements of games found propping up amusement arcades around the country: six channel sound, 160 colours on-screen and a single load for the many, many levels the game features.

If you think that sounds unlikely, take a look at these screenshots and remember - three-channel sound has been squeezed out of the Spectrum in the past, so the Ami should manage six through her superior sound chip. Still no prices: are companies getting coy about announcing their list prices? And what is the giraffe doing to the camel on Terramarque's logo?

Terramarque is a Finnish company. Let's hope they get the game finished (sic) in time for review in the next issue!

entertainment now!

games news

PIPPIN'S DAD STRIKES BACK

Most role-players know the name "Paladin". Not all that many know that the name comes from The Lord of the Rings, or that he was Pippin's father (Pippin was a companion of the Ring on its journey to the Crack of Doom). The name has been used many times in many places (spot the weak tie-in coming up) not least in an early Impressions game, Paladin. Now the Chelsea firm have launched Paladin 2 and, from the bumph I've got here, it looks extremely promising.

Breach 2 - one of Impressions' best ever products -

had a superb gameplay system. Paladin 2 uses this system along with top quality graphics to create what should be a great role-playing experience. Another

unusual feature is the games designer which Breach 2 used but which I hadn't expected to see in Paladin 2. Watch this space for a review and a price.

DIZZY'S EXCELLENT ADVENTURES

CODEMASTERS

£29.99

Dizzy the Egg has had some great adventures over the years. Now here's a compilation of games which wouldn't stand up too well on their own but slot together quite nicely in this compilation. Most have not been seen before.

Two of the games, Spellbound Dizzy and Prince of the Yolk Folk, are typical Dizzy adventures, where our elliptical hero has to solve graphical problems by using items at various places. The latter is better written and looks like more time has been spent on the presentation but both are playable - if you like that sort of game (which I do).

Panic Dizzy is a nice two-player puzzle game. Tubes at the top of the screen drop in coloured shapes towards collectors at the bottom of the screen, where you have control of these shaped and coloured slots. You may move them left or right to catch the shapes and by pressing fire the shapes may be rocketed down into the collectors. It's quite addictive, which is the nature of arcade puzzles and the two-player option is a nice addition.

Bubble Dizzy is the weakest game here. It's a game of reflexes, where Dizzy has to be guided, against the force of gravity, from the bottom of the seabed towards the surface of the water. To do this the aid of bubbles is enlisted, which Dizzy `rides' until they burst. He has to fight for every inch of height gained and also find treasure and oxygen on the way. Very frustrating and terminally so after only a few games.

Finally, Kwik Snax is another arcade game based on the 80s arcade game Pengo. The screen is made up from mobile blocks, immobile blocks and fruit, with patrolling monsters to kill and bonus objects to aid you. It has got the grab factor of Pacman and the manic playability of Pengo, making it a playable and addictive game.

This compilation is a strong one indeed. There are no real duffers, graphics are sharp and colourful and it's probably the best value for money around. A good present for the younger games player.

GRAPHICS: 82%

SOUND: 79%

GAMEPLAY: 85%

DIFFICULTY: Varies

OVERALL: 86%

Dr T's Music Software

BLUE RIBBON SOUNDWORKS LTD

BAND-IN-A-BOX

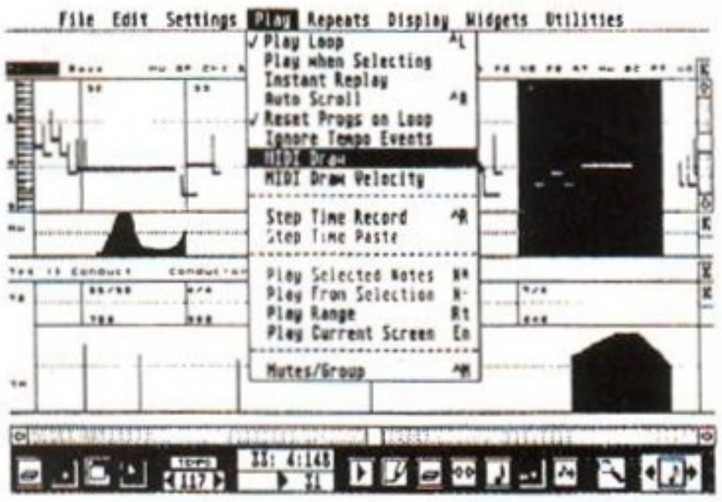
TRYCHO TUNES
PERFORMANCE SEQUENCES

ZONE DISTRIBUTION

THE BEST SUPPORT FOR THE BEST MUSIC SOFTWARE IN THE WORLD

Dr T's Music Software

Dr T's KCS has over the years established itself as one of the most reliable and well featured sequencers available for the AMIGA. KCS ha also been used on many major world tours. With the recent release of KCS 3.5 Dr T's have not only shown their support for power sequencing on the Amiga but have in the words of many reviewers produced a sequencer to compare with the most powerful available on the Atari and Apple Mac.. KCS now includes the full range of sequencing tools needed for virtually any musical application.



TIGER, the reatlitme graphic editor, Quickscore, the notation module, Automix, the graphic faders & PVG are just a few of these tools. Couple this with Dr T's MPE environment where multiple programmes can 'share' data in real time and a newly designed front panel, KCS 3.5 is the answer to all your prayers.

Here's what one reviewer had to say;

' KCS not only offers the best MIDI/music environment available for the Amiga at the present time, but provides workstation potential which is powerful enough to challenge some of the established heavyweights of the ST world '

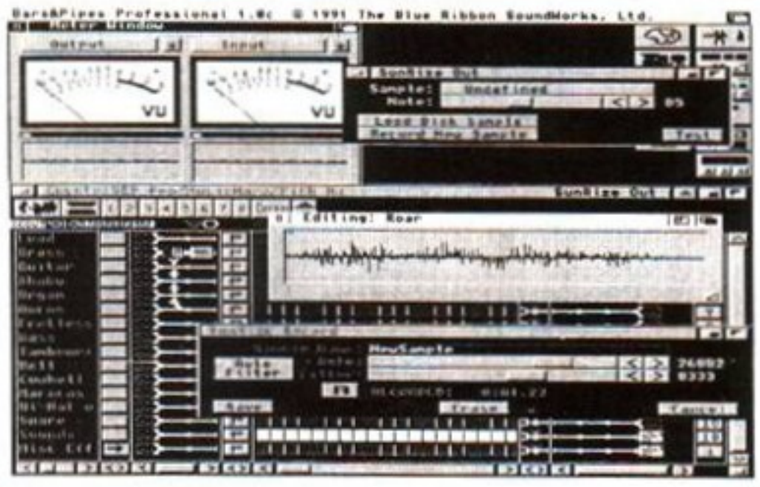
Paul Overa, Sound On Sound Oct. 1991

Dr T's produce the widest range of music application software for the Amiga in the world. Shown below is just a small selection of these programmes.

KCS 3.5 sequencer	£279
Phantom SMPTE/MIDI interface	£249
TIGERCub 12 track sequencer	£99
Copyist App notation	£99
Copyist DTP notation	£229
X-oR generic editor/librarian	£219

BARS & PIPES PROFESSIONAL

Bars & Pipes Professional encompasses all the power and flexibility demanded by the creative musician. Its power and simplicity give you the ability to record an unlimited number of tracks with unlimited methods of editing, enhancing & embellishing your music. Choose from standard music notation, hybrid notation, piano - roll or an event list as your editing medium. You can also print your music in notated form, including lyrics and chord designations. Once you record your music, you can mix it using MixMaestro. This automated mixing feature includes real time control of



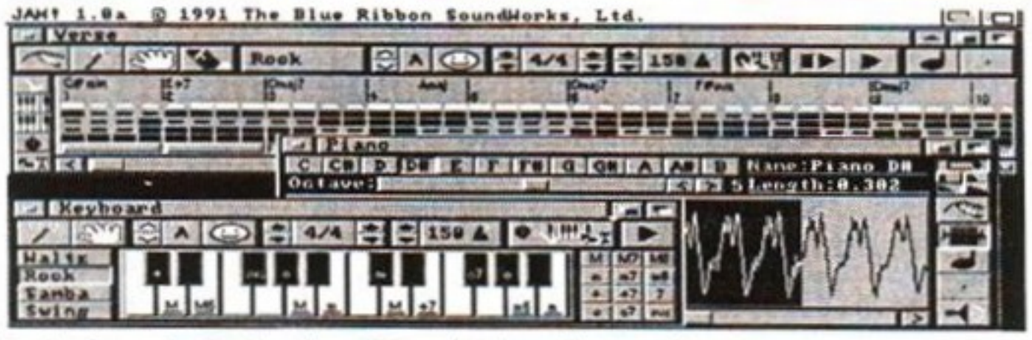
volume, panning and other MIDI effects. You can also use up to 5 separate MIDI ports (80 MIDI channels) with an appropriate serial expansion board. Bars & Pipes Professional's Tools enhance your music as you compose. These tools perform standard tasks such as quantizing, musical tasks such as counter point generation or technical tasks like merging, branching and event conversion. Bars & Pipes Professional is designed by musicians for musicians and will quickly become an invaluable part of your studio.

THE UK VERSION OF BARS & PIPES PROFESSIONAL COMES WITH A SET OF PRE-RECORDED SONG FILES WORTH £19
FREE FREE FREE FREE FREE FREE

Bars & Pipes Professional will open your eyes to a new vision of music composition. It's flexibility, expandable design and innovative architecture will assure composing music will mean 90% inspiration and 10% perspiration.

Bars & Pipes Pro	£299
Bars & Pipes	£149
JAM	£99
Internal Sounds Kit	£49.99
Pro Studio Kit	£49.99
Creativity Kit	£49.99

SUPER JAM



JAM is an incredible NEW programme from Blue Ribbon soundworks that can be used by anyone with an Amiga. Unlike ordinary MIDI sequencers and music programmes, JAM requires little musical finesse in order to accomplish exciting results. Instead JAM can create everything from rythmic patterns to chord progressions and fully orchestrated accompaniments at the touch of a button. JAM's unique ability to auto write music in an unlimited amount of styles will appeal to all AMIGA users. Using JAM's new editor allowing you to shape, redesign, loop, modulate and filter exisiting IFF files for use with JAM.

TurboSound Technology™ which allows the Amiga to play more than four sampled sounds at a time, amyone can create fully fledged accompaniments using nothing but the Amiga. Multi Media Artists (*JAM can create and synchronize with packages such as Showmaker, Imagine, Scala and Caligari*), non musicians (*using the TurboSound Technolgy*) and all MIDI & Bars & Pipes users can use JAM to try out various musical styles simply and quickly Using the TurboSound Technology™ you can mix samples on the fly creating an advanced multi timbral effect. JAM includes a special TurboSound

All in all JAM is a must for all Amiga owners whether you use MIDI or not.

Available from all good computer shops every where !

Unit 6/70, Eurolink Centre, 49 Effra Rd, London SW2 1BZ. 071 738 5444

ZONE Distribution are exclusive UK distributors for Dr T's, Blue Ribbon Soundworks, Trycho Tunes, Midimas & Band in a Box. We pride

Please rush me information on your products

NAME

ADDRESS

POSTCODE

COMPUTER

entertainment now!

LEGEND

MINDSCAPE
£30.99

Legend is a brave attempt at a mixture of role playing games. It's based on a map format but also features 3D isometric dungeons, exploration, combat and spell-casting in real time. This has not been tried before in quite the same way - Abandoned Places tried it with Dungeon Master style locations and Shadowlands tried a constant 3D display - so I loaded it up with interest.

The map shows all of the various locations in the land of Trazere: cities, towns, towers and what have you. It's best to start with the adventurer's guild, where a 'test' dungeon is located. Succeed here and you get to progress through the game in the traditional way, discovering clues and magical items to help your quest.

The most noteworthy aspect of this game is the magic system. Your spells must be

MICROPROSE SOCCER

US GOLD/KIXX £7.99

Microprose Soccer was one of the first playable soccer games to be written for the Amiga. That said it doesn't stand up to too much criticism these days and, due to its up-and-down the screen format, comparisons with Kick Off have to be made. Cliched I know, but KO is regarded by most people as the best arcade soccer game around.

MS is viewed from above. As the ball is kicked around the pitch, it grows and shrinks according to its height. There are two games on the disk: Indoor Soccer is also included, which is the fast, five-a-side variant of soccer played, would you believe, indoors. The regular game and the indoor version feature options such as colour of kit, level of play, amount of curve on the ball, action replays and so on.

Microprose Soccer is more like the arcade machines found in pubs than an attempt at soccer for the home computer formats. It does look dated but in my opinion it plays fairly well and has a lot of options that so-called further advanced games lack.

At the price it's not bad but as a solo game it will pall quickly. One to play with the lads.

GRAPHICS: 78%
SOUND: 68%
GAMEPLAY: 79%
DIFFICULTY: 7/10
OVERALL: 78%

JOH

ELECTRONIC ARTS
£25.99

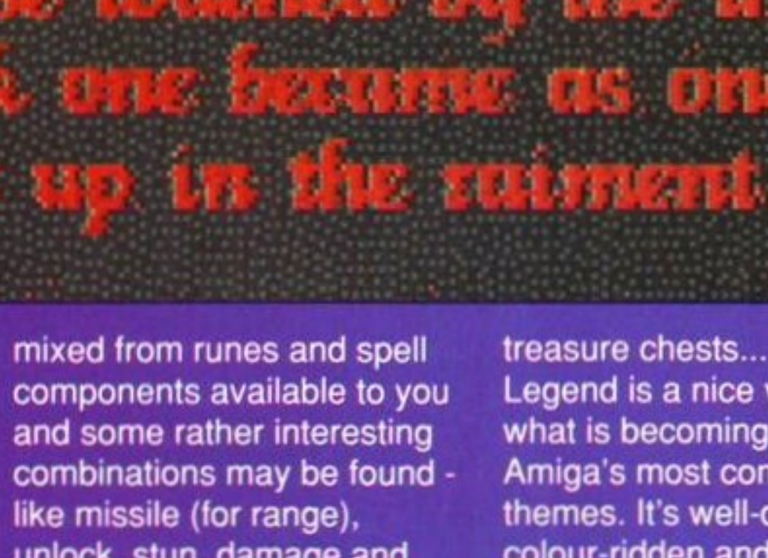
John Madden was THE American football game on the Commodore 64 and, from the Amiga version, it's destined to become a 16-bit classic as well. Channel 4 first made the violent US game popular in this country and ever since many attempts have been made at making it work on a home computer. But this is the first to really succeed, even more awesomely than its younger 8-bit cousin.

Once a tournament and team is selected - for either one or two players in a single game - the play all takes place from the pitch. Offensive teams always run up the pitch and should the defensive team intercept a pass or turn over a fumble, the screen swaps to reflect the change of possession.

...hose touched by the thoughts of the ...rk one become as one with it, and ...se up in the raiment of Chaos!

mixed from runes and spell components available to you and some rather interesting combinations may be found - like missile (for range), unlock, stun, damage and heal! Useful for nasty creatures carrying locked treasure chests...

Legend is a nice variant on what is becoming one of the Amiga's most common themes. It's well-drawn, colour-ridden and full of interesting little touches which, for me at least, lift Legend above the competition by those few extra marks. One day soon, though, someone's going to have to think of a new way to present a role-playing game.



DICISION

GRAPHICS: 91%

SOUND: 82%

GAMEPLAY: 89%

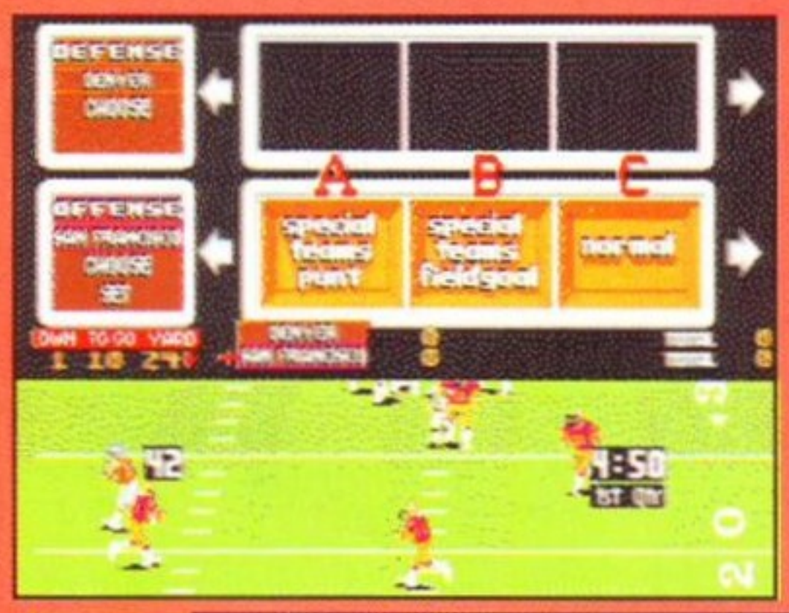
DIFFICULTY: 8/10

OVERALL: 88%

...N MADDEN
AMERICAN FOOTBALL

Plays are called from three boxes on the screen while the team crouches in a huddle. Then the player may choose to control the play himself or let the computer work it out on its own.

This means that players with strong strategy but weak arcade skills can still get the most from John Madden. Nice to see this and it should increase the size of the game's market. Graphics are brilliant, showing everything from the referees to the shadows of players. Sound is well-used as well, although the crowd sounds a bit muted. But it's the game play and attention to detail of the real sport that makes John Madden for me. Fans of the sport will love it.



GRAPHICS: 92%

SOUND: 87%

GAMEPLAY: 97%

DIFFICULTY: 5/10

OVERALL: 96%

games news

SATELLITE FALLS IN MANCHESTER

Microprose recently won an award. An INDIN gong? ECTS medal? No. By default, it won my award for the most isolated software company in the UK. This award previously was held by Electronic Zoo, which resided in a house down a single lane track with a cattlegrid across the driveway! Sadly, EZ died a few months back. Microprose, a mere five minutes' driving time and two hours' navigational time away from EZ's HQ, has opened another - and hopefully easier to find - office in Manchester.They call this their satellite office. Will we see 'Prose sponsoring the next shuttle mission? Which takes me quite nicely into the latest of my uncanny links. Microprose also announced that it has obtained the Vektor Grafix development team, best known for its work on Virgin's Shuttle game. And who said that my writing is totally irrelevant? (Me - Ed). Thanks, Ed.

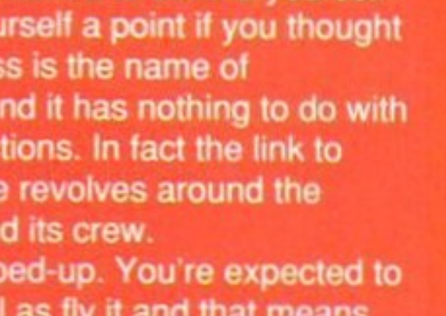
MINDSCAPE BUILDS A DEFENCE

What would you build if you wanted to defend yourself from a mega army? Give yourself a point if you thought a mega fortress. Megafortress is the name of Mindscape's latest release and it has nothing to do with wood-built strategic constructions. In fact the link to warfare is there, as the game revolves around the fortunes of a B52 bomber and its crew.

Okay, it's been a bit souped-up. You're expected to fight for the flying bus as well as fly it and that means keeping track of the four crewmen. You can bet that three friends aren't going to turn up and help you out too. Addicts of flying combat games should get their piggy banks to regurgitate £34.95 for the pleasure of piloting a Megafortress and you should be able to get hold of a copy right now.

METAL MADNESS

Tungsten. Look above you right now and (unless you're on a bus or in the park) you can see some the the filament of your light bulb. It's also a game from Sullivan Bluth, the software design team which brought you Dragon's Lair and Space Ace and which has decided to go it alone. The game looks remarkably like a game from Psygnosis concerning small people (Lemmings to you) but I'm assured that the gameplay is different - it's two-player simultaneous for a start. A review coming your way as and when I get hold of it.



But for those of you who are wondering how Sullivan Bluth could get so far away from the cartoon-quality graphics games it specialised in before now, look no further than Sea Beast. From the screens it looks like the quality of graphics has been maintained with more gameplay elements included as a sweetener. No prices as yet I regret to add.

entertainment now!

Adventure Now

with Andy Moss

COVERT ACTION

Microprose £34.99 1 Meg only

As is par for the course with any Microprose product this was first out on PC. What is also par for the course with any Microprose product is that the Amiga conversion is as good if not better than the original.

foil the World's enemy masterminds, by preventing the crimes they plan and putting them away for a long time. From initial clues given to you on your case files and using the huge resources of the World's intelligence networks, you will have to tap phones, break into enemy hideouts, bug their HQs, steal equipment, crack codes, indulge in physical combat and most importantly of all, use your brain to unravel the clues as they are uncovered. You will need to get enough evidence to arrest the mastermind and anyone else you can get your hands on. The crimes will take place in either the Middle East, Europe, or South/North America and you will be able to use the Agency's local office for back up.

Most of the game is great fun, particularly the unraveling of the clues, and the thrill you get when you begin to close in on the mastermind. The only iffy bits are the combat sequence, seen as an overhead birds eye view of the action with little blobs to represent you and your adversaries, and the car chase sequence. Both seem to be in only as an offering to the more arcade loving players and are really poorly done, more as an afterthought. Those apart, you have got yourself another Sid Meir winner.

DECISION	
GRAPHICS	80%
GAMEPLAY	90%
OVERALL	82%

Typically, they will change things for the better having had a good six months to test it on PC owners. And unlike some other American publishers (did I say Sierra?) they write a dedicated Amiga program that ensures speed quality.

COVERT ACTION is all about spies and lies. Meet one Max Remington (or Maxine Remington if you want) number one secret agent working for the CIA to

SIM ANT

MAXIS/OCEAN £29.95
1 MEG/2 MEG/ HARD DRIVE

The first prize to the most unlikeliest sequel to SIM CITY and SIM EARTH is duly awarded to Maxis who have discovered a fond fascination for ants, in SIM ANT. I look upon this release with all the dubious nature of a cat checking into Battersea Dogs Home, because I do not call simulating the life of an ant fun.

It must be said that they have not taken the subject in a flippant way, quite the reverse. There is a real in-depth study of ant behaviour in this one - building colonies, marshalling the soldiers to fight the red ants, spiders and even humans. You have to forage for food, keep the colony fed, look after Queenie, and ultimately, drive out the human family from their home and take over the house.

If you have any strength left after all that there is a spot of reproducing to be done to grow the colony. It's all very colourful, very educational (if you are an ant-lover, which I am not) and in reality not very entertaining. For a few reasons. Firstly, it is a memory sponge, swallowing up huge amounts of memory calculating all the things that are going on at the same time. Really, to get the best production you need a 2 meg Amiga, with a hard drive, otherwise you get low res graphics and a pretty slow screen update. Personally I put that down to inferior Amiga programming on the American side, since this was originally a PC game.

It looks a bit like MOONBASE with a dash of colour but a lot more expensive. There is no real depth to the game/sim/nature lesson and I found it all a bit tacky.

DECISON	
GRAPHICS	60%
GAMEPLAY	60%
OVERALL	60%

EAGLE SOFTWARE

118a Palmers Road
New Southgate
LONDON N11 1SL.
(10 am - 6pm 6 days)
Tel: 081-361 2733/5730
(2733 Faxline after 6pm)

FREE MYSTERY GAME WITH ORDERS OVER £50

Access VISA

ST & AMIGA BUDGET TITLES UNDER £10

1 Meg Cricket (Amiga only)	£4.99	Fantasy World Dizzy	£5.99	Platoon	£5.99
3 Stooges	£6.99	F16 Combat Pilot	£7.99	Predator	£6.99
3D Pool	£6.99	Gauntlet II	£6.99	Rambo III	£6.99
Afterburner	£6.99	Ghostbusters II	£6.99	Red Heat	£6.99
Altered Beast	£6.99	Ghouls'n'Ghosts	£6.99	Resolution 101	£6.99
Arkanoid (Amiga only)	£4.50	Golden Axe	£6.99	Road Blaster	£6.99
Arkanoid II	£6.99	Hard Drivin'	£6.99	Rocket Ranger	£8.99
Baal	£5.99	Head over Heels	£6.99	R-Type	£6.99
Barbarian	£5.99	Hitch Hiker's Guide to Galaxy	£7.99	Run The Gauntlet	£6.99
Barbarian II	£6.99	Hong Kong Phoey	£6.99	Shadow of the Beast	£6.99
Batman The Movie	£6.99	IK+	£6.99	Sherman M4	£6.99
Beach Volley	£6.99	Impossible Mission II	£6.99	Shinobi	£6.99
Blood Money	£6.99	James Pond	£6.99	Shuffle Puck Cafe	£6.99
Cabal	£6.99	Jet Set Willy (Amiga only)	£7.99	Speedball	£7.99
California Games	£6.99	Kid Gloves	£5.99	Strike Force Harrier	£6.99
Carrier Command	£8.99	Last Ninja II	£6.99	Stunt Car Racer	£6.99
Celica GT4 Rally	£6.99	Licence to Kill	£5.99	Super Hang On	£6.99
Centrefold Squares	£6.99	Lombard RAC Rally	£6.99	SwitchBlade	£6.99
Cloud Kingdom	£6.99	Manic Miner (Amiga only)	£7.99	Teenage Mutant Turtles	£6.99
Colossus Chess	£6.99	Michael Jackson Moonwalker	£6.99	Thunderstrike	£6.99
Conflict in Europe	£7.99	Moonshine Racers	£6.99	Toobin'	£6.99
Continental Circus (ST only)	£4.99	New Zealand Story	£6.99	TV Sports Football	£7.99
Defender of the Crown	£7.99	Ninja Rabbits	£5.99	Vigilante	£6.99
Def of the Earth	£6.99	Nitro	£7.99	War Zone	£6.99
Deluxe Strip Poker	£6.99	North & South	£6.99	Waterloo	£6.99
Double Dragon I or II	£6.99	Out Run	£6.99	Wings of Fury (Amiga only)	£6.99
Dragon Ninja	£6.99	Operation Wolf	£6.99	Wizball	£4.99
				WC Leaderboard	£6.99
				Xenon II	£7.99

TOP TITLES	ST	AMIGA
Half Meg Upgrade + Clock	N/A	£25.99
World Series Cricket	N/A	£16.99
3D Construction Kit	£29.99	£36.99
Addams Family	£16.99	£16.99
Advantage Tennis	£16.99	£16.99
Agony	£15.99	£15.99
Air Support	£15.99	£15.99
Alien Storm	£16.99	£16.99
Alpha Waves	£16.99	£16.99
Altered Destiny	N/A	£21.99
Another World	£18.99	£18.99
AMNIOS	£15.99	£12.99
Amos (Easy)	N/A	£23.99
Amos 3D	N/A	£23.99
Amos Compiler	N/A	£19.99
Amos The Creator	N/A	£36.99
Aquaventura	£15.99	£15.99
Armourgeddon	£15.99	£15.99
Armourgeddon Upgrade	£10.99	£10.99
A.T.A.C.	£23.99	£23.99
ATOMINO	£12.99	£12.99
AWSOME	£12.99	£12.99
B17 Flying Fortress	£23.99	£23.99
Back to the Future III	£10.99	£10.99
Back to the Golden Age	£16.99	£16.99
BARBARIAN II (Psyg)	£12.99	£15.99
Bard's Tale III	N/A	£16.99
B.A.T. II	£22.99	£22.99
Battle Chess II	£16.99	£16.99
Battle Command	£15.99	£15.99
BATTLE HAWKS 1942	£8.99	N/A
Battle Isle	£18.99	£18.99
BATTLE MASTER	£19.99	£11.99
Betrayal	N/A	£8.99
Big Run	£16.99	£16.99
Billiard Simulator II	£16.99	£16.99
Bike GP	N/A	£15.99
Birds of Prey	£23.99	£23.99
Black Crypt	£16.99	£16.99
Blue Max	£19.99	£19.99
Blues Brothers	£16.99	£16.99
Boston Bomb Club	£16.99	£16.99
Buck Rogers	£19.99	£19.99
Cadaver	£16.99	£16.99
Cadaver - the pay off	£10.99	£10.99
Captive	£15.99	£15.99
Cardiaxx	£17.99	£17.99
CARTHAGE	£15.99	£12.99
Carve Up	£9.99	£15.99
Chaos Engine	£16.99	£16.99
Champion of the Raj	£9.99	£9.99
Chase HQ	£6.99	£6.99
Chase HQ II	£14.99	£14.99
Chuck Rock	£16.99	£16.99
Cisco Heat	£11.99	£11.99
C.Y's Air Combat	£20.99	£20.99
Cohort	£20.99	£20.99
Combo Racer	£6.99	£6.99

TOP TITLES	ST	AMIGA
Cover Girl Poker	£16.99	£16.99
Covert Action	£23.99	£23.99
Crazy Cars III	£21.99	£21.99
Crime Wave	£16.99	£10.99
Cruise for a Corpse	£17.99	£17.99
Darkman	£15.99	£15.99
Days of Thunder	£15.99	£8.99
Deliverance	£15.99	£15.99
Demoniak	£19.99	£19.99
Deuteros	£19.99	£19.99
Devious Designs	£16.99	£16.99
D/Generation	£16.99	£16.99
Disciples of Steel	£17.99	£17.99
Double Dragon III	£16.99	£16.99
Dr Dooms Revenge	£9.99	N/A
Dungeon Master/ Chaos	£15.99	£15.99
Dyna Blast	£20.99	£20.99
ELF	£15.99	£15.99
Elvira Mistress of Dark	£21.99	£21.99
Elvira II Jaws of Cerberus	£23.99	£23.99
Elvira the Arcade	£16.99	£16.99
Epic	£18.99	£18.99
Eye of the Beholder	N/A	£19.99
Eye of the Beholder II	N/A	£23.99
F14 Tom Cat	£18.99	£18.99
F15 Strike Eagle II	£23.99	£23.99
F117A Stealth Fighter	£21.99	£21.99
F19 Stealth Fighter	£19.99	£19.99
F29 Retaliator	£15.99	£15.99
Face Off - Ice Hockey	£15.99	£15.99
Falcon 3.0	£23.99	£23.99
Fantastic Voyage	£16.99	£16.99
Fate of Atlantis (Adv'ture)	N/A	£17.99
Fate of Atlantis (Arcade)	N/A	£17.99
Federation of Free Traders	£6.99	£6.99
Final Blow	£16.99	£16.99
Final Fight	£16.99	£16.99
First Samurai/MgaLoMania	£20.99	£20.99
Flight of the Intruder	£16.99	£22.99
Floor 13	£19.99	£19.99
Football Crazy	£16.99	£16.99
Future Baseball	£16.99	£16.99
Fuzzball	N/A	£13.99
G-Loc R360	£16.99	£16.99
Gauntlet III	£16.99	£16.99
Global Effect	£16.99	£16.99
Godfather	£18.99	£18.99
Gods	£16.99	£16.99
Golden Shot	£16.99	£16.99
Graham Gooch Cricket	£21.99	£21.99
Graham Taylor	£19.99	£19.99
Grand Prix (Formula 1)	£23.99	£23.99
Gunship 2000	£21.99	£21.99
Hagar the Horrible	N/A	£15.99
Hard Drivin II	£15.99	£15.99
Harlequin	£16.99	£16.99
Harpoon (1 Meg)	£19.99	£19.99
Heart of China	£24.99	£24.99

TOP TITLES	ST	AMIGA
Heimdall	£23.99	£23.99
Hero's Quest (Gremlin)	£16.99	£16.99
Hill Street Blues	£15.99	£15.99
Home Alone	N/A	£23.99
Hook	£15.99	£15.99
Hudson Hawk	£15.99	£15.99
I. Botharns Cricket	£19.99	£19.99
Indy Heat	£16.99	£16.99
Ivanhoe	£6.99	£6.99
Jack Unlimited Clipart	N/A	£10.99
Jaguar XJ220	£16.99	£16.99
Jahangir Khan's Squash	£8.99	£8.99
Jimmy White's Whirlwind	£19.99	£19.99
John Barnes (1 Meg)	£16.99	£16.99
John Maden's Football	£16.99	£16.99
Kick Off II (1 Meg)	£15.99	£15.99
Kick Off II (.5 Meg)	N/A	£14.99
Kick Off Winning Tactics	£9.99	£9.99
Kid Gloves II	£16.99	£16.99
Killing Cloud	£11.99	£11.99
KILLING GAME SHOW	£15.99	£12.99
Kings Quest IV	£14.99	N/A
Kings Quest V	£26.99	£26.99
Knight Mare	£16.99	£16.99
Knight of the Sky	£23.99	£23.99
Last Ninja III	£16.99	£16.99
Leander	£15.99	£15.99
Legend	£19.99	£19.99
Leisure Suit Larry II	£14.99	£25.99
Leisure Suit Larry III	£25.99	£25.99
Leisure Suit Larry V	N/A	£26.99
Lemmings	£15.99	£15.99
Lemmings II	£15.99	£15.99
Lemmings - Data Disk	£13.99	£13.99
Lemmings - Stand Alone	£15.99	£15.99
Life and Death II	£20.99	£20.99
Lord of the Rings	N/A	£20.99
Lost Patrol	£15.99	£15.99
Lotus Esprit	£15.99	£15.99
Lotus Turbo Challenge II	£16.99	£16.99
M1 Tank Platoon	£19.99	£19.99
Magic Garden	£16.99	£16.99
Magic Pockets	£15.99	£15.99
Man Utd. Europe	£15.99	£15.99
M. Ditka Ultimate Football	£18.99	£18.99
Megatraveller II	£20.99	£20.99
Megatwins	£16.99	£16.99
Mercenary III	£20.99	£20.99
Merchant Colony	£20.99	£20.99
Microprose Golf	£23.99	£23.99
Midnight Resistance	£6.99	£6.99
Midwinter II	£23.99	£23.99
Mig 29 Fulcrum	£21.99	£16.99
Mig 29M Super Fulcrum	£19.99	£19.99
Might of Magic III	N/A	£19.99
Moonfall	£15.99	£15.99
Moonstone	£19.99	£19.99
Monkey Island	£15.99	£15.99
Monkey Island II	N/A	£25.99
Mystical	£15.99	£15.99
Myth	£15.99	£15.99

TOP TITLES	ST	AMIGA
Narc	£15.99	£15.99
Navy Seals	£15.99	£15.99
Nebulus II	£15.99	£15.99
Neighbours	£16.99	£16.99
Nightshift	£10.99	£16.99
ORBITUS	£12.99	£12.99
Operation Thunderbolt	£6.99	£6.99
Ork	£15.99	£15.99
Outrun Europa	£16.99	£16.99
Pacific Islands(T.Yankee II)	£20.99	£20.99
Pang	£15.99	£15.99
Paperboy II	£16.99	£16.99
Parasol Stars	£15.99	£15.99
Pegasus	£16.99	£16.99
PGA Golf Tour +	N/A	£20.99
PGA Courses Disk	N/A	£10.99
Pinball Dreams	N/A	£15.99
Pitfighter	£16.99	£16.99
Plotting	£15.99	£15.99
Populous II	£20.99	£20.99
Predator II	£9.99	£9.99
Prince of Persia	£15.99	£15.99
Project X	£16.99	£16.99
Puzznic	£15.99	£15.99
QUEST AND GLORY	£20.99	£20.99
Race Drivin'	£19.99	£19.99
Railroad Tycoon	£24.99	£24.99
Rainbow Islands	£6.99	£6.99
R.B.I. 2 Baseball	£20.99	£20.99
Realms	£20.99	£20.99
Red Baron	£23.99	£23.99
Red Zone	£15.99	£15.99
Renegade (Coin-op Hits)	£6.99	£6.99
Rise of the Drago	N/A	£24.99
Robin Hood	£16.99	£16.99
Robocod	£15.99	£15.99
Robocop	£6.99	£6.99
Robocop II	£14.99	£14.99
Robocop III	£15.99	£15.99
Rod Land	£16.99	£16.99
Rollin' Ronny	£15.99	£9.99
R-Type II	£16.99	£16.99
Rubicon	£15.99	£15.99
Rugby World Cup	£15.99	£15.99
R.V.F. Honda	£6.99	N/A
Secret of the Silver Blues	£21.99	£21.99
Secret Weapon Luftwaffe	£19.99	£19.99
Shadowlands	£20.99	£20.99
SHADOW OF BEAST II	£12.99	£12.99
Shadow Sorceror	£19.99	£19.99
Shadow Warrior	£15.99	£15.99
Shuttle the Sim	£29.99	£29.99
Silent Service II	£23.99	£23.99
Sim Ant	£22.99	£22.99
Sim Earth	£20.99	£20.99
Simpsons	£15.99	£15.99
Ski or Die	£16.99	£9.99
Smash TV	£15.99	£15.99
Space 1889	£20.99	£20.99
Space Ace II	N/A	£33.99
Space Gun	£15.99	£15.99

TOP TITLES	ST	AMIGA
Space Crusade	£16.99	£16.99
Space Quest I,II,III,or IV	N/A	£23.99
Special Forces	£23.99	£23.99
Speedball II	£15.99	£15.99
Spirit of Excalibur	£20.99	£20.99
Starglider II	£6.99	£6.99
Star Trek V	£16.99	£16.99
Starfighter II	N/A	£16.99
Stratego	£17.99	£17.99
Steel Empire	£20.99	£20.99
Storm Master	£16.99	£16.99
Strider II	£15.99	£15.99
Strike Fleet	£16.99	£16.99
Supaplex	£6.99	£6.99
Super Cars II	£15.99	£15.99
Super hero	N/A	£15.99
Super Off Road	£8.99	£8.99
Super Space Invaders	£16.99	£16.99
Supremacy	£20.99	£18.99
Suspicious Cargo	£16.99	£16.99
Swap	£16.99	£16.99
Switch Blade II	£15.99	£15.99
Terminator II	£15.99	£15.99
Test Drive III	£15.99	£15.99
Their Finest Hour	£19.99	£19.99
Their Finest Mission	£12.99	£12.99
The Manager	£16.99	£16.99
Thunderhawk AH-73M	£21.99	£21.99
Thunder Jaws	£16.99	£16.99
Tip Off	£16.99	£16.99
Titus the Fox	£16.99	£16.99
Toki	£14.99	£14.99
Total Recall	£15.99	£15.99
Turrican II	£7.99	£9.99
Twilight 2000	£23.99	£23.99
Ultima Martian Dreams	£20.99	£20.99
Ultima Underworld	£20.99	£20.99
Ultima V	£19.99	£19.99
Ultima VI	£20.99	£20.99
ULTIMA VII	£20.99	£20.99
ULTIMATE RIDE	£8.99	£8.99
UMS II	£23.99	£23.99
UMS II Planet Editor	£20.99	£20.99
Under Pressure	£17.99	£17.99
UN Squadron	£15.99	£15.99
Untouchables	£6.99	£6.99
Utopia	£20.99	£20.99
Vendetta	£16.99	£16.99
Vengeance of Excalibur	N/A	£19.99
Video Kid	£15.99	£15.99
Volfied	£20.99	£20.99
Vroom	£16.99	£16.99
War Head	£7.99	£7.99
White Death (1 Meg)	£19.99	£19.99
Wild Wheels	£14.99	£14.99
Wing Commander II	£19.99	£19.99
Wiz Kid	£15.99	£15.99
Wolf Child	£16.99	£16.99
WOLFPACK	£14.99	£14.99
W.W.F.	£15.99	£15.99
Ziltrax	£16.99	£16.99

MAX EXTRA only £17.99
Turrican II, ST Dragon, SWIV and Night Shift

BITMAP BROTHERS VOL 1 only £16.99
Xenon, Cadaver and Speedball II

NINJA COLLECTION only £13.99
D. Dragon, Shadow Warrior, D. Ninja

VIRTUAL WORLDS only £14.99
Driller, Total Eclipse, Castle Master, The Crypt

MIND GAMES only £14.99
Austerlitz, Waterloo, and Conflict in Europe

TNT 2 only £20.99
Hydra, Skull + Crossbones, Hard Drivin II, Badlands and Stun Runner

QUEST FOR ADVENTURE only £23.99
Operation Stealth, Indiana's Last Crusade and Mean Streets

AIR COMBAT ACES only £18.99
Falcon, Gunship and Fightbomber

HOLLYWOOD COLLECTION only £16.99
RoboCop, Ghostbusters 2, Indiana Jones, Batman the Movie

BOARD GENIUS AMIGA only £17.99
Deluxe Monopoly, Deluxe Scrabble, Cluedo, Master Detective and Risk

SOCCER MANIA only £11.99
Football Manager II, Gazza's Soccer, Football Manager - W.C. Edition, Microprose Soccer

FALCON CLASSIC COLLECTION only £21.99
Falcon, Mission One, and Mission Two

SUPER HEROES only £17.99
Strider II, Indiana Jones, Last Ninja II and Spy who loved me

GRANDSTAND £17.99
Gazza Super Soccer, Pro Tennis Tour, World Class Leaderboard and Continental Circus

2 HOT 2 HANDLE only £18.99
Golden Axe, Total Recall, Shadow Warrior, Super Off Road Racing

SUPER SIM PACK £21.99
Int.3D Tennis Crazy Cars II, Italy'90 and Airbourne Ranger

AWARD WINNERS ONLY £16.99
Kick Off II, Pipemania, Space Ace and Populous

FLIGHT COMMAND only £13.99
Eliminator, Strike Force Harrier, Lancaster, Sky Fox and Sky Chase

4 WHEEL DRIVE £20.99
Lotus Esprit, Celica GT4 Rally, Team Suzuki, and Combo Racer.

POWER PACK only £14.99
Xenon 2, TV Sports Football, Bloodwych and Lombard Rally

SUPER SEGA only £21.99
Super Monaco GP, Golden Axe, Crackdown, ESWAT, and Shinobi

BIG BOX £15.99
Captain Blood, Tin Tin on the Moon, Satan Guns, Teenage Queen, Bubble Plus, Purple Saturn Days, Krypton Egg, Jumping Jackson, BoBo, Hostages

TEST DRIVE II COLLECTION AMIGA only £20.99
Muscle Cars, California Challenge, European Challenge, Duel, Super Cars

DOUBLE DOUBLE BILL AMIGA only £22.99
Tv Sports Football, Lords of the Rising Sun, Tv Sports Basketball, Wings

ACTION PACK only £15.99
Cosmic Pirates, Rotor, Maya, On Safari, Eliminator, Fast Lane, Sherman M4, Hostages, Targian, Colorado

CHAMPIONS only £13.99
Jahangir Khan Squash, Man United and W.C. Boxing Manager

MAGNUM 4 £16.99
Afterburner, Double Dragon, Operation Wolf, and Batman Caped Crusader

RAINBOWCOLLECTION only £13.99
New Zealand Story, Bubble Bobble, Rainbow Islands

POWER UP only £16.99
Altered Beast, Rainbow Island, X Out, Chase HQ, Turrican

AIR, LAND, SEA only £23.99
FA18 Interceptor, 688 Attack Sub, Indy 500

Please make cheques and P.O.'s payable to *Eagle Software*. P&P is £1.00 per order in the UK. Orders under £10 please add 50p per item. Europe: add £3.50 per item. Elsewhere add £4.50 per item. If the title you want is not listed please *phone for prices*. **Spring-Summer catalogue available - please tick box.** ☐

Member No: _____ **Computer:** _____ **Date** _____

Title _____ **Price** _____

_____ **Price** _____

_____ **Price** _____

_____ **Price** _____

P & P _____

Total _____

80 Mail Order Only

Name: _____

Address: _____

_____

_____

Postcode: _____ **Tel:** _____

Card No: _____

Exp Date _____

Access ☐ **Visa** ☐ **Cheque** ☐ **P.O's** ☐

Free Membership with First Order to all Our Customers

entertainment now!

Adventure News

AMIGA GETS CIVILIZED

At last, news of the Amiga version of Sid (Railway Tycoon, All The Flight Sims, Covert Action) Meir's classic CIVILIZATION. Starting in 4,000 BC you must develop an entire civilization from a small nomadic tribe. If you manage to get going well enough, you could survive up to the present day and into the future, meeting along the way major historical figures such as Napoleon or Ghengis Khan.

You will encounter problems representative of a certain era, such as nuclear and reusable energy in modern times or initiating the building of the pyramids in ancient Egypt. One to watch for.

DISNEY TAKES THE FRENCH ROUTE.

Infogrammes, having secured the rights to distribute Disney products in the UK, have a host of titles in the starting blocks. THE ROCKETEER is a true state of the art cross between Rocket Ranger, Indiana Jones and a flight sim, following the success of the film. A clutch of Disney characters are ready in various packages ranging from computerised jigsaw puzzles, through to educational software for up to seven year olds. STUNT ISLAND is a place where all the greatest stunts ever performed can be re-enacted in the comfort of your own home. Everything from flying six types of stunt plane through to shooting and editing your own movie can take place in this game.

Mickey Jigsaw Puzzle

Rocketeer - true state of the art

Mickey Colours and Shapes

Talking of making movies, how about designing and riding on your very own rollercoaster? ROLLERCOASTER lets you do just that, providing you tie down tight your monitor and leave off feeding your face before playing it. Out at the end of 1992.

