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CGTC

COMPUTING

A DATABASE PUBLICATION



2
CONTESTS
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REVIEWED

- Joe Blade 2
- Vector Ball
- Bubble Ghost
- Vindicator
- The Train
- Arctic Fox
- Wizard's Lair



Learn the secrets of Ascii

3 word processors compared

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Trinary's got police and tips for gamers new and old. This month ATV Simulator, Chess and Smart, and Driver come in for the treatment.

Callup Software Chart

Air Wolf has now made it to the top of the chart followed closely by Code Masters' ATV Simulator, which is the highest – and only – new entry. Indeed there are four simulator-type games in the charts this month.

| THIS MONTH | LAST MONTH | TITLE (Software House) | PRICE |
|------------|------------|---|-------|
| 1 | △ 2 | AIR WOLF Encore | 1.99 |
| 2 | • | ATV SIMULATOR Code Masters | 2.99 |
| 3 | △ 12 | BATTLESHIPS Encore | 1.99 |
| 4 | △ 4 | STUNT BIKE SIMULATOR Firebird | 1.99 |
| 5 | ▽ 1 | FOOTBALL MANAGER 2 Addictive | 9.99 |
| 6 | △ 7 | BEACH BUGGY SIMULATOR Firebird | 1.99 |
| 7 | • | GAUNTLET Klar | 2.99 |
| 8 | △ 10 | YOGI BEAR Alternative | 1.99 |
| 9 | △ 12 | RALLY DRIVER Alternative | 1.99 |
| 10 | • | BOMBJACK Encore | 1.99 |
| 11 | • | OUT RUN US Gold | 9.99 |
| 12 | ▽ 11 | EUROPEAN FIVE-A-SIDE Firebird | 1.99 |
| 13 | ▽ 9 | ROCKY HORROR SHOW Alternative | 1.99 |
| 14 | ▽ 8 | STEVE DAVIS SNOOKER Blue Ribbon | 1.99 |
| 15 | ▽ 3 | ACE Cascade | 2.99 |
| 16 | ▽ 7 | SUPER STUNTMAN Code Masters | 1.99 |
| 17 | ▽ 4 | FRANK BRUNO'S BOXING Encore | 1.99 |
| 18 | ▽ 11 | TARGET RENEGADE Imagine | 8.95 |
| 19 | ▽ 10 | FRUIT MACHINE SIMULATOR Code Masters | 1.99 |
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Graphics



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Communications

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What the reviewers have said:

"Innumerable value for money and its current success is truly well deserved!" - *Zone 64*

"Little short of miraculous at the price!" - *Acorn User*

"Makes some of its over-priced competitors hang their heads in shame!" - *Computer User*

Voted Business Program of the Year two years running in *Popular Computing Weekly*.

It's no wonder that there are **AROUND 400,000** satisfied users across the complete Mini Office range... the ideal package to increase your personal productivity.

| Please send me Mini Office II on 3.5" floppy (1.44 MB) for <input type="checkbox"/> or hard disk (5.25") for <input type="checkbox"/> . <input type="checkbox"/> I've been a regular customer to Database Software. <input type="checkbox"/> Please debit my Access/Plus number <input type="text"/> . Expire date: <input type="text"/> / <input type="text"/> / <input type="text"/> Order No. <input type="text"/> / <input type="text"/> Name: _____ Title: _____ Address: _____ Postcode: _____ | <table border="1"> <thead> <tr> <th>Product</th> <th>Unit</th> <th>Price</th> </tr> </thead> <tbody> <tr> <td>Mini Office II, 3.5" floppy</td> <td>1</td> <td>149.95</td> </tr> <tr> <td>Mini Office II, 5.25" floppy</td> <td>1</td> <td>149.95</td> </tr> <tr> <td>Mini Office II, hard disk</td> <td>1</td> <td>199.95</td> </tr> <tr> <td>Word Processor</td> <td>1</td> <td>29.95</td> </tr> <tr> <td>Database</td> <td>1</td> <td>29.95</td> </tr> <tr> <td>Spreadsheets</td> <td>1</td> <td>29.95</td> </tr> <tr> <td>Graphics</td> <td>1</td> <td>29.95</td> </tr> <tr> <td>Label Writer</td> <td>1</td> <td>29.95</td> </tr> <tr> <td>Communications</td> <td>1</td> <td>29.95</td> </tr> <tr> <td colspan="3"> Total £ <input type="text"/> </td> </tr> </tbody> </table> <p>Send to: Database Software, Empire House, Wellington Park, Wellington, Middlesex UB8 3NF. Enquiries: 0822 879800 Order hotline: 0822 879800</p> | Product | Unit | Price | Mini Office II, 3.5" floppy | 1 | 149.95 | Mini Office II, 5.25" floppy | 1 | 149.95 | Mini Office II, hard disk | 1 | 199.95 | Word Processor | 1 | 29.95 | Database | 1 | 29.95 | Spreadsheets | 1 | 29.95 | Graphics | 1 | 29.95 | Label Writer | 1 | 29.95 | Communications | 1 | 29.95 | Total £ <input type="text"/> | | |
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DATABASE SOFTWARE

Update

Christmas boost for the CPC

Post strike gives fax a new line

AS a result of the recent postal disruption, which brought many aspects of British business to a crippling halt, plans have been rushed through to make fax available on MicroLink.