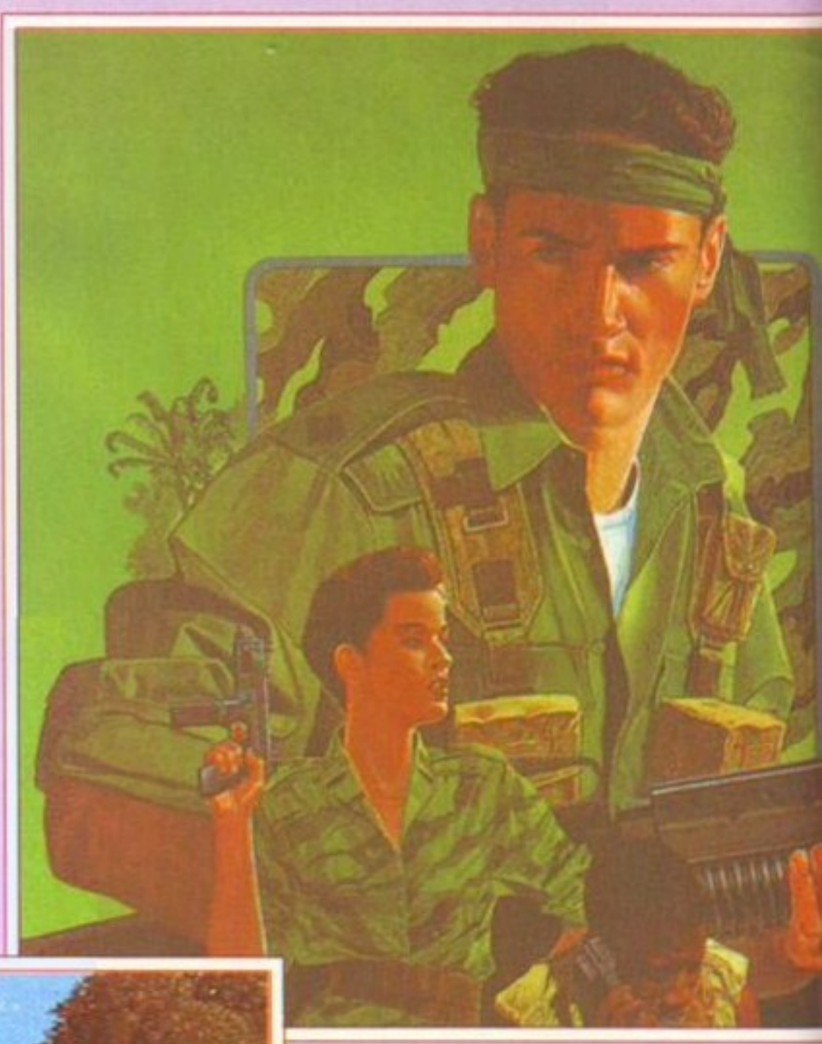
123 Mickey

While on the subject of Infogrammes, their newie, ETERNAM, is just about the greatest thing graphically to hit our screens in a long while. It will take your breath away.

SPECIAL FORCES

Microprose £34.99
1 meg only

This is the sequel to AIRBORNE RANGER, a release that was one of the first departures for Microprose from their more simulation based games and one that I was not at all impressed with at the time. SPECIAL FORCES isn't a great deal better. It must be said though that this is a UK commissioned project developed by a third party team and does not have the huge Sid Meir development team behind it. And it shows. Once again you take charge of a specially trained team of operatives, equipped to operate secretly behind enemy lines. You are given missions in four differe climatic regions to sabotage, assassinate or rescue and have t pick the individuals for your team who are best suited to handle the job.

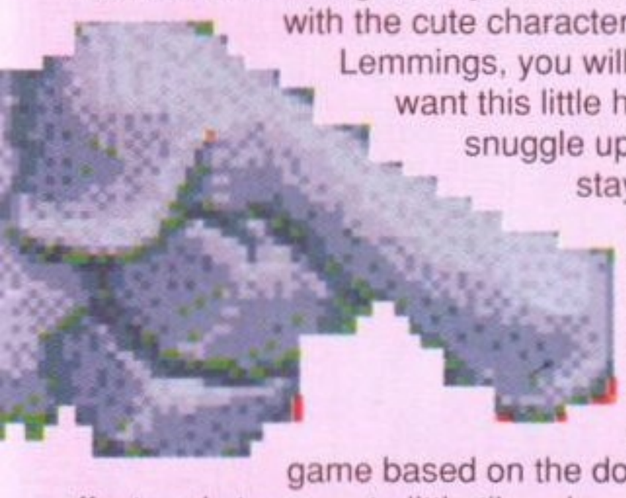


The view is a bird's eye

PUSHOVER

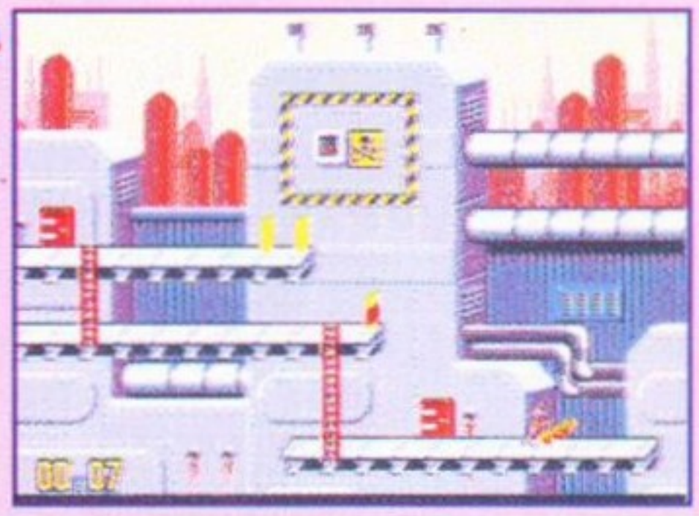
OCEAN £19.95

This is an absolute gem. If you fell in love with the cute characters from Lemmings, you will simply want this little hero to snuggle up and stay with you forever. PUSH-OVER is a clever game based on the domino effect and stars a cute little tike whose job is to sort out the different slabs on the screen and arrange them in such a way that one push will knock them all over one by one, ending up with the trigger slab which will open the door to the way out to the next screen.



Before I hear you shout "that's too easy" I had better explain. The screen is on multiple levels and the slabs have different uses when pushed over. Some rise up, some roll along, some are magnetic, some rebound. It is up to you, with the aid of "little tike", to pick up the slabs and move them about the different screens which get progressively harder, all within a time countdown. The animation is superb, the humour is wonderful (if you take too long "tike" impatiently taps his foot, or makes cutting remarks in a high chipmunk/lemming voice) and the puzzles are devious in the extreme.

This is the sort of simple concept game that has an unbelievable hook in it and should sell like hot cakes. No faults, no moans from me, just go out today and grab that copy and enjoy some of the best entertainment you are likely to be privvy to for many a year.



STEEL EMPIRE

Millenium/EA £24.94

This is a futuristic version of RISK for up to five players and the sole aim of the game is ultimate global domination. Instead of using humans this is a time where robots and cyborgs do battle on our behalf, although the damage to cities in the ensuing battles affects the outcome of a city's potential to build more armies later.Starting with just one territory you must first build a factory and then, by gauging your finances properly, build your army. Obviously, the bigger machines not only cost more money but they also take longer to build, so the strategy is a fine balance between building up your army numbers and building a force to be reckoned with.

Solo players can battle against up to four computer controlled players, which even at the easiest level are difficult customers. The more territories you invade and conquer, the more places you have to build more factories and yet more armies. You must also remember to defend your borders at the same time.

Each round of building or attacking is taken in turns, with the novel approach of blinding each player to the others movements during their turn.

For those of you who like to conduct your own battles you can play the arcade version and shoot away to your heart's content, or if you prefer a more strategic approach, let the computer decide the outcome. A good one for your collection.

DECISION
GRAPHICS 70%
GAMEPLAY 80%
OVERALL 75%

scrolling terrain map, which shows your four man squad, and of course the deadly enemy, who seem to wander around in no fixed intelligent pattern and, providing you approach with caution, can be picked off pretty easily. Your squad can be controlled individually, or as a coordinated unit to create diversions, or lay explosives, or provide covering fire.

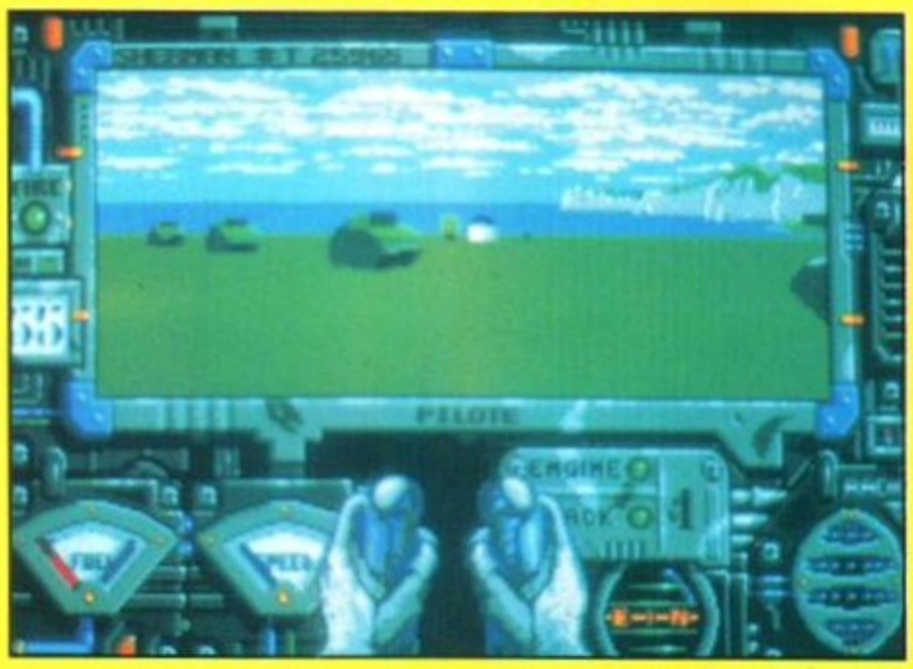
There are some nice touches, and as with all Microprose releases a raft of manual info, but the arcade action (which is really what the game is all about) is a bit uninspired and not worth all the build up that goes into picking the squad.

It may appeal to those of you who like a touch of strategy with your shoot em ups - but it did nothing for me.

GRAPHICS 70%
GAMEPLAY 60%
OVERALL 50%

Adventure News

D DAY FOR US GOLD



And while on the subject of stunning graphics, have a look at these shots from US Gold's D DAY. This strategy/battle sim really looks the part, recreating that great moment in history when the combined allied forces launched their counter offensive against the Germans in 1943.

MAXIS MOVE TO MINDSCAPE

After ditching Ocean following the release of SIM ANT, Maxis, also creators of SIM CITY and SIM EARTH have signed a distribution deal with Mindscape. The first release will be Maxis' answer to Microprose's RAILWAY TYCOON, simply called A TRAIN.

The game, a mixture of RT and SIM City, challenges you to build the metropolis of your dreams with a rail network system as the transportation hub. The trains will transport people and building materials to areas under development, laying the groundwork for the housing, job and leisure centres vital for city growth.

VIRGIN FLOORED SOON

Previewed in these pages in July, Virgin's great political PC game FLOOR 13 is now ready on Amiga. Do not overlook or pass by this opportunity to delve into the mysterious world of Britain's security dirty tricks department, where you play the new leader of a secret government department that has to manipulate media and take care of dissidents in order for the government to continue in office without pressure from its enemies. Complete use of all intelligence and strong arm resources are to hand, on one condition. You must remain out of the public eye at all times. Fail and you will end up trying to fly from your 13th floor window.

Also out soon, DUNE, SHUTTLE, APOCALYPSE, POOL and REACH FOR THE SKIES.

SMASH TV

Ocean £24.99 1 Meg only

Come on down to the deadliest TV show around, where the ultimate prize is staying alive! This is a new slant on game shows isn't it - no pretty hostesses here, just a choice of weaponry like photon lasers and plasma grenades which give you 360 degree firepower in the number one hit show on TV.

Before a live audience you have to battle cyborg mutants, power orbs and 30 ton mutoid men in order to win loads of money and the odd toaster and microwave oven.

No doubting the outcome, the action is fast and furious, with two players having a much better chance of surviving than one. No fancy frills in this one, just 100 percent arcade shooting using a multi scrolling screen and 360 degree shooting power. Not a lot of depth to this game as you can imagine and after the first few screens of awesome destruction, the action becomes pretty tedious to those of us with more than half a brain. It is good fun for two friends to just spend half an hour at it, but don't set your sights any higher than that.

WHY 316?

★ FAST EFFICIENT SERVICE
★ WE ONLY SELL QUALITY PRODUCTS
★ WE CAN MEET ALL YOUR HOME COMPUTER & OFFICE NEEDS
★ FRIENDLY & HONEST SALES TEAM
★ SPECIALIST MEDIA KNOWLEDGE
★ PRE & POST SALES TECHNICAL ADVICE

316 SUPPLIES

ROCLITE 3.5 SLIMLINE DRIVE

Amiga Format says "beautifully made slimline drive, quick and quiet with all the extras - 85%"

- 3.5" 880KB External Drive
- Access time: 3ms track to track
- 0.9" high
- Enable/disable switch
- 23 pin pass through socket
- Allows connection to a 3rd drive

£54.95

AMIGA EXTERNAL HARD DRIVE

Special Purchase Lower Prices

- External hard drive for Amiga 500
- Built in Autobooting
- On board Ram option up to 8Mb
- Beginner friendly on-line help
- A super-fast, high capacity hard drive that leaves others in its wake

Rochard RH800C 52Mb SCSI OK £329.00

ROCGEN PLUS GENLOCK

- User friendly design, easy installation
- Video-Thru & RGB - Thru Ports
- Variable fading effect; inversion of overlay function
- Key-in port for expansion with external keying device
- Compatible with all Amiga models & Commodore CDTV

£175.00

MITSUBISHI DISKETTES

3.5" MICRO FLOPPY DISK

MF-2DD 3.5" DSDD 135tpi 1MB

1box	2-5 boxes	5-10 boxes
£6.93	£6.46	£6.22

MF-2HD 3.5" DSHD 135tpi 2MB

1box	2-5 boxes	5-10 boxes
£14.00	£12.90	£10.00

* Our diskettes are 100% error free and carry a lifetime guarantee.
We only sell top quality products!

ROCTEC MOUSE

AMIGA UPGRADES

ADDUP A500 Plus 1Mb RAM expansion board.....£53.95

AMIGA EXTERNAL FLOPPY DRIVES

ADDUP Data Drive 3.5" floppy drive slimline 1" floppy drive £55.95

INTERNAL RAM EXPANSION

Amiga A501 RAM/clock expansion unit 500/500 Plus	£99.50
Amiga A2508 8Mb RAM board 1500/2000	£345.00
GVP SIMM 32bit 1Mb Upgrade - 60ms 1500/2000	£65.00
GVP SIMM 32bit 4Mb Upgrade - 60ms 1500/2000	£195.00

MICE & SCANNERS

ROCTEC AMIGA MOUSE rm3000
Superbly styled, ergonomic design Smooth precise operation!
200dpi/500mm/sec.....£13.95
OPTICAL MEGA MOUSE 6' lead, 300 dpi.....£29.95
NAKSHA SCANNER for Amiga 500.....£115.00
DAATASCAN PROFESSIONAL A625 SCANNER
2/3/400 dpi.....£170.00

DOT MATRIX

Brother M1309 9 pin 80 col.	£175.00
Citizen 120D 9pin 80 col.	£125.00
Citizen Swift 9 pin 80 col.	£155.00
Star LC200 Colour 9 pin	£160.00
Brother 1324 24 pin 80 col.	£230.00
Star LC24-200 Colour 24 pin	£225.00
Citizen Swift 24 24 pin	£199.00

LASER PRINTERS

Brother HL4V	£765.00
Brother HL4PS	£1400.00
Brother HL8E	£1150.00
Brother HL8V	£1250.00
HP Laserjet III	£835.00
Star LP4	£725.00
Canon LBP4	£705.00

INK-JET PRINTERS

Canon BJ10E	£225.00
HP Deskjet 500	£330.00
HP Deskjet 500 Colour	£575.00

NO APOLOGIES JUST QUALITY!
QUALITY DISKS! QUALITY VALUE! FREE STORAGE BOX!

3½" DISKS MITSUBISHI

	20	50	100	200
DSDD 1Mb	£12.92	£31.10	£60.00	£110.00
DSHD 2Mb	£25.80	£50.00	£95.00	£180.00

3½" DISKS UNBRANDED

	25	50	100	200	500
DSDD 1Mb	£21.15	£41.12	£79.90	£182.12	
DSHD 2Mb	£17.00	£32.50	£54.00	£122.20	

ADD UP STARTER PACK

Includes ✚ DUSTCOVER, ✚ MOUSE MAT ✚ 3.5" CLEANING KIT ✚ 5 x 3.5" DISKETTES..... **£9.99**

3.5" LOCKABLE STORAGE BOXES

200 Capacity	£19.95	40 Capacity	£5.50
100 Capacity	£6.95	25 Capacity	£3.95
80 Capacity	£6.50	10 Capacity	£0.65
50 Capacity	£6.25		

JOYSTICKS

Maverick QS128F	£14.95	Quickshot Turbo	£9.50
Flightgrip	£8.95	Speedking Autofire	£10.50
Pythcn 1	£9.95	Cheetah Bug	£13.95

ACCESSORIES

Mouse Mat		£2.50
Mouse Pocket		£2.35
Amiga Dust Covers		£3.95
2 piece Universal Printer Stand		£5.95
Mutifunction Printer Stand		£15.99
Monitor Stand, (tilt/swivel)		£12.95
3.5" Cleaning Kit		£2.25
Computer Cleaning Kit		£9.95
14" Colour Screen Filter		£9.95
Monitor Plynth		£22.95
Mouse Pad Station includes mouse pad, mouse holder, wrist rest and pen/pencil tray		£6.99
ADDUP Starter Pack for IBM users inc. 5 x 3.5" DSDD, 1 x mouse mat, 1 x 3.5" cleaning kit and 1 x keyboard dustcover		£9.99
80 capacity BANX storage box		£9.99
CABLES AND SWITCHES		
Parallel Printer Cable	2 metre	£5.25
	3 metre	£9.50
	5 metre	£13.95
	10 metre	£22.50
RS232 EXTENSION CABLES	2 metre	£6.50
	3 metre	£8.95
	5 metre	£10.95
	10 metre	£20.50
CENTRONICS PLUG TO PLUG	2 metre	£9.50
	3 metre	£11.50
	5 metre	£16.95

DATA SWITCHES - MANUAL	Parallel	Serial
2 printers to 1 computer	£13.50	£13.50
2 computers to 1 printer	£13.50	£13.50
4 computers to 1 printer	£21.00	£20.50
2 computers to 2 printers	£21.00	£20.50

MONITORS

PHILIPS CM8833/11 STEREO 14" COLOUR MONITOR.
Covered by a 12 month warranty includes connecting cable, green screen switch UK specifications
£229.99

SPECIAL OFFER

Free storage box with every 50 disks ordered

BEST BUYS SAVE £ £ £ 's

DEAL 1
ROCTEC MOUSE
QUICKSHOT TURBO JOYSTICK
ADD UP STARTER PACK
~~£34.55~~ OUR PRICE £28.50

DEAL 2
ROCTEC MOUSE
MOUSE PAD STATION
3.5" CLEANING KIT
10 3.5" DISK IN PLASTIC BOX
~~£29.75~~ OUR PRICE £23.50

DEAL 3
ROCTEC SLIMLINE DRIVE
10 X 3.5" DISKS IN PLASTIC BOX
3.5" CLEANING KIT,
100 CAPACITY STORAGE BOX
~~£76.85~~ OUR PRICE £68.25

DEAL 4
UNIVERSAL PRINTER STAND,
AMIGA DUST COVER,
1 REAM A4 PAPER,
14" SCREEN FILTER,
KEYBOARD STATION.
~~£44.12~~ OUR PRICE £35.50

DEAL 5
ADDUP AMIGA A500 PLUS UPGRADE,
1Mb EXPANSION BOARD,
14" SCREEN FILTER,
50 x 3.5" DISKETTES,
50 CAPACITY STORAGE BOX,
3.5" CLEANING KIT,
AMIGA DUSTCOVER
~~£113.60~~ OUR PRICE £93.95

HOW TO ORDER

BY PHONE
0446 421316

BY FAX
0446 420404

BY POST

316 SUPPLIES LTD
7/8 TY VERLON INDUSTRIAL ESTATE,
BARRY,
SOUTH GLAMORGAN CF6 3BE

ALL PRICES INCLUDE VAT

Access VISA

CARRIAGE COSTS
ALL ORDERS ARE NORMALLY DESPATCHED TO YOU WITHIN 48 HOURS OF ORDERING
Please add £3.60 per order for carriage up to 12 kilos. Over 12 kilos charged at cost

WHY WE ARE OFFERING THIS HIGH QUALITY 12 PIECE CURTIS COMPUTER TOOL KIT FOR ONLY: £19.95 (plus p+p)

The Computer Tool Kit contains:

- Chip Extractor, Assembly Tweezer,
- Three Claw Parts Retriever,
- Screwdriver - slotted, 6 3/8ins overall,
- Screwdriver - Slotted, 5ins overall,
- Screwdriver - Phillips, 6 3/8ins overall,
- Screwdriver - Phillips, 5ins overall,
- Nutdriver - 3/16ins, Nutdriver - 1/4ins,
- Torque Screwdriver - T/15.
- Carrying Case 9ins x 6ins x 1 3/8ins.

FREE CHIP INSERTER

Inserts chips and straightens pins on the two most commonly used chips.

SAVE £15.00

This exclusive offer brings you the chance to buy what must be the finest quality Computer Tool Kit around, for the unbelievable price of Only: £19.95 – saving you a fantastic £15.00 off the recommended retail price. Whether you're a professional technician or simply a tinkerer, you can repair and maintain your system with this impressive 12 piece computer tool kit.

Read what the editor says . . .

"An essential part of equipment for every computer enthusiast – a tool for every task, this Computer Tool Kit reflects the highest quality and design you come to expect from Curtis."

All the tools are demagnetized and arrive in a handy Vinyl zip-carrying case. For the Curtis Computer Tool Kit, simply send your cheque or postal order made payable to HHL Publishing for £22.95 which includes £3.00 postage and packing — Today.

AMIGA USER INTERNATIONAL
DEPT: MGCT GREATER LONDON HOUSE, HAMPSTEAD ROAD, LONDON, NW1 7QQ.

AMIGA USER INTERNATIONAL
DEPT: MHCT
GREATER LONDON HOUSE
HAMPSTEAD ROAD, LONDON, NW1 7QQ

Please send me the Curtis Computer Tool Kit

Name _____
(CAPITAL LETTERS)

Address _____

_____

_____

_____ Post Code _____

Telephone No. (in case of queries): _____

I have enclosed my cheque/postal order made payable to HHL PUBLISHING for £22.95 which includes £3.00 postage and packing.
Please allow 28 days delivery from receipt of order.
Offer open to UK and Eire only.

mentor

Programming Tips

This month Paul Overaa takes a look at the two basic ways that programmers can initialise Amiga system structures.

Structure Initialisation

The C language, as many of you doubtless know, allows variables of different types to be collected together into a unit known as a structure. For instance:

```
struct Dat    {
                UBYTE Day;
                UBYTE Month;
                UWORD Year;
              };
```

Such structures may be copied or assigned as complete units, their addresses may be taken and their individual members can be accessed, copied and assigned. In fact ANSI C even allows a structure to be passed to a function as a complete unit – and it allows the function to return a complete structure. C goes a step further than this because you can define structures within structures so we could, for example, create an appointments structure like this:

```
struct Appointment  {   struct Time;
                        struct Date;
                        char  AppointmentDetails[200];
                    };
```

Pointing in the Right Direction:
C has a special notation for working with structure pointers, namely the -> operator. If p is a pointer to a structure then one of its members can be accessed with this type of statement:

```

```

If date_p is a pointer which has been declared as a pointer to the Date structure described earlier, that is, as:

```
struct Date *date_p;
```

then the individual structure members could be initialised to represent 1st January 1992 using the statements:

```
date_p->Day=1;
date_p->Month=1;
date_p->Year=92;
```

The reason why the Amiga programmer needs to take more than a passing interest in these types of complex variables is simple – almost everything that is done system-wise on the Amiga is done using C type structures.
Screens, windows, gadgets, menus, requesters and so on – you name it and there'll be a system defined structure to represent it. This being so it is little wonder that programmers need to come to terms with structure-related operations very early on during their Amiga travels.
Most people adopt 'fixed data' type definitions and would tend, if for example they were defining a NewWindow structure, to do it in this fashion:

```
struct NewWindow NewWindow = {
0,0, /* XY origin */
SCREENWIDTH, SCREENHEIGHT, /* window width and height *//
-1,-1, /* detail and block pens */
MENUPICK+GADGETUP, /* IDCMP flags */
SMART_REFRESH+BORDERLESS+ACTIVATE, /* window flags */
NULL,    /* no gadgets */
NULL,    /* no custom CHECKMARK imagery */
NULL,    /* no window title */
NULL,    /* custom screen - resource handler sets this up */
NULL,    /* no custom bitmap */
0,0, /* minimum width and height */
0,0, /* maximum width and height */
CUSTOMSCREEN /* destination screen type */
};
```

There is however another approach which can often be useful. You can use AllocMem( ) to allocate a suitably-sized block of memory and then initialise the various fields using C's -> operator. If at the same time you use the MEMF_CLEAR flag the result will be that all the locations of the memory block will be initialised to zeros and you will only have to explicitly set those fields which are non-zero!
The code needed from C for dynamic allocation and initialisation is quite straightforward. Firstly, make the memory allocation:

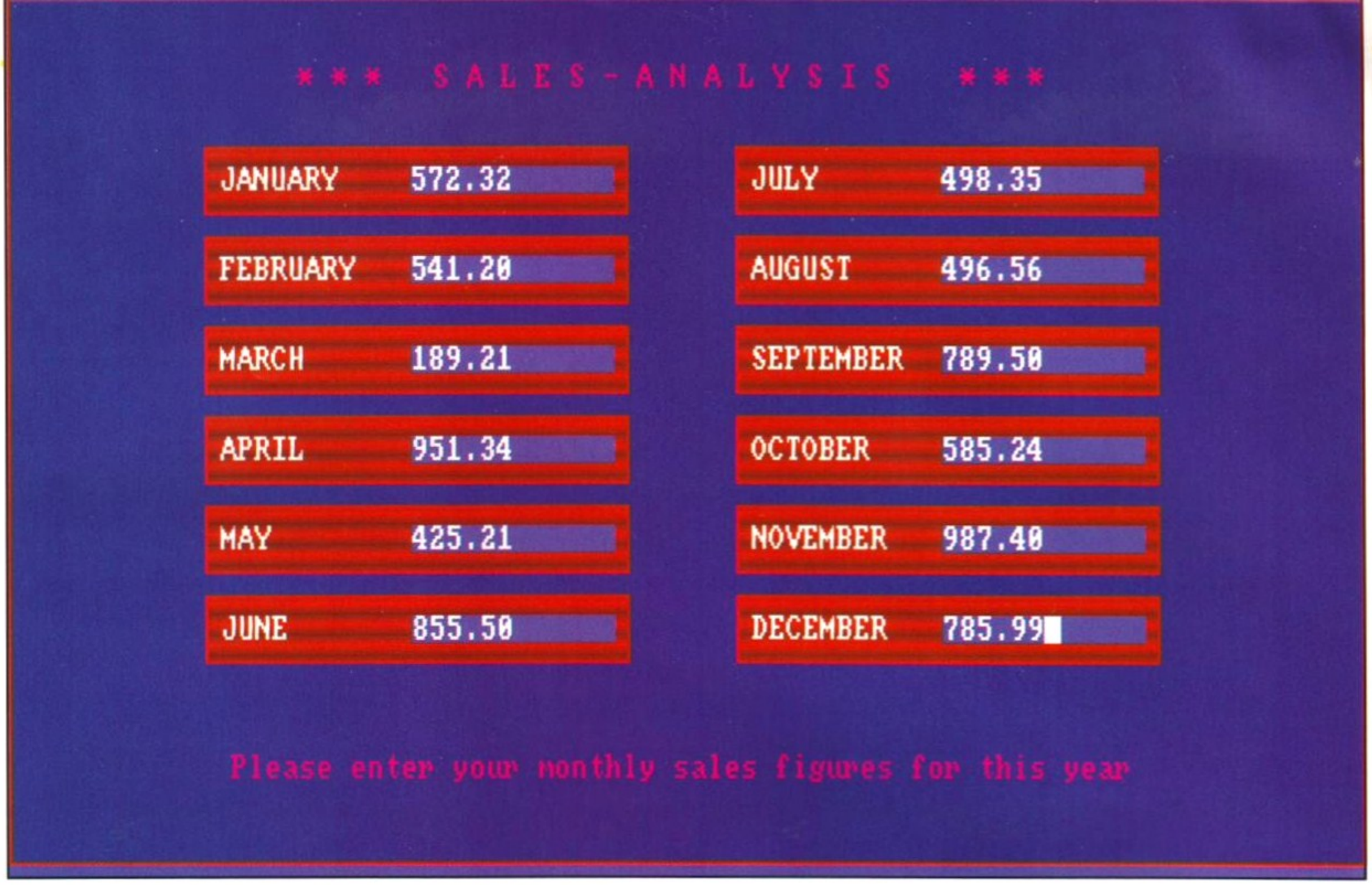
```
new_window=AllocMem(sizeof(struct NewWindow), MeMF_CLEAR);
```

and then initialise the non-null fields in this fashion:

```
new_window->LeftEdge=10;
new_window->TopEdge=20;
new_window->Width=100;
new_window->Height=50;
```

. . . and so on!

The Assembler Equivalent
The above ideas are easy enough to implement from C but what about those working with 68K assembler? Strangely enough the structure



Intuition objects like windows and gadgets all need to be described using structures

cture sation

initialisation process is almost as easy because the '.i' include files use a STRUCTURE macro that can calculate the offsets to be used when addressing particular fields in a structure.
To start with, however, here is another NewWindow definition that has been created using dc.x type assembler directives:

(Note: The various labels DETAIL_PEN, BLOCK_PEN and so on in the above example will of course have been previously defined using EQUate statements.) What is interesting about the assembler pathway is that because of the 68000's flexible addressing modes the dynamic allocation alternative is easily possible: With the address of the block of allocated memory in register a0 we could, for instance, use the 68000's indirect addressing with displacement to initialise the fields like this:

```
new_window
    dc.w    13,26                       window XY origin
    dc.w    610,115                     width and height
    dc.b    DETAIL_PEN,BLOCK_PEN        pens
    dc.l    CLOSEWINDOW                 IDCMP flags
    dc.l    WINDOWDRAG+WINDOWCLOSE      window flags
    dc.l    NULL                        no gadgets
    dc.l    NULL                        no CHECKMARK imagery
    dc.l    NewWindowName               window title
    dc.l    NULL                        no custom pointer
    dc.l    NULL                        no custom bitmap
    dc.w    0,0                         minimum width and height
    dc.w    0,0                         maximum width and height
    dc.w    WBENCHSCREEN                screen type NewWindowName
    dc.b    'This window opens in the WorkBench Screen',NULL
```

```
INIT_WINDOW     move.w  #WIDTH,nw_Width(a0)
                move.w  #HEIGHT,nw_Height(a0)
                move.b  #DETAIL_PEN,nw_BlockPen(a0)
                move.l  #CLOSEWINDOW,nw_IDCMPFlags(a0)
                move.l  #SMART_REFRESH,nw_Flags(a0)
                move.l  #NewWindowName,nw_Title(a0)
```

Both initialisation approaches, whether coded in C or assembler, have their uses. When, however, many related structures have to be initialised in a similar way (for example, a couple of dozen gadget structures which differ only in that they occupy different positions in the window and have different gadget IDs) the dynamic initialisation approach does start to pay dividends and of course dynamically allocated memory helps reduce the physical size of the program.

AMIGA USER DIRECT

Amiga User International chooses the very best and brings it - Direct To You

BARGAIN ACCESSORIES

UNIVERSAL PRINTER STAND

Save valuable workspace, improve efficiency, fits all desktop printers, standard carriage or wide. Stores paper underneath, for centre or rear feed, removable paper tray neatly stacks printout.

NOW SAVE £10.00 £20.00

CURTIS MOUSE PAD ORGANIZER

Four work-saving functions in one. Mouse Pad, Wrist Rest, Pen/Pencil Tray and Mouse Garage.

SAVE £5.00 £12.00

CURTIS SUPER CLIP

Position copy perfectly next to your Word Processor, Computer Keyboard. Fits all monitors and switches easily for left or right hand use.

SAVE £5.00

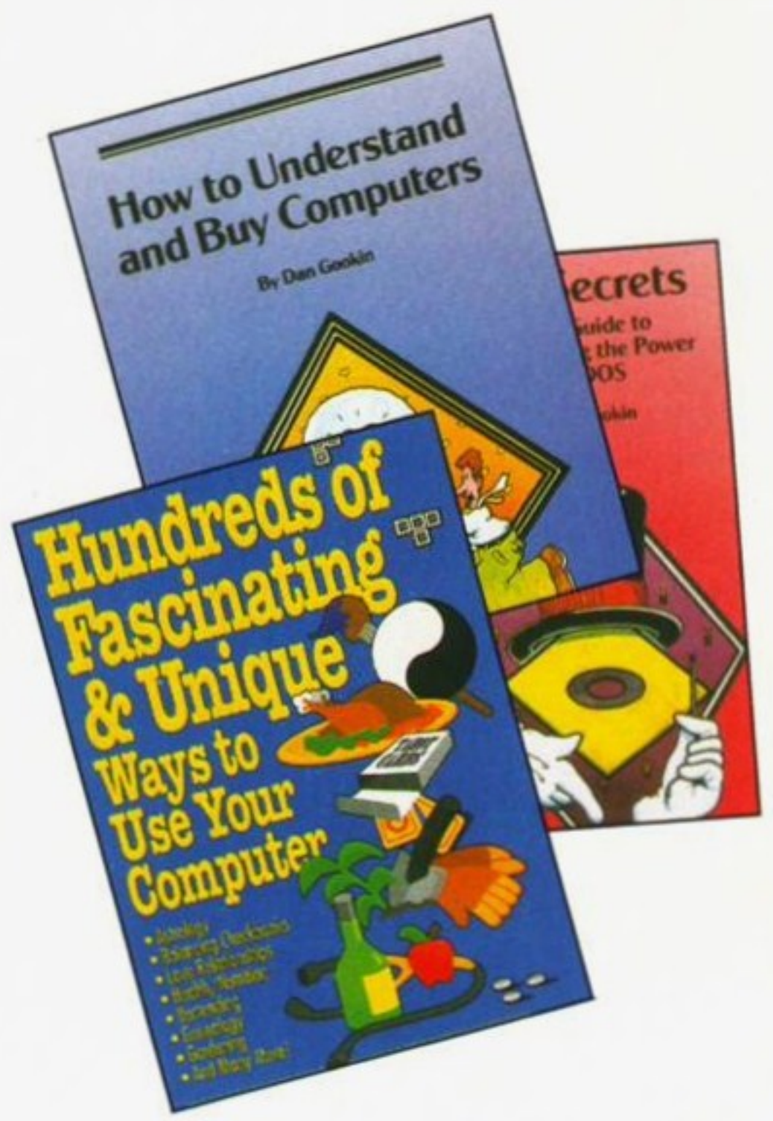
£8.00

BOOK BARGAINS

YOURS FREE

Choose any two computer books shown here and this Simple Computer Maintenance & Repair book is yours - Entirely Free

DESCRIPTION PRICE



HOW TO MAKE MONEY WITH COMPUTERS

Shows you how to get started in the most profitable businesses, consulting, programming.
193 pages **£9.95**

DIGITAL DAVE'S COMPUTER TIPS AND SECRETS

Hundreds of questions asked by computer users with clear, easy to understand answers.
174 pages **£9.95**

COMPUTE'S SECOND BOOK OF AMIGA

A collection of articles, programs and advice on the Amiga. 285 pages of strategy and thinking games, classic card games and action arcade games. Sections on graphics and programming.
285 pages **£15.45**

★ STAR SAVER ★

CURTIS FAX STAX

Save valuable workspace - create your own desktop Fax Centre, holds Fax machine to make multiple 9ins x 14ins custom-labelled Fax mail boxes. 3 shelves, 6 compartments.

NOW SAVE £15.00 £15.00

HUNDREDS OF FASCINATING & UNIQUE WAYS TO USE YOUR COMPUTER

If you're tired of using your computer to crunch spread sheets, do word processing and input data, this is the book for you. Discover all the other things a computer can do.
145 pages **£9.95**

SOFTWARE BUYING SECRETS

An excellent guide to decisions that will be invaluable for as long as you own a computer.
170 pages **£9.95**

DOS SECRETS

Ever wondered about all those cryptic DOS features and commands, then this book is for you.
178 pages **£9.95**

HOW TO GET STARTED WITH MODEMS

This handy guide covers all aspects of Modeming from purchase to installation.
139 pages **£9.95**

HOW TO UNDERSTAND AND BUY COMPUTERS

This book contains all you need to know about buying computers and explains in easy to understand language. *160 pages* **£9.95**

ELEMENTARY AMIGA BASIC

A tutorial guide to programming in AmigaBASIC for anyone new to programming. Sections on educational programming, built in functions, graphics, music, sound and speech. **£15.45**

BEGINNERS GUIDE TO DOS

This book explains DOS in a clear, relaxed and easy to digest manner.
220 pages **£9.95**

DISK-PICK

Simply touch the diskette and the spring pops it out and gives you access to 14, 3.5in diskettes. Designed with interlocking side panels to connect multiple units. A sliding cover protects from dust and damage.

SAVE £6.00

£10.00

LABEL-IT

The intelligent labelling system you can't do without. High quality, permanent adhesive holders with reversible labels. 10 clear-adhesive label holders, 60 coloured removable labels in each pack. **Available: 3.5in and 5.25in disks**

£15.00

SAXON PUBLISHER V1.2

Tag based system with the ability to rotate, scale, skew, flip, expand and compress both text and graphics. Enhanced colour separation technology. Has the ability to convert any PS file into IFF or EPS image or DR2D. Includes Saxon Script Professional, a powerful and sophisticated PostScript Interpreter with the added flexibility of being able to edit and manipulate. Support of PostScript downloadable fonts including Compugraphic, Adobe Type 1 and Type 3 fonts.

SAVE £40.00 £209.00

SCALA 500

A professional video titling and presentation package which can set text in any style, colour, size and can be easily manipulated on and off the screen.
Create captions, credits and whatever you can dream up, including effects.

NOW SAVE £30.00

SCALA 500 £65.00

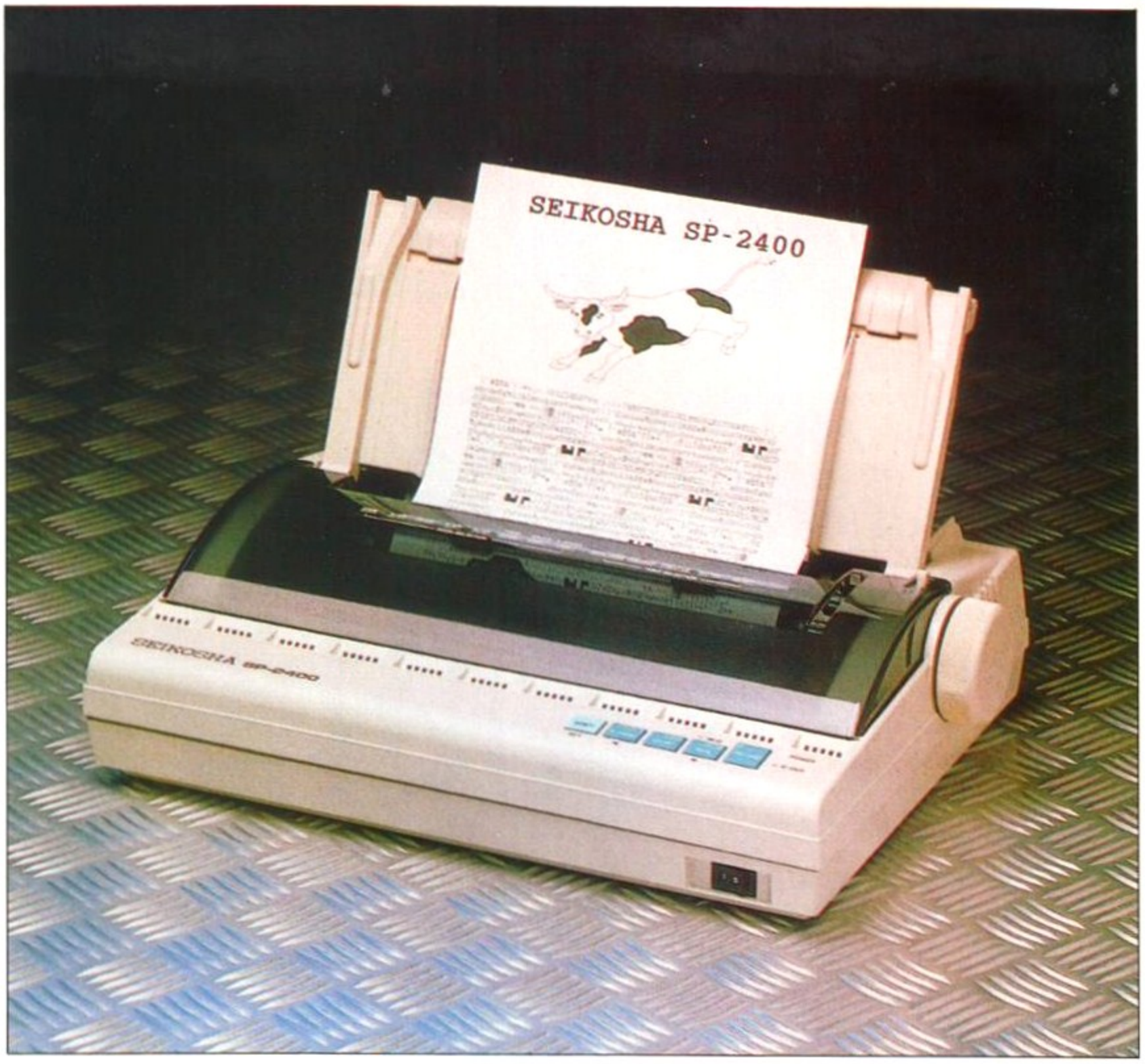
VU-TEK SCREEN FILTER

Among the highest performance filters available for glare reduction. Contrast ratio improvements of up to 40:1 provides a black, non-distracting background for easy to read characters. Eliminates the "halo" around text and graphics providing a clear sharp image. Reduces flicker, compatible with colour and high resolution monitors. Absorbs static and up to 98% of all VLF radiation. Highest durability.
Available: 12/13/24/15ins (state size)

SAVE £25.00

VU-TEK SCREEN FILTER £93.00

★ EDITOR'S STAR CHOICE ★



THE NEW SEIKOSHA SP-2400 A1 9-PIN DOT MATRIX PRINTER

A high quality speed printer designed to provide rapid response and versatility. As well as maximizing throughput - performing at up to 300cps (Super Speed Draft mode) - the bidirectional 9-pin printhead delivers excellent quality with a choice of 5 attractive type styles. Also with its impact printing mechanism, the SP-2400 A1 can handle multipart forms smoothly and efficiently. Two interfaces and two emulations ensure hardware/software compatibility. So whatever the challenge, Seikosha's SP-2400 A1 is your perfect partner.

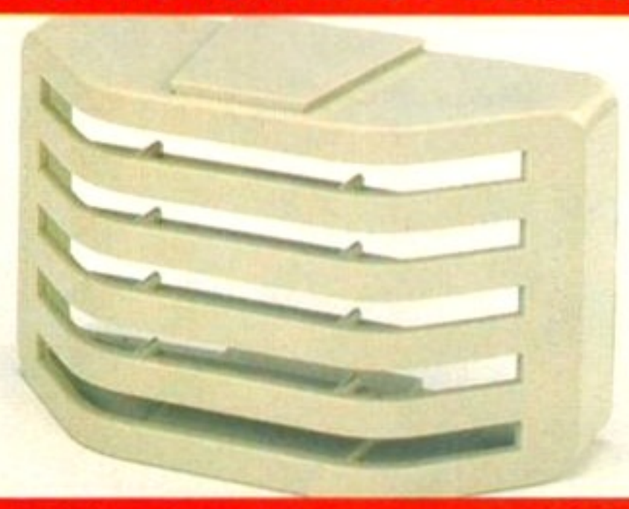
Each printer arrives with a One Year On-Site Maintenance Guarantee.