It means that anyone with a CPC, phone and modem can now key a message into their home or office computer and have it instantly transmitted to any fax machine anywhere in the world.

Denis Meakin, head of MicroLink - Britain's fastest growing electronic mail service - said: "We brought forward our plans to implement fax facilities as a result of the damage being done to Britain's trade and commerce by the postal dispute.

"We are offering subscribers a multiple fax service. This means that, like our telex service, you will be able to send a fax to up to five addresses simultaneously.

"We know this instant service will be warmly welcomed by companies who need to get information into the hands of their customers without any delay".

The arrival of fax follows a number of new services being launched on MicroLink. They range from financial and business management databases to a multi-user game.

SHADES IS BIG BUSINESS

SHADES, the most famous of all the interactive online computer games, is enjoying an unprecedented boom in popularity.

The latest army of fans to enter the mystical world is drawn from the ranks of MicroLink subscribers.

Within days of what has been described as "the ultimate adver-

tise multi-user game" being introduced on to the system, record log-on times were being recorded.

"Our subscribers appear to be suffering from Shades fever", says Denis Meakin. "In fact, we find a substantial number of businessmen on MicroLink are even giving up their lunch times to play".

AMSTRAD has lined up plans to launch a massive advertising campaign this Christmas to boost sales of the CPC.

One of the highlights will be the new Amstrad Entertainment Centre - a completely self-contained system that consists of computer, colour monitor, tv tuner, clock radio, work desk, joystick and 17 free games.

With the clock radio, you can tune into your choice of station and use the micro at the same time. The tv tuner steers between

the monitor and radio. Unplug the leads from the computer, plug in the tuner, and watch the CPC advert on TV.

The free games include such classics as Scrabble and Trivial Pursuit, and to complete the package there is a stylish dark grey work desk, which neatly accommodates the whole system.

Both 404 and 6128 versions of the Amstrad Entertainment Centre will be available, each with a colour monitor, priced at £299 and £499.



Munsters in your micro

VETERAN to star the Munsters have finally made the transition to the CPC, courtesy of new software house Again Again (0877 78777).

Sister company to Alternative Software, Again Again is

committing itself to producing additive games - hence its choice of name.

The Munsters, an arcade game, is the company's debut release and takes its theme from the series currently being rerun on Channel 4.

All the family is there - Herman, the ultimate in spare part surgery, wife Lily, misad-ad Eddie and vampire Grandpa.

Self-made man Herman greeted the release enthusiastically: "I am absolutely delighted at the prospect of seeing a game featuring normal people for once", he said.

Programmed by Peter Harrop and Shaun Hollingsworth of top software house Topex, the Munsters is available now, priced at £9.95.

It's all go on the CPC games front

THE
PERSONAL
COMPUTER
SHOW
REPORT

THERE is going to be a battle royal on the games front at Christmas. Among the products on offer are some of the most stunning entertainment software ever produced for the CPC and all the major players are in the ring - which adds up to great news for end users.

Looking horns in the fight for supremacy once again are Ocean and US Gold, occupants of the two biggest, brassest and noisiest stands at the PC show in the Leisure Hall at Earl's Court.

"We've been number one at Christmas for the past two years with Gauntlet and Conan, and we intend to be there again with Thunder Blade - the most popular coin-op in Europe this year", said US Gold sales boss Geoff Brown.

"This will be backed up by Summer Games from Epyx, LED Storm from Capcom and many others".

The many others include epic martial arts game Tiger Head - another conversion from Capcom - Realms of the Trellis, Starfall and Joan of Arc from Rainbow Arts, and flight simulation Bahrain from the Leisureboard team at Access.

To come next year are Last Duel, Human Killing Machine, Black Tiger and Forgotten World.

Across the aisle, Ocean sales manager Paul Peterson said: "Last year people laughed when we said we'd have five games in the top ten - but we did it. This year we're aiming to fill the top five places, and we can do it with the likes of Batman, Rambo II, Dragon Ninja, Robocop, Operation Wolf and Mac La Mans.

"We've just had one of the best years ever, thanks to concentrating on quality products. We've now got an in-house programming staff of 40 including graphics and music experts - Robocop had a team of 18 to itself - most of whom have been with us two years or more. These days we're looking for around 100,000 sales for everything we produce".