SAVE £45.00

£189.00

POST YOUR ORDER TO: AMIGA USER *DIRECT*, GREATER LONDON HOUSE, HAMPSTEAD ROAD, LONDON NW1 7QQ

FREE FASTRACK DISPENSER



This handy FastRack Dispenser holds 3½ ins and 5¼ ins disks and attaches easily to your monitor - valued at £5.99.

AMIGA USER *DIRECT*

DEPT MH
GREATER LONDON HOUSE, HAMPSTEAD ROAD, LONDON NW1 7QQ

Name _____
CAPITAL LETTERS
Address _____

_____ Post Code _____

Telephone No (in case of queries) _____

DESCRIPTION	QUANTITY	AMOUNT	
POSTAGE AND PACKING		3	00
TOTAL ORDER			

HOW TO ORDER

Simply send your cheque/postal order, made payable to HHL PUBLISHING with this order form.

Remember, write clearly using CAPITAL LETTERS.

DELIVERY

GIVING YOU THE BOOT

David Carryete has created an interesting AMIGA PROJECT that will allow you to build a hardware boot selector without the need for expert knowledge.

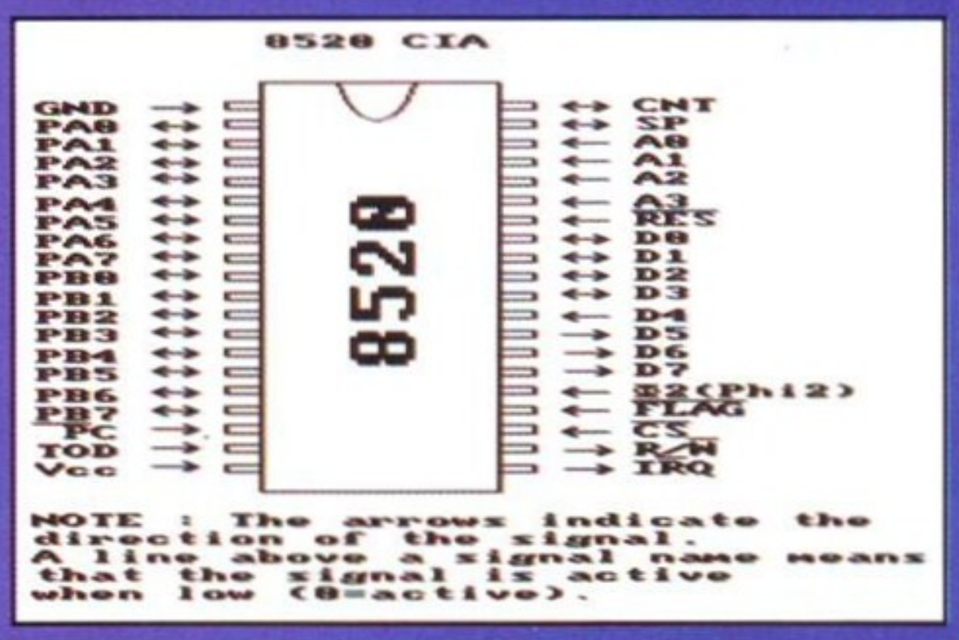
Ever been frustrated by a dodgy internal drive or wish for some reason to be able to boot from the external drive, or even be able to use an external 5 1/4 drive as your internal drive?

This little device will enable you to do all these things and at the end of the day, at a flick of a switch, your Amiga will return back to its normal configuration.

The boot selector device fits internally to your machine and enables you to 'boot' (that is, start up your machine with either Workbench or from a bootable disk) from either the normal internal drive or from an external drive. It is switchable from a toggle switch which may be either fitted to the side of your machine or (as I have in mine) the ribbon wire is just fitted through a gap in the casing (although this I would not recommend - due to the vulnerability of the bare components).

I have only the facilities to test the device on my standard A500 but I can see no problems with using it with other versions of the Amiga, as long as the EVEN CIA chip has the same configuration (which it should have - A3000 excepted).

The Boot Selector is quite a simple device to make up and install and the components required are also quite minimal. Only a basic knowledge of soldering is required. You do not need to know what exactly is going on successfully to make up, install and use the boot selector.



The Components

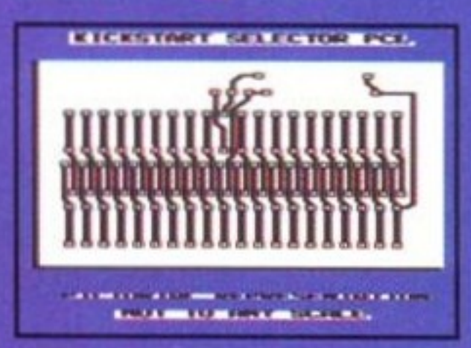
The main component is the Printed Circuit Board (P.C.B.) which can be obtained from David Carryete, or made.

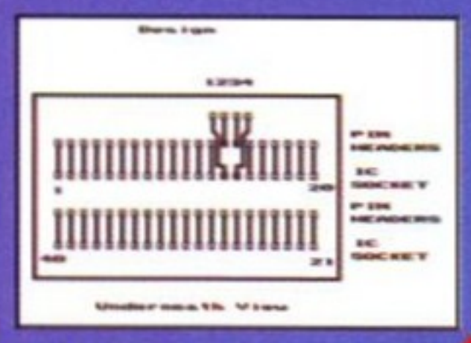
2 x 20 Pin Strip 56p each
1 x I.C. Holder Socket (DIL Socket) 20p
60cm x 4 wire Ribbon Cable
10 core, 72p per metre
10cm x 1 core wire (use one of the 10 core wires)
1 x DPDT Toggle Switch 98p
Solder 98p - or less

The components are fairly widely available from good local electrical stores such as Maplins or Tandy. The prices above were obtained from a Maplins store.

The Circuit

What the Boot Selector does is switch the drive select for drive 0 (internal) with the drive select for drive 1 and visa versa. These are the pins PB3 and PB4 on the EVEN CIA chip. The toggle switch is wired as an inverter for the drive lines. A board is necessary because of the switching required in between the chip and its socket.





Assembly

With the four holes for the ribbon cable facing at the top of the bare board and the Printed Circuit Board tracks facing down.

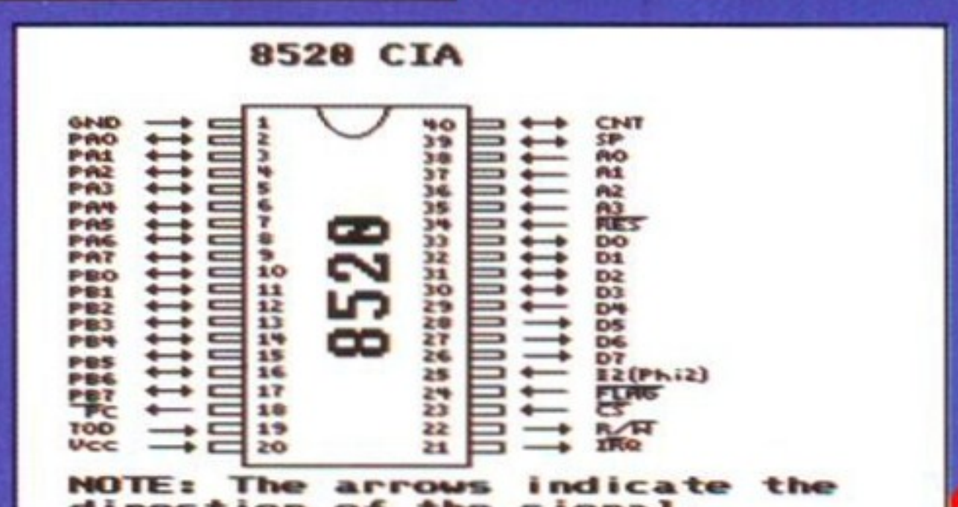
1. Position the IC socket holder into the upper side of the board, using the lower set of drilled holes, MAKE SURE THAT THE NOTCH IN THE HOLDER IS FACING TO THE RIGHT and solder the socket holder to the board on the lower side.

2. Position the two pin headers into the remaining sets of 20 drilled holes on the lower side of the board and solder the pins on the lower side.

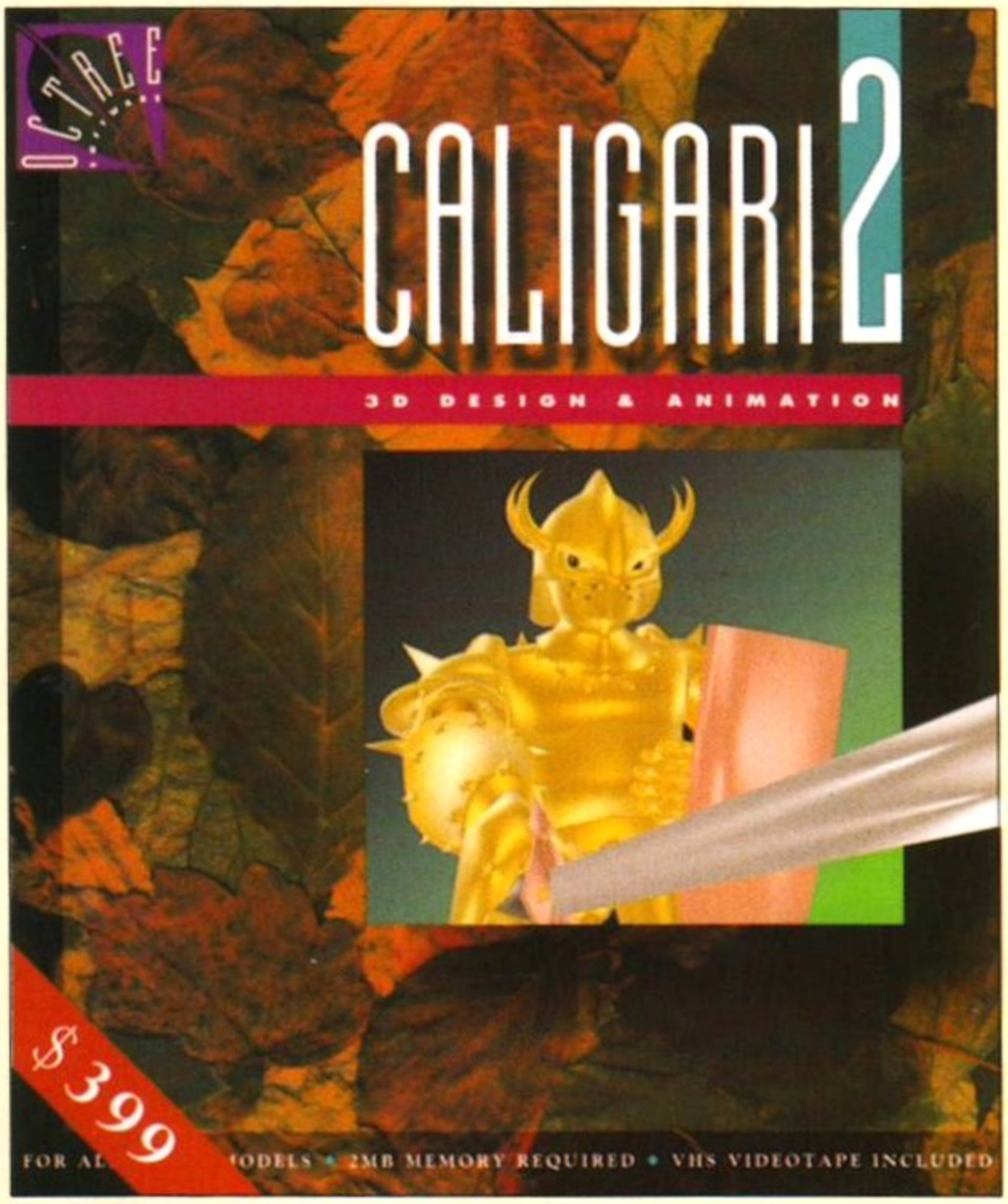
3. Position the four wire ribbon cable onto the upper side of the board and solder the wires from below.

4. Solder the toggle switch as per the illustration shown below.

The Boot Selector is now



WHY WE ARE OFFERING REALITY • REFINED • VIRTUALLY FOR ONLY £230.00 (plus p+p)



SAVE £50.00

HERE'S HOW . . .

The world's best modeller using virtual reality technology for direct real time manipulation of 3D objects in full perspective.

Single Point Editor, full hierarchies, Primitives, Extruder, Mirror, Slice and Sweep tools.

Photorealistic full colour renderer with texture mapping, environment, Gouraud, Phong, Metal and Environmental shaders.

Four levels of of antialiasing, with separate antialiasing of textures, unlimited number of lights, including Global, Local and Directional lights.

20 to 50 times faster than ray tracing programs.

Full colour output to HAM, HAME and DCTV frame buffers.

Interactive spline based animation with Videoscape, Light Wave and Sculpt 4D object formats.

Runs on all Amiga models (2Mb memory required).

Support for 68030/040 accelerators.

Full implementation of Caligari Broadcast 2.0 technology.

For your Caligari 2 simply send your cheque/postal order made payable to HHL Publishing for £233.00 which includes £3.00 postage and packing - Today!

AMIGA USER INTERNATIONAL
DEPT: MHC2
Greater London House, Hampstead Road, London NW1 7QQ

AMIGA USER INTERNATIONAL

DEPT: MHC2
GREATER LONDON HOUSE, HAMPSTEAD ROAD, LONDON NW1 7QQ

PLEASE SEND ME CALIGARI 2

Name _____

Address _____

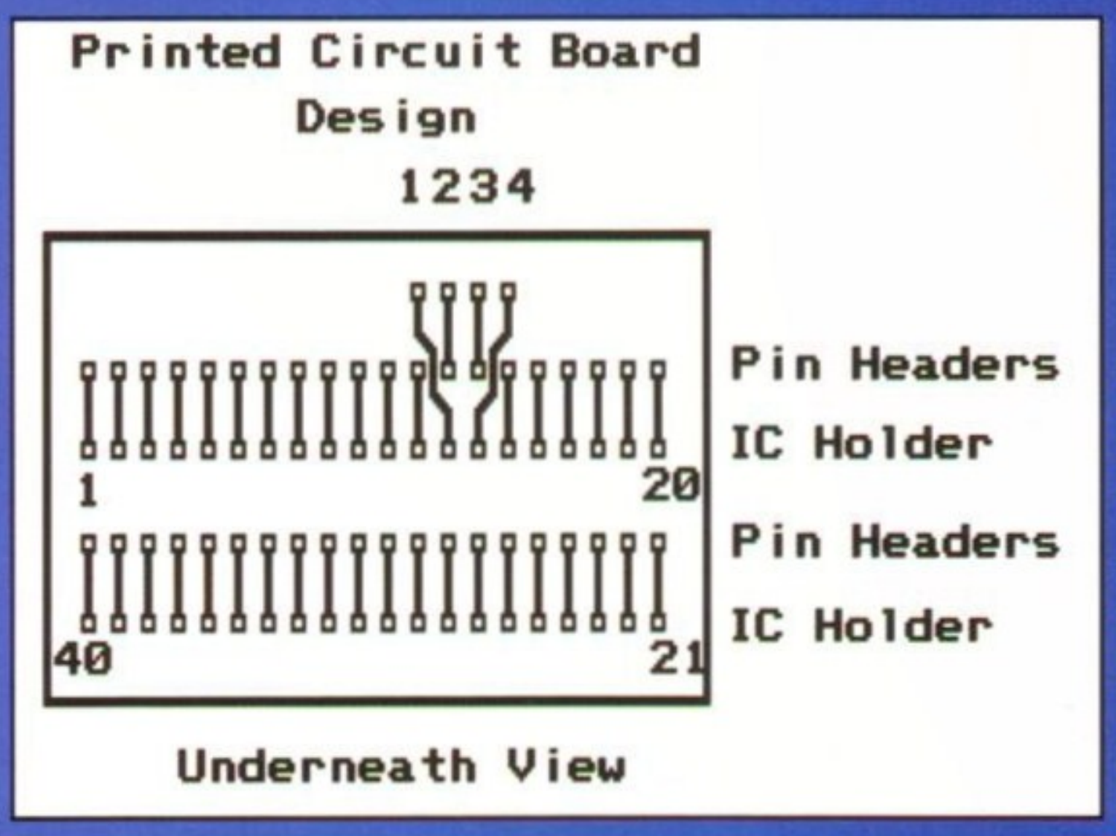
_____

_____ Post Code _____

Telephone No: (In case of queries) _____

I have enclosed my cheque/postal order made payable to HHL Publishing for £233.00 which includes £3.00 postage and packing.
Please allow 28 days delivery from receipt of order. Offer open to UK and Eire only.

GIVING YOU THE BOOT



Fitting

Opening your Amiga may invalidate your warranty. If in doubt contact your locally appointed Commodore agent.

1. Make sure that all wires going to your Amiga are unplugged and that the machine has been switched off and standing for at least 30 minutes. ELECTRICITY CAN KILL.

2. Remove the six fixing screws under the machine case. NOTE - do not remove the Disk Drive screws which are the ones in the middle of the lower case, only the two lots of three screws on the upper and lower part of the bottom case.

3. Carefully turn the machine the right way up and remove the upper case - do not force it. Take the keyboard off, noting the way the keyboard connector is fitted (use a pair of pliers to remove the connector - do not pull on the wires). Remove the metal shield screws and carefully bend the tabs back with a screwdriver, not your nails. Remove the metal shield.

4. Find the EVEN CIA chip which is located closest to the disk drive and should be named as such on the circuit board.

5. Carefully remove the EVEN CIA chip making sure not to bend any of the pins (you may have to take off the ribbon cable to the disk drive or remove the drive altogether to gain access).

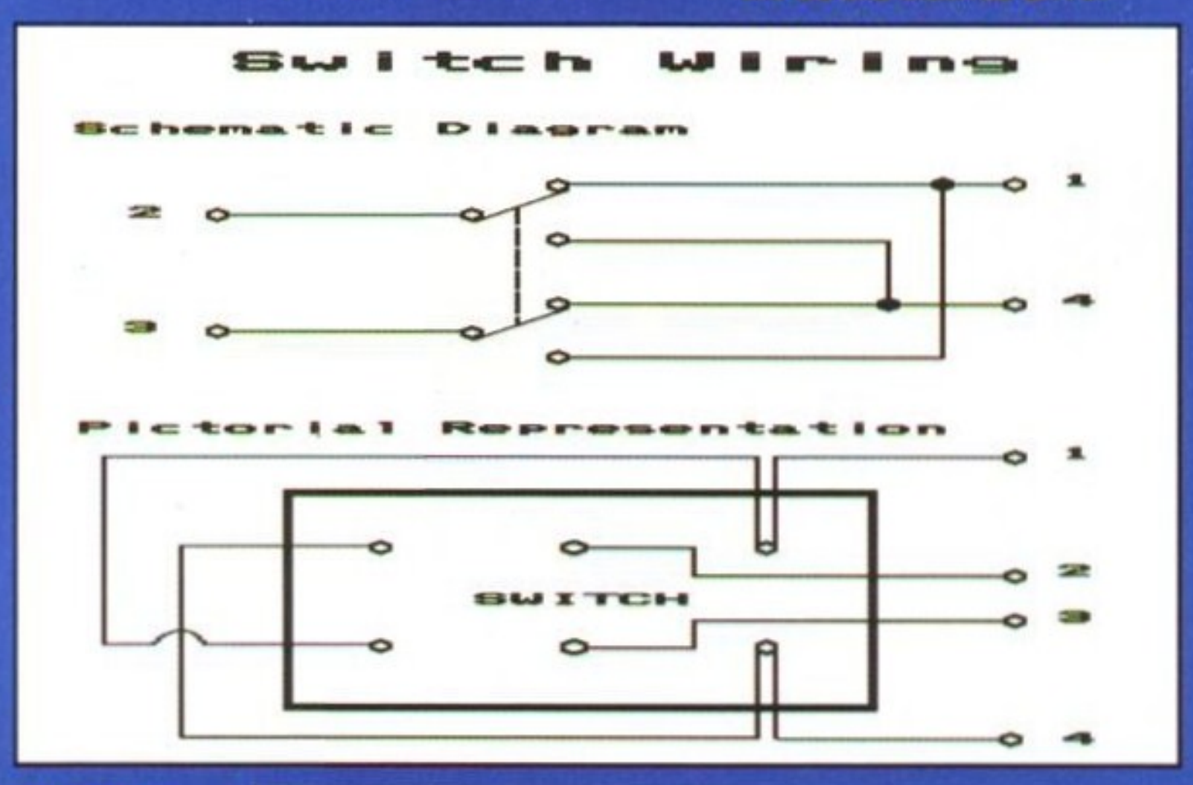
6. Fit the CIA chip into the socket holder on the boot selector. Make sure the end of the chip with the dot or notch is at the same end as the dot or notch on the socket.

7. Plug the assembled boot selector into the EVEN CIA empty socket making sure it is firmly in place (do not exert to much pressure on the Amiga circuit board - it is very expensive to replace you know !)

8. Turn on the computer and see which drive is operating and note the position of the switch.

9. SWITCH THE COMPUTER OFF and flick the switch to the opposite way. The other drive should operate as the boot drive.

10. Finally SWITCH THE COMPUTER OFF and drill and fit your toggle switch in a convenient position on the side of th e machine - possibly the lower case, right of the keyboard position, or to the rear of the disk drive, lowercase, depending on room available.



Use of the Boot Selector

Use is simplicity itself. Just switch off the computer and flick the toggle switch to change drives.

Remember that the internal drive (DF0:) will in effect be the external drive (DF1:) and the external drive will be the internal drive. This enables you to boot from the external drive.

Printed Circuit Boards are available at the price of £12.50, including postage and packing.

If you would like a PCB for your Boot Selector write to David Carreyette at 125 Davies Rd, West Bridgeford, Nottingham NG2 5HZ.

Warning and Disclaimer

The Author, Headway, Home and Law Publishing Group Limited, or their agents will not be held responsible for damage, death or injury caused by the use or misuse of project or products. The opening of your machine may invalidate your warranty. If you have any doubt, consult your appointed Commodore agent who should ensure you do not jeopardise your warranty. You have been warned!

NOTE

ALWAYS MAKE SURE YOU SWITCH THE COMPUTER OFF BEFORE YOU USE THE BOOT SWITCH. YOU MAY CAUSE INTERNAL DAMAGE IF YOU FLICK THE SELECTOR WHILE THE COMPUTER IS ON. WE CANNOT BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED.

★ A REVOLUTION IN FOOTBALL MANAGEMENT

DIVISION ONE 92 REV 1

"(The Midnight Oil) treat soccer in the sophisticated way Americans treat their national games." - The Guardian

THE GAMES Everyone has their own ideas on what makes a soccer team "tick". Here is the opportunity to put into practice your own ideas. Operating from the English 1st division you must build a squad to challenge for the league title, the FA and League Cups and the 3 European trophies. And as players age, rebuild the team while holding off relegation.

SQUADS/TRANSFER MARKET In a 3 squad system (1st team squad, reserve squad and youth squad), use the continuous intake of youth players and training program to create a squad whose skills reflect your ideas. Supplement these skills with carefully selected transfer market acquisitions. As they age, veterans fade and youngsters develop, keep an eye on the changing skills of your team.

SKILLS All players have a balance of 5 skills (no "skill levels") which you must develop by experimenting with your team. Even more important will be your judgement about the effect of the particular team balance or skill combination on the outcome of the match, and subsequently a season of football. Suitable training can develop/enhance skills.

MATCH/STATS Your judgement will be put to the test in this unique 4 minute match/stats simulation against accurately simulated opposition. This is the measure of your talent and your most reliable source of information. There are displays of: match flow, two teams, player-with-the-ball, injuries, discipline, substitutions, in-match tactics, goal scorers, possession breakdown and performance assessment.

REVISION ONE.

The best just got better! All updates that have been made to Division One 92 over the last 6 months. In addition the match screen has improved, opposition team info expanded, a European transfer market added and a few more minor changes. An edit program and a customisation program have also been added. The manual has been expanded and the packaging improved.

EDIT PROGRAM Edit the team and players that make up Division One. Produce your own Division One, or Scottish League, British League, European League, German/Spanish/French/Italian etc. etc. Or even make up a league of all the best teams you've ever seen.

CUSTOMISATION PROGRAM Customise the 45 man starting squad. Use your favourite players, or your local side. How about a squad with Pele, Beckenbauer, Best, Cruyff, Maradonna...?

★ WHAT IS DIFFERENT ABOUT THIS GAME?

Division One 92 transforms the soccer management game. You can concentrate on the football. Experiment with players, formations, team styles. Build your dream squad and check it out in accurately simulated league/cup football. Match results are from a unique soccer match. Every pass, tackle, shot etc. is determined by the players involved. Your choice of skills thus influences match results. Mental arithmetic has been dumped. Football knowledge is the name of the game.

HEAD COACH V3

"When it comes to the 4th down Headcoach has it". "Headcoach", "TV Sports Football" head to head" - Pop Comp.

HEADCOACH V3 has been described as "the best game ever put onto a computer". It is the complete American Football game, a multi season epic with the very best strategic elements of the real thing. You will call the plays, devise the gameplans and develop the team.

Use the first season (2 pre-season games, 16 regular season games, and the play-offs) to discover your 45 man squad of players. Then exploit the college draft to improve the team and expand your gameplay to beat the very best the NFL can throw at you.

Players will age and teams will fade (a player will last about 6 seasons), but you will stay and rebuild...

THE MIDNIGHT OIL

Tel Sales: 0438 721936 FOR NEXT DAY DELIVERY

VISA · EUROCARD · MasterCard

POSTAL SALES

The Midnight Oil Dept. *(AUI)* 18 Hazelmere Road, Stevenage SG2 8RX

2/3 days delivery

Please supply:

	HC	D1rev1
Amiga	☐	☐
Amiga 1 meg	☐	☐
Atari ST	☐	☐
	£19.95	£19.95

Current owners: replacement disk £1.50

COOLEEN COMPUTER SERVICES

30, Cooleen Ave., Newtownards, Co. Down. BT23 3UZ Telephone: (0247)811091

Amiga P.D. & accessories PHONE MON-SAT 9am to 9pm

£1.20 per disk order 10 get one free. P&P 50p
Send cheque, P.O. or phone your Access/Visa No.
If you have any problems using discs please phone and we will try to help

Utilities

WORKBENCH

UW 2 Quickbench (NP)
UW 3 Super Workbench (NP)
UW 6 Workbench (NP)
(improvement on 1.3)
UW 9 Jazzbench (NP)
UW10 SID v1.6 (P)
UW12 Littlebench (PO)
(Replacement for WB2)
UW13 Messy Sid II (P)
UW19 HardDisk utils (P)
UW22 MessyDos (P)
UW23 DiskMaster v3.2 (NP)
UW25 SID V2 (P)

GENERAL

UG17 Power Utilities
(Imploder Diskmaster Editor etc)
UG18 Text Utilities
(Muchmore PoPa PPmore Text editors & word processor)
UG45 Catalogue Workshop A
(Databases Cataloguers Label Printer)
UG51 Catalogue Workshop B
UG52 Brilliant Boot Utilities 2
UG54 Optimum Utilities disk 1
(Thirty utilities with Docs)
UG55 Hardware Mods
UG56 System Exerciser v5.0

PRINTING

UP 1 Joy of printing
(Printer progs & drivers)
UP 2 Printer utilities
(Label printer progs & label base)
UP 3 Print Studio (P)
(includes 41 printer drivers)

BUSINESS

B 1 Bankin
(Personal accounts reckoner)
B 2 Wordwright
(wordprocessor spellchecker)
B 6 U-Edit
(wordprocessor with help sheet)
B 8 Rim (database)
B 9 Amibase v3.76
B11 TextEngine
(wordprocessor & spellchecker)
B14 Visicalc (spreadsheet)
B16 Amibase Pro 2
B18 Textplus V3.0E
(Texteditor, Printer drivers spellchecker & disk copier)
B19 600 Business Letters
(A letter for almost every occasion just add names and addresses and your signature)
B21 BBase II
(Good first time database)
B22 Database Wiz
(Names addresses & tel. No.s)

PAINT PROGS & D.T.P.

PP 1 D/Paint Fonts II (P)
PP 4 Dynamite Fonts (P)
PP 5 Fonts+Surfaces (P)
PP23 D/P PaintcartoonBr (P)
PP26 Fancy Fonts (P)
PP29 SpectraPaint V3.2 (P)
PP47 Gelignite Fonts (P)
PP49 Sculpt 3D scenes
PP50 ElectroCad V1.4
PP51 Mobedll
(Colour cycling paint package)
PP52
= Ten disks of Fonts
= for Pagestream 2
= including a range
= "normal", Fancy,
= Outline, Shadow
PP61

EMULATORS

E 1 P.C. emulator
(15 min demo needs MSDos)
E 5 ST emulator (P)

GRAPHICS

GU 1 TV Graphics 1
GU 2 TV Graphics 2
(fonts for desktop video work)
GU 5 Graphic utilities
GU 6 Graphic Management

DEMO CREATORS

DC 1 Daves Demo Creator
DC 2 Dope Intro Maker
DC 5 SpaceWriter
DC 9 ACUmegademo maker
DC14 Intromaker

ANIMATIONS

A 1 Juggler
A 2 Vaux Killer (2)
A 3 Juggette (1 meg)
A 4 Pogo
A 5 Amy v Walker (3 meg)
A 6 Anti-lemming (2 meg)
A 7 Shuttlecock (1 meg)
A 8 The Dating Game (3 meg)

Music Programmes

MP 1 Med 3.2 (P)
(4 track music package with midi, player prog selection of instruments & sampled sounds)
MP 2 Sound tracker V4.0
with Song & samples)
MS 1 Instruments & sounds 1
MS 2 Instruments & sounds 2
MS 3 Instruments & sounds 3
MS 4 Instruments & sounds 4
MS 5 Instruments & sounds 5

GAMES

G15 & G16 Startrek (P)
G17 Computer Conflict (P)
G20 Flaschbier (NP)
G22 Collosus
G23 Megaball (P)
G25 Seventiles (NP)
G26 Wizzy's Quest (P)
G27 Lazer Zone (NP)
G28 Merv the Merciless (NP)
G44 Llarnatron (P)
G52 Wacko Jnr in Wonderland (NP)

COMPILATIONS

GC12 Assassins IV (P)
GC13 Assassins V (P)
GC19 Megagames 2 (P)
Loads more available

CRUNCHERS COPIERS & VIRUS KILLERS

CV 1 PowerPacker 2.3 (NP)
CV 6 Warriors Cruncher Disk V3.5
CV 8 Copycat
CV10 Virus killer disk
CV15 Crunchers 2
(thirty crunchers + 12 virus killers)
CV24 D-Copy 2

Music Pack £5
6 disks inc. Med 3.2 Soundtracker, rippers and 4 meg of sampled soundfx & instructions

KICKSWITCH
Rom Switcher £29.95
1.3 Roms £29.95
2.0 Roms £39.95
UK 2.04 Rom kit inc. rom chip 4 disks and Manual £89.95

ACCELERATORS from £270
HARD DRIVES from £299

CHILDREN'S PACK
6 Disks £5
Under 10's pack Maths, Spelling, Paint Program and some simple reasoning games.

BEGINNER'S PACK
6 Disks £5
something of everything

MOVING UP TO 2.0

In response to a reader's request, Andy Eskelson explains what to do - and what not to do - when upgrading your computer.

By now most of you will have heard of the new style WorkBench 2. The A500+ and the A3000 come fitted with it and for existing Workbench 1.3 users upgrade packs are now becoming available.

But be warned - UPGRADING IS NOT A SIMPLE TASK AND UNDER NO CIRCUMSTANCES SHOULD YOU ATTEMPT THE FOLLOWING IF YOU ARE IN ANY WAY UNSURE OF YOUR ABILITY.

There are big problems and these include:

a. You have to disassemble your Amiga and this will void any warranty
b. You must remove and replace a large integrated circuit
c. You must ensure that you are working in safety, that is, no power must be connected
d. You have to put everything back together again.

As I have stated, upgrading your workbench is not a simple operation. To give you an idea here are the main steps that you have to take:

a. Back up your hard drive
b. Install the new kickstart chip
c. Install the new WB2 software
d. Back up your system again
e. Reformat your hard drives (to get the best out of WB2)
f. Restore your hard disk software
g. Get all your applications working again.

Apart from step (g) this will take about three hours assuming a half hour back-up or restore cycle.

For the purposes of this article I am going to make the following assumptions.

a. You are going to upgrade a A2000 machine
b. You have a hard drive fitted (A2091)

Generally the sequence of steps will be the same for an A500, apart from getting into the machine. Some A500 Amigas are assembled using Torx screws. (They look like a six pointed star.) You will need the correct screwdriver to get them out. There is also a metal screen that must be removed before you can get at the chips.

1. The Upgrade Kit comes as a large box and contains two big ring binders, four disks, an installation/getting started booklet, some odd but VERY important insert sheets for the installation and a small black box containing the Kickstart chip.

2. Go and make a cup of coffee (or tea) and sit down and READ the getting started booklet.

3. Done that? Good, now read it AGAIN!

4. The first thing to do is to have a good purge of your hard disk. Archive off all those files you have been meaning to do something about. Tidy up the directories and get rid of obsolete programs.

This is not strictly necessary but it will reduce the back up times.

5. Ensure that whichever back up utility you use is compatible with both WB1.3 and WB2. Prepare a copy of your back up program for both WB1.3 and WB2 on a floppy.

6. Back up your WB1.3 system. This is a security measure that will ensure you will be able to get back to where you started from should things go wrong. ENSURE THAT YOU VERIFY YOUR BACK-UP!

7. Put your back-ups away somewhere safe - away from stray magnetic fields and the like.

8. Back up the four disks that came with your upgrade kit and ensure that you rename the copies exactly the same as the originals.

9. Put the original WB2 disks away somewhere safe.

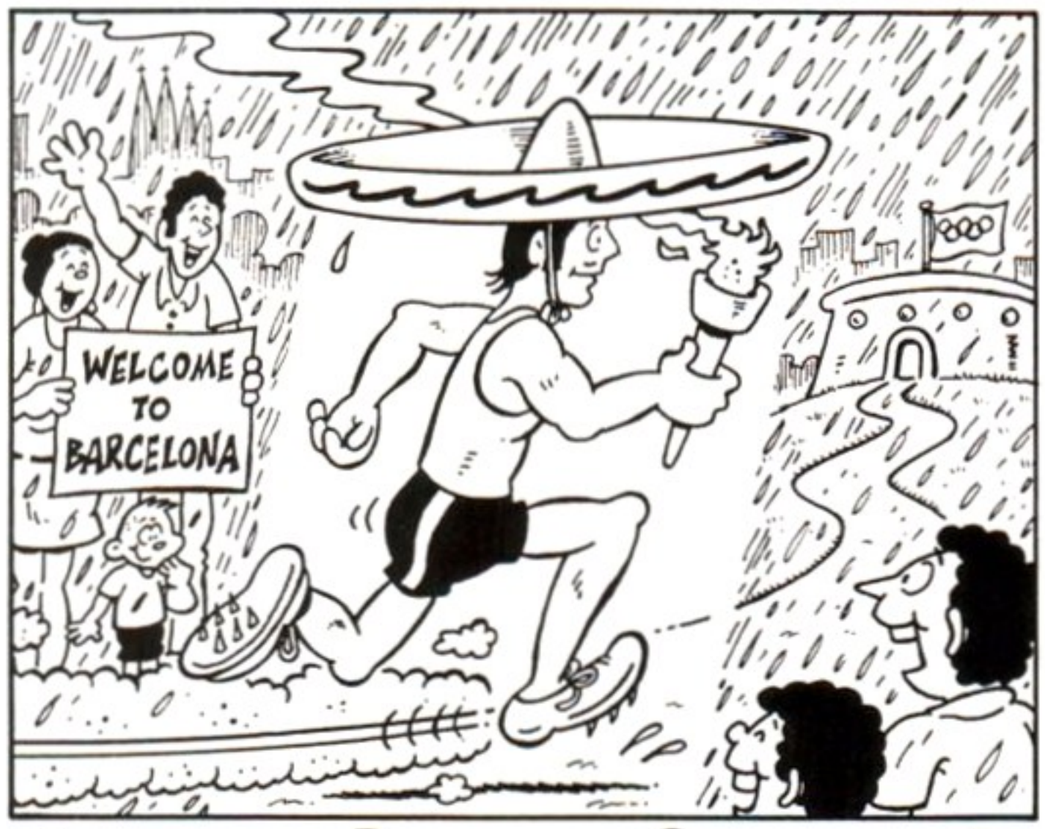
10. Clear your bench so that you have room to work. You will need a couple of small flatblade screwdrivers and a medium size crosshead screwdriver.

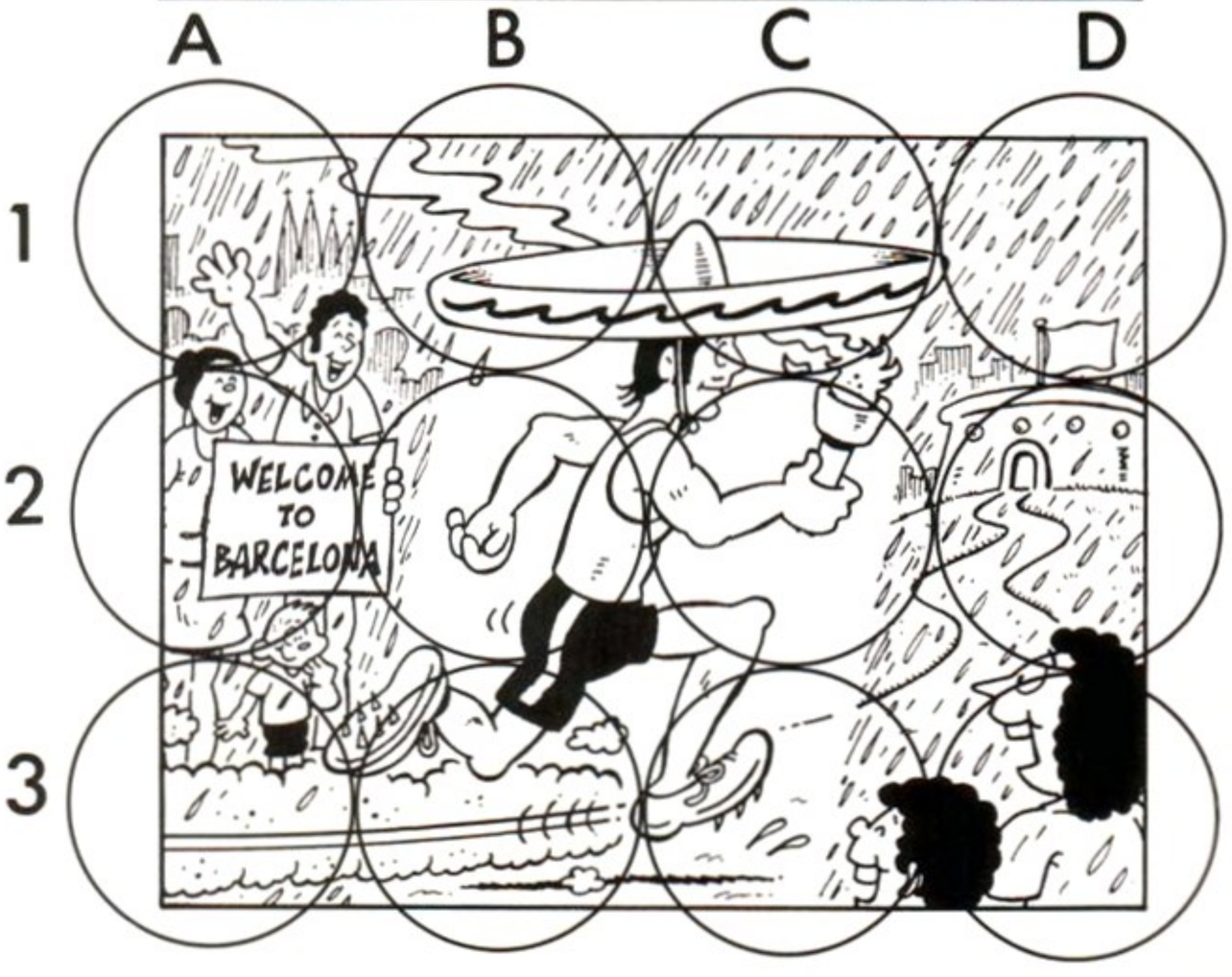
11. Disconnect your Amiga from the mains and disconnect any other peripherals that you might have connected.

12. Now is the time to open up your Amiga. To do this remove the two crosshead screws on the right and left hand sides, a total of four screws. →

YOUR CHANCE TO BE A WINNER!

OLYMPIC RINGS £500 CHALLENGE





GOLD AWARD

£250

SILVER AWARD

£150

BRONZE AWARD

£100

The Olympic symbol features five rings, and in our cartoon five simple changes have been made to the bottom picture. As you spot the differences note the key letter and number of each ring containing an alteration. Telephone our "Olympic Challenge" line and you will be asked to identify the five rings, and to leave your name, address, and telephone number. *It's quick, and so easy to take part!*

The winners will be those entries with correct answers, chosen at random after the closing date. The first correct call found will be judged the £250 winner, the second the £150 winner, and the third our £100 award winner.

GIVE US AN "OLYMPIC RING" NOW!

Tel: 0891 242 219 *Anytime!*

LINES OPEN UNTIL MIDNIGHT 31st AUGUST 1992

Calls cost 36p per minute cheap rate. 48p per minute at all other times.
Names of prize-winners will be published in the October issue of participating magazines.

13. Remove one crosshead screw from the rear panel. This screw is on the top edge exactly in the centre and will be the same size as the screws that you removed from the sides.

14. Put the screws away somewhere safe. YOU WILL NEED THEM AGAIN.

15. The top cover will now come off. Pull it directly towards you from the front. Once you are clear of the disk drives lift the cover away and put it somewhere where you will not trip over it.

16. Now is the time to have a good look inside the Amiga. Make a note of how the cables are laid, look at your drive bays and identify what is in them.

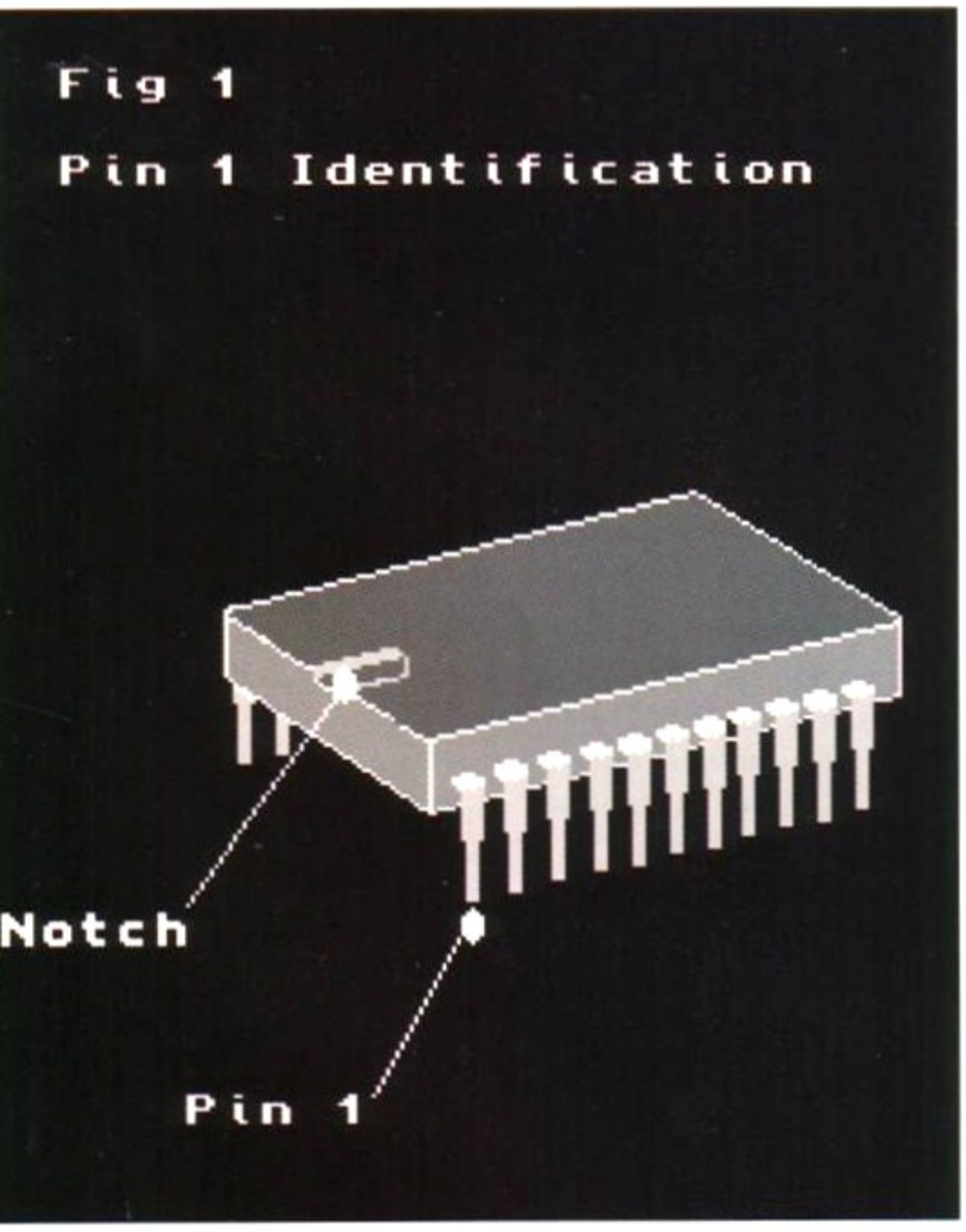
17. In order to fit the kickstart chip you have to remove the drive bay and power supply frame.

18. From the front of the Amiga you will see two, three, four, or five screws that attach the drive bay to the front of the Amiga. Remove them.

19. There are two or four screws attaching the power unit to the rear of the Amiga. Remove them.

Fig 1

Pin 1 Identification



The age of your Amiga will determine how many screws you will find. They are fairly obvious.

20. Lift out the power unit/drive bay. BE CAREFUL not to strain the power and disk leads. You should be able to rest the assembly on the rear corner of the case. If not use a couple of books to support the assembly.

21. In the centre of the area just exposed, you will see a large square chip (Agnus) and below this (towards the front) is the Kickstart ROM (U500) and to the left of U500 is the 68000 CPU.

22. This step in not necessary for the upgrade but as you can see most of the main chips it is worth doing. FIRMLY press each chip back into its socket (including Agnus). You will hear some alarming creaking noises when you do this. Chips moving in their sockets are one of the main causes of random Guru events.

23. Look at U500, draw a small picture of it and indicate where the notch is (see fig 1). You have to put the new chip in the same way round!

24. Using a couple of SMALL screwdrivers gently ease U500 out of its socket. Work in small steps from each end. DO NOT LIFT ONE END COMPLETELY, you will bend the pins of the chip if you do! A few `wiggles' with the screwdrivers will ease the chip out - just take your time.

25. Put U500 in the small box containing your new Kickstart chip.

26. Now comes the awkward part. You have to insert your new kickstart chip into the socket you have just removed U500 from. You MUST put it in the same way round as U500 was. However, it is unlikely that the pins of the chip will align with the socket exactly, so great care must be taken at this point.

Locate one side of the chip into the socket first. DO NOT PRESS DOWN YET! Now gently spring the other side into place. When all the pins are aligned firmly press down. The big danger here is bending a pin UNDER the chip. This is a real devil to spot with large chips, so be very careful (see fig 2).

27. Identify the type of Amiga you have. Look on the insert sheet for where to look. Generally on the A2000 one type will have pin one of U500 facing the rear of the chassis and the other type has pin one facing the front of the chassis.

28. If your A2000 is NOT made in Germany cut the link on the top of the new kickstart chip.

29. Double check for any bent pins. If you find some, gently remove the chip and straighten out the bent pins and re-insert. At this point a bent pin is EXTREMELY fragile so be very, very careful or it will break.

A500 users:

A number 10 Torx driver will be required to remove the screws from the case.

Once the case is open you will have to remove the keyboard assembly. The screening can has four tabs that have to be straightened and several screws to remove. Once this is done, remove the screening can and you will have access to the motherboard.

The KickStart rom is located to the right of the 68000 and is labeled U6.

There as several different models of A500 - you need to look at the PCB revision, located on the front right corner.

For Rev 3 and Rev 5 boards the link wire on top of the new kickStart ROM must be IN PLACE. For Rev 6A and above the link must be cut.

30. Replace the power unit/drive bay and make sure that the connectors are pressed home on the motherboard. Secure the assembly with a couple of screws for now.

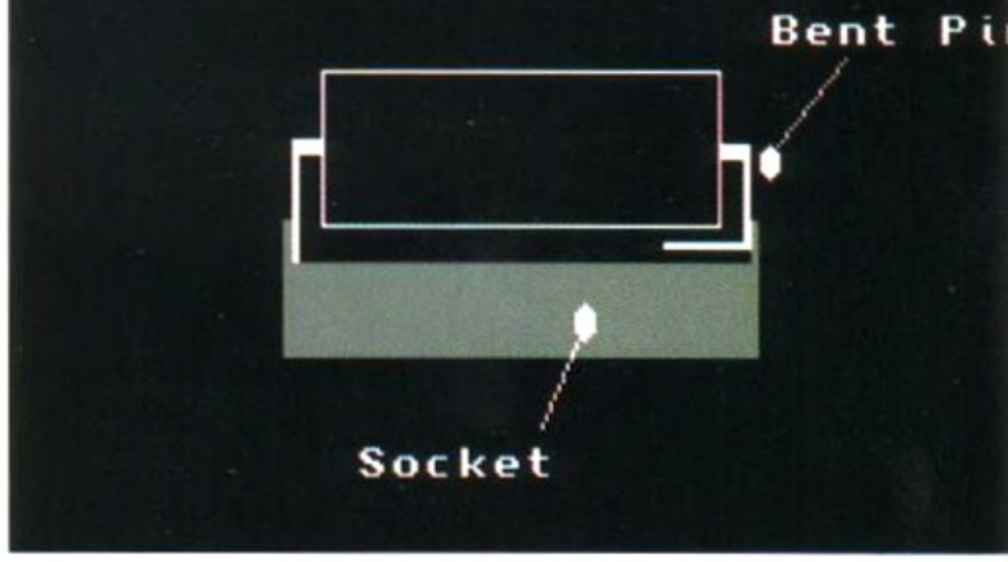
31. Disable the autoboot function of your hard drive and reconnect your keyboard, power leads and monitor.

32. Switch on. If all is well you should see the new insert WB disk screen come on.

33. Once you get the new start-up screen switch off, remove the mains lead and replace the screws that you removed from the drive bay assembly. Ensure that they are firmly tightened.

Fig 2

Bent Pin Problem



34. Check to see that no cables have been dislodged and check the DF0: and DF1: (if fitted) data and power connectors.

35. Replace the cover and its screws.

36. Reconnect your keyboard, mouse, monitor and power.

That's the end of the hardware installation. Next comes the software.

37. Have a short break and get yourself organised. The new WorkBench contains some new features that improve the operation of the system. The main thing is a NEW FastFileSystem. This is contained in the new Kickstart ROM that you have installed. In order to make this fully operational you will need to modify the filesystem on your hard disk and also it is worth reformatting it at this stage. Reformatting and restoring the system will remove any file fragmentation that has built up and this will make a great improvement in the performance of your hard disk system. You will need your new WB2 disks and another set of back-up disks or tapes.

38. Once you are happy with the basic operation of the new WorkBench make a complete backup of the system. This backup will be used to restore the system once the drive has been reformatted. Ensure that you VERIFY this backup.

39. Activate your HDtoolbox (if you can't find it on the newly installed system you will find it on the extras disk). Select partition drive and then advanced options. Select Add/Update File systems, highlight the FastFile system and select DELETE, then OK all the way back to the first screen. Repeat this for all your partitions.

40. Next select your drive and perform a low level format. Repeat this for each of your drives if you have more than one.

41. The next stage is to perform an AmigaDos format, (format disk from the Icons menu).

42. Remember to rename your drives to the same names as they were before. Reboot your Amiga. You will have to boot from floppy using the WB2 disk.

43. Load up your backup program and restore your drives.

44. Reboot your Amiga and ensure that the system comes up as per normal. You should notice a considerably improved boot time (I shaved five seconds off my warm boot time) and the drive should be nice and quiet for the moment.

That is all there is to the actual upgrading - the biggest problem is getting all the software to work again. You will find that your old start-up sequences will be in a directory called OLD on your root drive. There are lots of things that you can tweak, such as the WorkBench font and the backdrop patterns. Take the time and have a close look at each program. They have lots of features and you will find some very useful programs among them.

INFO

The WB2 upgrade kit was purchased from:
Applied Research Kernel, Corve Farmhouse, Corve Lane, Chale Green, Ventnor, Isle of Whight, PO38 2LA.
Tel: 0983 551496
ARK can also supply the 2620/30 upgrade roms mentioned in the installation guide.

mentor

FROM DREAM TO SCREEN PART I

Professional programmer Steve Goddard gives you advice on how you can get started writing programs without falling into the traps the experts know how to avoid.

The versatility of a computer such as the Amiga all boils down to the fact that it is programmable. For almost any task you want the Amiga to do, it is possible to sit down and write a program to do it.

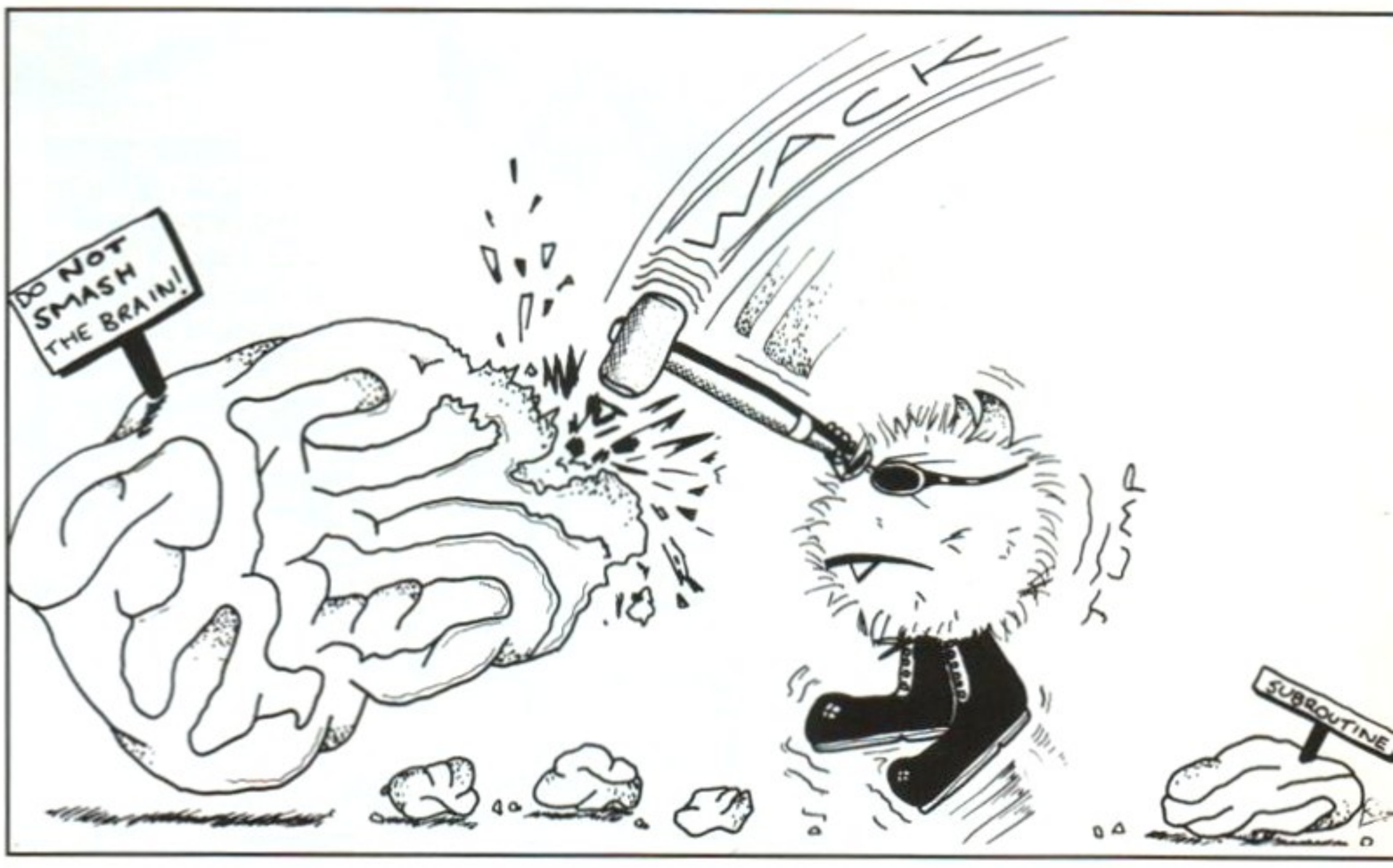
Of course, this is not news to most people. Many Amiga owners have sat down and started learning a computer language, either from a book, or perhaps from one of the Amiga User International series. Learning the language, however, is not the whole story.

This article is the first in a series of five that will be looking at how to go about writing a program. It is aimed at people who may have some knowledge of a programming language but who aren't sure what to do next. Since a good way to learn is by watching someone else, we will be developing a program from scratch. Although the examples will be in C, the ideas being talked about are pretty well the same no matter which language you use. There is no reason you cannot use BASIC, or assembly language, if that is what you prefer.

While you are writing programs, it helps if you keep in mind these guidelines.

Keep it Simple

If there are several ways to do something you are usually best off choosing the simplest. It sounds obvious but too many programmers think that everything MUST be done the fastest way possible. Now, there's nothing wrong with speed or efficiency - but when you start trying to squeeze the last byte or microsecond out of some code things start getting complicated. This is fine for experienced programmers but complicated things go wrong more often, so we will be trying to avoid them.



Think about the Audience

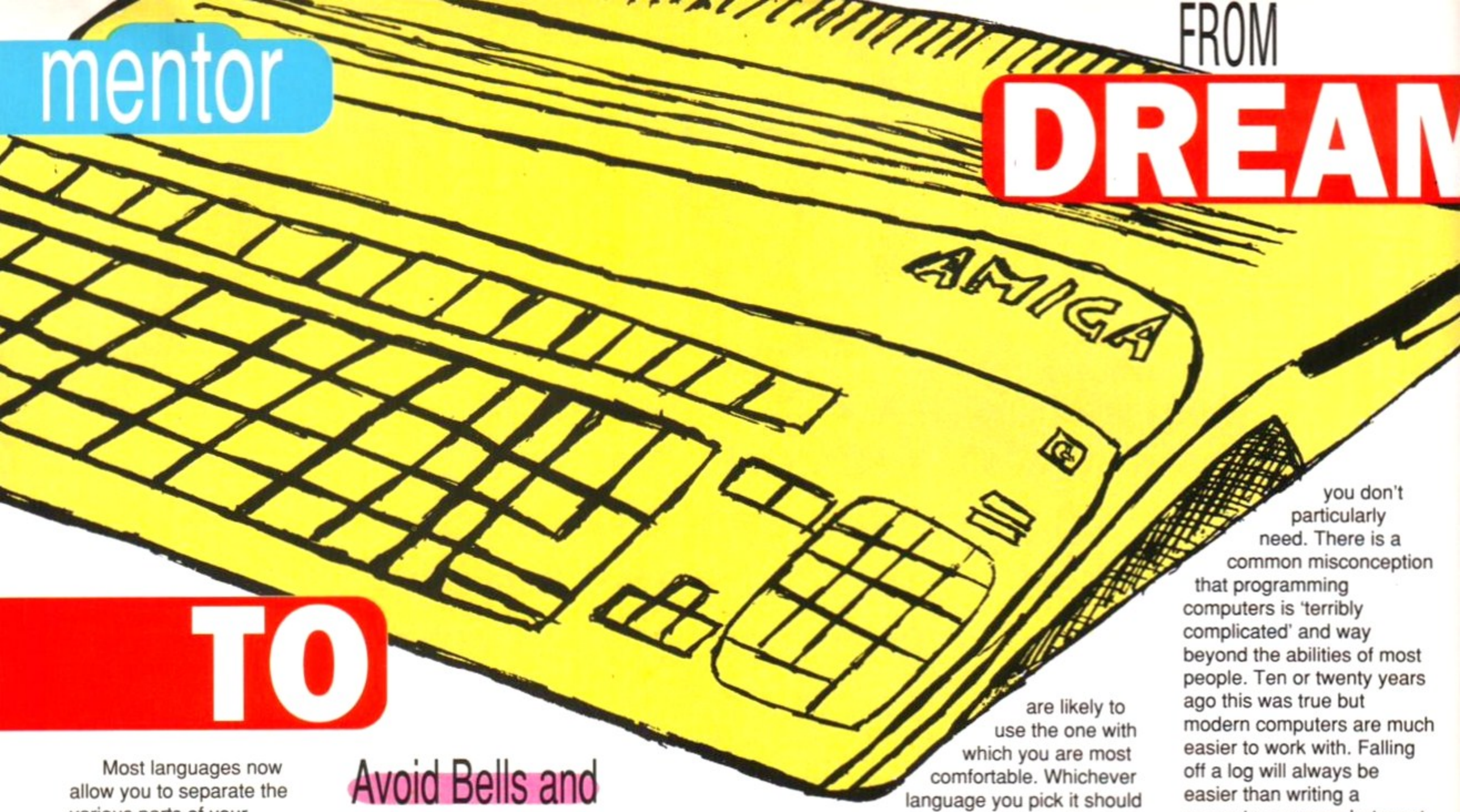
If you are writing a program for yourself, consider releasing it as PD so that other people can benefit from your work. It means a little extra effort as you will have to think about different types of Amiga, new and old operating systems, faster and slower processors and so on. If a program is useful to you there is probably someone else out there looking for something similar. But remember that other people using your program may not know as much about the Amiga as you do and what seems obvious to one person may not be to another.

Keep it Modular

In order to wrap your brain around a big problem you have to break it up into smaller pieces. So a program generally calls a series of subroutines, which in turn call more subroutines, until the job is done. One of the first skills that programmers learn is how to pick the best way of breaking a problem up. This modular approach also extends to the files in which you hold the programs.

mentor

FROM DREAM TO



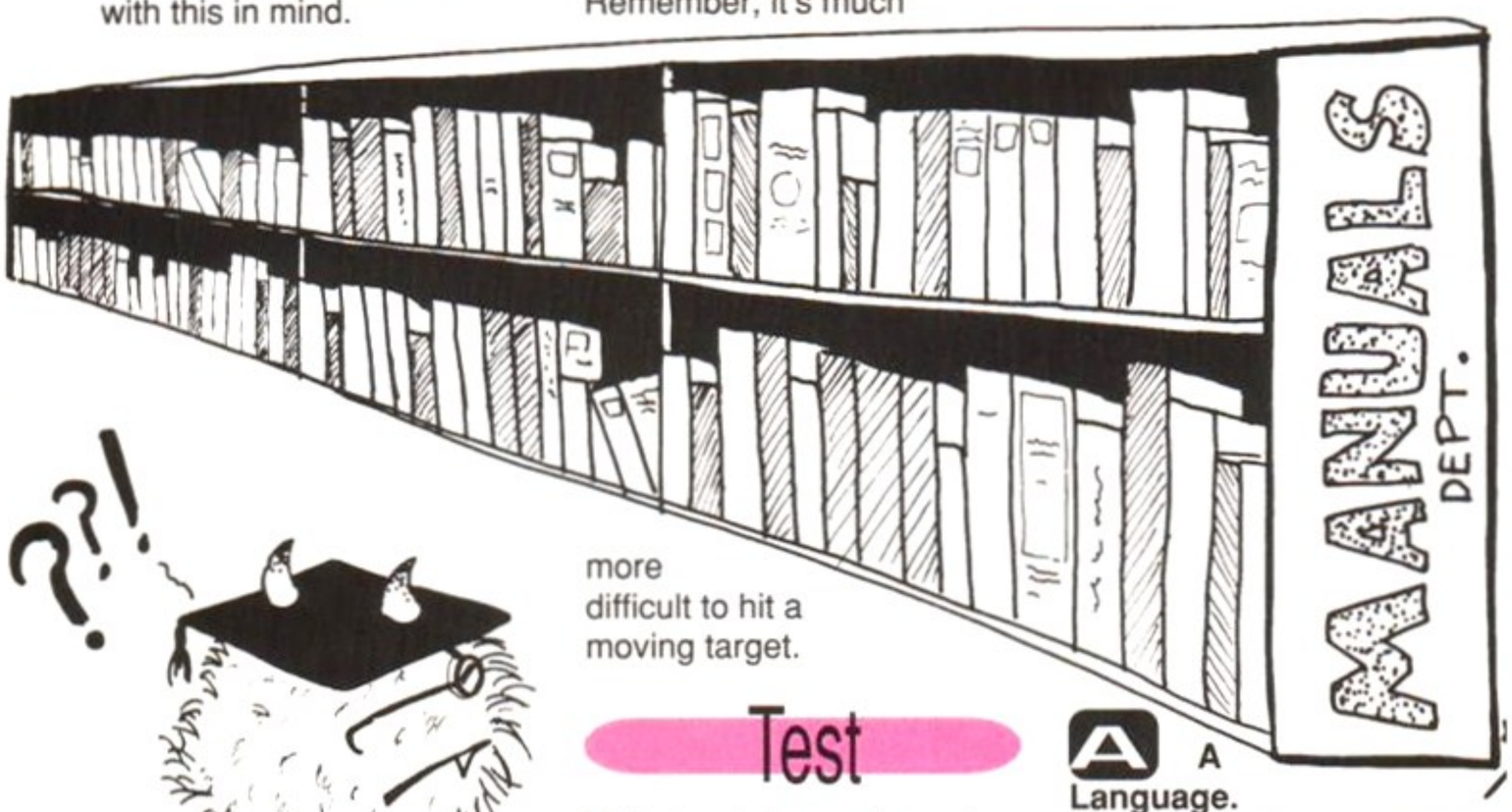
Most languages now allow you to separate the various parts of your program into separate files. If done correctly this will speed up development and testing as changes generally only affect one file and when you recompile the compiler doesn't have to plough through heaps of code every time.

Look Ahead

While you are writing your program try to think of possible ways you might want to improve the program in the future. Upgrading a program to do new or better things is much easier if the program has been written with this in mind.

Avoid Bells and Whistles

These are bits of a program that are neat and clever but don't really make the program any more useful. While you are writing a program you will think of all sorts of whacky new things it can do. Make a note of them for later by all means but do not try putting them in unless they are really necessary. You will find that you can think of bells and whistles faster then you can write them into the program and if you give in to them you are less likely to get your program finished. Remember, it's much more difficult to hit a moving target.



Test

Unfortunately, most people think of testing as the bit on the end. No-one writes perfect programs and your code WILL have bugs in it. If you think about testing from the word go your program should be easier to test and thus more reliable.

Since these are guidelines, and not rules, it is sometimes necessary to bend them a little. Be careful if you do as you are likely to be making more work for yourself. We will be thinking about these guidelines while we are developing our program.

Before introducing our example program, let's take a look at some of the things you need to write programs on the Amiga.

A A Language.
There are many languages available for the Amiga and each has its own good and bad points. Eventually, you are likely to use the one with which you are most comfortable. Whichever language you pick it should support the Amiga libraries (most do) and you should have a fair knowledge of it. If you have followed one of Amiga User International's series you will probably already be there.

There is a common misconception that programming computers is 'terribly complicated' and way beyond the abilities of most people

B Some Manuals.
You will find life difficult if you don't get hold of some manuals. The Amiga has lots of built-in routines that programmers can use, but without some sort of manual you won't know they're there, or how to use them. The obvious ones to go for are the ROM kernel manuals and if you are really serious about your programming they are the only real choice. Unfortunately, they are very expensive and if they are beyond your means there are several third-party books available which give some examples and basic information.

C Brain the Size of a Planet.
Actually no! This is one thing you don't particularly need. There is a common misconception that programming computers is 'terribly complicated' and way beyond the abilities of most people. Ten or twenty years ago this was true but modern computers are much easier to work with. Falling off a log will always be easier than writing a computer program but most people who dabble in programming find a level they are happy with.

OK then, what program are we going to write? The situation is this: You hear from a member of your family that the bingo machine at the local social club has broken. This is quite serious as many of the local people enjoy their Sunday bingo night out - it's a chance to meet friends, chat about the week's events and perhaps win a few quid. No-one has the faintest idea how to fix a bingo machine and they don't know a man who can. Things are looking bleak. "Hmmm", you think, "my Amiga could do that", and a program idea is born.

SCREEN

Next month, we'll make a start on the program. In the meantime, have a think about how you would go about writing a program like this.

HUDSON PUBLIC DOMAIN

PO BOX 25 WIGAN LANCS WN2 3WW

NOW STOCK

Deja Vu Licensed Software

THE FOLLOWING TITLES ARE COPYRIGHT THEY ARE NOT PUBLIC DOMAIN

Games

L/003 GALLEONS*
L/007 4-WAY LYNX*
L/011 GO-GETTER*
L/012 HYPNOTIC LAND*
L/016 REVERSI II*
L/017 DOGFIGHT II*
L/018 TOUCHSTONES
L/019 X-IT-50
L/025 THE MISSION*
L/026 CYAD*
L/027 FLOWER POWER*
L/030 SHYMER*
L/041 RESCUE
L/043 AMOS LAZER ZONE*
L/044 FORMULA ONE CHALLENGE*
L/047 DIRTY CASH V1.06*
L/048 SPARXS STOCKING FILLERS*
L/059 PREHISTORIC FUN PACK*
L/060 TECHNO SNAIL*
L/061 THE FINAL CHAPTER*
L/062 REVOLUTION*
L/063 WILBERTS WINTER WONDER-LAND*
L/064 RESCUE II*
L/066 HOTEL MANAGER*
L/067 CYADONIA*
L/069 MAGICAL MIX-UP*
L/071 AMOS BATTLECARS*
L/072 MONSTER ISLAND*
L/074 SOUR GRAPES*
L/083 PICTURE HANGMAN
L/084 GUESS WHO*
L/087 PUZZWORD*
L/096 MAGIC WASSOCKS II*

Utility

L/013 JIGMANIA*
L/022 LC 10 FONTS
L/028 BUDDBASE II
L/033 AMOS CREATIVE ADVENTURE TOOLKIT*
L/035 T/TEC DRAW*
L/036 FRAGGEN II*
L/042 X-STITCH*
L/052 LC 24 FONTS
L/055 SPRITEX V1.32
L/056 CTEXT V1.3
L/065 POWER PLANNER/DIARY
L/068 VIRUS BUSTER V2.2*
L/073 AMOS DATABASE V4.0*
L/075 VIDEO LAB V1.0*
L/077 POWERBASE V2.1*
L/080 ICON BANK EDITOR
L/081 POOLS PRO V1.2
L/088 REMM 1.06*
L/090 CONCERT BOX
L/092 REMM GRAPHICS DISC 1
L/093 LC200 FONTS

Children's Software

L/001 COLOURING BOOK 1
L/004 THINGAMAJIG
L/005 JUNGLE BUNGLE*
L/008 WORK AND PLAY*
L/010 WORD FACTORY*
L/014 PLAY IT SAFE*
L/015 ARC ANGELES SHAPES*
L/027 FLOWER POWER*
L/029 BIG TOP OF FUN*
L/030 SHYMER*
L/037 ROCKET MATHS*
L/045 MUSIC BOX*
L/051 MAGICAL YOUTH ARTIST
L/058 LOCKS, KEYS & ENEMIES
L/070 PAINTBOX*
L/082 COLOURING BOOK II
L/083 PICTURE HANGMAN
L/091 FUN TO LEARN

U.K. £3.50

U.S.A. $8.00

N.Z. $13.00

O.Z. $10.00

CANADA $9.00

GERMANY 11 MARKS

FRANCE 38 FRANCS

BELGIUM 233 FRANCS

SWEDEN 41 KRONER

NORWAY 44 KRONER

SPAIN 700 PESETAS

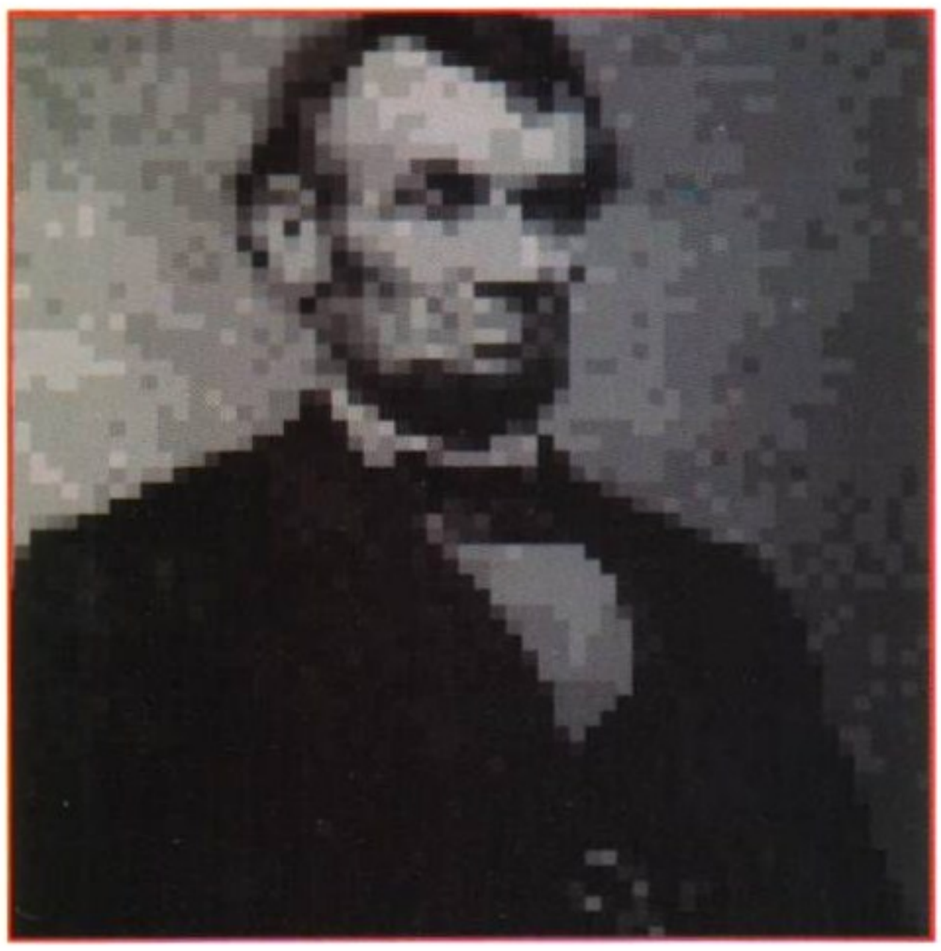
PAYMENTS

PLEASE MAKE ALL CHEQUES OR POSTAL ORDERS PAYABLE TO HUDSON AND SEND TO HUDSON PUBLIC DOMAIN, PO BOX 25, WIGAN, LANCS WN2 3WW, ENGLAND.
SORRY WE DO NOT ACCEPT CREDIT CARDS
ALL GOODS WILL BE DESPATCHED WHEN CHEQUES ARE CLEARED BY OUR BANK.

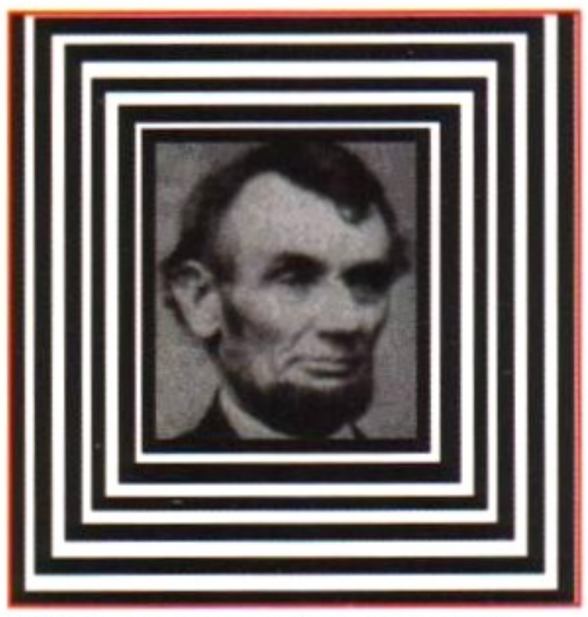
NOTICE

ALL ABOVE SOFTWARE IS COMPATABLE WITH THE A500+ AND 600

* MEANS YOU NEED 1MB OR MORE TO RUN



Lincoln turned into a pixelised image using Butcher



Putting several heavy frames around a portrait can give it a more powerful picture

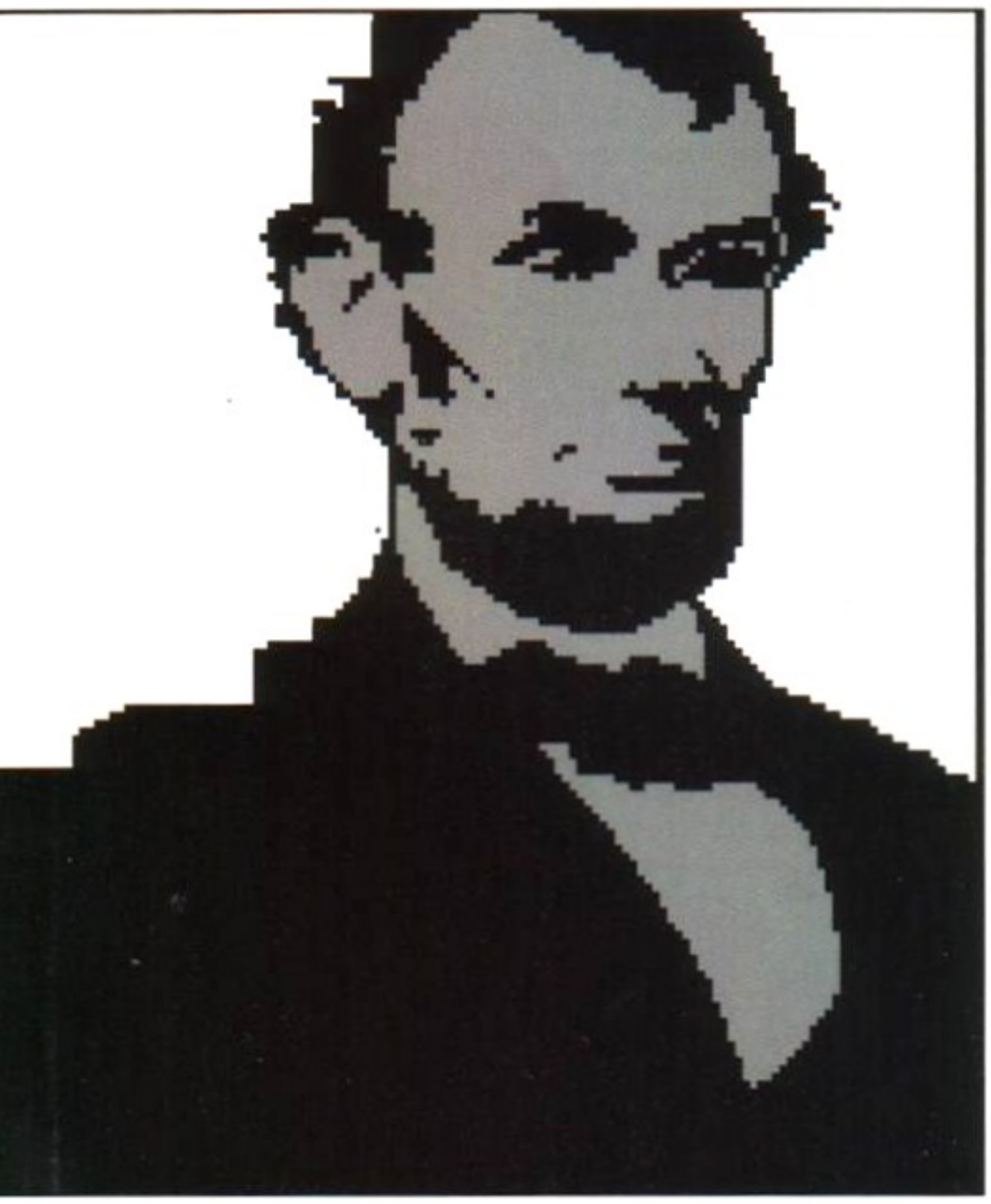
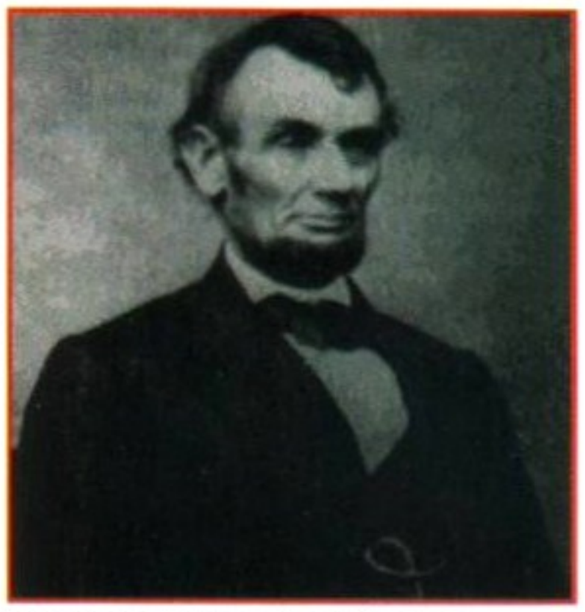
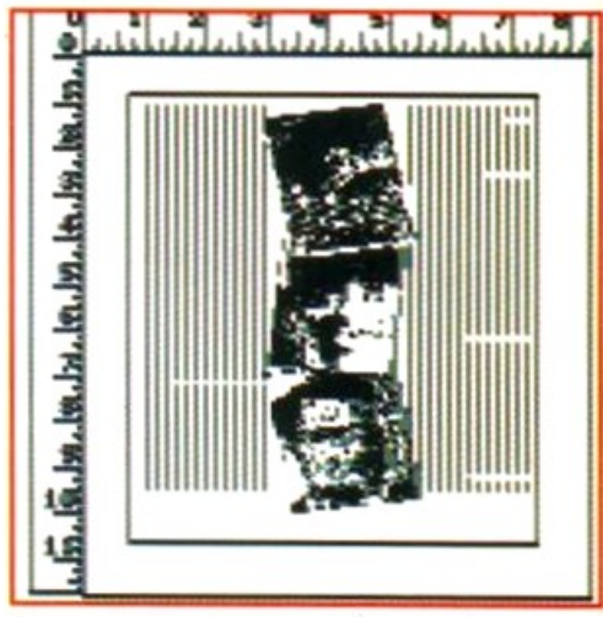


Photo of Lincoln rendered as a black and white image



A halftone photograph of Abraham Lincoln



A page layout showing a three column newsletter page with the central column used for portraits

A page layout sh
newsletter page
used for portrait

You have a picture to illustrate your DTP. That's the good news. But the bad news is that its resolution is no good. John Walker gives you some tips on how to make it look right.

Just Picture This

A picture is worth a thousand words - or so they say. In desktop publishing they may not be quite that valuable. Pictures on a page do provide interest, do break up slabs of text, do make for more stylish layouts. But they also create a problem. It's one of resolution and there's no way around it - even with the best of scanners or digitisers.

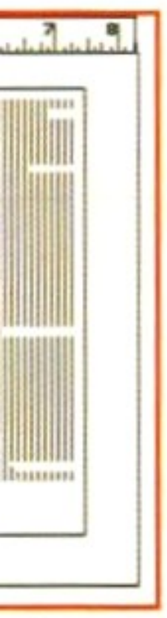
It's easy to see why. You're likely to be working to a resolution of 300 dots per inch or, at the best, 360 dpi from one of those nice ink-jet printers that are deservedly so popular now. Photographs are reproduced in conventional printing by half-tones, in which the picture is broken up into a series of dots of different sizes to represent the various shades. A computer imitates this method

except that the dots are the same size and the continuous tones of the original picture are likely to be translated into 16 shades of grey.

50 Dots Per Inch

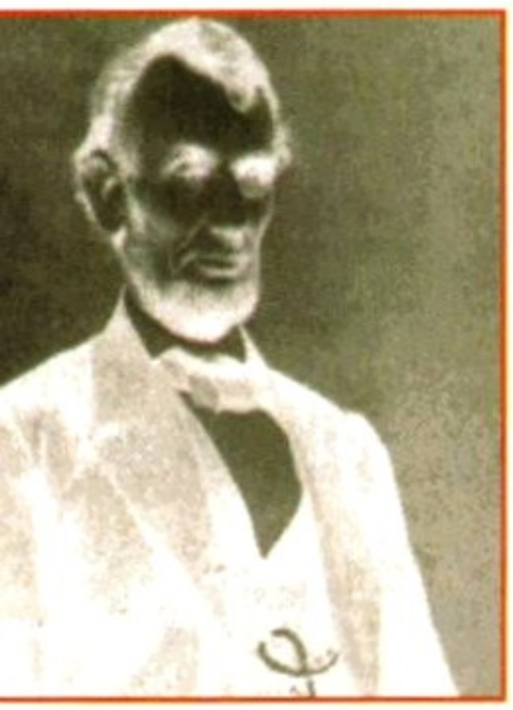
What this gives you is a half-tone resolution of 75 dots per inch and it's possible that the contours of each shade of grey will be visible. Increase the shades to 36 and the resolution will come down to 50 dots per inch, which is the sort of muddy reproduction that used to be seen in newspapers until they switched to high-resolution computerised methods in recent years.

So how do you resolve the problem of resolution? As you can't improve the quality of the photos themselves you need to use imaginative ways of presenting them.



column
al column

One approach is to reduce the levels of grey - to turn your photograph into a high contrast image



of Lincoln as a negative image

containing, say, four levels of gray. The easiest way to do this is with an image-processing program such as PIXmate, which allows you to set a threshold level. Any shade darker than the threshold is turned black. Any shade lighter than the threshold is turned white. But you can achieve similar results with a little more work using a graphics package such as Deluxe Paint.

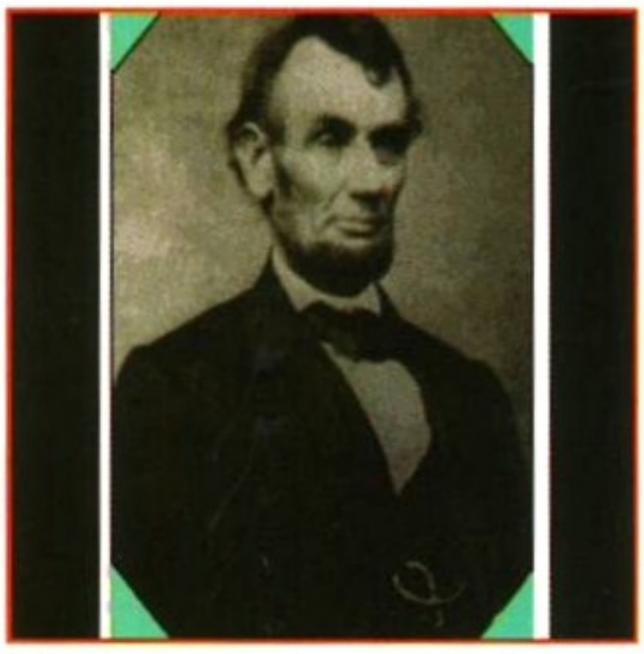
The result will, of course, have less detail than the original. But the starker, more dramatic image will have much more impact on the page. Not all images lend themselves to this treatment and you will need to experiment with threshold levels to get the contrast right. It can work well with portraits of people and with images that have clearly defined shapes - such as buildings silhouetted against the sky.

Several small images overlapping each other are likely to have more impact than one big, muddy image.

Another approach is to remind readers that what they're looking at is not just a reproduction of a photograph. Normally, when you see a photo in a newspaper or magazine you think of it as a representation of reality - a moment frozen in time. For that reason you expect the quality of the image to match reality.

But when you look through a family photo album your expectations are lower. You expect to see Aunt Millie with half her head cut off because she moved at the wrong moment or have a blurred portrait because someone jogged your arm as you clicked the shutter.

Turn your photograph into a high contrast image containing, say, four levels of grey.