Ocean 001-032 86030 and US Gold 001-356 30880 won't have things all their own way, however. They can expect plenty of competition from Telecomsoft's Firebird and Silverbird labels (01-326 0786).

Firstaid is offering Probe Software's multi-load game Savage, while Silverbird has Ropper Copper, Classic Daylight, Scuba Kids, Turbo Boat Simulator and Skateboard Joust.

Hewson 00325 832830 also previewed a strong all-action Christmas line-up for the CPC in Cybernoid II, Eliminator, and Hethroward.



Pac-Mania comes to the CPC

Serious stuff

First Street Editor for the CPC made its debut. From Microsoft (01-377 4645) it provides multi-coloured layouts, a range of typefaces and a library of clip art.

Peak-it budget releases from the same source include Ocean Conqueror, Lightforce, Smokey Rider and Hydrobot.

Also in the cheaper price sector, Bug Byte (01-408 9888) has Slider Rider, A View to a Kill, coin-op classic Elevator Action, Yabba Dabba Doo and Split Personalities on offer.

The new Imageworks label from Microsoft (01-377 4645) fulfilled its promise of quality games with Fenderbar Must Die and Bombard.

Mandarin Software (0425 676666) has made a determined entry into the CPC marketplace with Lancelot, a triple adventure based on the Arthurian legend - there's a chance here to win a (5,000) replica of the Holy Grail.

Christmas offering from Prism Leisure's Addictive Games label (01-804 8180) is Hyperforce, a 32-level space race.

Granulars (01-347 6434) launched its 1-4 player board game conversion Espionage and CPC versions of the Matcho coin-op classics Pac-Mania and Pac-Land. Also due before Christmas is Dandy - The Computer Game.

The programmers at Donmark (01-842 5822) were rewarded by a visit from Margaret Thatcher. But it was only the Spring Image version of the Prime Minister, there to publicise Donmark's latest release.

"The game will be so-head-battered enjoyment", promised Donmark boss Dominic Wheatley. "Making Cities

are programming and are working very closely with our technical people and also, very importantly, with the Spring Image computers.

"It's a marvellous opportunity for Donmark and I'm thrilled we have the opportunity to market such a title in the busiest selling season of the year. It really is completely brilliant".

Donmark was also previewing a number of other entertainment products due for launch before the end of the year. They included The Computer Maniac's Diary, Return of the Jedi - last in the Star Wars trilogy - Live and Let Die, and Games II - Trivial Pursuit.

Simulations specialist MicroProse (0685 54328) had little new for CPC users, but promised Airborne Ranger and F19 Stealth Fighter for early next year.

There was the first public showing by Level 5 (0044 487591) of Ingrid's Back, the satirical animated sequel to George Ranger.

March (003 768666) was offering a choice of Rex and Shoot Out, both all-action shoot-'em-up games.

New joysticks

Three new joysticks for the CPC from Konix (0485 350211) made their debuts. The ergonomic Navigator was described by Konix director Sandra Holloway as "the best joystick we've produced - it's also the best looking joystick ever". Also from Konix came The Predator - operated by micro switches - and the more traditional Magellan.

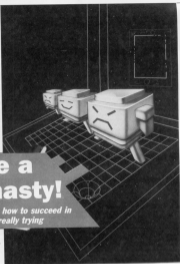
The Starfighter and Challenger joysticks from Oberon (0022 255220) were also being launched at the show.

As promised last month, I'm following the assembly language sprites routine with a neatly-made Mode II package for Basic programmers. You don't need any knowledge of machine code to understand it, just an average level of competence in Basic.

Having typed in Program I - Sprite System - the idea is that you can use it to design sprites with a simple editor. The sprites can then be saved as a binary file, and along with the shape data in the machine code. You can load a sprite file into Basic, and the machine code can be called to move the sprites around the screen.

It's all pretty straightforward, and I'll begin with a run-down on the designer.

When you run it you will see a display similar to Figure 1. At the bottom left is a list of the pen numbers - 0 to 15 - with the colours assigned to



Make a video nasty!

IAN SHARPE shows you how to succeed in sprites without really trying

them. To change the colours in a pen, move the pointer to the one required using Shift with the up and down cursor keys. Then use the left and right arrow keys in conjunction with Shift or Control to alter the colours.

The numbers you see are the same ones used in Basic's POK command, and you must remember to note them down so you can set them up in your game.

After stepping on your palette, it's time to start designing. Down the right-hand edge of the screen is a bank of 25 blocks, and ready is a pipette hole for a sprite.

If you want to store the sprite you've just designed, move the pointer to the slot you want to put it in with Control and the up and down arrow keys, and press Control P for Put. If you want to edit a previously defined sprite, move the pointer to the one you want, and press Control Q for Get.

The editing area is completely independent of the sprite bank, so don't forget to put the sprite back when you have finished editing it.

The editing area consists of an 8x8 grid which, being in 16-pixel Mode II, is twice as wide as it is high. You can move a cursor round with the arrow keys, and pressing the spacebar plots

that pixel in the currently selected pen. The Del key will delete it.

If you want to reflect the sprite horizontally or vertically, Control M (for Mirror) and Control V (for Vertical mirror) do the trick. If you can't remember which keys do what, Control H brings up a help screen with all the commands listed.

When you've finished an editing session, press Control S (for Save) to save the sprite set to tape or disc. This file can be reloaded next time with Control L (for Load), though disc users may find the operating system has added .file to the filename. The file can also be loaded from a Basic program to provide the means of printing and moving the characters around.

Get moving!

Early in your program you should set up the ink values you noted down

from the editor, and include these few lines:

```
INK 0=0001,0111
INK 1=0001,0111,0111,0111
INK 2=0111,0001
```

The line numbers aren't significant, and, of course, you may have given the sprite file a different name when you saved it.

How do you now use your sprites? There are two ways of calling the machine code:

```
GOTO 8888,0,0,0
GOTO 8888,0,0,0,0,0,0,0,0
```

The first case is where you put the sprite on the screen in the first place. You specify the x and y coordinates which are exactly the same as the text coordinates in:

```
SPRITE 0,0
```


The number *n* is the number of the sprite you want to print, and as you'll see in Figure 1 the numbers are shown next to the sprites in the editor. As an example, let's suppose you want to print sprite 3 at 70,5:

```
CALL PRINT,3,0,70,5
```

You can also use this call to remove a sprite by overprinting it with a blank block. I suggest you define this as *sprite zero*.

The second call is for moving the sprite from one character cell to another. The character is at location *xy*, and it is being moved to *mxy*. As I said, you should define a *sprite = preferably zero* - as a blank block. This can then be used as on to erase the old sprite. If we were moving sprite 3 from 10,4 to 11,5, the command would be:

```
CALL MOVE,3,0,4,11,5
```

You may be wondering why I make you specify a block number with which to erase the old sprite. This is to make the system more flexible. Most of the time you may be running your characters around on a blank background, but if you were writing a Pac-Man type game, there would be places where the sprites need to discover a dot, not a blank.

With a little thought you will see that these calls directly substitute for their

```
CALL1 GETPRINT char;
CALL1 MOVEPRINT char;
CALL1 PRINT
```

type constructions.

I realize that this sprite system is very rudimentary, but there is still a lot of fun to be had with it. If you typed in Tiffany's Save Santa from the January 1988 issue, you will have seen that it is possible to write games of a publishable standard with this utility.

Save Santa wasn't actually created with Sprite Systems because it didn't exist then - but it could have been, and in less time. Sprite Systems gives you an improved version of the machine code I wrote for TIF, so you can see that the results can be good.

Now I'll give you an example of the system in action. Program II creates a sprite file on tape or disc, and you should type this in and run it before going on to Program III. You can load the resulting file into Sprite Systems for editing if you want to, though you'll have to alter the ink values to those shown in the data near the start of Program III.

The demonstration - Program III - has a missile launcher which can be moved left or right with the cursor

keys. The spaceship has a rocket, and the object is to kill the invaders which descend from the top of the screen. This isn't intended to be a full game, just an example, though if I'd written it seven years ago, I'd have made a mini *Ali*, those were the days!

And there I'll leave it. I've been talking about arcade games, but this system can be used effectively any time you want multi-colored Mode 0 characters printed easily and quickly. It doesn't have to be an invader or Pac-Man clone.

No doubt many of you aren't at a

stage where you can understand the example or program your own, so if enough of you write in asking for a follow-up article on this aspect I'll cover it at a later date. Also, I've been working on more advanced sprites which are able to move over and behind screen objects, and where the background shows through holes and right up to the edge.