Putting photo-corners on the Lincoln photo turns it into a picture of a picture

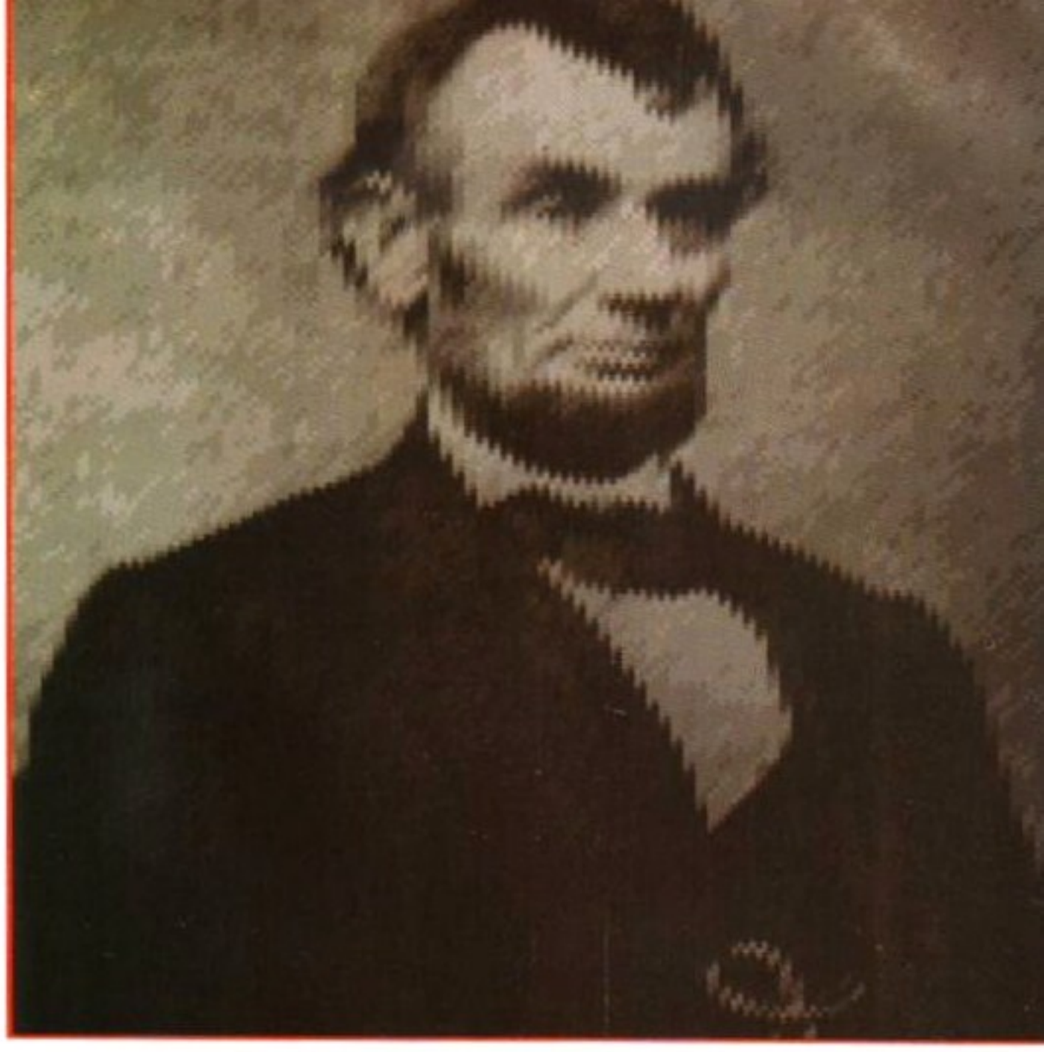
The trick with photographs in DTP is to make your readers think they're not looking at photographs but pictures of pictures. Do that and the lack of quality will be more acceptable.

Image processing programs are an essential aid here since they allow you to manipulate photographic images with ease. With Butcher, for example, you can overlay photos with patterns so that you can create a computerised portrait using pixelisation or add tapestry-like effects. One other useful trick is to create the effect of a photographic negative, turning black to white and white to black. The result adds an air of mystery or menace to a picture.

How else can you create the effect of looking at a picture of a picture? The simplest is to follow the example of an old photo album and draw photo corners on the image so that they look as if they're stuck in a book. Or you can present them as strips of film or contact prints.

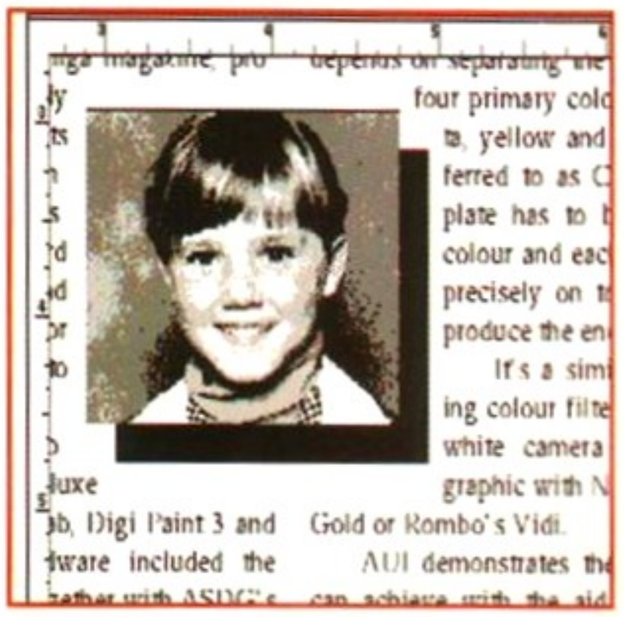
Floating

Another way is to overlap pictures one on another at slight angles so that they look as if they've been casually put down on the page. This can work particularly well in DTP since photographs are better reproduced at a small size. Several small images overlapping each other are likely to have more impact than one big, muddy image. If you want to use several pictures of people in a newsletter, for instance, one effective way is to put them one after the other in a central column on the page. Individually, the pictures would look ordinary. Together, they create an eye-catching effect.



Lincoln turned into a tapestry using Butcher

A photo with the corners turned over to emphasise that it is a picture of a picture



A page layout showing how putting a shadow behind a photo makes it float above the page

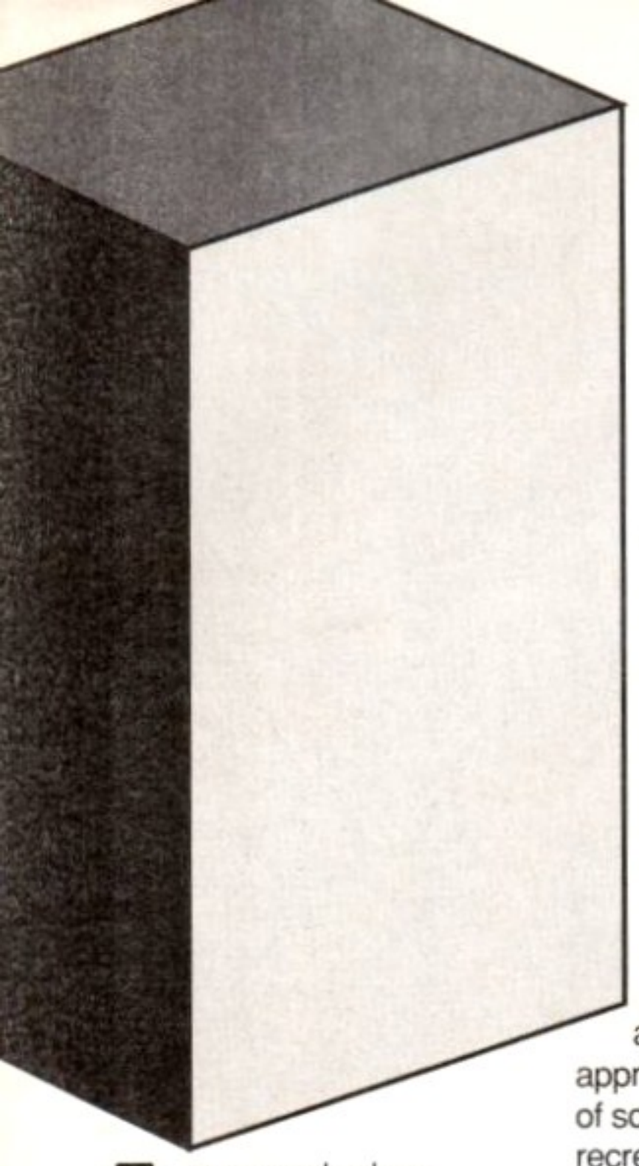
You can also add a shadow behind a photo so that it looks as if it's floating above the surface of the page. Or put an elaborate frame around the picture which can also dramatically increase its impact.

There's no end to the way you can manipulate images with the aid of an art package. You can add torn edges to the pictures, fold over the corners so it looks as if they're peeling off the page, or position them at unusual angles.

All such methods compensate for the inevitable lack of quality in their reproduction and also add variety and punch to your documents.

SURROU

Wrap the sound around you and enhance your home film viewing, advises Gideon



Anyone who has watched a film at the cinema lately will be aware not only of the high quality picture - no more oldtime flickers - but also the sound quality. This will probably be in something called Dolby Stereo. Dolby Stereo is not the noise reduction system, although it was developed by the same company. Dolby Stereo does not only produce sound from the front of the cinema but also from the left and right and finally from behind you, to complete the wrap around surround sound effect.

But how can they get four channels of sound out of two? Well, this is done at the recording stage by using a Dolby Stereo encoder. The stereo is then fed through a decoder on playback and piped to the appropriate speaker. This kind of sound system can be recreated in your own living room - with not as high a cost as you might think.

You would have to be a reasonably regular movie watcher to think of setting up a Surround system. To start with you will need to have a good hi-fi system and a hi-fi video. The video will be able to play back the Dolby Stereo soundtrack that exists on most films (from about 1977 onwards) either bought or rented.

Decoder

You will then need, of course, the decoder, which comes in all shapes and sizes. The early decoders just played the surround channel through the rear speakers. The more recent uses more complicated processing. This extra circuitry, called Pro-Logic, provides a clearer positioning of sound around your room. This is done mainly by the addition of a centre loudspeaker for the front.

This speaker sits on top of your television. If you buy a centre speaker you must make sure it is magnetically shielded. If it is not the television picture will bend towards the magnet and will eventually stain the TV tube. The Pro-Logic processor scoops out the dialogue, which is usually in the centre of the stereo soundstage, and feeds it to the centre speaker. The result is dialogue coming directly from the screen, instead of somewhere in front of you. The bigger the television, the greater impact the sound has.

Sing Along

This opens up a new use for Pro-Logic. You attach the decoder to the tape monitor on your amplifier and so every input can then be channelled through the decoder. So when playing, for example, a CD and the front and dialogue speakers are switched off, you should be able to hear the music without the voice singing. This enables you to sing along to your favourite songs karaoke style.

If you have a video with Nicam stereo you can enjoy most films that are broadcast plus, increasingly now, popular TV series. These include Quantum Leap, Columbo, The Simpsons, and Star Trek: The Next Generation (from the fourth season onwards). The surround speakers should be mounted on the wall behind you. They need not be expensive at all because

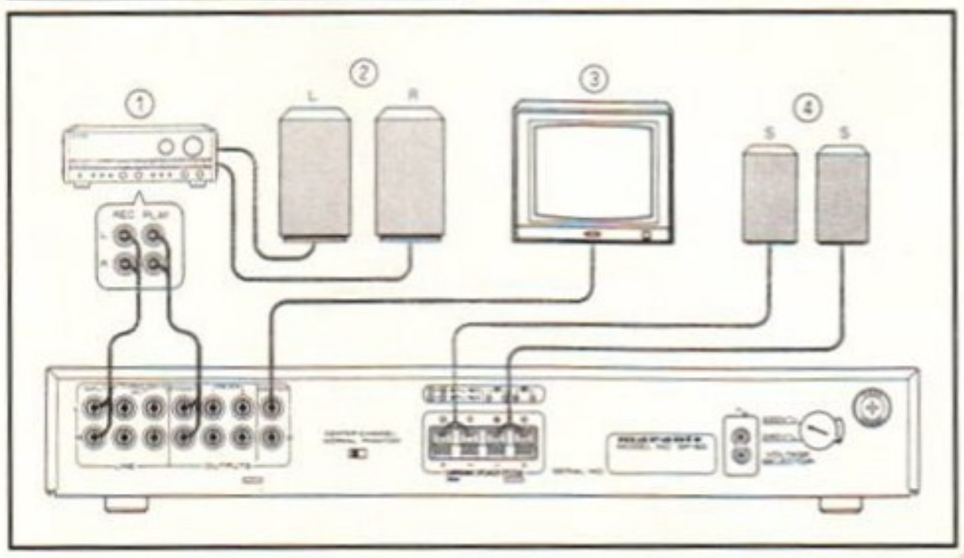
Overhead as he shows you how to do it.

D SOUND

sound quality is less important here. You can pick up small speakers for around £15.

Surround decoders vary in price. As each channel of sound has to be amplified you rarely get just the decoder on its own. One of the cheapest and best value for money decoders on the market is the Marantz SP-50. For around £200 it has Dolby Surround and Pro-logic plus two other surround modes for sources that might not be Dolby encoded. It also has an onboard 30W amplifier for the rear speakers, so all you need is another amplifier for the centre speaker. If buying this puts you off then you can use the television speaker. As a last resort, if your television speaker is not loud enough,

KEY:
1: Main amplifier
2: Main front speakers
3: TV as centre speakers
4: Surround speakers



there is a phantom speaker switch. At this setting, the audio signal intended for the centre speaker is divided and sent equally to the front (left and right) speakers. Therefore, the sound image remains positioned in the centre. Even though this works quite well, I have found that the dialogue is sometimes drowned out if there is music and/or sound effects happening at the same time.

Other decoders on the market include the Pioneer VSA-740. This is classed as an AV amp, which means that it caters for both Audio and Visual needs. It has Dolby Pro-Logic, plus a range of other modes. It amplifies all five channels and will cost you £450. For the ultimate AV amp, you cannot top the Yamaha DSP-A1000. It has nine inputs, seven channel amplification and 12 sound field programs. These can mimic the acoustic properties inside concert halls, rock concerts, discos, even a church. Dolby Surround is also available on all large Toshiba televisions. The only video, of which I am aware, that has Dolby Surround is the Akai VS-A650, which has an onboard 12 watt amplifier and retails at £600.

A computer is used to fool your brain into thinking that the instruments you are hearing are somewhere out in front of you, beyond the speaker.

Spacious Sound

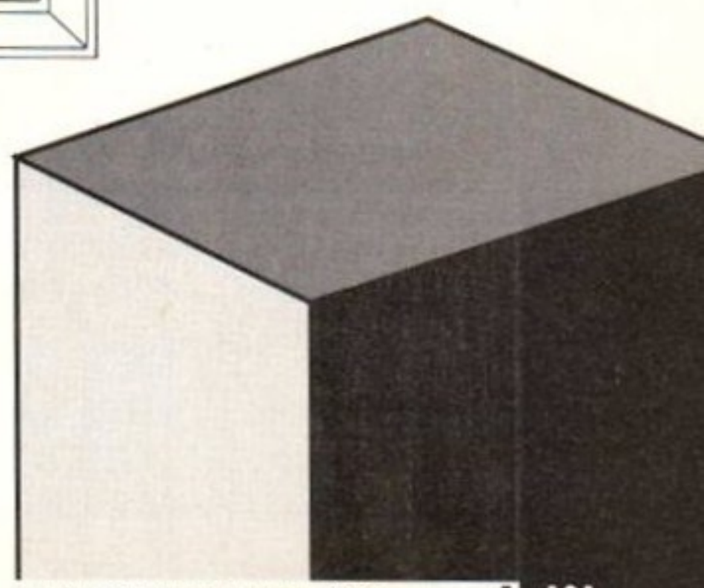
So what does a Dolby Surround film actually sound like? The first thing that strikes you is the spacious sound. The music of the film fills the air and seems to be all around you. One of the best films for surround effects that I have heard is The Empire Strikes Back. At the beginning of the film a probe flies towards you - you hear it travel over your head to the rear speakers. It then flies back to the front again. This type of involving sound enhances what is happening on screen.

There are other certain types of surround sound - but these are not true surround. For example, one type used in music recording is called Q sound. A computer is used to fool your brain into thinking that the instruments you are hearing are somewhere out in front of you, beyond the speaker. It does this by playing the sound on one speaker a split second before it does on the other. Because of the Amiga's wide stereo sound, this can be recreated (with a little practice) at home with a sampling program. CDs processed with Q sound include Madonna's Immaculate Collection and Sting's The Soul Cages. Listen to them and see what you think.

Nowadays, home video companies are increasingly releasing films in widescreen format. This was how the director shot the film and how it is supposed to be viewed. With the arrival of Nicam the viewer can hear the stereo soundtrack. But only with Dolby Surround sound and widescreen can you hear and see the whole picture.

You are in the middle

The Marantz SP 50 Dolby Pro-Logic Surround Processor



PD PROFILES

A500 + PD

Formed in March 1992 by Chris Price, C.P.P.D., a new and welcome P.D. Library for the Amiga 500 User. I for one was fed up with having to search through lists from other libraries, looking for disks, so I decided to form a library with a difference, namely one that caters for the 500 Plus. Every disk has been tried and tested to work on the 500 Plus. If the disks don't work, I don't sell them, so you don't ever need to worry about any disk being incompatible with the Plus. **All disks will work on the Standard 500 and also the new A600.** Every disk is checked by me for virus's and errors, so that your satisfaction is guaranteed always. All areas of the Public Domain spectrum covered including business, games, children's education, animations, utilities, demos and more.

Phone Chris on 0283 516736 for a full list, or write to me enclosing a blank disk. In return, I will send you my catalogue disk with free utility. I am here from 8am till 10pm seven days a week. Where else would you get this kind of service?

Write to Chris at:

C.P.P.D.
3 Dunedin Crescent,
Winshill, Burton on Trent,
Staffs DE15 0EJ

HUDSON PUBLIC DOMAIN

100% AMIGA

PO BOX 25, WIGAN, LANCS, WN2 3WW

HUDSON PUBLIC DOMAIN was established in November 1991 by a group of Amiga enthusiasts. We have been successfully trading for over 7 months, in this time we have built up a customer base of over 900 customers with 80% of them living overseas. It is because of this we are the only Public Domain Library based in the UNITED KINGDOM, that allows overseas customers to pay in their own countries currency. We are currently in talks with overseas PUBLIC DOMAIN libraries with the possibility of opening up a distributor in their country.

All of the duplication, invoicing and artwork are done using the Amiga range of computers, keeping the Amiga the number one computer in the world.

AMIGANUTS UNITED AUSTRALIA
199 Taylor Street,
Toowoomba,
Queensland,
AUSTRALIA
Phone (076) 331172

AMIGANUTS UNITED
169, Dale Valley Road,
Hollybrook,
Southampton SO1 6QX
England
FAX (0703) 785680

SIX YEARS OLD AND STILL GOING STRONG!

Teijo Kinnunen's excellent OctaMED Professional is soon to be released and to give an insight into it's features would be impossible in such limited space, however, here are just a few additions to this masterpiece.

We recognised that the program appeared complicated to some users, so Teijo has included a new layout and made it much more user friendly.

An extra effects character has been added to each note, giving a total of 4. It now supports 9 octaves and also the use of beats per minute, meaning that anything that is played on a piano can now be entered directly from sheet music using the stave display.

It also has the ability to recognise songs and instruments etc, that have been crunched, using Nico's powerpacker, thus saving a vast amount of disk space. Also available soon will be a comprehensive manual, to make full learning of this musical masterpiece so much easier.

In fact the additions are tremendous and the only way to discover them all is to send for this amazing new version. So keep an eye on our advertisements and the review pages, the release date will soon be announced.

Also very popular is the Amiga Coders Club disks that are produced Monthly by Mark Meany.

Each issue is packed, (so much so, that it has to be crunched to get it all on disk), with help and advice for and from seasoned and newcomers alike, with letters, tutorials, contacts, source and with the use of progs such as the much admired Devpak, the source files can be assembled to see how it all works. The ACC disks are so popular that they are even supplied to one of the Technical officers at Commodore themselves!, so why not join this growing band of true Amiga enthusiasts yourself and become one of those in the know.

SEE OUR FULL PAGE ADVERTISEMENT IN THIS MAGAZINE FOR OUR ADDRESS

AMIGA ONLY

ULTIMATE P.D.

ONLY 99p PER DISK!

DEMO DISKS

D264 Shark Animation (1 Meg)
D278 Madonna Hanky Panky (P)
D240 At The Movies (2 Meg)
D279 More Aerotoons (1 Meg)(P)
D280 Amy V.S. Walker Anim (1 Meg)
D294 Life of Brian (P)(2 Disks)
D297 Anti Lemmin Demo (2 Meg) (2 Disks)
D298 Robocop Animation (1 Meg) (P)
D300 Silents: Ice Demo
D254 Virtual World (1 Meg)
D150 Windsurfer Animation (P)
D315 Mr Potato Head (1 Meg)(P)
D316 Creature Comforts Demo
D318 3D Pinball Animation (1 Meg)(P)
D001 Walker 1 (1 Meg)
D002 Walker 2 (1 Meg)
D003 Walker 3 (1 Meg)
D004 Cool Gougar (1 Meg)
D012 Rebels Megademo
D014 Space Ace Demo
D023 Stealthy 2 Anim (1 Meg)
D028 Budbrain Mega Demo (2 Disks)
D047 RAF Megademo (2 Disks)
D045 Arse Wipe Advert
D059 Red Sector Megademo (2 Disks)
D062 Red Sector Cebit 90
D077 Good Morning Vietnam
D088 Silents Megademo
D095 Outsiders Acid Demo
D115 Vision Mega Demo 4
D127 Chubby Brown
D134 Garfield Demo
D147 Neighbours Slideshow
D148 Viz Slideshow
D151 Robocop 2 Slideshow
D153 Epic Game Demo (1 Meg)
D158 Operation Vark
D160 Exodus Real 3D (1 Meg)
D163 Probe Sequence
D164 Slycath Amazing Demo Comp
D168 Horizon Megademo
D169 Budbrain Megademo 2
D176 Jasper Carrot Demo
D184 Dragons Lair 2 Demo
D185 Wrath of the Demon Demo
D187 Batman The Movie Demo
D251 Decaying Paradise (1 Meg)
D264 Hardwired (1Meg)
D225 Phenomena Enigma (1 Meg)
D231 KGB Megademo (2 disks – 1 Meg)
D237 Silents – Global Trash
D240 Vic Reeves Demo (2 Disks)
D241 Ray of Hope II
D247 Dmob Its A Lame D-MO
D284 Odyssey – Alcatraz (5 Disks)
D312 Anarchy – Seeing Is Believing
D325 Hypnautic Hammer
D327 Greatest Demos Volume 1
D330 Greatest Demos Volume 2
D333 Greatest Demos Volume 3
D345 It Came From The Desert Demo
D346 Harry Meets A St Owner
D347 Shuttlecock Animation
D354 NASA Slideshow
D357 KGB Megademo 2
D359 Kefrens Guardion Dragon
D370 Terminator 2 Slideshow
D379 Navy Seals Slideshow
D388 Track-Ro Vectra

MUSIC DISKS

M001 Seriously Good Music 1
M002 Seriously Good Music 2
M003 Seriously Good Music 3
M011 D-Mob Music 2
M012 D-Mob Music 4 (2 Disks)
M014 Rebel Megablast
M016 Micromix 2
M022 Amiga Charts Mix 3
M023 Titan Trax 1
M026 Amiga Charts Mix 5
M029 D-Mob Music 3
M034 Arnie Swarzeneggar Total Remix (2 Disks)
M035 Digital Concert 2
M036 Digital Concert 3
M037 Digital Concert 4
M038 Digital Concert 5
M039 Digital Concert 6
M040 RAF Megamix 1
M042 Bat Dance Remix
M049 Ben Elton (XXX)
M057 D-Mob 1
M081 Flash 2 (Disk)
M102 Debbie Gibson's Electric Youth (2 Disks)
M114 Betty Boo. . . Doing The Do
M121 Band Aid II (2 Disks)
M122 RAF Beat Thiz 1
M123 RAF Beat Thiz 2
M124 RAF Beat Thiz 3
M125 RAF Mega Mix 2 (2 Disks)
M126 Amiga Charts Mix 2
M127 Amiga Charts Mix 6
M134 Miami Vice Theme (4 Disks)
M136 Laurel & Hardy (2 Disks)
M141 JM Jarre – Definitive
M143 CD Player Demo (1 Meg)
M144 Flash! Queen (2)
M159 Technotronic Remix
M161 Crusaders Bacteria
M183 Scoopex Beast Sonix
M157 Digital Concert 5 (VI)
M151 Crusaders: Genesis
M132 Depeche Mode Music Disk
M156 Seal Crazy Remix (1 Meg)
M185 I Think Wer'e Alone
M186 Everybody Dance Now
M187 Doing The Do (Remix)
M189 Amazing Tunes (1 Meg)(3 Disks)
M190 Move Any Mountain
M192 Charly Remix
M193 What Can You Do For Me?
M194 Bruno Music Box (2 Disks)
M195 Manic Raves (2 Disks)
M199 Star Trek Theme
M201 Journey Into Sound
M203 Looney Tunes
M205 Vogue CD Player
M206 Flashing Bytes
M208 Remember The Time (Remix)
M209 Enjoy Live
M211 Rave Around The Clock
M212 Raver's Delight
M216 Genesis
M217 Dirty Digit Songs
M225 Phil Collins
M226 The Wall by Pink Floyd (6 Disks)
M229 Desire Lego Land
M230 Manic Raves Remix
M234 808 State Remix
M241 The Equaliser
M246 Music Dream 2
M247 Four Seasons
M248 Flash Team Music
M249 Move Any Mountain
M251 Roger Ramjet
M253 Crazy Looney Tunes
M260 Old Soul Remix
M265 Stand By Me
M269 My Girl
M271 Simply Red – Stars (2 Disks)

UTILITY DISKS

U009 Soundtracker Collection (3 Disks)
U012 Mega Utils (175 Utils)
U024 SID Cli Utility
U039 Amibase V3.76
U042 Front Disk
U043 Kim Database
U059 Clip Art
U062 Ultimate PD Copies & Virus Killers Disk
U069 Demolisher Utilities
U071 D-Copy
U073 Hard Disk Utilities
U074 Easy Back Up & View 80
U075 Pascal C Compiler
U075 A 500 & Utilities (for the A500+ only)
U080 Turbotitle
U081 S-Movie
U082 Graphs
U083 Drawmap V3.1
U085 RBase II V5
U086 Textengine V3
U088 SID V1.6
U091 OPTI Utils 2
U093 PCQ Pascal
U094 M.V.K. V2.1
U095 Zerovirus & Bootx V4.30
U096 St Emulator
U098 Amibase V3.67
U099 M-Cad
U101 C-Manual V2.00
U103 Iconmania
U104 Messysid II
U105 Insanity Tools
U106 Imploder V4.0
U107 N-Comm V1.921
U108 Amiga MCAD
U109 D-Paint Cartoon Brushes
U111 D-Paint Fonts Disks (4 Disks)
U112 Ham Radio Utilities (5 Disks)
U113 Programming Disk (2 Disks)
U117 Sound Applications (2 Disks)
U119 Video Applications (2 Disks)
U128 The Comms Disk
U129 Dpaint Clip Art (2 Disks)
U130 Video Graphics (4 Disks)
U132 Genealogy (1 Meg)
U066 C-Light (1 Meg)
U135 New Superkillers
U138 Electrocad V1.4 Demo
U139 Spectrapaint V3.0
U140 Language Tutor
U145 Database Master 2.0
U146 Dynamite Brush Fonts
U147 Textplus Word Proc
U149 Med V3.10
U151 Dice V2.06A
U152 Pagesetter Clip Art (8 Disks)
U154 Nightflyers Utilities IV
U156 Vector Ball Editor (1 Meg)
U157 Antivirus V3.14
U158 Kids Paint
U159 Text Engine
U160 Windows Bench
U161 PDS utils No.1 Printing Utilities
U163 Ncomme V1, 921
U164 Workbench 2+ Work Station
U165 Video Screens
U167 Cursor Basic Compiler
U168 Jrcomm V1.02
U171 Super C Commands
U172 P Suite V1.4
U173 The Ripper Guide
U174 Jam Ripper V1.7 Jam Cracker V1
V175 Beatrix Potter Clip Art
U177 Thief Sound Ripper V3.0
U178 Faulty Towers Samples
U179 News Flash 21
U183 Swag No. 4: Fractals
U184 Little Bench
U185 Plotting & Graphics: Plot-X-Y
U186 Draw Map V3.1

GAME DISKS

G001 Star Trek 3 (2 Disks)
G006 Breakout Construction Kit
G008 Boardgames (Monopoly etc)
G014 Buck Rogers
G015 Star Trek (3 Disks, 1 Meg)
G016 Tennis (1 Meg)
G020 Train Set
G024 Pipeline
G026 Treasure Hunt
G031 Drip!
G033 Jeopard (1 Meg)
G034 Dragon Cave
G037 Seven Tiles
G038 Pom Pom Gunner
G043 Mental Image Games Disk
G056 Strategy Games
G057 Simpsons Game
G059 Bionix II (1 Meg)
G062 Atic Atac (1 Meg)
G065 Battle Pong (1 Meg)
G066 Frantic Freddie
G068 Air Ace II
G069 Downhill Challenge
G070 Llamatron
G071 Sky Flyer
G074 Revenge of Mutant Camels
G075 Jet Man
G077 Asteriods
G078 Twintris
G079 Card Games
G080 Battle Cards
G081 Mind Games 21
G083 Sword of the Warlock
G084 Solitaire
G086 Scramble
G087 Dungeon on Nadroj
G088 Royal Boulderdash
G090 Sub Attack
G092 Mega Ball
G093 Air Warrior
G095 Super Skoda Challenge

SPECIAL OFFERS

Unbranded Blank Disks – 38p each

Disk Boxes:

3.5" cap 10 ..... 99p
3.5" cap 40 ..... £4.00
3.5" cap 80 ..... £6.50

Mouse Mat £2.99
1000 Disk Labels £9.99

512K Memory Upgrades

With Clock £32.50
Without Clock £28.50

We also stock Fred Fish Disks 1-596 & T-Bag 1-59

All disks are 99p each, some titles are on more than 1 disk. Please add 50p P&P to the total order
Please send all orders to:
Ultimate P.D. 44 Festiniog Road, Gabalfa, Cardiff CF4 2QS Wales
European orders please add 50p per disk and rest of the World add 75p per disk.
Please make Cheques & Postal Orders payable to Ultimate P.D.
The Ultimate P.D. mag-catalogue disk is available for 75p or free with orders of 2 disks or more.

Access

VISA

arena

CONTACT RICHARD VAUGHAN OR LIZ EDGAR ON 071 388 3171

N.B.P.D.L. (DEPT AUI) 37 BASFORD ROAD, NOTTINGHAM NG6 0JG

Telephone 0602 267113
VAT REG No 567 9159 85
Virus free Amiga Public Domain and Shareware

ONLY £1.25 PER DISK

PD GAMES 1.3 AND PLUS

15 Pipeline
22 Larn V12.0
90 Pom Pom Gunner
94 Moria
115 Hack
197 Return to earth
304 Sea Lance
198 Breakout Cons Kit
268/269 Star Trek Game
474 Golden Fleece
565 Moria
588 Train
599 Bionix it
881 Pair it
656 Wacko junior
815 Dragons Cave
520 Atic Atac
522 Amos Shapes
735 Dale Games
939 Tile Trait
946 Crossfire
965/966 Pixi Kingdom
977 Mastermind + Pair up
1001 The Simpsons

PD DEMOS 1.3 AND PLUS

38 Ian and Mick demo disk
52 The Probe
69 Mindwarp
98 Education of cool Cougar
100 Enigma demo
110 Kaktus and Mahony
123/124/128 Alcatras M/D
218 Section 5 music disk
237/238 Red Sector M/D
240 Vangelis demo
314 Popeye beachboys
324 Kefrens M/Demo
544 Phoenix M/D
425 Danish Know How
613 Exel UK demo disk
659 Laurel and Hardy
660 Jerry Lee Lewis
377 Alpha Omega
481 Dragons Legend
763 Phenomina M/D

PD VARIOUS 1.3 AND PLUS

3 Banking & Home Help
97 Star Trek anim dry dock
209 Valentine vey funny disk
233 Digiview slide show
242 Frog Animation
270 Amibase V3.76 data base
271 Qbase & Spreadsheet
308 Black book & City desk
362 Fractal Flight demo
373 Shark animation
357 Headline Fonts
411 Luxo Teenager animation
422 Lion Posts
476 Ghost Pool animation
607 Police Chase animation
655 Family Data Base
880 Daddykins Word Processor
902 French, German, Italian and Spanish Tutor

PD MUSIC 1.3 AND PLUS

35 Technotronics Radio Poland
45 ITV Mega Music
63 Safe House Music
109 Compact Disk Player
112 Flashing Byres Music Disk
221 Cryptoburners Mega Music
286 Vision Music Makers
447 Crusaders Bacteria
454 PIC Mega Music
486 Dragons Legend
535 Angie S from Flash
594 Chaos Mega Death
604 Dexions Music Disk
628 Goonies Electric Sounds
657/658 Laurel & Hardy
669 Amiga sounds III
675 Noetroms Music box
751 Classics classical music
1098 Never too Late Kylie

DEJA VUE LICENCE WARE 1 TO 81 IN STOCK AT 3.50 PER TITLE AND 5.50 FOR A TWO DISK TITLE TOP QUALITY SOFTWARE FRED FISH DISKS IN STOCK UP TO 610: T.B.A.G. DISKS FROM 1 TO 60 IN STOCK: ALL PD DISKS 1.25 per disk incl p/p and VAT CATALOGUE DISK ONLY 70p OR PRINTED LIST SEND SAE. ALL CHEQUES POSTAL ORDERS ETC. TO NBPDL AT ABOVE ADDRESS ALL ORDERS DESPATCHED WITHIN 24 HOURS: HARDWARE AND COMMERCIAL GAMES AT VERY LOW PRICES SEND SAE

LONDON AMIGA REPAIR CENTRE

REPAIRS, SPARES, SWITCH BOXES AND LEADS

Amiga 500 PCB repair	- £49.95	* Free estimates
Disc Drive replacement	- £66.00	* 3 Month's Warranty
Keyboard replacement	- £69.00	* Fast turnaround

IF YOU DON'T SEE WHAT YOU WANT JUST CALL

Switchboxes

Mouse/Joystick switchbox - Manual	£13.95
Mouse/Joystick switchbox - Auto	£18.95
Parallel Port switchbox	£18.95
2 computers to VGA Monitor	£24.95
2 computers to IBM standard TTL	£24.95
Dual External drive switchbox	£18.95
Serial Port splitter (2 way)	£18.95
Scart Switchbox (2 way)	£39.95
Stereo Headphone Adaptor (2 players)	£14.95
AB Dataswitch (2 way) serial/parallel	£14.95
ABCD Dataswitch (4 way) Ser/Par	£19.95
X Dataswitch serial/parallel	£26.95
Switchboxes made to order	Call

Consumables

Diskettes $5^1/_4$" or $3^1/_2$" HD-DD	from £14.99
Printer Ribbons	from £4.40
Disk Boxes	from £7.99
Mouse Mats	£4.99
Dust Covers	£5.50
$3^1/_2$" Cleaning Kit	£6.50
Mouse Holder	£5.99
Listing Paper	Call
Labels	Call

Amiga Extras

A590 TV Modulator	£29.95
3.5" internal Disk Drive	£59.95
Power Supply	£45.00
A500 1/2 Mb RAM Upgrade	£27.00
Mouse	£15.00
Spare parts	Call

Leads - General

Mouse/Joystick twin extension	£5.95
Joystick extension lead (1.2m)	£5.00
TV Lead	£1.50
TV modulator lead 2 phono-1 phono	£1.50
Modulator/Disk Extension	£9.95
4 Player Adaptor (25cm)	£6.95
Hi-Fi connection lead (1.2m)	£2.95
Audio Port splitter (2 way)	£3.95
Null Modem cable (2m)	£8.95
Replacement Mouse cable (1.5m)	£5.95
Midi interface cable (3m)	£2.99
External Drive extension lead (1m)	£9.95
Printer lead - Parallel (2m)	£5.95
Printer lead - Serial (2m)	£7.95
Amiga - HP Laserjet (2m)	£11.95

Leads - Monitor

Amiga - TV/Monitor with Scart	£12.95
Amiga - NEC Multisync 2A/3D	£12.95
Amiga - NEC Multisync RGB	£10.95
Amiga - Commodore 1084S	£12.95
Amiga - Commodore C1084SPI	£12.95
Amiga - Commodore C1084SD	£12.95
Amiga - Philips Colour Monitor	£12.95
Amiga - any monitor	Call

Engineering Services

- Upgrades
- Soldering
- Wiring
- Dealer support

SPECIAL CABLES MADE TO ORDER

Opening Hours: Mon-Fri 9.00am - 9.00pm, Sat 10.00am - 3pm

All prices include VAT. Please add £1.50 postage for small items, £3.50 for large items. Phone David to check stock availability.

COMPULINK

☎ 071-790 2424

E&OE Wickham Business Centre, 10 Cleveland Way, London E1 4TR

¡ STOP !

EUROCARD · Master Card · VISA

For Software/Hardware at LOWEST, of LOW Prices

eg: Imagine V2 £165 - X-CAD3000 £225

Write - Phone/Fax for our FREE 30 page catalogue. (24Hrs)

¡ NOW !

We are the UK Main distributors of X-CAD & Imagine Products

D.M.S Ltd
Incorporating Computech Services.

87, Victor Gardens
Hawkwell, Hockley
Essex. SS5 4DY
Tel/Fax (0)702 206165

AMIGA REPAIRS

Repairs from £23.00 inclusive.
Free registered carrier pick-up and return despatch for ultimate peace of mind, for any repair anywhere in the UK mainland!
Free diagnostic inspection.
All repairs carried out are covered by free 90 day warranty.
Fast efficient service, average diagnostic and repair time – 24 hours!
Experienced, qualified engineers.
Any upgrade fitting, fixed price £15.00 inclusive.
Terms and conditions available on request

ACS ELECTRONICS

Business Enterprise Centre, Eldon Street,
South Shields, Tyne & Wear, NE33 5JE
Telephone: 091-455 4300

CONTACT RICHARD VAUGHAN OR LIZ EDGAR
ON 071 388 3171

arena

95p FIVE-STAR PD — VIRUS FREE

1400+ QUALITY DISKS TO CHOOSE FROM
Massive range of UTILITIES, GAMES, EDUCATIONS, ANIMATION, MUSIC, DEMO, CLIPART set.
FONT Set and sound MODULES. POWER ANIMATIONS.
BELOW IS JUST A SMALL SELECTION OF TITLES AVAILABLE!

Deja-Vu	1-94
Fred Fish	1-600
T-bag	1-63

GAMES
G019 Games Pack 19
G039 Atic-Atac (P)
G044 Intacts (P)
G051 Marathon-Mimes III
G056 Hugo (P) (3D) Brilliant
G070 Mech-Force
G091 Viking Childs
G094 Return to Earth
G095 Marbles-Slide
G100 Wizzy Quest
G106 Dragon Tiles (P)
G122 Skate-Tribe
G123 Little-Wizzards
G138 Peter Quest (P)
G144 Mysterious World
G145 Amos Coin Drop (P)
G149 Ice Runner
G150 No Man Lands
G160 Super Twintrix (P)

MUSIC
1003 Do the Bartman (P)
1007 Pet Shop Boy
1014 Digital Concert 5 (P)
1025 Money For Nothing
1026 Walk This Way Remix (P)
1031 Betty Boo (P) (3D)
1065 Amazing Tunes II (3D)
1076 Popeye (P)
1082 Beyond 2000 (P)
1102 Move My Mountained
1009 The MC Hammer Mix
1110 Flash Gordon (2D)
1111 Project Techno (2D)

FONT
300 Pagestream Font Set (6D)
310 Hacl Fonts 2 (2D)
313 Computer Eyes Fonts (2D)
320 Delux Paint Fonts (4D)
325 Fancy Font

UTILITIES
U161 Sid II (Latest Version) (P)
U002 Amiga System Tester (P)
U023 Bankings (P)
U030 Color-Vision
U031 C-Light (P)
U049 Dark-Star Vol 5
U101 Database-Workshop (P)
U102 Database-Workshop Extra (P)
U116 Text Engines
U121 Spread-Sheet
U128 Business Card Maker (P)
U144 Amiga Fox D.T.P (P)
U146 C-Manual (4D) (P)
U149 Emulators Collection
U160 600 Business Letter (P)
U165 Q-Based
U165 Dope Intromaker
U169 Paint & Animated
U182 Biorhythm V4.1

DEMO
D003 Alpha Omega (P) (Brilliant)
D004 Northstar Acid Demo
D005 Turtle Mania
D011 Multitasking
D022 Asia Ghost Writer (P)
D030 Budbrain Megademo (2D)
D031 Ray of Hope II
D040 Virtual World
D045 Alcatraz (P) (3D)
D082 Hardwired (2D)
D083 Anarchy SystemViolation
D097 Odyssey (5D)
D110 Mega Game Demo 15

CLIP ART
U350 Clip Art Pack 1 (10D)
U361 Cartoon Clipart
U370 FSC Clip Art 1 (5D)
U374 Clip Art 1
U376 Clip Art 3

ANIMATION
A013 Space Probe (P)
A027 Raider of The Lost Art
A032 Blood Sport II
A043 Spinner II
A049 Busy Bee
A057 Bugs Bunny Cartoon Show
A067 Elvira Anim
A069 Walker II (2MB) (2D)
A109 Another World (Brilliant)
A104 Innerspace
A121 Stealthy II (P)
A105 3D Pinball
A106 Space-Animation (P)
A110 More Classy Anim 5
A114 Vietnam Conflict
A125 Westle-Mania (2D) (P)
A175 Madonna SS II (P)
A180 Space Bubble 1 & 2 (2D)
A190 Terminator II SS (2D)
A250 Amy VS Walker II (2 MB) (2D)

EDUCATIONS
E001 Kids Paints (P)
E002 Colour It
E003 Treasure Search (P)
E004 Learn & Play I (P)
E005 Learn & Play II (P)
E006 Spanish Translator (P)
E007 Education Graphics (P)
E008 Mr Men
E009 Astronomy (P)
E010 Simon & Space Maths
E011 Education Set (P) (5 Disk)
E019 Dinosaurs
E020 World Database

SOUND MODULES
U400 Sample ST 1-10 (10D)
U410 Sound Tracker M (7D)
U422 Noise Tracker M (3D)
U065 Noise Player 4.0 (P)
U046 Protracker

LATESTS
SID II
MEGA-STATION

1 to 9 disks 95p each
10 to 20 disks 90p +1 FREE Disk
Over 20 disks 85p +3 FREE Disks
Add 60p to total for P&P. All orders same day despatch.
Please make cheque or P.O. payable to FIVE-STAR PD
Overseas orders welcome please add 25p per disk.
(P) = A500+ compatible (2D) = 2 disk (2MB) = 2 meg. etc.

FIVE-STAR PD
48 Nemesia
Amington
Tamworth Staffs
B77 4EL
Tel: Tam 0827 68496

Send 60p for the Latest Catalogue + FREE A BRILLIANT GAME

ORION PD

89P

ORDER 11 OR MORE TO GET 2 FREE DISKS

Dept AUI 2
14 Ouston Close
Wardley
Gateshead
Tyne & Wear
NE10 8DZ
Tel: 091-4385021

UTILITIES
U004 D-COPY V2.0+ excellent copier
U005 MESSY SID II + PC-Amiga transfer
U006 AMIGA FOX DTP + make leaflets
U008 DISK LABEL DESIGNER + good
U009 LAND BUILDER V3.2 + scenery
U010 WINDOWS BENCH new w/b look
U011 OPTI UTILITIES II + lots of utilities
U012 LABEL BASE V3.0 + database
U013 TEXTPLUS V3.0EN + the best w/p
U014 P-SUITE + text/sound/anim in one
U015 DISK SALVAGE + recovers files
U016 RED DEVILS UTILITIES + great
U017 PASCAL COMPILER language
U018 NUKE v1.5a + virus killer
U019 NEW SUPER KILLERS+ get it!
U020 PRINTER UTILITIES+ essential
U021 RSI DEMO MAKER V2.0 great
U022 RAD BENCH V1.4 recoverable w/b
U023 RSI VECTOR EDITOR super editor
U024 DISK SPEED V4.1 + checks drives
U025 MULTIPLOT VKLNe + data plotting
U026 BUDGET V1.3.4 + personal finance
U027 WORLD DATA BANK V2.2+ maps
U028 A64 EMULATOR V2.0 + great
U029 OPTICOMMS II NCOMM 2.0+
U030 LABEL MAKER V1.5+ colour labels
U031 CROSS WORD V4.1 +
U032 SID II + the best CLI utility program
U033 PRINT STUDIO V1.25 + great
U034/38 PAGESETTER Clip Art (5) +
U039 GELIGNITE FONTS 2+ get it!
U040 AMIBASE PRO II + great database
U041 DOS HELP + CLI help
U042 TYPING TUTOR + improves typing
U043 PROFESSIONAL D-COPY v3.0
U044 CASSETTE LABELLER + good
U045 POOLS PREDICTOR + feel lucky?
U046 S-MOVIE + video titler
U047 FONTS DISK 1 + more fonts
U048 UTILITIES DISK 1 lots of them
U049 GRAPHICS UTILITIES 2 great
U050 AMIGA DISK COPIERS essential
U051 SUPERSPELL + 9000 words
U052/53 ANALYRIM (2) +2M database
U054 PP V1.4 + view powerpacker files
U055 HDCLICK V2.0 + hard disk utility
U056/58 DYNACADD DEMO 1M (3) +
U059 MAIL MERGE + print from database
U060 ICON TOOLS + 4 excellent tools
U061 RAYSHADE DEMO 1M + great
U062 PICTSAVER V2.4 + saves screen
U063 DUNGEON MAP CREATOR +
U064 SUPERDUPER V2.01 + copier
U065 CHEMESTHETICS V2.1 +
U066 AMIGA REAL TIME MONITOR +
U067 AUDIOSCOPE + audio analyser
U068 CRYSTALLS V2.15 + simulator
U069 LVD V1.61 + virus killer
U070 WORLD TIME V1.31 + 84 cities
U071 ICONS + hundreds of icons
U072 FREE PAINT + painting program
U073 GELIGNITE FONTS 3 + get it!
U074 MULTI PLAYER + music player
U075 PLOT LIB + function plotter library
U076 MIDI STUFF + 8 midi tools
U077 AUTO GRAPH + great
U078 DOS CONTROL + new version
U079 ICON EDITOR + essential editor
U080 U-EDIT + great text editor
U081 ADOC + Amiga help utility
U082 PROTRACKER V2.0 + essential
U083 CARTOON BRUSHES + great

ANIMATION
A011 JUGGLER +
A012 NEWTON CHAIR +
A013 AGATRON ANIMATION 10 +
A014 AGATRON ANIMATION 14 +
A015 AGATRON ANIMATION 20 +
A016 AGATRON ANIMATION 25 +
A017 AGATRON ANIMATION 28 +
A018 AGATRON ANIMATION 31 +
A019/20 NEWTEK (2)
A021/22 SCANNER HORROR (2)
A025 STAR TREK
A026 HORROR ANIMATION
A027 BATMAN ANIMATION
A028 RAIDERS ANIMATION 1M
A029/30 WAVE SAILING (2) 1.5M
A031 AT THE MOVIES 1.5M
A032/34 LOST IN SPACE (3) 2M
A035/37 STATION at KHERNE (3) 2M
A038/39 WALKER DEMO (2) 2M
A040/41 VAUX KILLERS (2) 2M
A042 FROG ANIMATION
A043/44 SENTINEL Animation (2) 3.5M

DEMOS
D013 VANGELIS MFI + great music
D019 KEFRENS 1st DEMO + nice demo
D020 RAY OF HOPE 2 great megademo
D021 ALPHA OMEGA + just brilliant
D022 VOYAGE + superb effects
D023 INDIANAPOLIS 500 + racing demo
D024/28 ODYSSEY 1M (5) + excellent

GAMES
G001 COMPILATION 1 + 5 GAMES
G002 COMPILATION 2 + 7 GAMES
G003 COMPILATION 3 + 7 GAMES
G004 COMPILATION 4 + 3 GAMES
G005 COMPILATION 5 4 GAMES
G010 AMASTERMIND + 5 GAMES
G011 SUBATTACK + 3 GAMES
G012 LANDMINE + 6 GAMES
G014 MUTANT CAMELS + 2 GAMES
G015 EQUILOG + 2 GAMES
G016 SUPER QUIZ +
G017 AIR ACE II + 2 GAMES
G018 BALLOONACY +
G019 ARCADIA +
G021 HYPERBALL +
G022 SQUAMBLE + 3 GAMES
G023 DOODY + 3 GAMES
G026 DEFENDA + 4 GAMES
G027 FRUIT MACHINE +
G030 RING WAR + NEW
G031 MATHS ADVENTURE + NEW
G032 PARAGON & ROTHELLO + NEW
G033 CUBE 4 + NEW
G034 CIRCLES UP + NEW
G035 GOLD + NEW
G036/37 LEARN & PLAY (2) +

DEJA VU
DEJA VU LICENSED SOFTWARE IN STOCK NOW. CURRENTLY UP TO DISK 97. DEJA VU DISKS £3.50

FRED FISH
WE STOCK THE LATEST FISH DISKS IN OUR LIBRARY FROM AS LITTLE AS 89P A DISK

T-BAG
ALL T-BAG DISKS IN STOCK NOW.