The techniques are quite advanced, involving machine code, so I'd like to know how many are interested before inflicting realms of assembler on the unsuspecting public.

```

30 000  Sprite System
30 001  By Ian J. Skyrup
30 002  Oct 08 1987
-----
30 003 100 Control Utility
30 004 1000 Control Utility
30 005 10000 10000 10000 10000 0
30 006 100 100 100 100 100 100 100 100
30 007 1000 100 100 100 100 100 100 100
30 008 100 100 100 100 100 100 100 100
30 009 100 100 100 100 100 100 100 100
30 010 100 100 100 100 100 100 100 100
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Figure 1: The Sprite Designer

Turn to Page 70

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There are many immediate and direct benefits available, so don't delay before filling out the application form below and sending it back to Amstrad.

Yours sincerely,

Alan Sugar
 Alan Sugar
 Chairman AMSTRAD Ltd



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FORM 001 (02/85) 7

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CPC001a

£850

Epson
printer

competition!



Printers are the most popular add ons for the CPC, so together with Epson UK we're giving one away! And not just any printer but the Epson LQ1050, which is the state of the art in dot matrix technology. Among its many advanced features the LQ1050 includes:

- 24 pin print head for fast, quiet top-quality printing.
- Up to 360 CPS in draft mode, and 88 CPS NLD.
- Friction and tractor paper feed.
- Impressive repertoire of fonts and type styles.
- High definition 360 dpi graphics – better than many laser printers.
- 8k buffer.
- Parallel and serial ports built in.

Worth £850, the LQ1050 represents thoroughbred performance from the world's foremost printer manufacturer.

HOW TO ENTER

Simply answer the five printer-related questions below, complete the tie breaker, and send your entry form to the address shown to arrive no later than November 18. For entry photography the form, but only one entry per household is allowed.

THE QUESTIONS

1. The LQ1050 uses the dot matrix printing method. Name two other printing techniques commonly used in computer printers.
2. What does NLD stand for?
3. Who invented the first printing press?
4. What was the first book printed on a press?
5. What sort of printer interface does the CPC have, serial or parallel?

ENTRY FORM

1 _____
2 _____
3 _____
4 _____
5 _____

NAME _____

ADDRESS _____

POSTCODE _____

The Breaker. Think of the most original and catchy advertising slogan for the Epson LQ1050 printer in 12 words or less.

Send your entry to: Epson LQ1050 Competition, CPC Computing, Empire House, Adlington Park, Adlington, Macclesfield SK10 4MP.

Closing date 18 November. Only one entry per household.

CPC

AND A NEW GAME



Catch Olympic fever

Gold Silver Bronze, £26
1320 bytes, 174 9/16 view
Joystick and keys

EAGER to catch on to the recent Olympic fever, Eyre has released what is possibly the largest sports compilation of all time. Gold Silver Bronze is an amalgamation of three previous top-selling Olympic programs - Summer Games volumes one and two, and Winter Games - a grand total of 23 events.

As you might expect, the first team

on the agenda is the opening ceremony. A torch-bearing athlete runs an wreath to the strains of an anthemic ballad. With the same might, a cloud of seven score boards heralds the forthcoming spectacles.

Each suite of programs is preceded by a comprehensive series of playing options. You may practice or compete in a single event, compete in a few of your favourite events, or go the whole way and attempt the lot in succession.

Summer Games I consists of the cool water, high diving, 4x400 metre



relay, 100 metre sprint, gymnastics, freestyle relay, freestyle 100 metres, and clay pigeon shooting.

The swimming events entail pressing the fire button as the swimmer's arms break the water, and accurate timing assures a strong stroke. My favourite in this section though is the clay pigeon shooting. With very fluid movements, the left right wings left and right, shooting at singles and pairs of clays is achieved a maximum of 23 hits out of 23 clays - not your heat out Clint!

Volume I uses Mode 0 graphics and the full range of colours. The programmes of Summer Games II had a preference for the higher resolution of Mode 1 - and very effective it is too. The line 20 includes some less common events - triple jump, rowing, javelin, equestrian, high jump, fencing, vaulting and kayaking.

If you keep repeating the words "right, right, left, forwards", you may just reminisce the combination of joystick moves necessary to



Rowing up for the pole vault

Out for a bounce

Vector Ball (Atari/Amiga) MD
CIBR box
Available in shops

DASH for the ball, block the rival, spin around, head up, shoot. Goooooo! No, it's not another football simulator, but a cross between Marble Madness and Hyperbowel, although the instructions claim it's a mix between ice hockey, softball and even green levels. But how many landing greens do you know with surfaces like these?

After loading there's some rather pleasant music, but this doesn't play throughout. Unfortunately the keys are not redefiniable, though there is a selection of key combinations for both players. Player one can be computer operated, and he's a pretty mean computer!

You control a droid who floats round a 3D surface trying to get the ball into his opponent's goal. The screen scrolls smoothly left and right, although the playing area is rather small.

Once you've caught the ball your droid grinds to a halt, allowing his neck up and down determines the power of the shot, and left and right rotates him. A droid can't move while in possession of the ball, so it helps if you can get the computer player behind you so that it covers you towards the goal. If a droid holds on to the ball and does not shoot, after about five seconds it will fire in the current direction at velocity it was set to.

You may choose the pluck style - falls, ditches or waves - and there's a mix of obstacles which gives it life. Choose the mega mix, as this is the most fun. According to the instructions you can set the time limit, game length, mass of ball and so on, but with the exception of the first option these have been omitted.



Here's a tournament to test to the best out of five matches.

The graphics look as though they've been copied from a Spectrum, but don't be fooled from the game. Vector Ball is enjoyable - even more so if you have a human opponent.

Keith Cole

Presentation 50%

One or two-player game, so is suitable for

Graphics 40%

rather bland

Sound 32%

Good title music, ingame effects long from going to quality.

Playability 85%

Very easy to play, but little thought needed.

Addictiveness 70%

It's not the computer yet!

Value 70%

Good for a budget title.

OVERALL 70%

Nice idea, implemented well.



Ready for the jump in that big droid!

execute a perfect slide jump. Time them correctly and you'll reach the end pit, fall and you'll be face down on the run up.

Maybe I'm just not a fancy person, but I found the equestrian event very difficult to master, though nonetheless enjoyable. You must tackle a wide variety of fences and water jumps in the shortest time possible while accumulating the minimum number of faults. I'm still trying to get round inside the time limit!

Another unusual event is white water kayaking. Paddling at break-neck speed you must negotiate a series of 15 upstream, downstream and reverse gates. The Olympic helicopter provides a view of your manoeuvring strategy, and the scoreboard computer gives a post-event summary of your performance at each gate.

Denying your thermal underwear you take your place in the British team for Winter Games. Ignoring the obnoxious music, you can take your pits from hot dog stands, bathes, speed skating, figure skating, ski jumping, ice skating and the bob sled.

Standing at the top of the 50 metre ski jump, you take your coverage in both hands and begin your descent. A well-timed jump at the end of the ramp, and you're skating like a bird.

Have you ever seen or catch leap from a ski jump? With consummate ease I made three forwards look like a good medal contender!

The bobsleigh is another fun event. This mixture of cross-country skiing and target shooting requires a sense of rhythm and perfect reflexes if you are to hit the target.

Gold Silver Bronze encourages just about every sporting discipline in the book, and at £74.99 you just can't go wrong.

Jon Beale

Presentation 87%

Instructions are included for all 33 events.

Graphics 88%

A mixture of block 2 and 1 graphics are employed, and are well implemented.

Sound 64%

The sound tends to be neglected.

Playability 50%

With controls and practice you will succeed.

Addictiveness 33%

A superb set of options ensure the game has a very long life span.

Value 35%

Free bet!

OVERALL 81%

Who will beat you for the next Olympics? Beat your own today!



Huff 'n' puff

Bubble Ghost: Intergame
 £19.95 (inc. £3.50 tax)
 Available in shops

If you like to see an original idea now and again because I get fed up with action replays, in Bubble Ghost you guide a happy-go-lucky little spirit through a castle, the idea being to use his ghostly breath to blow a bubble from tooth to tooth without bursting it.

Why a ghost should want to blow a bubble through a castle I don't know, but judging from the look of pure joy on his face when things are going well, it's a labour of love. On the other hand, when you burst a bubble he gets a bit miffed to let you know how he feels.

Control is by keyboard, joystick or I've told mouse, and there are two methods of operation. These allow you a rotate-and-forward mode, or the ability to indicate a particular direction.

Pressing Fire causes the ghost to blow, and the bubble obediently floats off in the right direction. Once on the move you have to be quick to stop it hitting something, though it does gradually lose speed. There are all sorts of obstacles, including walls, corridors (which can be blown out), fans (which can be turned off), spikes (both fixed and moving) blades and snakes.

Even the programmer gets in the act - the French egomaniac behind this title number has put himself in



there as a Pythonesque head on a staff complete with bulging Irish ears. That sets the general flavour of the graphics, which are very well executed and slightly wacky.

A nice sense of humour pervades the game. For instance, a few screens into the action there's a

green head blinking the way. Behind it is a trumpet on a stand and if you smooch up and blow a note, the head is killed by the shock.

I don't know how many screens there are, but I hope it's a lot because more are difficult enough to hold you up for too long. This is one



of the better games I've seen recently, and one I'd be happy to have in my collection.

Tiffany Wood

Presentation 98%

Optional movement modes, and some very high scores.

Graphics 99%

Animation a bit flabby, otherwise pretty clear and humorous.

Sound 58%

Rudimentary - fits in without being intrusive.

Addictiveness 90%

Middling.

Value 88%

A quality game with plenty going for it.

OVERALL 88%

Original and fun - love it!

Pete's in a hole

Wizard's Lair: Blue Moon
 £29.95 (inc. tax)
 Available in shops

AMSTRAD CPC MAGAZINE 10



YOU might think "Wonder-hops all ye who enter here" is a fitting inscription for the entrance to a flow coast.

But that's not where you'll find it. In fact it's the introductory screen to Wizard's Lair, a budget arena adventure.

You are in charge of Portale Pete, who's lost in a subterranean maze, doomed to a life of wandering unless he can find the wizard's lair. Before that, however, he must gather four pieces of the Golden Lion, which can be found somewhere on the game's seven levels.