PRICES
1-5 DISKS £1.25
6-10 DISKS 99p
11+ DISKS 89p

POSTAGE
UK ORDERS 70p
EUROPE £2.00
WORLD £4.00

HOW TO ORDER
Please make cheques with bankers card number or postal orders payable to "ORION PD"
All orders despatched 1st class same day.
Overseas orders welcome. Payment in sterling
+ = A500+ compatible ( ) = Number of disks

CANNIDISK 2

2 SUPERB DISKS WITH THE BEST PROGRAMS

ADDRESSER, SUPERLOCK, WORLD TIME, FO, BANNER, RECOVER II, DISKX, FUNCTION KEY, ANY MONTH, CHINESE CHECKER, SPADES, SQUAMBLE, MINIBLAST, MEMLOCK, ZOO, PP, SMARTICON, BIORHYTHM, ANALYZER, SHOW FONT, PUBLIC SERVICE, FLASHCOPY, RING WAR, PRINT STUDIO.

ALL THIS FOR ONLY £3.00 PLUS 50p P&P

SUBJECTS
French, Spanish
German, Italian
Science, History
Geography
English Words
Spelling
Arithmetic
Football, Sport
First Aid
General Knowledge
England, Scotland
Natural History

Kosmos are specialist producers of Educational Software designed to help you enjoy learning from your computer. Versions are available for most popular home & business computers. Many of our programs even allow you to add your own lesson material.

⇓

Write or telephone for our *NEW* FREE 16-page COLOUR BROCHURE of Educational & Leisure software

NEW RELEASE "AMIGA MATHS ADVENTURE" £25.99

Kosmos Software Ltd, FREEPOST (no stamp needed in UK)
DUNSTABLE, Beds. LU5 6BR
Telephone 0525 873942 or 875406

Access VISA

SOUTH LINCS PD

1-9 disks 90p, 10+ disks 80p, large selection of Amiga PD including Games, Graphics and Animation, Utilities, Music, Demos, Fred Fish Disks, T-Bag Disks 1-64. Below is a small selection of titles available.

GAMES
1024 Breaker
1040 Bionix
1050 Pipeline
1059 Tile Trial*
1065 Yelp
1086 Hugo* (3 disks)
1093 Downhill Challenge
1094 Games 12 (Air Ace 2 & More)
1098 Megaball*
1100 Startrek T.N.G. (1.3)
1101 Llamatrons (1.3)
1105 Grand Prix Sim (1.3)
1106 Pete's Quest
1110 Airmania
1121 Super Skoda Challenge

GRAPHICS AND ANIMATION
2031 Elgato* (Cat anim)
2040 Tron* (2 Disks)
2069 Real Things Birds*
2077 Rock Album (Slideshow)
2089 Madonna Cartoon* (1.3)
2098 The Frog Animation*
2111 Anti-Lemmin (2 Mb, 2 disks)
2124 At The Movies (1.5 Mb)
2147 Buzzed (2 Mb) (3 disks) (1.3)
2162 At the Movies 2* (4 disks)
2181 At The Beach (2 Mb) (2 disks)
2183 Jet Anim*

UTILITIES
4087 CManual V2.00 (4 disks)
4100 Text Plus 3
4108 NorthC V1.3 (2 disks)
4109 BBase II V5.3 (W/B)
4110 Sid V2.00

MUSIC AND SOUND
5066 Blues House (2 disks)
5067 Meaning of Life* (2 disks)
5068 Walk This Way Remix
5074 Crystal Symphonies
5075 Bad Boyz* (Rave)
5079 Head Banger

DEMOS
6001 Dead Dance Thrash (1.3)
6072 Ray Of Hope 2 (1.3)
6075 Odyssey (5 Disks) (1.3)
6078 Voyage
6087 Total Confusion

(1.3) = Amiga 1.3 only, all other titles are 1.3 and 500+ compatible. *=1 Meg

Blank Disks 3½" DD/DS

Unbranded		Mitsubishi Branded	
10	£4.50 (P&P included)	10	£5.80 (P&P included)
50	£19.90 (P&P included)	50	£27.00 (P&P included)
100	£37.00 (P&P included)	100	£51.00 (P&P included)
200	£69.00 (P&P included)		
500	£160.00 (P&P included)		

Catalogue disk only 50p or send large S.A.E. for list of titles. Please add 50p for postage and packing to total for orders of PD. All orders of PD sent same day by first class post.
Europe add 25p per disk. ROW add 50p per disk. Cheques/postal orders made payable to South Lincs PD.

Dept AUI, 10 Linden Rise,
Bourne, Lincs, PE10 9TD.
Tel: 0778 393470

arena

CONTACT RICHARD VAUGHAN OR LIZ EDGAR ON 071 388 3171

Beaugh's British Domain

Discretion is the better part of Beaugh

Largest selection of "Adult-Ware" in the country and the only specific adult library. Complete discretion, ordering and advertising options.

ADULTS ONLY - PROOF OF AGE REQUESTED!

For more information send SAE to:
P.O. Box XG 14, Leeds LS14 6XR
or telephone (0532) 642550

MAKE YOUR AMIGA EARN!

Yes making money with your AMIGA becomes incidental when you know how! Your AMIGA is, if only you knew it, a gold mine. The size and make is irrelevent. Make the initial effort **NOW** by starting your own **HOME BASED BUSINESS**

This may be the most important move you will ever make!

REMEMBER: You'll never get rich by digging someone else's "ditch". Anyone in the country, including **YOU**, can become very rich in a relatively short period of time just by doing a few basic things! It's more rewarding than playing games. The benefits are many and varied. Full or part time.

FOR FREE DETAILS SEND S.A.E. To:

Home Based Business.

31, Pilton Place (AUI 39), King & Queen Street,
Walworth, London SE17 1DR

AMIGA WORK CENTRE

- MONITOR STAND
- SPACE FOR 3½" & 5¼" DRIVES
- ALLOWS HARD DRIVE
- DOES NOT BLOCK ANY PORTS
- EXTENSION LEADS UNNECESSARY
- FITS BOTH A500 & A500+

GET YOUR DESK SPACE BACK AND GET SERIOUS

ONLY £29.95 INCLUDING POSTAGE, PACKING & INSURANCE.

CHEQUES & PO's TO:
MISDEM METAL BOX
UNIT 3, CARVER BUSINESS PARK
ASTONFIELDS INDUSTRIAL ESTATE
STAFFORD . ST16 3HR
TEL 0785 42796
• • • • • *dealer enquiries welcome*

BUILD YOUR OWN ROBOT

With the AMIGA INPUT/OUTPUT PORT £27.95

Now you can use your Amiga to switch electric motors, respond to sensors and control robotic devices.
*11 Outputs for motors etc. Up to 13 inputs for sensors + 2 analog inputs. Easy to program in AMIGA BASIC, AMOS, GFA & HISOFT. Simple programming commands: eg TURNON (1). 21 page User Manual.

Amazing Sensor and Control Experimenters Kit £27.95
£1 OFF if purchased with I/O Port
6 electronic projects which plug into the I/O Port. No soldering required. Includes relay module, motor, tilt sensor, reed switch, light bulb, 4 LEDs, powerful software on disk (available separately for £4) and FREE "Guide to Amiga Interfacing"

ROBOTICS CONSTRUCTION SUPPLIES: BUGGY KIT (£39.90), GEARS, GEARBOXES, WHEELS, AXLES, ELECTRIC RAM, ETC. PHONE FOR DETAILS

Temperature & Light Experimenters Kit £11.95
Thermo & Photo sensors which plug into the analog inputs + "Amitrol" software.
Mains Controller Module £25.95 (3 pin socket). Handles 15 amps.

UNCONDITIONAL GUARANTEE
If not completely satisfied, you may return any product within 14 days for a full refund.

Please send cheque payable to SWITCHSOFT or ring Switchsoft on **0325 464423**
Prices include P&P. Overseas add £4.

SWITCHSOFT

SWITCHSOFT, Dept AUI82, 26 Ridgeway, Darlington, Co. Durham DL3 0SF.

VISA

Amiga 500 + pd

FOR THE VERY BEST IN PUBLIC DOMAIN SOFTWARE
All Disks Fully Compatible And Virus Free
Will also work on standard Amigas and the new 600

UTILITIES

Anti Virus Killer 5.19
CPPD Utilities – 10 Disks
Workbench 2 Utils – 8D
Textengine V3.00
Windowsbench 2.0 - 2D
D Copy V2.0
C Programmer Disk Pack – 6D
Messysid 2

DEMOS & ANIMATIONS:

Budbrain Megademo – 2D
Gremlins II Slideshow
Reliant RobinTurbo Challenge
Total Recall Slideshow
At The Movies 2-4 Disks
Operation Vark
Robocop Demo
Queen Animation
Highlander Slideshow
Silents Blues House – 2 Disks
Soundtracker 2.6
WWF Wrestlers
Terminator 2 Slideshow
Lemmingoids
Llamatron
Module disks – 8 Disks

For more information on these and many more, call Chris on 0283 516736 (Anytime)

Amiga-64-Link

- Links C64 peripherals to Amiga parallel port
- C64 Not required

Connects C64 printers to the Amiga

- Supports MPS, DPS, VIC, Star, Brother, Seikosha & Citizen printers
- Graphics output on dot-matrix printers
- Works with all software

Transfers C64 disk files to the Amiga

- File transfer programs
- Read/Write text, binary & program files

Standard "Ami-64-Link" £35.25 *Prices include VAT and delivery*
Budget "Ami-64-Link" £23.50 *Budget stops multi-tasking during printing*

York Electronic Research (0904) 610722
The Paddocks, Jockey Lane, Huntington, York Y03 9NE

VISA

Cottage Industries

HOME BASED BUSINESS

EXPLOIT YOUR COMPUTER

The ART of making your computer earn.
For your FREE details send 1st class stamp to:-

COTTAGE INDUSTRIES
4A Oddfellow Court
Oddfellow Street
Ystradgynlais
Swansea SA9 1LH

Kempston Computer Systems

88B Bedford Road, Kempston, Bedfordshire MK42 8BG
Tel. & Fax: (0234) 843282

HIGH QUALITY COMPUTER REPAIRS

Repairs on all types of computers and peripherals
We collect and deliver
All work carried out by trained technicians

90 DAYS WARRANTY ON ALL REPAIRS

Simply phone us on:
0234 843282
and we do the rest

userport

The PD Stakeout

Scoring

The marks awarded to each PD disk are based purely upon their own merits and, of course, our personal views. Value for money and reliability are also taken into account as well as features and quality of the software.

Compatibility

The PD disks reviewed in this issue were tested on an A500 with Kickstart 1.3. Please check with your PD supplier that the disks you are ordering are compatible with your Amiga. Amiga Plus owners should be aware that roughly half of the software in the public domain will not work with Kickstart 2. Always ask first.

PD or Shareware?

It is all freely distributable software under the rather deceiving umbrella of "public domain". Quite a lot of this software is in fact shareware. Shareware means that if you like the software, or use it regularly, the author will request a reasonable donation from £5 to £20. There is usually a note on the disk informing you if the software is shareware or regular PD. Whether or not you send a donation to the author depends totally upon your level of conscience and morals.

Remember, if you send a donation to the author, you may receive an updated version of the software. Even if you don't receive an update, you will have given the author the incentive to continue contributing into the public domain.

Sanity Music

Disk M430

NBS

There is an excellent demo which precedes the main music menu which is just superb. The actual music is also splendid. The title of each piece is displayed and selected via a rotating marble pillar which is very well animated.

8/10

I-C-P-U-G

the Independent Commodore Products Users Group is the largest and most friendly computer club in the country

* Over 1000 disks of Amiga Public Domain & Shareware Software entirely free to members - you supply blank disks and pay only for postage.
* Superb 100 - page magazine published every two months- keep up to date with latest Amiga hints and tips. Get the news from America first!
* Meet other Amiga users at one of our local groups which meet regularly all over the country.
* Help and advice services - hardware or software problems can be quickly resolved.
* Discount scheme makes purchases easier! Save money on hardware add-ons and software.
* Subscription for 1992 only £19 including £1 joining fee.
* Overseas prices on application.
* FREE software library catalogue disk when you join the group.
* Want to have a look before committing yourself? Back issues of the magazine from 1991 to all at £2.50.
* We support ALL Commodore machines with extensive software libraries and help services.

If you are seriously interested in using or programming your Amiga or indeed any Commodore Computer then joining ICPUG is a must!

For full details send a stamped addressed envelope to: **ICPUG Membership Secretary, Jack A. Cohen, PO BOX 1309, LONDON N3 2UT or Telephone 081-346 0050 after 6.00 p.m.**

AMIGANUTS UNITED
169 DALE VALLEY ROAD, HOLLYBROOK, SOUTHAMPTON SO1 6QX ENGLAND
AMIGANUTS UNITED AUSTRALIA - 199 TAYLOR ST, TOOWOOMBA, QLD. AUSTRALIA 4350

WORLDWIDE DISTRIBUTORS OF THE DEDICATED AMIGA CODERS CLUB DISKS
EUROPEAN DISTRIBUTOR FOR THE T.BAG DISKS. Numbers 1 to 68 NOW AVAILABLE

● ● ● ● ● ● ● ● **OCTAMED PROFESSIONAL (Version b)** ● ● ● ● ● ● ● ●

OctaMED PRO WILL BE ON SALE FROM THE 1st SEPTEMBER FOR ONLY £22.50 (inc p&p)
IF YOU WANT WHAT HAS BEEN RECOGNISED AS ONE OF THE BEST BUDGET PRICED MUSIC PROGS IN THE WORLD TODAY, READ ON.
OctaMED Pro NOW CONTAINS A HOST OF EXTRA NEW FEATURES, INCLUDING THE MUCH REQUESTED BEATS PER MINUTE FUNCTION (pianists will love this).
THE ABILITY TO LOAD/DECRUNCH POWERPACKED SONGS, A NEW FILE REQUESTER, FREEHAND OPTION FOR THE SAMPLE EDITOR, (edit waveform with the mouse), PIXEL SAMPLE DISPLAY FUNCTION, EXTRA CONTROL OVER ECHO EFX, PLUS MANY NEW MIDI FEATURES AND MORE!
THE DISK ALSO CONTAINS A NEW OctaMEDP layer WHICH IS RELEASED AS PUBLIC DOMAIN TO ENABLE YOUR COMPOSITIONS TO BE CRUNCHED AND FREELY DISTRIBUTED. (YOU DO NOT NEED ACCESS TO A MIDI UNIT TO COMPOSE MUSIC WITH OctaMED Pro)

SPECIAL OFFER TO PREVIOUS FULL PRICE PURCHASERS

IF YOU BOUGHT YOUR OctaMED V2 DISK DIRECT FROM AMIGANUTS THEN RETURN IT ALONG WITH £12.50 (inc p&p) AND WE WILL UPGRADE IT TO OctaMED Professional.
Note that the above upgrade offer is ONLY open to customers returning the official white Amiganuts disk that has the RED Amiganuts logo printed on it. It is not open to those who upgraded to V2 using the V1 Amiga Format Coverdisk. If you purchased a full price copy of V2 from one of Amiganuts licencees, then you must contact them for upgrade price details first.

(ORDERS RECEIVED PRIOR TO 1-9-92 WILL NOT BE DESPATCHED UNTIL 1st SEPTEMBER)

THE INSTRUCTION MANUAL FOR OctaMED IS NOW REDUCED TO ONLY £8.50 (inc p&p)

● ● ● ● ● ● ●

The pd Stakeout

Marvel Comic Slideshow

Disk 1957

17 Bit

There are eight excellent pictures on this disk, all drawn on Deluxe Paint. They feature characters from the Marvel Comics. The only one I recognise is Spiderman - where is The Incredible Hulk, or Mister Fantastic? They were the heroes when I used to buy the mag! The pictures are in hi resolution interlace using either eight or 16 colours.

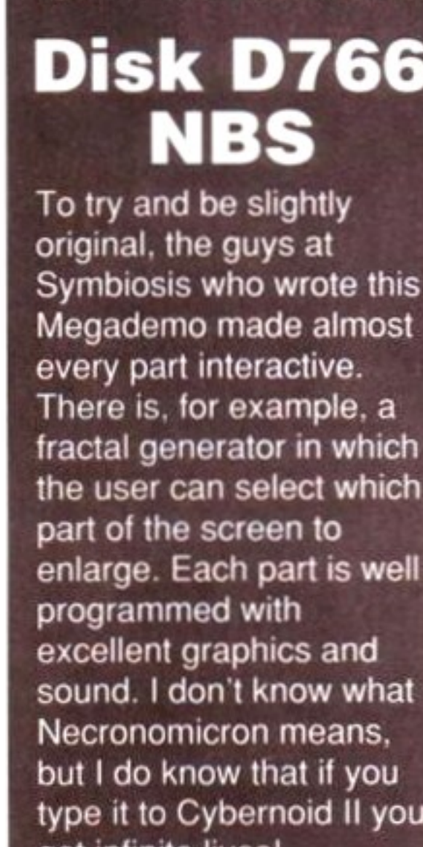
8/10

Pacman

Disk 2467 NBS

Pacman? Just plain Pacman in this day and age? Well I'm afraid so. Even if it is reasonably programmed there is still 500K free on the disk. It is quite difficult to complete a level so I suppose it holds a small challenge.

3/10



Necronomicron

Disk D766 NBS

To try and be slightly original, the guys at Symbiosis who wrote this Megademo made almost every part interactive. There is, for example, a fractal generator in which the user can select which part of the screen to enlarge. Each part is well programmed with excellent graphics and sound. I don't know what Necronomicron means, but I do know that if you type it to Cybernoid II you get infinite lives!

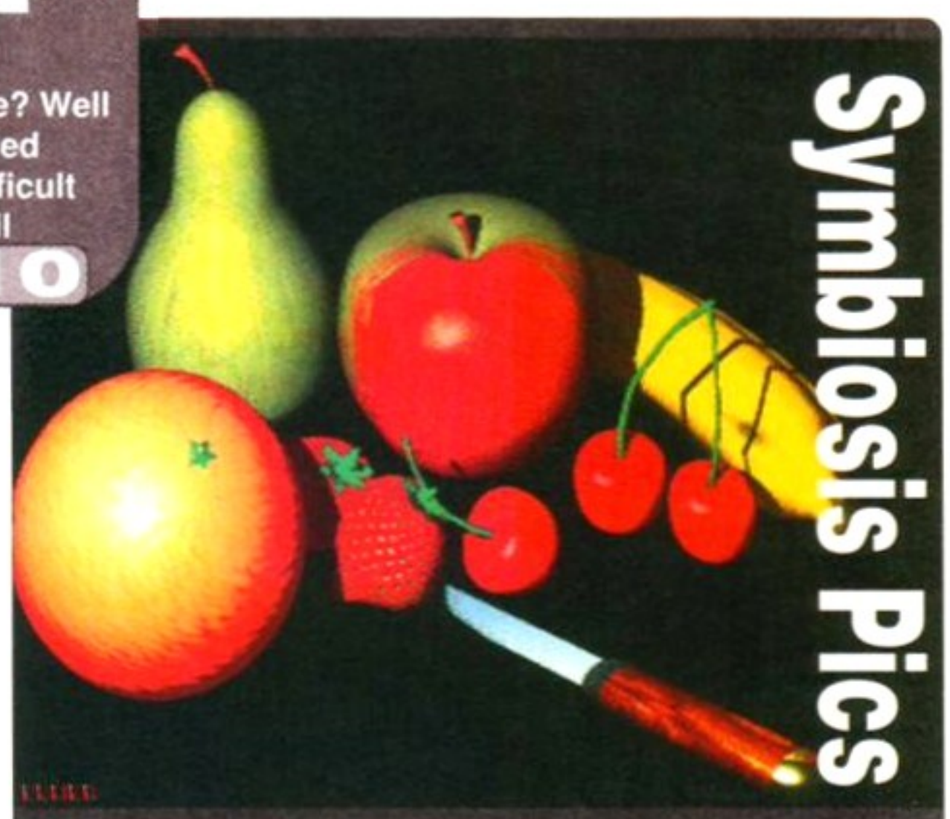
7/10

Hyperball

Disk 2512 Virus Free

Hyperball is a game which looks like it is based on Speedball. Speedball, you will remember, is based on the ice hockey theme. All you have to do is hit the ball into the opponents' goal, but there are some interesting differences. The goal moves from left to right and can be controlled by you or the computer. If you touch the opponents' goal you are transported to your side of the play area. You can play against the computer but it is more fun two player. It is well programmed using Amos and has good sound and graphics. If you do have either Speedball 1 or 2, you will not even think about touching this, otherwise it is worth a look.

6/10



Disk S568 NBS

Only seven pictures were able to be squeezed onto this disk but they are all excellent. The themes vary from space to fruit to pyramids. They were drawn using Real 3D. It's a pity there is no tune to accompany them.

8/10

Unsporting

Disk P066 (Requires 2 Meg) NBS

Another in a seemingly endless line of animations from the talented Eric Schwartz, creator of the notorious anti-Lemmings demo. (I heard he was visited by a top Psygnosis executive and he feared he was going to be sued for infringing their copyright. It turned out that he just wanted to speak to the genius programmer who was - to their astonishment - only about 15! Fifteen! Makes you sick, doesn't it?

This time the subject for the Schwartz satire is the Gulf War. A weedy looking Iraqi tank is pursued somewhat hastily by a mean looking A-10 tank buster. The Little tank is understandably distressed and will probably require a change of underwear if he survives the assault. Get it (if you have the memory) and find out what this brilliant programmer is up to now.

9/10

FERGUSON SMITH

'State of the Art technologies for your Amiga'

QUALITY AND PERFORMANCE AT UNBEATABLE PRICES

NEW! GVP G-FORCE 25MHz & 40MHz 68EC030 Combo Boards

Accelerator, RAM Board & Hard Disk Controller in One

- 25MHz - 1Mb/13Mb 60ns 32-bit RAM, 68882 Co-processor **£549**
- 40MHz - 4Mb/16Mb 60ns 32-bit RAM, 68882 Co-processor **£889**

MICROBOTICS 68030 ACCELERATORS

VXL-30 25MHz **£259**
VXL-30 40MHz **£365**
VXL-30 2MB 32-bit RAM **£199**

EMULATORS

GVP PC-286 16MHz Emulator for Series II HD8+ (A500) **£224**
Vortex ATonce Plus, 286, 16MHz 512k RAM (A500/1500/2000) **£248**

MONITORS

Commodore 1084SPI 14" Stereo Colour Monitor £249
Philips CM8833 Mk II Stereo Colour Monitor £229

PRINTERS

Full range of 9 and 24-pin dot matrix printers including FREE starter kit.
PRICES FROM £129
Call for details

New VLAB Real-Time Video Digitiser

This board which accepts both PAL and NTSC Input grabs frames in YUV Format and provides excellent image quality. The built-in ARexx port for automated video capture **£299**

ABACUS/ADDISON BOOKS & SOFTWARE

Amiga for Beginners £12.45	Amiga Machine Language £19.99
Best of Amiga Tips & Tricks £24.95	Making Music + Disk £27.99
Amiga Basic Inside & Out £18.45	Amiga 3D Basic Graphics £17.95
Amiga C for Beginners £17.95	Using ARexx + Disk £27.99
Amiga C Advanced £29.99	Desktop Video Power £24.99
Amiga DOS Inside & Out £19.99	User Interface Guide £17.99
Amiga Graphics Inside & Out £29.99	Amiga Hardware Reference £24.99
ROM Kernal: Devices 3rd Ed £24.99	ROM Kernal: Libs 3rd Ed. £29.99

FULL RANGE OF APPLICATIONS AND LEISURE SOFTWARE AVAILABLE - PHONE FOR DETAILS

ALL PRICES INCLUDE VAT, P&P
Prices subject to change without notice. E&OE

NEW! ROM KICKSTART V2.04 WORKBENCH 2.0

Upgrade your machine to version 2.0 for only **£84.95**

Package includes ROM 2.04 chip, 4 workbench diskettes and manual. Original Commodore
(Due to the weight of this product, please add £2.50 P&P)

NEW! ENHANCED CHIP SET

8372A Fatter Agnus £45.00
Super Denise £45.00

PHOENIX ROM SHARER

Switch between Kickstart 1.3 & 2.04 . £24.99
Keyboard switchable version £34.99

NEW! GVP A530 COMBO/ 52Mb HD

The Ultimate A500 Expansion Product
40MHz Accelerator + 52/120/240Mb HDD + 8Mb RAM Board (1Mb)

- 40MHz 68030EC CPU
- Runs at 12.1 MIPS - Faster than an A3000
- Quantum SCSI Hard Drive 52, 120, 240 Mb Versions
- Ultra fast 11ms access. Transfer rate up to 2,100k/sec (with 240Mb Drive)
- Up to 8Mb 32-bit FastRAM - 1Mb populated
- Mini slot for future expansions - PC-AT Emulator NOW AVAILABLE
- 2 year warranty

£665

GVP SERIES II HARD DRIVES

52MB £339
120MB £499
240MB £734

GVP SERIES 2 HARD CARD

52MB £275
120MB £445
240MB £675
420MB £1275

SEAL 'N' TYPE £11.95

- Protects your keyboard while you type
- Custom made for the Amiga 500/500+/1500/2000
- Soft, flexible invisible shield - fits like a glove
- Made from high quality, durable polymer

RAM EXPANSION

- 8Mb BOARD for A500 Incl. 2MB £129
- 8Mb BOARD for A500 Incl. 4MB £189
- 8Mb BOARD for A500 Incl. 8MB £299
- Power 1.5Mb A500 (allows for 1Mb chip RAM) £85
- 1Mb Through Port for A500 ..... £49.95
- 1Mb chip RAM A500 Plus £39.99
- GVP Series II RAM (A1500) 2/8 Meg populated £169

POWER FLOPPY DISK DRIVE

PCA 880b - Compact external drive with through-port, isolating switch, anti-click board PLUS the Blitz backup system & in-built virus blocker £69.95

PC A880dd - External Dual Drive. Anti-click boards in both drives. External power supply in quality compact case £125

ACCESSORIES

High quality Dust Cover A500 ..... £4.95
Monitor & Printer Dust Covers £9.95
3.5" Disk Boxes
50 Capacity lockable £6.95
80 Capacity lockable £9.95
100 Capacity lockable £11.95
Mitsubishi 3.5" DS/DD £0.50
50 Mitsubishi diskettes + 100 capacity box . £34.99
2 piece Printer Stand £7.95
Printer Ribbons ..... Phone
8mm Mouse Mat £3.95
Tilt & Swivel Monitor Stand £18.95

AMIGA PACKS

Amiga 500 Plus (1 Meg)
Cartoon Classics Pack Software includes The Simpsons, Lemmings, Captain Bart & Deluxe Paint III **£339**

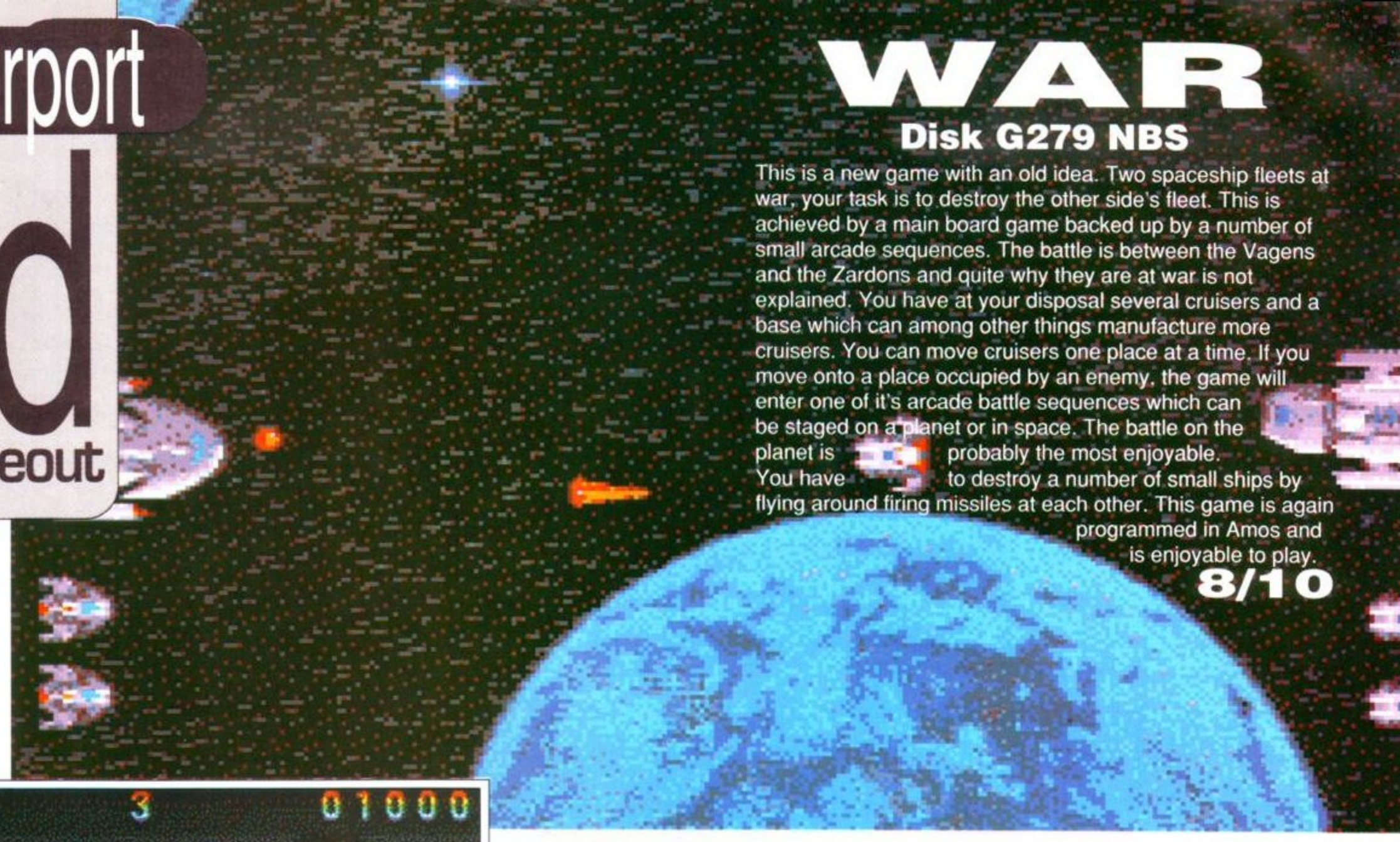
Amiga 1500 Plus (V2.04)
Pack includes Deluxe Paint III, The Works, Home Accounts, O/S Software & much more **£569**

FERGUSON SMITH
14 Dowanside Road, Glasgow G12 9DA

Tel: 041 339 3590
10am to 6pm Monday to Friday

A COMPLETE RANGE OF PRODUCTS AVAILABLE FOR THE AMIGA – CALL FOR UNBEATABLE PRICES!

The pd Stakeout



WAR

Disk G279 NBS

This is a new game with an old idea. Two spaceship fleets at war, your task is to destroy the other side's fleet. This is achieved by a main board game backed up by a number of small arcade sequences. The battle is between the Vagens and the Zardons and quite why they are at war is not explained. You have at your disposal several cruisers and a base which can among other things manufacture more cruisers. You can move cruisers one place at a time. If you move onto a place occupied by an enemy, the game will enter one of it's arcade battle sequences which can be staged on a planet or in space. The battle on the planet is probably the most enjoyable. You have to destroy a number of small ships by flying around firing missiles at each other. This game is again programmed in Amos and is enjoyable to play.

8/10

Dragon Tiles

Licenceware £.50) Virus Free

The simple concepts are always the best and this is a game that is both addictive and fun to play. The basic idea is to match the tiles together but you can only do so if there is a free space either side. The tiles are stacked in piles and once two are matched they disappear to reveal the two beneath. The game gets harder as there are fewer tiles visible. It is professionally written with excellent graphics and a nice tune in the background.

8/10

Entertainment

Vol III Disk 1962

This is a disk of games especially for the Plus but you will find that if you try you can get two of the games to work on a 1.3 machine. Both Space War and Squamble (yes Squamble, no misprint!) will work if you type their names at the CLI prompt. Space-War is a fun game to play. It is a two player only game, but you have the option to play over a Modem if you have one. You can control either the Starship Enterprise or a Klingon ship and the object yet again is to destroy each other (why are people so aggressive!)

This is the first game I have seen that is inHi-Res mode and it is quite fast as well. Squamble is based on the game Scramble (no kidding) and runs very smoothly indeed. The third and final game, The green slimy Martians from space, seems to be just a different name for Space Invaders. This may be but the way it is played is something else. Your ship is in the centre of the screen and the invaders spiral down towards you. A neat idea.

9/10

userport

The pd Stakeout

Pontoon/Gobbit

Disk 2573 Virus Free

Just the two games on this disk, both programmed in Amos. The first is a simple Pontoon game. It is basic and looks boring but I seem to keep on loading it! The second is a conversion of the arcade classic Pongo. For those who don't remember this you have to guide your little character up and down the side of a pyramid colouring the squares as you go. Most enjoyable.

6/10

I 'Ate that Duck

Disk H700 NBS

Made in Deluxe Paint III, this short animation is very ordinary. However, when you consider that the author is only 12 years old, you are impressed. It shows an ED-209 (of Robocop fame) shooting down a duck. He seems to have got the inspiration from watching one of Eric Shwartz's Animations. (Eric Schwartz 15, and now this one 12! It makes you even more sick!) Although nowhere near as good, at the current rate of production, he should achieve the same results or even better.

Total Fire

Disk G281 NBS

I was quite excited when I saw the loading screen to this game. My face dropped, however, when it had finished loading. It was a horrible SEUCK game. It's amazing how similar these "games" are. They are also extremely unplayable. You tug at the joystick desperately trying to avoid a missile hurtling towards you and the helicopter, or whatever, moves so slowly it makes you think... why?

1/10

Classic PD Spot

Wild Copper

Disk 176 17 Bit

Way back in 1988 there was a computer shop in France. The people who worked in the shop wrote software, the label was TecSoft. They formed a group for making demos and called themselves the Wild Copper Crew. As far as we know they only made one demo but it was to become a classic. As it was made at the dawn of demo creating it is highly original. It still impresses me to this day. Users should note that this demo does contain the odd swear word. One interesting fact is that this is the same team that went on to write Gary Fenton's favourite piece of software, TV Paint. Talented bunch.

CONTACTS

For PD reviewed in this issue

17 Bit Software 1st Floor Offices
2/8 Market Street
Wakefield
West Yorkshire
WF1 1DH
Tel: 0924 366982

Virus Free PD
31 Faringdon Road
Swindon
Wiltshire
SN1 5AR
Tel: 0793 512321

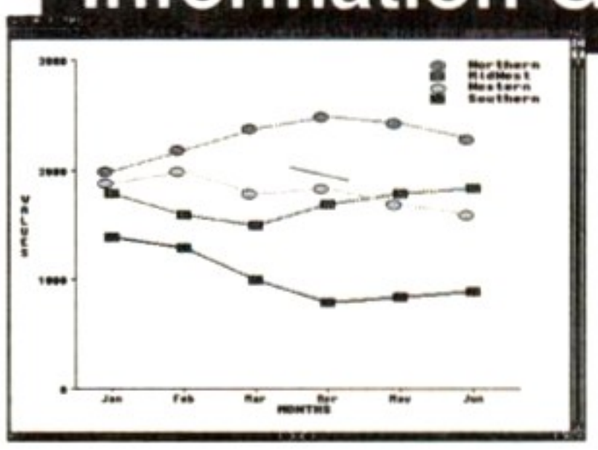
NBS
U/F6 1 Chain Lane Newport
Isle of Wight
PO 30 5QA
Tel: 0983 529 594

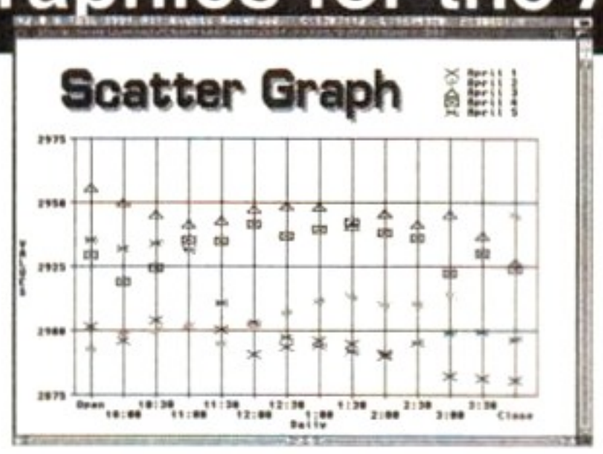
Have you any PD you would like me to review? If so please send it in. The address is:

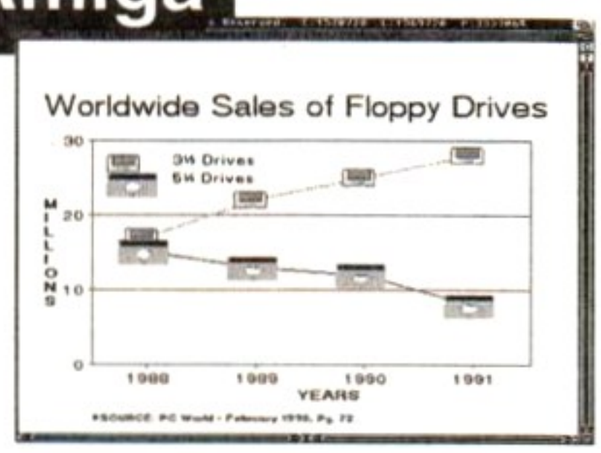
PD section, AUI, HHL Publishing
Greater London House
London NW1 7QQ

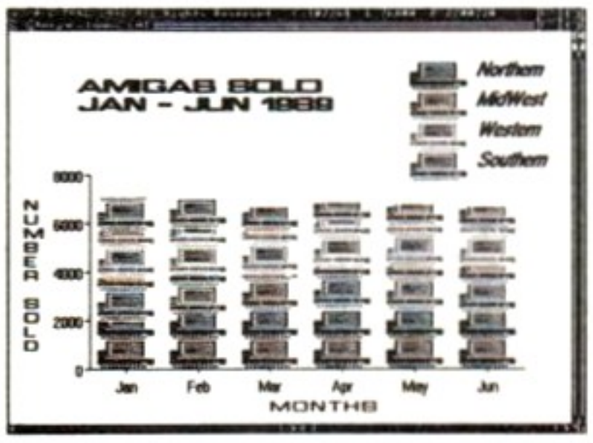
Charts&Graphs

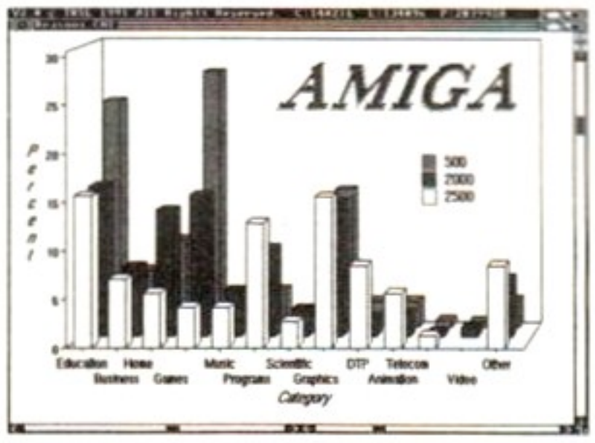
Information Graphics for the Amiga !