The screen shows a bird's-eye view of the action with a black backdrop. This may be appropriate for caves, but it makes the display less interesting than it might have



been. The spikes are a little transparent, and indeed all the graphics lack life.

To compensate for this, perhaps, the gameplay provides plenty of activity and there is a good deal to explore. The underground world has its own rivers, wastelands, lakes and

wells, and there are plenty of secret passageways and hidden discoveries to find.

Rooms separate each room, though it is possible to go down wells or slip on life to other areas. Entrances open and close intermittently, keys being required to open a

Earth's revenge

Platform, imagine
32-bit chips, 17MB size
3000000 bytes

It's not easy being mankind's last hope. You see, some nasty aliens have done unto us before we got around to doing unto them - they have laid waste to Earth and decimated the population.

You are the linchpin. You must battle your way through tortuous mazes, take to the air against the mechanised legions, race across the planet in your high-powered jeep, and then enter the catacombs to face the Great Mutoid Guardian and his hordes of bodes.

The game is divided into three sections. Thankfully, you get a pause-work option if you complete one, so you don't have to start from square one each time you play. Mind you, completing even one section will take some doing.

In the first part you must find your way through four levels of a complex maze comprised of a number of bomb-compensated hidden-in-computer rooms. When you get the bomb you can blow up the boss.

But it ain't that easy 'cause you meet aliens on the way and if you don't shoot them, they'll shoot you. They carry more ammunition for your gun, hit bosses less, carry up without goal and colour-coded pass cards which give you access to the computer rooms.

When you've successfully crossed a computer you'll get a frogman-type puzzle. Solve it and



you explore two parts of the map, one showing where you are - always nice to know - and the other showing the location of a bomb component. One more thing: The atmosphere is poisonous and you

must continually draw a supply of oxygen which can be found in some of the storehouses.

The screen contains lots of information and is well designed. Although the action only takes place in the middle section of the screen, it doesn't seem restrictive.

Once you've blown up the complex you'll find yourself in the cockpit of a fighter plane. You fly over a vertically-scrolling landscape and must clear a path to the catacombs with bombs and strafing fire. Legions of robot tanks and helicopters attempt to halt your progress - and succeed jolly well, too.

You continue the journey by jeep which adds variety, but doesn't really make your task any easier. Beware the Mutoid Guardian and his gun killer lobster claw. Oh boy! If you get through that arduous trial, you pick up a few brownie points and the password to level three. This is a platform-and-ledgers type scenario in which you must make your way to the evil God's lair deep in the centre of the Earth.

Hordes of gibbering tentacles - I'm waiting for the first arcade game to be made in slobstermoo - leap and bound from the stations with guns blazing and teeth gnashing. Only

after defeating them will you come face to face with Gog, and loonies! haven't made it that far yet.

Windchaser is subtitled *Cross Game 5*. It is all action and if you've spent many hours developing your trigger finger, here's a game to put it to the test.

Ken Whugh

door when it is closed.

The keys and other useful objects can be picked up, as can food to top up Pete's energy. Spells can be cast by poking up scrolls, but you need to have acquired some good food.

Every room contains a range of over-cast crystal-studies whose sole intention is to sap your vital energies. Though a brush with these doesn't result in instantaneous death, too much contact will cause the loss of one of Pete's five lives. Fortunately he is provided with a good deal of ammunition in the form of throwing axes.

The action is fast and your reflexes need to be quick. This is fine with a joystick, but if you prefer keys you may find that the designated ones are refused to use. All in all, Wizard's Lair seems dated, but as a

budget title it offers good value for money.

Timy Ranagan

Presentation 62%

More graphics details needed.

Graphics 57%

Disappointing lack of colour on the detail.

Sound 56%

Unimpressive.

Playability 77%

Easy to get into and quite enjoyable.

Addictiveness 77%

Plenty to explore - if you survive long enough.

Value 66%

Not a price.

OVERALL 81%

If you sleep around collections.

Presentation 85%

Nice packaging, definable keys, hints, tips and manuals.

Graphics 90%

Nice graphics, nice colours, nice sprites.

Sound 85%

A variety tone to keep you company on your mission.

Playability 85%

Plenty to explore if the boss variant may be desired.

Addictiveness 82%

Will test your maths and perseverance.

Value 90%

Three games in one - if it's got to be good value.

OVERALL 85%

If you like mathematics and platform games, you'll love this.

Great train robbery

The Train Robberies 4th
28.95 tape, 174.95 disc
Amiga or Ixay

In August 1944 and occupied France is about to be liberated by the advancing allies. Germany's grip on Europe is crumbling, and an evacuation of men, materials and plunder is under way.

In a heavily-guarded siding in the main yards at Marc lies a train ready to take one of France's most valued art collections to Berlin. You and your companions in the French resistance must try to steal the train from under the guards' noses.

At first you must provide cover for your accomplices - Le Duc - as he cuts towards a switch. Avoiding enemy fire is particularly difficult, and it takes a long time to master this initial section.

By the time I'd managed to get aboard, I was beginning to get fed up, which is a pity because the main