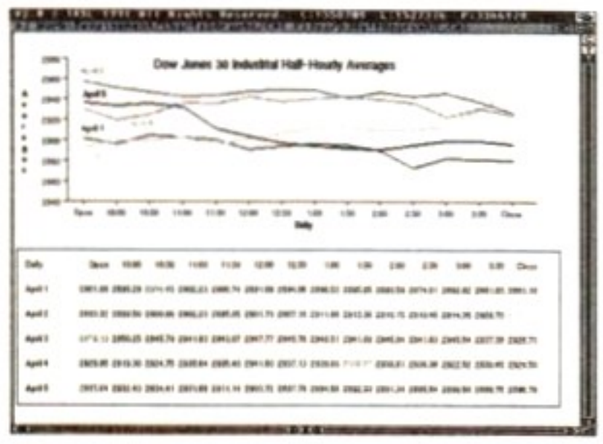


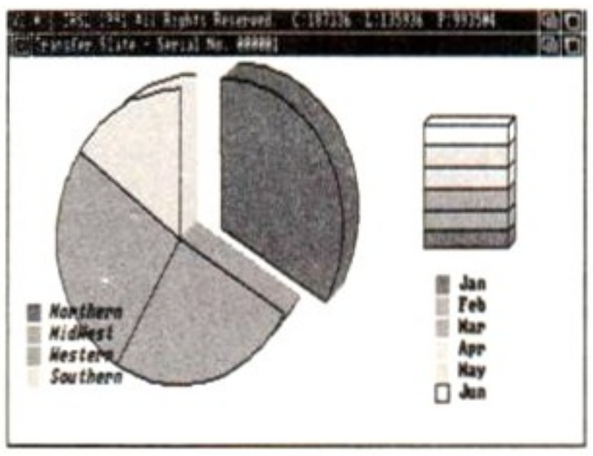


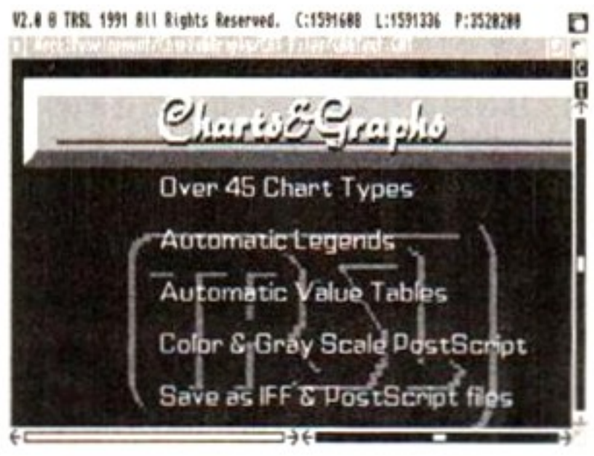


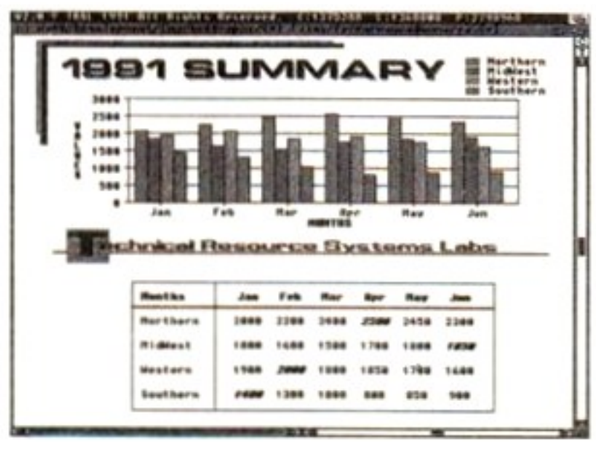


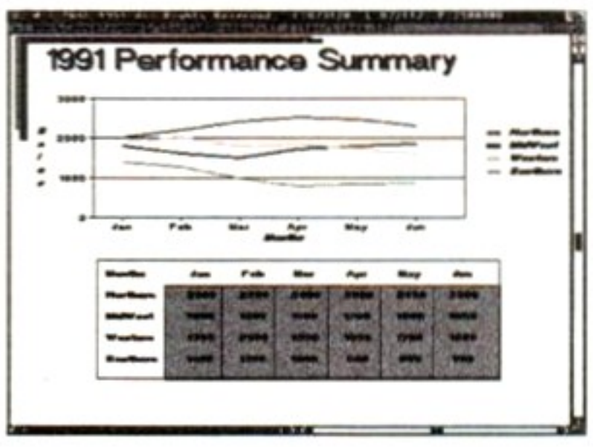


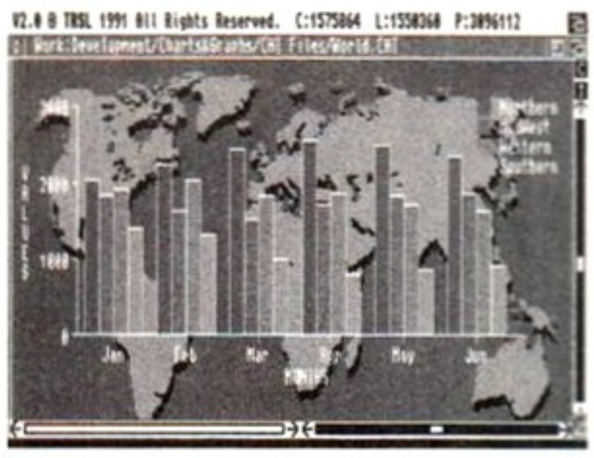


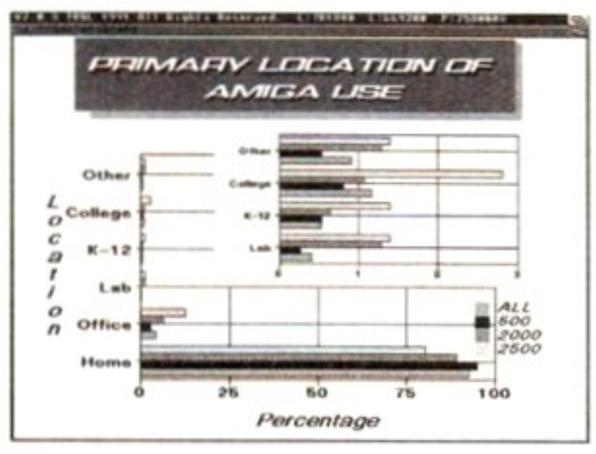


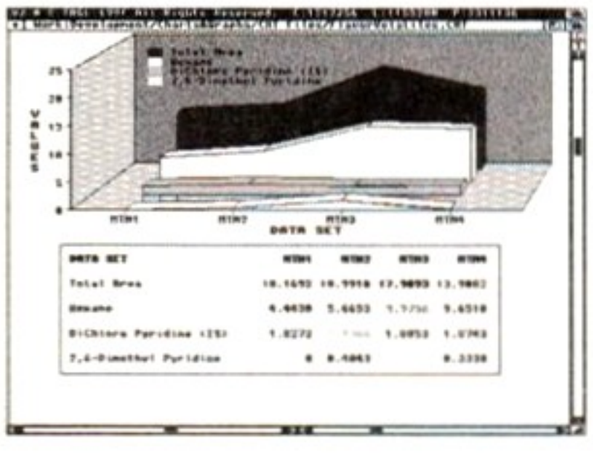


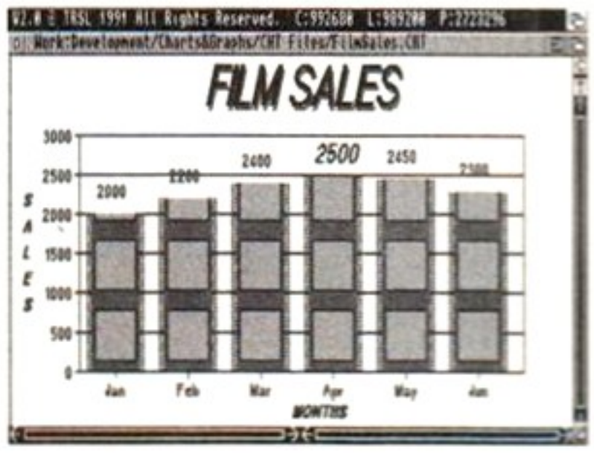


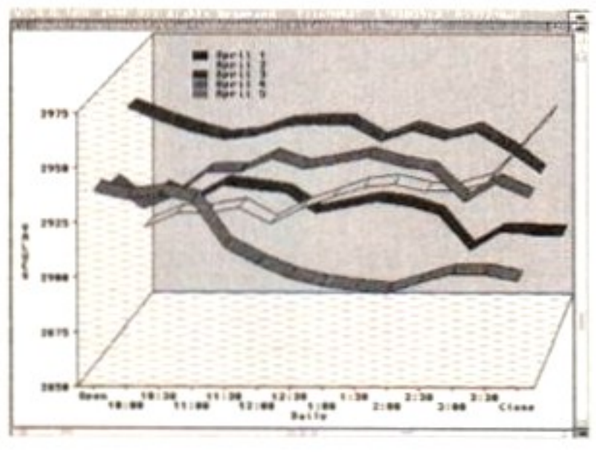










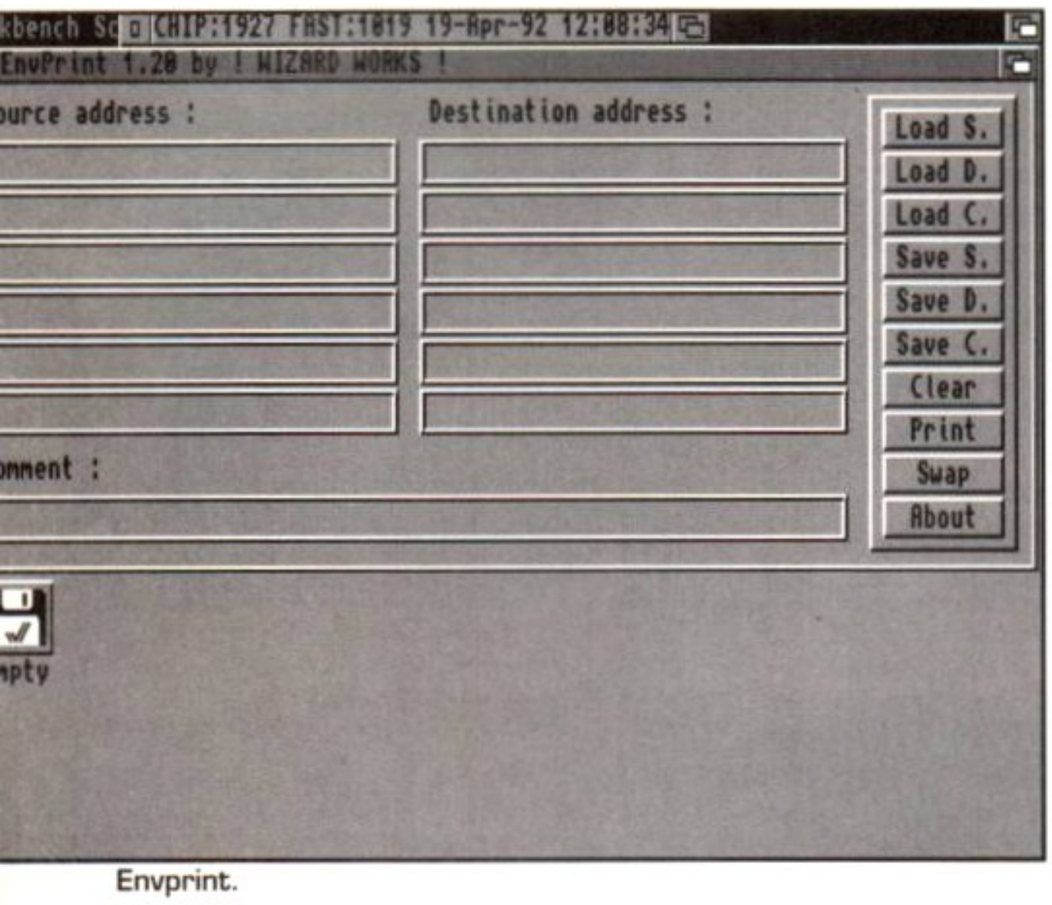


TRSL

$99.95
Suggested Retail
1 Meg Required
2.0 Compatible

Voice or FAX: 702-737-0880

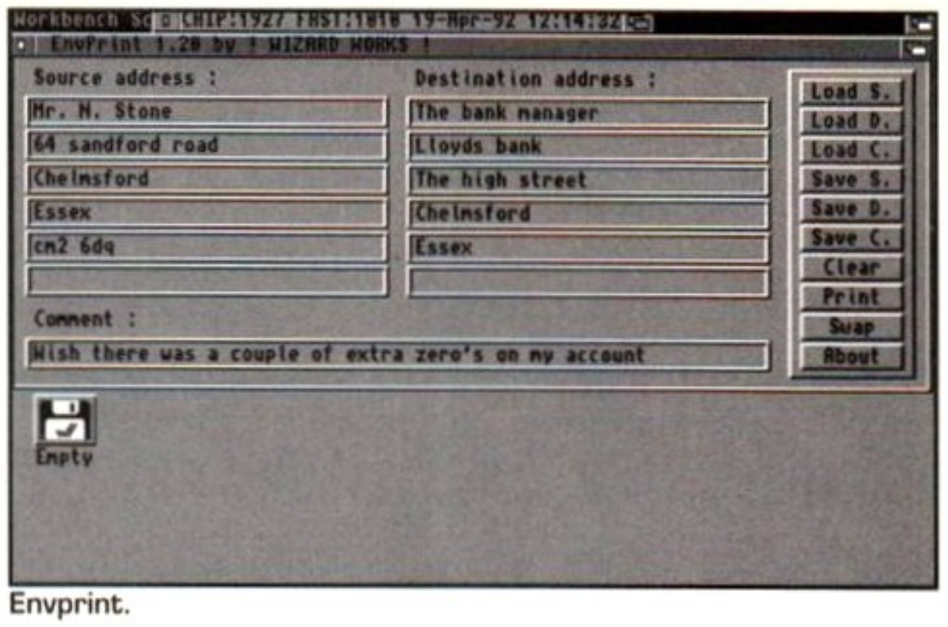
Amiga is a trademark of Commodore-Amiga, Inc.
PostScript is a trademark of Adobe Systems Corp.
Charts&Graphs is a trademark of TRSL.



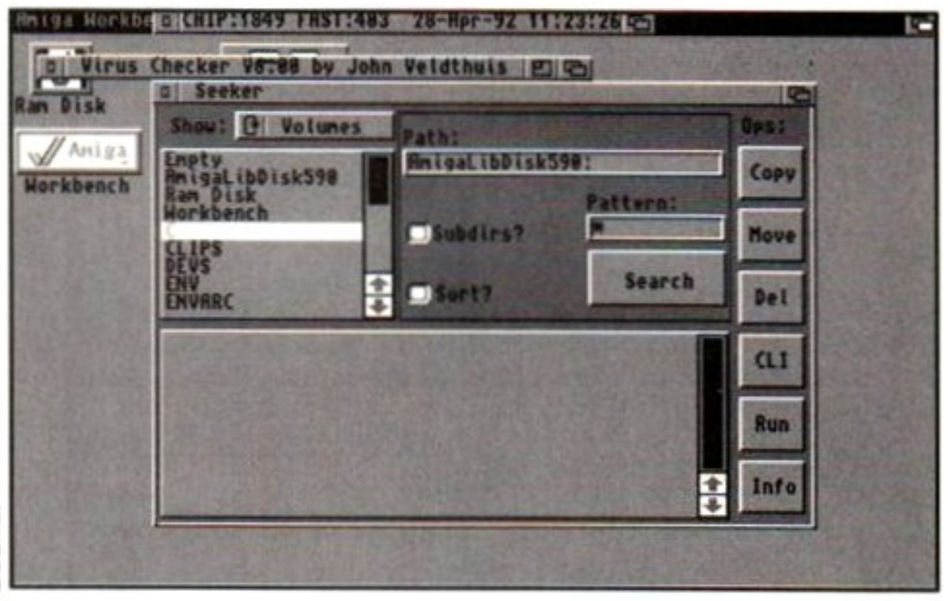
Envprint.

On Fish Disk 583 you will find **Superlock**. If you are involved in a situation where people could have access to your computer and you do not want anyone to tamper with your computer then this is for you. With this program you can lock or disenable your keyboard, diskdrive, mouse, hard drive, or any other attachments. For example you may be working on your computer at home and your tongue is hanging out through the lack of a drink - with this program you can quickly lock your keyboard and mouse and go into the kitchen to make a cup of tea or coffee and your cat can do it's tap dance on your keyboard and it won't make a bit of difference. Ahh! I hear you saying... so you lock your keyboard up but how do you unlock it!! It's simple. All you do is press these keys: left Amiga, right Amiga, and L (OK so it does not lock every key but these are the only ones it does not lock) then a window requester comes up and you enter your password or words and you then can disengage the locking device. Author: Jonathan Potter.

Fish Disk 584 has **Envprint** - how many times have you tried printing labels for your envelopes and then found a label has come off and stuck on a roller in your printer? Well, this is the answer to your problems. This program will print the destination and source address on your envelope, or just the destination address. You have the option of loading a saved address or typing in a new one. When you have loaded a saved address, or typed in a new one, and are satisfied with the address and want to print it onto an envelope, a requester comes up asking if you want to print just the front, or the back, or both. If you have chosen front and back it will ask you to enter your envelope into the printer. When the front is done another requester comes up asking you to place the envelope in again (of course, you would turn the envelope over) so the sender address can be printed. The menu is quite clear and easy to use. It is situated alongside the right hand side of the program where you enter your sender and source address, so there are no pull down menus. You just click on the option you have picked with the mouse button.



Envprint.



Seeker

The options are load, save, comments, clear all, (clears all gadgets) swap, (swaps the source and destination addresses) and print. The first line is printed condensed if that is empty, then the second line is printed condensed, the fifth line, if you use it for the country, will be printed underline. I have tried it out on an Inkjet printer and a ribbon printer and it does what it claims to do. It is an efficient and quick program. Author: Stefan Zeige.

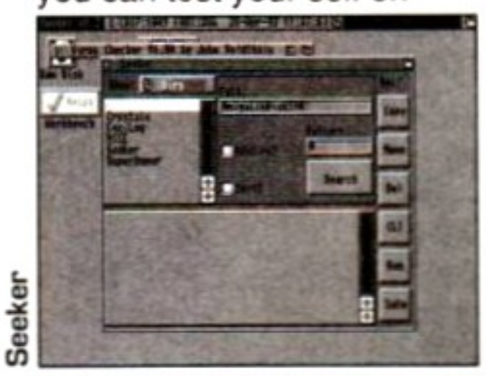
Seeker is to be found on Fish Disk 590. This is a handy program, suitable for people who wish to find certain files

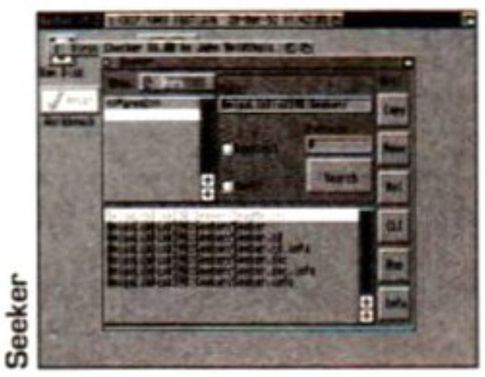
Norman Stone keeps trying to get you up-to-date on the flow of Fish disks. But even struggling strongly he has trouble stemming the flow.

or directories but hate using Shell or cli. In the show section you can display volumes or directories. If you click on a volume it will register in the path display. You can then click on one of the directories that are now displayed, then click on search and all the files will be displayed. You have the options of move, copy, info, delete, or run. Author: Don Lloyd.

On Fish Disk 592 is **Star** program. Do you ever look at some of the demo disks and see the different scrolling stars in the background and wish you could put them on your disk. Well, with this program you can. There are a few C functions that can be accessed easily by any C programmer, it is not a stand-alone graphics demonstration for the Amiga. But these have been put on this disk for you to use in your own programs and can be altered in any way to suit your own needs. There are some example programs that are used to illustrate how it is all done. For each line of the example program it is explained how it does it and why. The document explains exactly what to do and how to do it. Star is a nice introduction to the C language. Author: Jason Lowe.

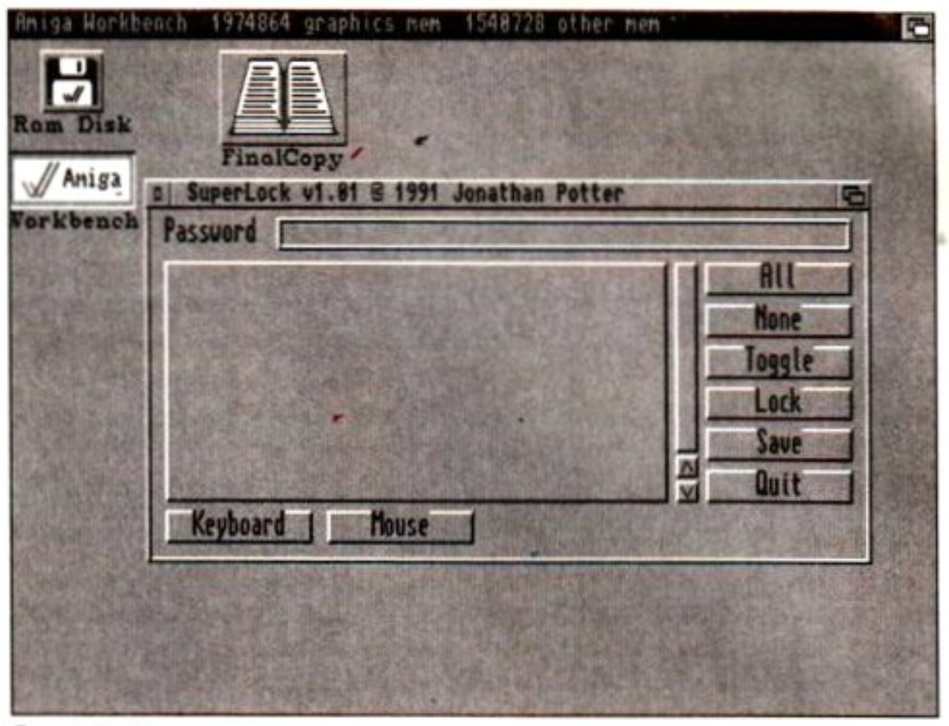
The **Elements** program on Fish Disk 593 will prove useful for all those budding scientists out there. You can get all the information you will need to know about the elements of this world. If you click on an element it will tell you the atomic weight, oxidation state, boiling point, melting point, density, atomic radius, volume, heat capacity, heat of fusion and so on. There is also a small diagram showing the crystal structure. Another good point is that you can combine the two elements and this will show you the two elements' separate state and information and also the information of the combined elements. There are two pull down menus on the info menu. It has subatomic particles, radioactive isotops, ionic characters, while the other menu is to change to interlace. There is also the option to use a test mode so you can test your self on how much you can remember about the elements.


Seeker

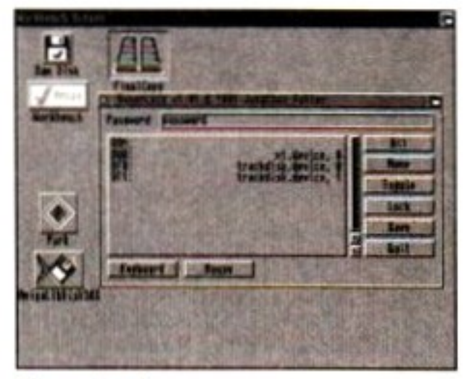

Seeker

Fish Disk 594 - **cube** - is a bit of a brain teaser type of game. It is a three dimensional version of 'Zeros and Crosses' using coloured cubes instead of paper and pencil. Alternatively, cubes are put on the 4x4 board or on top of any already present cube. The position of cubes cannot be changed any more. Each pile may be up to four cubes high, that is, the '3D board' is 4x4x4 large. The actual position is indicated as well by a '3D' image (centre) as by a 2D representation of the 4 horizontal planes (right). For better visibility the whole setup can be turned using the switches left and right below the 3D representation. You can take back a move if you want to, just in case you make a mistake, and there are three levels of play. Author: Joachim Tuckmantel.

Fish Disk 597 contains **Icontool.** There are three programs in one here. One replaces the colours of a Workbench 1.3 icon to the colours of the workbench 2.0. The other program with the replace colour program is replace tool. This program allows you to change the default tool of any number of project icons all at once. This is useful when installing a program and some projects created by it onto a disk which will have a different path from that of the distribution disk. Now instead you can just click on ReplaceTool and shift click on all the project icons and the tool to be used. That tool's path and name will be placed in the DefaultTool slot of the icon.



Superlock..


Superlock..

The other program is called FloatIcon. It is a spin-off of Replacetool. It simply lets you make an icon free floating again after it has been "Snapshot". This means that the Workbench will decide where it should be placed when a drawer is opened rather than putting it at a fixed position. A handy utility to save you a lot of time fiddling around with changing names and the colours on your icons. Author: Richard Mazzarisi.

Fish Disk 602 has **Mathadv**, an adventure type of program where you must escape a maze of rooms. This is done by answering a maths problem in each room. Of course, the further you go the harder it gets. In each room you will be presented with a problem either by a person situated in that room or through something you find, like an inscription on a wall etc... If you answer this problem correctly you will be allowed to enter the next room. Each room presents one problem but there are numerous problems in each room and they are randomly picked. So if you can not answer a problem in a room and you start again you may or may not have the same problem again, which gives it a bit more of a lasting attraction. Author: Jason Lowe.

All of these Fish Disks can be obtained from your local fish market through ICPUG.

AMERICA'S LARGEST SUPPLIER OF AMIGA CUSTOM CHIPS + UPGRADES

Prices now include VAT. Customs and duty if any

8372A (PAL) 1 Meg Agnus	£31.30	6570-036 keyboard chip	£8.75
8375 (PAL) 2 Meg Agnus	£39.50	A500 original P/S, 220 volts (no plug)	£40.25
1.3 Kickstart ROM	£19.70	A2000 original P/S, 220 volts	£64.20
A500 Keyboard-factory new	£35.60	A501 original new 512K module	£17.50
5719 Gary	£10.44	A500 internal floppy drive	£46.00
8362 Denise 1/2 bright	£13.90	Panasonic 32k printer buffer chip	£9.00
1 x 4/80 Static Column Zip	£15.60	Citizen 32k printer buffer chip	£12.40
8520A CIA (2MHz) Great price	£6.35	GVP-SIMM 32-4Mb60	£120.00

A500 PC Motherboard-PAL, populated & tested - (new low price) Rev. 3 ..... £58.60
A2000 PC Motherboard-PAL, populated & tested - includes the 1.3 Rom, 8372A 1 Meg Agnus & Super Denise 8373 installed (factory new) £301.60

UPGRADE YOUR A500 TO THE A500 PLUS - 8373 SUPER DENISE - £21.25

Advanced Amiga Analyser: Sophisticated but easy to use. Checks status of all data transmissions/signals, disk drive, ports, buffer chips, alignment, joystick + mouse. Checks status of read/write errors and tells what chips are bad. (hardware and software) £49.80
McCoy PLCC: (Burndy clone) Agnus chip puller (sold by CBM for £32) £9.50
Amiga Diagnosticlan: Diagnose up to 28 common problems. Comes with diagnostic software and booklet. Save time & money by locating faulty chips yourself £9.86
The Final Test: Diagnostic diskette tests keyboard, display, graphics, Workbench, sound, timing, realtime clock, RAM, etc. (12 diagnostic programs in all) £6.95
MegaChip 2000 by DKB: Upgrade your A500/A1500/A2000 to 2Mb of chip RAM. Includes 2 meg Agnus, chip puller & "Final Test" diagnostic diskette (no soldering). Same 8372B chip used in A3000 £173.40
Buy the MegaChip from us and we'll give you the new Super Denise for £17.00
SwitchItt by Global Upgrades Inc. Electronic ROM selector switch for 1.3 or 2.0. Makes all your software compatible. Keyboard or mouse controlled. Does not overlap the 68000 - allows for accelerator (2.0 compatible) very popular in the U.S. (includes dual-tone speaker for confirmation) £19.50

***2.0 Upgrade Kit (PAL ed.):** Contains ROM, 1,000 page manual and diskettes £50.75
***2.0 Upgrade ROM only (PAL):** No manual or diskettes. Ideal for multi-computer owners, schools, businesses, etc. £20.50

AdRAM 540 for A500 by ICD: Add up to 4 megs of RAM with battery backup internally in your A500 1 Meg/2 Megs (install up to 4 megs) ..... £74.20/£95.15
AdSpeed by ICD: Best accelerator in its price range £118.90
Flicker Free Video by ICD: Eliminates interlace flicker £163.50
Flicker Fixer by Microway (PAL) £130.50

DO NOT FEAR

Buying directly from the U.S. with your credit card offers you the same protection as it does in the U.K. with the added benefit of saving lots of money. Deal directly with North America's largest distributor of custom Commodore & Amiga parts and chips. The Grapevine Group has been successfully servicing the U.K. and the Continent for 12 years. All our parts and chips are new and guaranteed for 90 days.

DEALERS - SEND YOUR LETTERHEAD FOR SPECIAL PRICING

PRICES JUST REDUCED

THE GRAPEVINE GROUP INC.
3 Chestnut Street, Suffern, New York 10901 U.S.A.
International Fax: 0101-914-357-6243
Customer Order Line: 0101-914-357 2424
Telephone Hours: 1pm to 11pm Mon-Fri British time

Prices now include VAT. Customs and duty if any

Prices subject to change. **International Orders:** If your order is over £40 send or fax front of credit card. **Air Parcel Charges:** All chips - £5.36 Keyboard & PCBoard - £8.40 2.0 Kit - £22.62

OLYMPIC DISCS
PRESENTS

AMIGA Software

• FREE POST & PACKING • SAME DAY SERVICE
• NO MINIMUM ORDER • OVER 1000 DISKS IN STOCK!
• NEED PRINTED DOCUMENTATION ? • AVAILABLE ON SELECTED PROGRAMS
• DETAILS ON CATALOGUE DISK •

99P PER DISK

WE ALSO STOCK FRED FISH & T.B.A.G.

PACK 1 £9.90
BUSINESS PACK
Super Database, Spreadsheet, Word Processor, Bank A/C Manager, File Management & PC File Transfer. Ring binder & fully printed documentation provided (5 Disks)

PACK 2 £9.90
UTILITY PACK
100's of tools from Virus Killers to disk copiers! Documentation provided (5 Disks)

PACK 3 £4.95
DEMOS/ANIMATIONS
Space Ace, Ferrari & Unicycle, Knight Ani, Rockers, F-15, Kahnankas, Viking Saga. (5 Disks)

PACK 4 £4.95
DEMOS
Probe, Mr Potato Head 1 & 2, Predators 1 & 2 (5 Disks)

PACK 5 £4.95
EDUCATION
Spanish, French, German, Globe, Grotier, Dripmat, Clock, Formula, Airpol, Weather, Word-Maker, World Data Bank, Gravity Sim and more! (5 Disk)

UTILITIES
Amiga Fox (DTP)
600 Business Letters
U-Edit (Word Processor)
Ambase Professional (Database)
BBase II (Database)
Bank 'N (Bank A/C Manager)
Mirrtyd V2.0 (Read/Write PC Files)
NComm (Modem Software)
CLI Tutorial Virus Killers
King James Bible (4 Disks)
Visicalc (Spreadsheet)
Perfect Sound (Digitizer)
French/Spanish/German Tutor
D-Copy 2.0 (Disk Copier)
Household Inventory

GAMES 99p EACH!
Assassins Vol 1
Rollerpede, Tank, Amigoids, Cave-Runner, Avtstris.
Assassins Vol 2
Space Invaders, Maze, Galaxian, Think-A-Head, Missile Command, Ballz 2
Assassins Vol 3 Drip, Mega-Ball
Assassins Vol 4
Cracker, Jumper, Turbo-Duel, Gomoku, Klondike, Jumpy

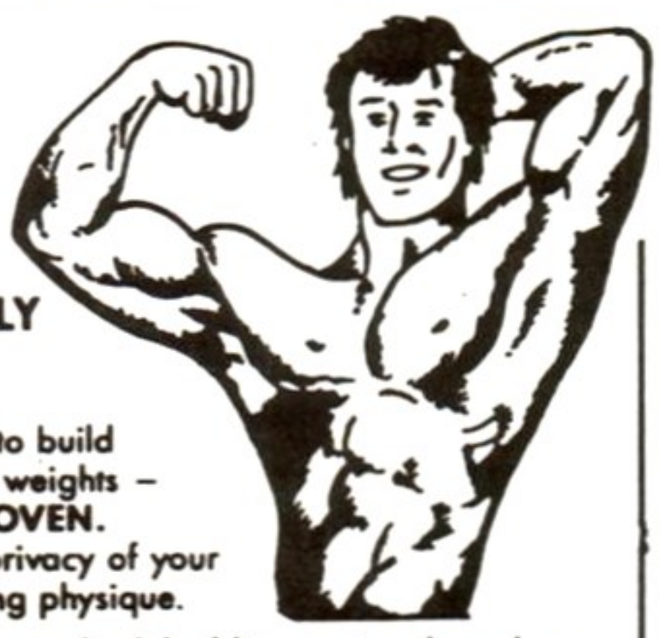
GAMES 99p EACH!
Assassins Vol 5
Go, Looly, Retaliator, Raid
Assassins Vol 6
Downhill Skiing, Pacman 87, Welltrix, Meta-Llamas.
Assassins Vol 7
Dest-Moonbase, Clauds-Runner, Night-Works, Trix
Assassins Vol 8
Air-Ace 2, Solid-Pit, Nobbs-Pinball, 8-Ball
Assassins 9 Blizzard, Battle-Pong
Assassins Vol 10
Escape, Pick-Out, Pipeline, SYS
Assassins Vol 11
Dad, Connex, Towers of Hanboi, Tetris, Reversi
Assassins Vol 12
Car, Llamatron, Power-Pong, X.F1.
Assassins Vol 13
Super-Twister, Asteroids, Block-It, Ball, Scramble, Amigatration
Assassins Vol 14
China-Challenge 2, Amiga Columns
Assassins Vol 15
Letters, Mamba Moves, Battle-Cars
Assassins Vol 16
Waterlane, Deludoa, Mirror-X, Pacman
Assassins Vol 17
Dudoa, Jetman, Tomcat F14, Bugblaster
Assassins Vol 18
Bust-a-Nut, Hexagon, Sci-Fi-Lib, Orbiance
Assassins Vol 19
Frantic Freddy, Blop-Block, Growth, Slider, Bat, Fight
Assassin 20
Microbes, Coin Drop, Hollywood Trivia, Match Patch

TEL: 051 252 0743

ALL A500 PLUS COMPATIBLE

PLEASE MAKE CHEQUES & POSTAL ORDERS TO:
OLYMPIC DISCS, DEPT AUI 33 STONEVILLE ROAD, STONEYCROFT, LIVERPOOL L13 6QD
CATALOGUE DISK 99P OR FREE WITH ANY PACK

BUILD MUSCLES FAST



YOU CAN BUILD A FANTASTIC POWER PACKED BODY IN ONLY 12 WEEKS!

NEW! Fastest and best way to build muscles and strength without weights – EVER! SCIENTIFICALLY PROVEN.
Just 20 minutes daily in the privacy of your home will develop an amazing physique.

MUSCLE DYNAMICS is a new bodybuilding system based on principals developed after years of exhaustive research. It is a total exercise programme involving the very **latest scientific breakthroughs** in the field of muscular development. It is the fastest, most effective way to build muscles in existance.

NOTICEABLE RESULTS IN 28 DAYS GUARANTEED

Send for exciting FREE information pack today

MUSCLE DYNAMICS (AUI), PO BOX 40, GATESHEAD, NE8 1PD

Yes! I want to build muscles fast. Please rush me my **FREE** information pack!

Name .....

Address .....

.....

..... Postcode .....

(A stamp for reply appreciated)

Where to find them! The *AUI* Advertiser Index

COMPANY	PAGE-NO
5 Star	105
16/32	51
316 Supplies	82
ACS	104
Activa	7/21
Amiganuts	108
Atlas	71
Audition Computer Supplies	63
Beaughs	106
Care	49
Castlesoft	65
Checkmate	23
Commodore	17
Compulink	104
Computer Mates	33
Cottage Industries	106
CPPD	106
Digi Copy	62
DMS	104
Eagle Software	79
Ferguson Smith	110
Fire Crest	108
Genlock	34
Grapevine	116
HiSoft	24
Homebased	106
Hudson PD	97
ICPUG	108
Inovatronics	IFC
Intracom	49
JCL	13
K2	61
Kempston	106
Kosmos	105
LCL	62
Marcam	19
Microdeal	6
Midnight Oil	91
Misdem	106
NBPDL	104
Olympic Discs	116
On Line	52
Orion	105
Oxxi	3
Pentire	42
Rombo	IBC/OBC
Sector	108
Sharow	62
Silica Systems	25/43/53
Soft Logik	30
Solid State	35
South Links	105
Switchsoft	106
Syntronix	52
Talking Birds	65
TLD	116
TRS	113
TTPD	51
Ultimate PD	103
VideoWare	59
Virgo	91
York	106
Zone	75

amiga answers

Dear AUI,
I am the proud owner of an A2000 upgraded to 3MB Ram and as a university physics student I find it a great tool for my work. However, in the field I use a more compact Casio PB 1000 upgraded to 32Kb ram.

This basic and Assembler programmable portable computer is very useful for statistical and scientific computing during laboratory work but there is a major inconvenience with it. All programs and data have to be saved to tape through the FA7 interface or to a disk via a special (and expensive) unit. Since tape saving and loading is time-wasteful and unreliable I figured out a solution that sounds almost too good to be possible to implement.

Since the FA7 interface is fitted with a standard RS232 comm interface, would it be possible to connect it to the Amiga communication port through a comms package (like JR-comm) upload and download programs and data from the Amiga disks to the PB1000 and vice versa? If the answer is yes, is the necessary hardware available or does it have to be custom made and will the Amiga disk saving procedure alter the data in any way to render it unreadable by the PB1000?

I am fairly good with programming but I am almost total rubbish with the soldering iron, so I decided to ask some competent people before wrecking my hardware.

David Cuciz
Lansanne
Switzerland

Dear David,
Your idea is very practical and is very similar to what I use with my Psion MC400, as well as my eprom programmer. The awkward bit will be sorting out exactly what the PB1000 expects to read and write. If it is all in ASCII then you will not have too much trouble. However, if it uses tokenised keywords and the like you may have to be very careful.

Write a very simple program and send it to the Amiga and have a close look at it with a good editor. That should tell you the format that the PB1000 is expecting.

Providing you have all the same parameters set on both comms interfaces set to the same values you should get all the data in and out without any changes. The Amiga will save what you tell it to, so that will not be a problem.

The comms side of things will be the fiddly bit to sort out.

1. Find out what the FA7 interface can be set to. If possible set it to something like 9600 bps NO parity ONE start and ONE stop bit. Also set it for RTS/CTS handshaking.

2. Set your Amiga comms package to the same values. You will need a cable to connect the FA7 to the Amiga. An Amiga to modem cable is no good in this case. You will need what is called a NULL-MODEM cable or sometimes known as a crossover cable. You will need the following configuration:

pin (amiga) pin(FA7)
1 1
2 3
3 2
4 5
5 4
6 20
20 6
7 7

You may have to link pins 8 to 20 in the FA7 connector that depends on the FA7. I am also assuming that the FA7 has the same type of 25 way connector that the Amiga does.

Soldering... well practice makes perfect - but two tips: The end of the soldering iron that hurts when you pick it up is the hot end. The other tip is, bribe one of your technicians to make the lead for you.

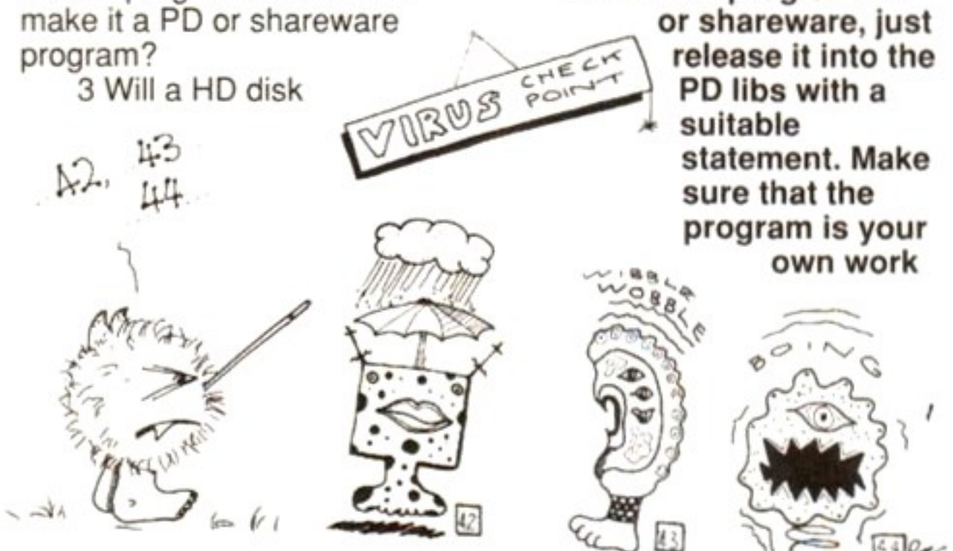
Dear AUI,
I own an A500 with 512kb. I'm thinking in terms of learning the C language. I have worked with BASIC but it's not any more interesting for me because I can't compile my programs and save them so they can be called from AmigaDos. So then I decided to program in assembly. But I found that it's too complicated for me so now in my opinion the best language for me is the C language. I chose this because I imagined that it's not as hard as assembly and not as easy as BASIC so it must be the one for me. But before doing something it's always better to ask someone who knows more for advice. That's why I'm writing you this letter. So do you think I should learn the C language or is there a better language for me? Could you recommend me an easy to use C language disk and an easy to use compiler for C?

Now that you have received my letter I would be happy if you could answer me a couple of questions.

1. Around how many viruses are there for the Amiga?

2. What do I have to do if I have a program and want to make it a PD or shareware program?

3 Will a HD disk have more space than a DD disk when it's inserted in the Amigas disk drive that can only read 880kb?



Babak Bayani
Barcelona

Dear Babak,
I don't know what type of programs you want to write but if you found assembly language tough going you will have quite a struggle with C. Assembly is the easiest language to understand. It's the Amiga operating system that is complex! With Assembly and C you have to interface fairly closely with the OS. For what it's worth you will need a C development system. There are two leading compilers, Manx and SAS (used to be called Lattice). I use SAS but both are good.

There is also a PD C which you will find in the Fish disk library. NO C compiler is EASY. They are all a royal pain in the neck until you get used to them. You will also need a lot of books, especially the CBM Rom Kernal Manuals.

In your case I would look at a couple of other products. CanDO, and AMOS. AMOS now has a compiler so that will overcome your main problem and it is very like BASIC so you should find yourself on familiar ground. CanDo is quite amazing for all sorts of control applications. Especially if you are controlling a program with an Arexx port.

Virus_Checker lists some 50 types of virus. However, many viruses are of similar types, or hacks of one or the other. I would not be surprised if there were less than 200 or so different named viruses.

To make a program PD or shareware, just release it into the PD libs with a suitable statement. Make sure that the program is your own work and contains no other code/ samples that you are not entitled to use. Nor must you distribute any libraries from various packages, etc.

HD disks v DD disks... don't be silly, it's the drive unit that determines the maximum capacity. You have to provide the drive with the correct type of media in order for it to work correctly. Incidentally, the Amiga drives are actually 1meg drives. That is the unformatted capacity. Once AmigaDos does its work it uses 120K of the disk so that it knows where to find things.

Dear AUI,
I have recently added the Maxi-Plan software to my son's Amiga computer collection which also includes Kindwords as well, of course, as the original Workbench.

In order to use Maxi-Plan with my OKI printer I have firstly to load the Kindwords or Workbench program to select printer prefer preferences and then load Maxi Plan in order to print my spread sheets or charts.

My question is this: How can I transfer the various printers available on Kindwords and particularly from my original workbench onto my Maxi Plan program?

JD Beveridge
High Wycombe

Dear JD Beveridge,
Firstly you only need one printer driver, the one for the OKI.

You do not say which version of Workbench you are using, as this problem is easy to solve with WB2, but requires a little CLI work on WB1.3.

WB2

Boot from WB open WB disk icon. Select Window/ show all files from the main menu bar. Lots of new drawer icons will appear. Open DEVS, open PRINTERS, drag the icon of the printer you want and pop it into the ram disk for a while. Insert the disk you want to copy it to and perform the same operations up the the open PRINTERS. Drag the icon FROM the ram drive into the printers window. Job done!

Address for your questions:
Amiga Answers
AUI
HHL Publishing
Greater London House
Hampstead Road
London NW1 7QQ
When writing to Amiga Answers include as much information as possible about your system and about which software/ hardware you are running. This will help to determine what your problem might be and its solution!

amiga answers

You will have run preferences and select the printer and then SAVE preferences to your Maxi Plan disk. Once you do that you will automatically have your selected printer available. This applies to WB1.3 as well.

WB1.3

Assuming that your Workbench disk is called WB: and your Maxi Plan disk is called Maxi: and the printer driver is called OKI_driver (substitute your own names if not).

Open a shell window:

type:

copy WB:devs/printers/OKI_driver to RAM:

copy RAM:OKI_driver to Maxi:devs/printers

(You will get prompted to insert your disks as needed. This is where a second drive is very useful.)

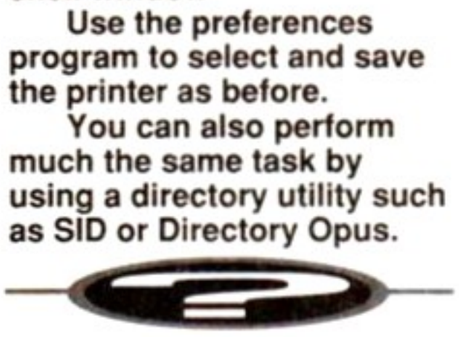
type endcli to close the shell window

Use the preferences program to select and save the printer as before.

You can also perform much the same task by using a directory utility such as SID or Directory Opus.

Dear AUI,
I have owned a A500 for about a year now and I am looking around for desk top publishing. I want something that is not too complicated to use at first but does have some powerful functions, e.g. spell checker and quite a few fonts. It's also worth mentioning that I still only have a megabyte of ram and I have heard I will need more. But how much more? I also have no hard drive. Also from your reports Pen Pal seems very good. Would this be a contender for DTP or a very graphical word processor which I think is what I mainly want? Please advise me on all three points.

A Baker
Somerset



Dear A Baker,
Without knowing what you actually want to do this is a rather awkward question. If you want real DTP at a reasonable price, then Pagesetter 2 is the program to use. DTPs are not much cop when it comes to real wordprocessing. Most DTP users use their favourite wordprocessor and then import the text into the DTP program. Use whichever wordprocessor you feel like.

If you want a wordprocessor with some graphics, then Pen Pal is quite nice, as are Wordworth, Prowrite, Excellence!, to name a few. Check for the types of dictionary supplied - that is sometimes important.

Memory. Well, 1 meg is just about enough but you can do things with more memory like put often used files in the RAM: drive for real speed. In your position I think I would go for a Hard disk before the extra memory. As most hard drives come with memory expansion sockets you can add a couple of megs as and when required.

The fonts are a bit of a problem. Pagesetter 2 has a couple of compugraphic fonts that can be scaled to any reasonable size without the pixels becoming obvious. All other standard Amiga fonts will suffer from this as you enlarge them. You should be able to use any Amiga font in a DTP package providing you bear this problem in mind.

Some wordprocessors will allow you to use Amiga fonts, others rely on the printers built in fonts. What will suit you depends on what you want to do. If you are into serious DTP you should check out Pagestream and Professional Page. They are the heavyweights in the Amiga DTP field.

Dear AUI,
Firstly I would like to congratulate you on producing a most interesting and informative magazine and now to my problem.

I have recently purchased a second hand A2000 PC-XT computer, an A2000 PC10-1 to be exact) of which I am experiencing great difficulties when trying to use in conjunction with a genlock or modulator when connected to the video port.

In the past I have tried several different modulators but to no avail.

When using the genlock the Amiga disk drive becomes temporarily disabled and I produced a negative picture from the composite output signal of the genlock and no picture on the RGB monitor coming from the RGB output of the genlock unless the computer was switched off which incidentally switches the genlock off and on.

My Philips RGB Monitor works perfectly with my A2000.

Should a Rocgen plus genlock or modulator (A520) work with the A2000 If yes, why isn't it and what can I check for?

Mr TR Knott
Stockport

Dear Mr Knott,
I have a very vague recollection that the bridgeboard might upset the external genlock devices. The bridgeboard is a card in the Amiga that is a small PC compatible. The only way to find out if this is your problem is to unplug the bridgeboard and then try again.

As far as I know the modulator and the Rocgen should work on the 2000 as well as the A500.

Dear AUI,
My husband buys AUI every month and as you can imagine after buying eight or nine there is becoming quite a pile.

What I would like to know is if you make a binder for them. As he is constantly referring to them it would be nice if he had them all together on hand.

Mrs S Cuttler
Reading

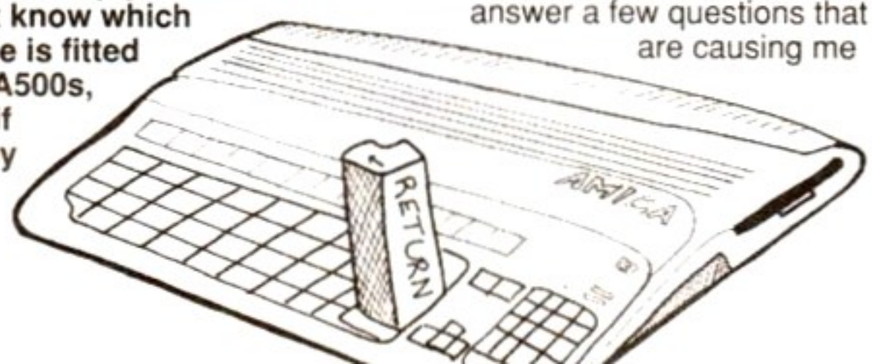
Dear Mrs Cuttler,
I am am told that a binder is at present being designed, so shortly you should be able to tidy your husband right up!

Dear AUI,
My problem is that the larger of the two return keys on my A500's keyboard has worn out. This is causing great problems, especially with wordprocessing, etc. At the moment I am having to use the smaller of the return keys on the right of the keyboard.

Can you tell me where I can buy a replacement key so that I can repair the keyboard myself? I am afraid that in the current financial climate I cannot afford to send the machine away and be charged £40 for its repair, or is there somewhere very cheap that I haven't heard of?

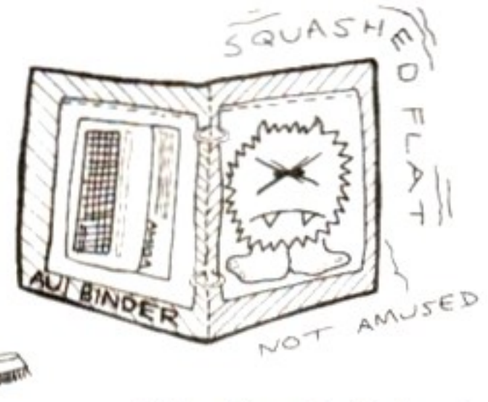
Colin Ledger
Harlington

Dear Colin,
I can't help with a source of keys, simply because I do not know which type is fitted to A500s, or if they are CBM specials. The A2000 keyboards are not made by CBM so there is a chance that keys for them can be found.



Your problem sounds as if it is mechanical rather than anything else. Providing that you are very competent with electronics and a soldering iron there are a couple of options.

Firstly remove the keyboard of the A500 and have a close look at it. I suspect that there will be a cover on the underside that you will have to remove as well. Once you can see the printed circuit layout have a VERY close look at the roundels on the return key pins. If the key is not firmly pressed against the printed circuit board when made, the constant tapping of the return key can cause the printed circuit track to fracture. It normally does this right at the edge of the solder blob on the pins and is a devil to spot. Reheating the joints, and possibly a small piece of wire, may be needed to re-establish the continuity of the tracks.



Other than that phoning about to see if you can find someone who has a few spare keys that may be your only hope. Or you can contact one of the advertised and recognised Amiga repair centres.

Dear AUI,
I am an Egyptian engineer and I have never owned a computer before but I recently managed to buy an Amiga. I intend to use the Amiga for the following:

Word processing, programming (Fortran, Assembly, C, etc) colour scanning, drawing small units of Arabic art (like panels and borders with carved wood decoration, details of wall mosaics... etc) animation, playing games and music. I would prefer the computer to be portable solid and easy because I don't want to lose my time in learning its operating system.

I can't deny I have been attracted to Amiga 500+ too much, so I wondered if you could give me a few words of advice and would you please answer a few questions that are causing me headaches. Would you think that the Amiga 500+ is suitable for me with the maximum available hard disk, RAM (say 20Mb HD + 1 or 2 Mb RAM) and High resolution, say 1280 * 512?

I will use my PAL 50hz/240V as a colour monitor. Is this choice quite enough to do the job? How much memory and what size of hard disk would you suggest?

Is there any available software to run Macintosh or IBM programs on the Amiga 500+?

I found an Amiga 500+ in the USA where my brother lives so it would be easy for me to get my Amiga from there. Is there any kind of compatibility between this Amiga and it's twin of England?

Can any of them accept the games of the other or some hardware like monitor or external HD. I think they may be the same in everything except the RF modulator and the power supply adaptor.

In the USA, there is an Amiga 500GT which runs at 14 Mhz. Can this fast model of Amiga 500 accept all the available software in the markets which were written for the Amiga 500+ either in England or the USA?

Mohammad Akmal
Saudi Arabia

Dear Mohammad,
It is possible to use the A500+ for what you want but you will be overloading it quite a bit so you should consider the A1500/2000 or even the A3000 if you can afford it.

As for compatibility... there were a few differences between the USA and UK Amigas as you mentioned in your letter, due to the NTSC/PAL and power supply differences. With the latest Workbench and chipset it is easy to switch between PAL/NTSC, however, the power supply and modulator could pose a problem. You can purchase spare PSUs and modulators but I suspect that the extra cost of these would outweigh any savings you could make by getting your Amiga from the USA.

Most software will run on all Amigas providing that it is programmed as per the CBM guidelines. There are a few programs that will crash on the new Amigas but generally the software base is quite stable and providing that you buy the latest versions of software you should have no problems. Look out for the WB2 sticker on software boxes.

Hard disk. I have said this many times before, 20 Megs is considered far too small, especially with what you want to do. You will need 60-100 megs of hard disk space. The same goes for RAM, as much as possible, 2 megs minimum and 4 megs or more if possible.

If you want to program in C (or just about any other language for that matter) you will NEED to get to grips with the OS. It is a fundamental part of the Amiga and unless you want to write your own multitasking OS and window system, then you will have to use the Amigas OS and library system. A set of the Rom Kernal Manuals and an AmigaDos handbook is vital for your programming.

You will NOT get 1280 by 512 resolution on a TV. With a special monitor and the new productivity mode you will just manage it, but only in four colours.

There are ways of running MAC and PC software on the Amiga. A product called Amax converts the Amiga into a MAC but you need MAC disk drives - and the MAC ROMS - to get the software across. There are several PC emulators available for the Amiga - the KCS unit, Vortex unit, and CBM 2288/2286 - and now 386 - bridgeboards (A1500/2000/3000 only) come to mind.

The A500GT is probably a standard A500 fitted with a speed up device of which there are quite a few on the market.

There are several scanners available ranging from hand-held B/W units to flatbed colour units and prices range from £130 to £5500!

Get a copy of the Amiga Buyer's Guide (available from AUI) for over 100 pages of product info, prices and contacts.

Just to summarise, I suspect that the system you will be looking for will consist of:
A2000 + WB2
8 meg Ram board populated to 4 meg
2091A HD controller + 60 meg HD
2286 bridgeboard (if PC emulation is required)
Amax (if MAC emulation is required)
Printer
monitor/suitable modulator
Lots of software including
SAS C
Devpac
Dpaint
XCad

Protext (or your chosen WP software)

(If your TV has a SCART socket fitted you can normally plug the Amiga and TV together without a modulator.)

Dear AUI,
I think that your magazine is the most serious in the Amiga Domain. It is the first letter I am writing to you and I'm desperately looking for your answer. I don't mean to be dramatic but here's the situation.

I am a student in the Computer Engineering Department in the University of Patras in Greece. Maybe I am one of the few users in Greece that are interested in serious programs for the Amiga. Four years ago I bought an A2000 3mb Ram Workbench 1.2 and I recently bought a Citizen Swift 24E colour printer. After a lot of searching in local Commodore dealers I understood that these guys are not even aware of the fact that serious software for Amiga exists! Therefore, my only source for serious software is ordering by mail from Germany or England. So please inform me about ways that I can get software, given the fact that I do not own a VISA or any other credit card.

The main reason I am writing to you is that I am very interested in a typesetting system that can be used with the Greek language. I know that I am asking something difficult because every existing typesetting package is English oriented. I have to note that the reason that I bought the printer is to use it mainly for writing papers and reports for the university projects. As you probably know this is work that requires good graphics capabilities both from the printer and the computer.

Till now my only way to get Greek characters on the paper is through a font named 'greeks.font' in the FONTS: directory of Workbench disk that the local Amiga dealers distribute with every new Amiga that they sell. The Greek characters are printed with the help of a printer driver named Greek that is provided also by them in the same disk in the DEVS: printers directory. To swap from the English keyboard to Greek I use the keys L-Amiga F2 and to get back I use L-Amiga F1. This is done with a little resident utility that they provide with the disk.

Now here's the main problem. The Greek characters are in the ASCII codes above 128 but how can I use these characters in my documents through a wordprocessor? Almost every wordprocessor has problems printing the Altered characters above 128. A friend who also has an Amiga used ProWrite V3.1 and the output quality was not a suitable one for my documents. My next move was to take a look at Protext 5.5. I finally created my own Protext printer driver '.ppd' but when I tried to print in proportional no line was justified correctly. Browsing the manual I found that you could adjust the proportional widths. After a lot of tries and paper loss I managed to fix the widths so that on testing they were correctly aligned. But on a common Greek text always something happened and some right line edges got out of order. So I finally also gave up on protext.

Hopefully, as I was looking at AUI March 1992 on page 128 I noticed an adv. of ARK for AmigaTeX. The university uses the TeX system extensively to prepare documents. They have versions of LaTeX (a version of TeX with graphics and other capabilities) for VAX an PCs. THEY HAVE NO PROBLEM WITH GREEK CHARACTERS. So please tell me is this version of AmigaTeX capable of printing characters (altered) over ASCII 128 code? Is it worth buying it? I need a wordprocessor that can accept Amiga workbench fonts. Is AmigaTeX one of these?

When I say altered characters, I mean the Bitmap image of the character is changed with FED. Is there any other way to print these characters using my printer? I also read on the hardware manual Amiga Fonts can be downloaded to the printer. How can this be done? Your advice could help me save lots of money and invaluable time.

And a last word about Amiga and Commodore. Amiga is a fine machine and better than all that PC stuff. The only problem for me is that all the PC packages and especially compilers (I am specifically interested in compilers and interpreters because of my studies) are far superior than the corresponding Amiga ones. Take a look at Borland C++ that is already in version 3 with a stunning windows interface and in contrast take a look at my Lattice C++ V1.0 that keeps crashing on my poor machine because of compiler bugs. Also please tell me is there any chance in the next two to three years to get some reliable software for languages like lisp, prolog, etc. I know the Amiga is a difficult machine to program - I personally have programmed in Lattice C for about two years.

Among my friends that own an Amiga there are very few that are interested in serious software so I do not expect any help from them. Also I note nobody here in Greece takes the Amiga seriously. I believe that this is because of the COMPLETE, TOTAL, FULL, ENTIRE lack of support that the Amiga user faces in this country. Not even to think about serious software about Amiga hardware? What is this?

After all the trouble I have had with the Amiga I am facing a serious dilemma. Is it really worth it to update my hardware with the new WB2 chips or sell my Amiga and buy a dull 386 running windows 3.0 with about the same money. You see I am emotionally connected with the Amiga. I have spent lots of days (even nights) searching manuals and trying to learn inside and out this machine. I managed to convert some PC PD utilities like YACC and XLisp to get them running on my Amiga. I also plan to create a C library to transfer directly C source programs to borland turbo C but what's the use.

IMPORTANT: If there is anyone that is interested in Compiler construction I can send him/her the YACC Unix tool converted by me and compiled with Aztec C V3.2 for Amiga, totally free.

For non UNIX freaks YACC is a toll that helps create LR(1) parsers for context free languages and so solves a big problems for compiler construction. Doing that conversion I hope there will be someone out there that will help increase the compiler/interpreter software for the Amiga please contact:

Thanos Siozos
Patra, Greece,
or bitnet
siozos@grpatvx1.bitnet
UUCP
...!mcvax!erhms!siozos
Thanos Siozos
Greece

Dear Thanos,
Thanks for the letter, it just about holds the record for the longest letter yet in Amiga Answers!

I cannot find any DTP software that has Greek Fonts. TeX will do the job but it is NOT a WP and special characters have to be 'programmed into the system'. Protext is still the best chance that you have. It is very simple to redefine the key to print ANY character you want, or even a sequence of characters.

You still have a width problem. These are utter pains to get spot on. There is a very useful program called Widths supplied with Protext. Use this to determine the granule size. You should end up with a correctly spaced font.

I would suggest that you type the Greek equivalent of 'the quick brown fox jumps over the lazy dog' and print that out, but each time removing a letter until you find the incorrect width and then cross check it against your .ppd file.

The other things you can do is to define a font for your printer. You will have to read your printer handbook for this as it varies from printer to printer.

If you define your own font you will know exactly what all the widths are so you should be able to sort that part out fairly easily.

Sending the font to the printer is also easy, normally just a simple series of printer escape codes. You could knock up a quick C or Basic program to send the font to your printer.

Remember that Wb fonts are NOT proportional so take care.

Buying products abroad is a problem for many people. If you do not have any credit cards then a bank draft drawn against the currency required is about the only other way. Banks tend to charge for this and very often it will cost less to get a credit card.

I think that your problems with compilers and the like are due to a lack of information, looking on my shelf I can see three Modula compilers, a couple of Basics, a C (now at V 5.1) a Forth, a Pascal and so on.

You have a problem with Lattice C++. That is a dead duck I'm afraid. Lattice (now SAS) did not continue with the development. C++ is unlikely to progress very far, especially as ANSI C has borrowed many of C++ features. SAS C has an interface that leaves Windows standing, as does any Amiga Application. I have to use a windows system sometimes and it is one of the most frustrating systems I have ever used. Only when Windows takes over the MSDross operating system will it become reasonable. Even then Microsoft have never been renowned for good programming, they do have a tendency to eat a large chunk of memory and disk space, so I won't hold my breath on that one.

You will find several of the other languages you mentioned as PD offerings but many are on the decline and I have no doubt that there will be a new 'flavour of the month' before very long.

You really need to get a set of the Rom Kernal Manuals and a copy of Rob Peck's book, Programmers Guide to the Amiga. (SYBEX ISBN 0-89588-310-4.) That will show you just how easy it is to program the Amiga.

I think that WB2 is worth the effort of upgrading but if your software runs happily and you are satisfied then it is probably not worth doing. You get a few enhancements and the printer output is better and it seems to be a very stable system.

Replacing your Amiga with a 386 may be a viable option if you really need to do so because of your studies. However, don't go away with the idea that the Amiga is hard to program, it is not. The PC with it's paged memory system is a pig to program, the 68x00 processor is linear and has no real hang-ups when it comes the programming, apart from the one problem of even address word alignment that you have to be aware of. (Most assemblers and compilers will check this for you.)

You do seem to be in a bit of a backwater as far as the Amiga is concerned. So as you have Internet access joining some of the Amiga newsgroups would be a good place to get some info from, as well as asking a few questions. A mailshot through the university network of Greece to find out how many serious Amiga users there are, might have the beginnings of a club and with a defined user group you might be able to persuade some dealer to gain access to some of the more serious software and hardware.

Thank you for the offer of YACC. Have you considered posting it to Usenet or uploading it to a ftp site. That would be the quickest way to get it distributed.

write to reply

This is where you get your chance to speak – or write – your mind about what's bugging you. Bud Vennos fields the bouquets and the brickbats.

Dear AUI,
'Twas a Monday, a Bank Holiday
A rather sunny jolly day
And sitting out with Wifey on the lawn
Over my new AUI
The only one that doesn't make me yawn

Whilst browsing through this new edition
And reading of past competitions
I saw my name atop the winners' list
And made a song and dance of it
And Wifey said: "I'm sure the bugger's pissed

Explaining that I'd won First Prize
To Wifey who, with widening eyes
Just could not grasp what Genlock's were about
I must admit I got quite vexed
When she said: "Don't you DARE change sex
Or you and your computer are OUT"

Finally we both calmed down
And Wifey smoothed her troubled frown
When I told her how these Genlock-things were used
I blinded her with gobbledygook
Went back to thumbing through my book

And left her looking suitably bemused
I'm glad they liked my little ode
And picked it out from such a load
And though you may consider this irrational...
Although the First Prize I did take
The icing on this little cake
Is winning a year of AUInternational.

Ian Heath
Merseyside
PS When do I get it?

Dear Ian,
I think your poetic letter speaks for itself. Though your idea of scanning - as in poetry not electronics - leaves something to be desired. You are obviously deserving of the prize as the first Amiga Shakespeare - though rhyming gobbledegook with book might make poor Will spin a bit in his grave... Anyway, well done... The genlock should be on its way to you now.

WRITE to REPLY

Dear AUI,
I am prompted into writing this letter after purchasing the May issue of Amiga User International. I understand that over the last six months you have had two reader surveys so that you can ascertain the best format in which to produce what was the BEST magazine by far, a magazine to satisfy Amiga users who wanted to get that little bit more from their home computer than just playing games.

While the content of the magazine is good, I found it most awful to read. There seems to be so much Razzmatazz over all of the pages and an extravagant use of fonts and styles I found that I had to decipher most of the pages within. This made what is normally a relaxing read turn into what I could only describe as damned hard work in which I easily lost my desire to continue.

I do hope that this issue was a one-off and not to be repeated in its style because if it is the first of a typical trend, then I shall be looking for another magazine to purchase. I do understand that I will not find one to match the content but you hold the answer to the problem.

Please take notice of a very humble reader.

Philip K Price
Birmingham

Dear Philip.
By now I hope you will have seen both the June and July issues of AUI. I also hope you will have seen that the excesses of the first "new look" AUI of May have been toned down. As I said in my reply to letters in July AUI, I wasn't totally convinced myself about it. In fact nobody was but if you want to try something new it is always a matter of taking a chance of getting it wrong as well as getting it right.

In addition to the usual teething troubles we have also suffered from some production problems which had nothing to do with AUI itself and they too brought difficulties in their wake. I think now, with this issue, we are beginning to get it right - or at least 'righter'. I do hope you will be patient and let us work the "new look" in and realise that there are certainly some things that have improved - better sectionalisation, for example. I must say that we are starting to get compliments too as well as complaints. As I'm sure you have realised the content of the magazine has not radically changed and if you liked that before, you should be able to go on enjoying it. Anyway, as the Managing Editor said in July AUI, nothing is forever - and when we change next time, perhaps you'll write and complain about the move from the "new look" to the "new, new look". And I bet you won't be the only one!

WRITE to REPLY

Send your letters to:

aui

HHL Publishing
Greater London House
Hampstead Road
London NW1 7QQ

write to reply

Dear AUI,
I purchased your latest issue of AUI and I was very surprised by the "fat lady" article. In that article you are talking of Blazemonger with almost the same word than the real author of the Blazemonger saga - I mean Daniel E Barrett. And you have taken that from Usenet? where this funny things were posted to comp.sys.amiga.advocacy. I know because I read them here. I also know that if not explicitly stated, all what you write in the news of Usenet is automatically "public domain". So you don't do any theft. No. But I think you really should have given credit to the real author of Blazemonger. Or should I tell him of a new feature to add to Blazemonger?

Apart from that sad point I find your magazine interesting. Yet your titles are horrible and hard to read. Better make something more conventional. Keep on, yet, you're on a good way.

Jean-Pierre Riviere
Paris

Chire Jean-Pierre,
You are quite right. The author of the Blazemonger episode in The Fat Lady was indeed Daniel Barrett. And thereby hangs a tale. The article was presented to us anonymously and we attempted to find the author by putting out a message on the net. We had no reply so as we thought it very funny and worth running in the magazine, we decided to print it and hope the writer would get in touch. If you noticed, the Fat Lady was said to have a collaborator - a Mr Anon whom we asked to contact us.

Daniel did and we are glad to have had the opportunity to get to know a very witty writer and one who is very knowledgeable in things Amiga. We hope he will be writing again for us in the future, though probably not as a Fat Lady again! In the old days when the Amiga community was much smaller we would possibly have known who wrote it anyway. However, the Amiga dimension is so much bigger these days... Ah oui, ou sonts les neiges d'antan?

WRITE to REPLY

Dear AUI,
In response to an advert in Amiga User May issue, on May 5, I wrote to ABPO at 45A Alma Road, Herts, enclosing an order and a cheque for £4.30.

Since I had not received any communication from ABPO, I used the telephone number quoted in the advert on page 121 to find that there was no longer a telephone in use at that number. I have been unable to contact you by phone since you are for some obscure reason ex-directory.

Will you please sort out what has happened to this firm and what has happened to my money! Please do not tell me to stop the cheque, it costs more than the cheque's worth.

CW Hazell,
Rochester,
Kent

Dear CW,
If you look in the most recent issues of AUI you will find some advice on what to about orders to ABPD. Fundamentally it comes down to calling in the police.

WRITE to REPLY

Dear AUI,
May I just take the opportunity of bringing your attention to a new piece of software I received called The Survival Game. I found it refreshingly educational as well as easy to use and am compelled to ask the question - why is it that other programmers are unable to provide products of such good quality and at such a sensible price? The products that I have bought in the past that have been reviewed in magazines like yours have never borne any true resemblance to the reality of what I received and some even appear unfinished. It cannot be said in this case!

Moira Shepherd
Halifax

Dear Moira,
I don't know the Survival Game but you make it sound well worth a look. If you let me know who made it we could get it a review or at least some press notice.

As for games not resembling the reality in reviews. I don't agree. There are no doubt some dishonest reviewers about and I may not think much of computer magazines - so many of them are badly written and childishly superficial in their approach - but they do generally represent the game reviewed in a realistic manner. They do get over enthusiastic sometimes - "This is the best simulation the world has ever seen" style juvenilia - and regard games as if they were where life began and ended. But computer games are as much a matter of taste as anything else and what you like they might not and vice versa. As for being unfinished, yes, you may be right in the sense that games companies do not always get every bug out of a program. But then neither do the companies that produce "serious" software. They both often take tooo long, underestimate the difficulties and then rush their software out. It shouldn't happen, I agree, but it does. But as was pointed out in a past AUI, no major software project has ever got out on time - or if it has it was bug-ridden.

WRITE to REPLY

Dear AUI
Last August, 91, I bought my Amiga 500 with a 2Meg Spirit board, Amax and a Deskjet 500 printer connected to it and since then I have added a 200 Watt power supply a A2000 series II GVP hard disk which plugs into the side of my Amiga.

My hard disk is a 44Meg Syquest removable hard disk which gives me the flexibility of having one cartridge running Amax software and the other full of Amiga software.The problem I am now faced with is there are no more ports to plug things into. In my case I would like to upgrade Amax II to Amax II+, however, I would need an Amiga 2000 to do that but at the moment I haven't got the space or cash to do so. Then one day reading AUI my questions were answered by an article on page 112, Feb, 92, where you had a tower that could be built out of an Amiga 500.

All the things I had wanted for the future use out of my Amiga seem to be pointing towards the HiQ IQLR500 but one thing you left out of the article was an address of the company which produces the tower. In Australia we get a lot of the Amiga publications for England and America but unfortunately they arrive two to three months late so I don't know whether you've tested the tower in one of your later publications so I was wondering whether you could tell me the address of the company so I could write to them. I hope you can help me with this matter and keep up the good work with the magazine. I particularly like the hardware and productivity software reviews you have in AUI because there is more to the Amiga than just games.

Volker Schubert
Victoria,
Australia

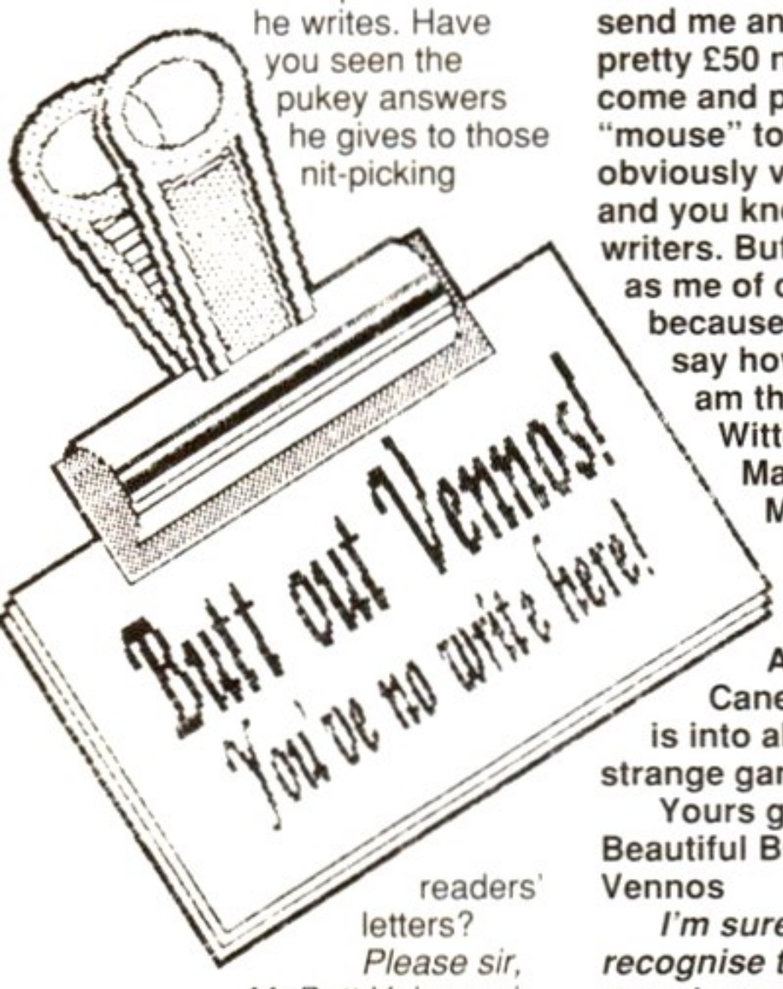
Dear Volker,
There are indeed probably many Amiga users out there who are in the same position. Lots of people would like a tower. The company who have been developing it have promised it for some time and hadn't until recently completed it. They are the same company that produced the box that contains my own Amiga - a 1500 - not the one that CBM brought out later which was really a 2000 but a special case for the 500. The company is called Checkmate Digital Ltd, 80 Mild May Park, London, N1 4PR. Tel 071 923 0658.

THE FAT LADY SINGS

Vol. 13. No. 8
Multiplied by 2

Now, as Henry Fonda said to James Cagney: "What's all this guff about Multimedia?!!!" (You remember the movie don't you? It was the film where Cagney was the captain of an American ship stuffed with toilet rolls and ball bearings which he rattled in his hand. I think it was called "The MoneyMedia Mutiny")

Anyway, who is this Bug Venemous anyway? Poison pen writer if you ask me. And what's all this crap about getting the thing printed directly from his typewriter. Can't he even use a printer? Multimedia? I've heard about this Bud Vinenose. He's some sort of GARDENER, for Gosh sakes. A gardener! He likes playing with worms I suppose. What's he on about with this MulchiMedia. Is that some sort of stuff he spreads around his weedy plants in winter? Manure. Is it? That certainly is an accurate description of what he writes. Have you seen the pukey answers he gives to those nit-picking readers' letters?



Please sir, Mr Butt Veinos, sir, lord and master, I'm going blind trying to read AUI and I'd like to lick your boots but my Amiga isn't working. So can I tell the other lickspitle Amiga users around the world that I think you are a better writer than Shakespeare, Damon Runyon, Jeffery Archer, Mike Nelso, Paul Overall, Norman Stoned and Handy Eskelsin combined. And as for the Moss family Adam, the grandfather, Andy, his Dad and Auntie Daphne - even if she was Miss Beckenham Computer Shop 1987 - they are not a patch on you, you wonderful superhuman computer being. Please can I have your illegible autograph on a genuine copy of Deluxe paint 6.5 which I enclose for your use over the next decade or two. Yours utterly, Bud Vennos Junior (No relation, of course - isn't it funny we have the same name, Dad? If you publish this letter you can keep the fifty pound note.)

And the vomitworthy reply?

Dear Bud - what a beautiful name you have. So unusual and exciting. So much weiser than Gideon for example.

Of course, you can you lovely, lovely boy - I'm sure you look just like pretty me when playing with your Amiga. I play with my Amiga a lot. Nobody plays with my Amiga the way I do. It must be the way I touch the "mouse". Funny name isn't it for THAT? It doesn't look like a mouse, does it? But you can have such fun with it. If you send me another of those pretty £50 notes you could come and play with my "mouse" too. You are obviously very intelligent and you know a lot about writers. But not as much as me of course, because you forgot to say how much better I am than Martin Wittong, Anthony Male, Paul-Margaret Fletcher and the brutal but charming Asleep Cotter-Canes - who, I hear, is into all sorts of strange games.

Yours geniusly, Beautiful Buddy Boy Vennos

I'm sure you could recognise that garbage - in or out - anywhere. And instead of giving the brownoses the boot and a proper answer like - Dear John, Get lost you Y-fronted gurued out creep. Take your tucked in shirt and stuff it up your RAM disk. Word process your slimy lying tongue until it looks like an old age pensioned off Citizen printer ribbon. And give away your Amiga at once to a much more deserving and imtelligent chimpanzee because we don't want your kind cluttering up the world computing summits of the 90's with your loopy cliched repetitions. And while you're at it - and I expect you are most of the time otherwise you wouldn't have that zonked out, gormless expression on your pixelsided face every time you stand on your Commodore cardboard box - while you're at it, take the rest of your Westminster Chapter of THICPUG (The Horiblly Incompetent Crazy Putridly Useless Gang) and plug them into the mains for a day or two to see if their corrupted diskdrives of brains will start working for a change as well as a C64 with a damaged cassette. I bet they won't. Otherwise we of the wonderful and glamourous Amiga User community who once led the world in everything from frying computer chips to breeding fast ram and now have nothing to cheer at except some barmy programmer surviving to the 1st round of the All England Wombledon Computer Championships (3rd Class, Sponsored by Toyota) would not be in the mess we are. Dismemberment is too good for you environmentally polluting sqaushed mouse dropping. And never, never read this Gospel-like magazine again!

Yours vomitingly, Bubby-Wubby Ventrousers

No. That's not the sort of reply old hungprogram Venemous gives them. NOT AT ALL!

And, now, as I told you he's speading his disgusting interfacing into MucusMedia. What does this Buttout Beanos know about Muddymedia? Damnall, I can tell. The same as about everything else.

So I went to this Messy Media Show he spews on about and I can tell you it was a heap of rodent dung. And not a big heap at that. I looked at one guy's stand - stand? He should be so lucky..There was nothing erect about him!

His name was Phil Lips. All he showed me was a teensy-weensy CD.

I've seen them before, I said.

Ah, but you can have words on this one.

So what? I told him. You can have words on a toilet roll but I don't want to put it near my Amiga.

You can put pictures on it too, he whined.

I've got them on my wall! I told the thick-head.

And music? You can play music!

So can my ukelele!

But what about video? You can have full motion and its all over the screen!

They've been showing 20feet (60 meters) wide moving pictures at the Muswell Hill Fleapittio Phoenix Palace for about a hundred years!

I went on to a sanitary plumbing merchant called Commode Door - see the photo. They tried to sell me a black box that they unhealthily called Amiga VDTV. Hey! Who wants to catch some nasty disease electronically? I tell you I believe in safe computing. None of that virus stuff infecting my litle ROMs and motherboards not even if they claim that hidden inside this sicko box is the very electronic toy we all love to take to bed with us on cold winter nights in July in Manchester, Lancs NO 500 PDQ.

So I drifted over to Applecore Computers. They were practically blowing their monitors in Quicktime. Now, similar to my other Pointer Sisters, I like a slow hand, a man who takes his time just the way an unexpanded 68000 does..

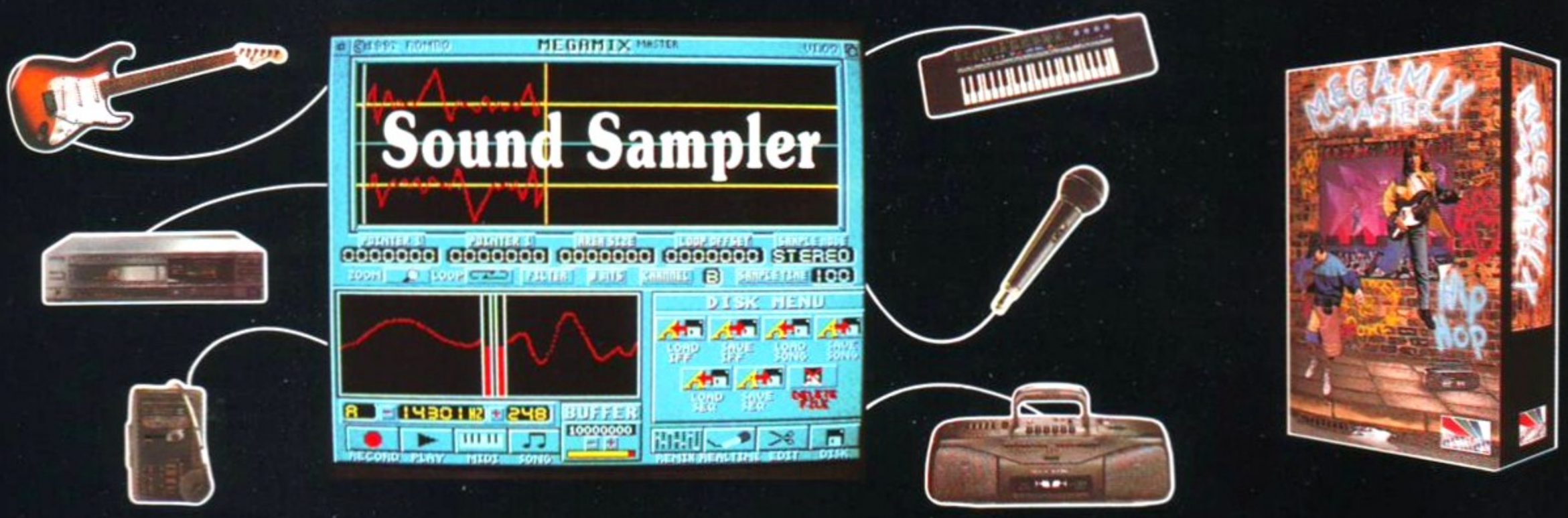
No, you can take it from your everloving Fat Lady that MuckyMedia is going no place fast. Everybody is really in the dark about this unwashed Murkymedia. Murphymedia, the Irish version, just might make it. Look at Oscar Wilde and Barnyard Shaw, they both made it - in their very different ways, of course. (Though Barnyard would not touch an Amiga after his 32nd birthday and sharp-witted Oscar liked his Amigas to be gay blades indeed.)

And as for this Bubb Bendovers, his ignorant Too Tight to Reply Column is as full of bugs as his rotting garbage about MouldyMedia. It's all a total waste of memory. I'm going to see the Editor about getting him launched into a new career as paperclip straightener - though that might be too stressful for his brain anyway. And have my brilliantly informative column extended to say a regular four page section. I know that will really macro your keyboard, won't it? So start mailing off those millions of letters of support right now, Amiga Lovers.

Address them to: Box AACtrl, The Fat Lady's Tights to Replay, C/o Ex-Bugg Vamoose Pages AUI Pleased to Media Department 13 Upper Downing Street London NW! 7QQ. Cheques and credit cards accepted.

NEW
£39.95
INC. VAT

Real Time Digital Effects



MEGAMIX master is a low cost, high specification digital effects cartridge that plugs into your printer port. It will allow you to sample or record stereo sound from almost any musical source. Special effects such as echo can be added in real time, perfect for the up and coming Karaoke singer who wants to get that live sound through his Hi-Fi. You will find that **MEGAMIX** masters performance and ease of use is unmatched by any rival. Just plug it in and go . . . .

CUT-Remove samples between pointers and stores it in the cut buffer.

COPY-Copies sample between pointers into the cut buffer.

INSERT-Inserts the contents of the cut buffer into the soundwave.

SPLICE-Removes the sample between pointers, stores it in the cut buffer then slides the rest of the soundwave together.

CHOP-Removes all of the soundwave except for the sample between pointers.

DELETE-Erases the sample between pointers.

MIX-Mixes the contents of the cut buffer with the soundwave.

FLIP-Reverses the sample between pointers.

PLAY CUT-Replays the contents of the cut buffer.

ECHO-Adds user definable echo between pointers.

IN-Makes Sample between pointers start quietly and build up to full volume.

OUT-Offers the opposite effect to **IN**.

PHASER-Adds phase shift to your sample.

LOUDER-Adds volume.

QUIETER-Decreases volume.

SEEK 0-Finds zero points nearest pointers, used in looping.

FILTER-Removes hiss or high frequency noise from your sample.

PACK-Removes every 2nd sample between pointers.

DISTRIBUTOR	COUNTRY	Tel. No.
ARKOFOTO S.A.	(SPAIN)	010 3433010020
CENTRESOFT	(U.K.)	44 0216253388
COMPUTERLINK	(SWEDEN)	010 4631750333
GEM DISTRIBUTION	(U.K.)	44 0279442842
GOLDHILL ASSOCIATES	(EXPORT)	44 819062009
H B MARKETING	(U.K.)	44 0753686000
MERLIN GRAF	(AUSTRIA)	010 4352238896
SCRIBIS SPRL	(BELGIUM)	010 3222458307
SOUNDWARE SRL	(ITALY)	010 39332232670
V C S	(HOLLAND)	010 311045115 37
MICROPACE	(UK)	44 0753 55188
PRECISION DIST.	(UK)	081 543 3500
SDL	(UK)	44 081 309 5000

ECHO-Adds echo to and incoming sound in Real Time.

DIRECT-Plays incoming sound direct through Amiga.

SYNTH-Adds user definable distortion to sound in Real Time.

PHASER-Applies variable phase shift again in Real Time.

STEREO ECHO-Adds digital delay between L & R speakers.

VIBRATO-Rapidly varies frequency of sound.

LOAD IFF—Load a single IFF sound sample

SAVE IFF-Saves your sample between pointers as an IFF file.

LOAD SONG-Load a song sequence

SAVE SONG-Save a song sequence.

LOAD MIDI-Load a midi sequence.

SAVE MIDI-Save a midi sequence.

Other features include . . .

* Fully multi-tasking
* 3D animated icons.
* UNDO function.
* Compatible with workbench 2.0.
* Runs perfectly on the new A500P.
* Mono sampling up to 52KHz.
* Stereo sampling up to 26KHz.
* 4 or 8 bit sampling.
* Thru-port for printer or Vidi digitiser.
* Stereo 3.5mm jack plug and lead.

Rombo Productions
Baird Road, Livingston
SCOTLAND EH54 7AZ
Tel: (44)-0506 466601
Fax: (44)-0506 414634

ROMBO

VISION, SOUND AND ANIMATION
FROM ROMBO
THE WORLDS BIGGEST AND BEST

ROMBO

MEGAMIX MASTER — SOUND SAMPLER

VIDI AMIGA 12 — IMAGE CAPTURE

TAKE 2 — ANIMATION

Real Time Digital Effects

OVERVIEW

MEGAMIX master is a high specification, low cost digital effects cartridge that plugs into your printer port. Special stereo effects such as echo can be added in real time.
You will find **Megamix Master's** performance and ease of use unmatched by any rival. Just plug it in and go...

Some of the Features include:

*Thru port for printer or digitiser.
*Fully multi-tasking.
*Intigrated 3.5mm jack plug and lead.
*3D Animated icons.
*Compatible with Workbench 2.0.
*Both Mono and Stereo sampling.

Real Time Digital Effects include:

ECHO-Adds echo to incoming sound.
PHASER-Applies space age phase shift.
SYNTH-Adds user definable effects.
DIRECT-Plays incoming sound direct.
VIBRATO-Rapidly varies frequency.
STEREO ECHO-Adds digital delay between L & R speakers.

Other Menu's Include:

REMIX (with many sampling features).
EDIT (for sample manipulation).
DISK (for saving and loading etc).

Workbench 2.00 Compatible.

4096 Colour Images

OVERVIEW

Vidi-Amiga 12 is the ultimate low cost colour digitiser for Amiga. There are no filters and no separate RGB splitter. Colour images can be captured in less than a second, mono images are grabbed in real time. Fully compatible with any video source.

Some of the features include:

*Multi-tasking software.
*Advanced error diffusion stippling.
*Cut and Paste with masking.
*Capture into a user definable window.
*Load and save IFF ILBM and ANIM files.
*Grab frames flipped on a X or Y axis.
*Multi frame store with animated playback.
*Composite or S-Video input.

Display in the following resolutions:

PAL	NTSC
320 x 256	320 x 200
320 x 512	320 x 400
640 x 256	640 x 200
640 x 512	640 x 400

Supports several screen modes:

* 4096 HAM mode.
* 64 EHB mode.
* 32 colours.
* 16 colours.
* 16/8/4/2 shade mono.
* 262000 HAM-E mode.
* 256 colour EREG mode.
* Overscan/Interlace/Hi-Res.

Image Processing and Enhancement:

Sharpen/Smooth/Negative/Quantise
Thresholding/Solarization/Mosaic
Edge Detection/Brush selected area.

Workbench 2.00 Compatible.

Professional Animation with Optional Image Capture

OVERVIEW

Take 2, as used in *"Rolfs Cartoon Club"* is the ultimate multi-level animation package. Offering up to 4 levels of animation and 4 levels of sound. Images are drawn within your favourite art package then loaded into Take 2 as IFF files. If you own Vidi-Amiga you can digitise your drawings from within Take 2. We believe its much easier to draw with a pencil than with a mouse.

Some of the features include:

* Compatibility with all Amigas.
* Supports 2, 4, 8, 16 and HAM colour.
* Loads or saves IFF or ANIM files.
* Traditional animators dope sheet.
* Play back up to 25 frames per second.
* Dubbing or simulated onion skin.

and lots more !!!

Applications:

* Traditional animation.
* Storyboards.
* Product presentation.
* Line tester.
* Stop frame animation.
* Cartoon productions.
* Education.
* 3D object animation.
* Video production.

Workbench 2.00 Compatible.

£39.95 Inc.

JUST LOOK AT THE SPEC.

American Software (U.S.A.)	(217) 384 2050
Arkofoto (Spain)	(34) 3301 0020
Centresoft (U.K.)	(44) 021 6253388
Darius Soft (Austria)	(43) 123 4555
Gem Distribution (U.K.)	(44) 0279 442842
Goldhill Associates (Export)	(44) 081 9062009
H.B. Marketing (U.K.)	(44) 0753 686000

COLOUR IMAGE CAPTURE FOR ONLY

£99.95 Inc.

Rombo Ltd., Kirkton Campus, Livingston
SCOTLAND EH54 7AZ
Tel: (44) 0506-414631 Fax: (44) 0506-414634
Sales Hotline: (44) 0506-466601

£49.95 Inc.

AS SEEN ON TV

Merlin Grafx (Austria)	(43) 5223 8896
Micropace (U.K.)	(44) 0753 55188
Precision Distribution (U.K.)	(44) 081 5433500
Scibis Sprl (Belgium)	(32) 2245 8307
S.D.L. (U.K.)	(44) 081 3095000
Soundware SRL (Italy)	(39) 3322 32670
V.C.S. (Holland)	(31) 1045 11537