part is much better.

Once you've managed to get the train going, you must use your skills to evade the Germans, operate the throttle, brakes and reverse lever, switch the lines and control the signals. The ultimate aim is to reach the adjoining allies at Plovers. By pressing the lever I'd you can switch the first gunner's view, the rear gunner's view, the engine cab or a map, which makes it more convenient to use the keyboard than a joystick.

When approaching enemy-held stations you must use your judgement. Do you try to run the station as late as to help the enemy? Attempting to run through enemy-held bridges is fatal and will end the game.

You score points for shooting enemy fighter planes, taking enemy stations and bridges, and protecting the train from damage. The packaging contains a map of the lines and sidings, and you must plan your route carefully. The Germans are



PHOTO FROM THE GREAT ROBBERY

highly unlikely to bomb the train or the main line because this will be needed for their impending retreat. On the other hand, they will not hesitate to risk the track in some of the sidings or lesser lines.

Technically, The Train is pretty

good, with nice graphics, good sound, a fast responsive feel and lots of action. Although the first stage lets the game down by making it difficult to get into, it deserves to do well.

Steve Lucas

Presentation 90%

Lots of background information.

Graphics 82%

Better than most.

Sound 82%

Good FX, reasonable music.

Playability 76%

Too difficult to get into.

Addictiveness 70%

If only it were easier to take the train!

Value 75%

Fair.

OVERALL 76%

A good game let down by a first nigger.

Enter London's Equaliser

Joe Blade 2 Interrupter
17.95 tape
Joystick or Ixay

FIGHT class games at a pocket money price aren't common, but Joe Blade 2 is one of the exceptions. The year is 1991, and the streets of London are packed with punks, muggers and skin heads ready to pounce on anybody fool enough to walk out alone.

Ordinary citizens are few and far between, most being prisoners in their own homes, too frightened to venture outside. Yes, you've guessed it: Only you Joe Blade can clean up the city and make it a place fit for decent folk to live in!

With a plot as original as that, you could be forgiven for thinking that this is just another cheapie not worth a second look. Nothing could be further from the truth.

Once the program's loaded, you can choose to play the game, read the plot or select keyboard or joystick. I found the keys awkward and would have liked an option to re-define them, but joystick control is excellent.

As you guide Joe through the streets you can pause on the games and read them packing, but you can't afford to linger around



fighting. There are 20 citizens desperately waiting to be rescued, and time is ticking away. Fortunately, someone has left a number of docks around the city which may be collected to reset the countdown.

Each punk or mugger disposed of increases your score, as does picking up doublets and rescuing citizens. The punks and muggers really don't put up much of a fight, but rescuing citizens is a lot harder. As soon as you attempt to free them, you're into a sub-game in which you have just 60 seconds to stack the code and let them out. Wash out

though - failure here means failure in the whole game.

The code is displayed at the bottom of the screen and you must press fire or zoom or the right combination shown. This is not an easy task, and you need a good eye and quick reflexes. Unfortunately, the instructions aren't clear on what you have to do at this point, and it took several attempts before I got it sorted.

Unlike the Spectravision Joe Blade 1, the CPC's superior graphics have been used, but the sound effect can only be described as adequate. Joe



Blade 2 may not be the most original game around, but it's lots of fun to play. There's plenty of action, good graphics and loads of excitement.

Steve Lucas

Presentation 82%

No definite line, but little else to fault.

Graphics 82%

Keeps the spirit off many full priced games.

Sound 67%

Nothing to get excited about!

Playability 85%

Foosball!

Addictiveness 85%

Not just hours of fun.

Value 89%

Worth every penny - and more!

OVERALL 85%

Another winner for Interrupter!

No hot number ...

Arctic Fox, Electronic Arts
\$3.99 (ages 17/18) (see
Special ads)

THINGS that be the deadliest vehicles ever invented and Arctic Fox, deadly tank of the new future, is no exception. As its commander you must find and destroy an alien base before all the oxygen on Earth is converted into an atmosphere more suitable for the invaders.

The game is set in the Arctic, complete with ice masses, mountains and tundra. All these hazards must be dealt with as you search for and destroy the main base. However, the alien army's main defenses consist of a variety of tanks, fighters and rocket launchers set to destroy you. Even the weather is hostile with fog, blizzards and lightning storms which cause partial loss of visibility, both physical and electronic.

On-screen is the forward view supported by the central panel instruments. These include a colorful radar display which bears little resemblance to the physical same, together with the normal meters for damage status, speed and so on.

Your latitude and longitude are also displayed, changing as you move and supposedly corresponding with the status map provided. The only trouble is that someone seems to have done a switch so that moving due north changes the east/west coordinate!

Once I learned to rely on actual bearings tracking, the game made more sense becoming a matter of "get close enough to a wire frame blob to decide whether it's a mountain or an alien before it shoots

you". Don't be tempted by screenshots or the package. Instead of multicolour filled 3D graphics, the CPC version has black sprites which don't resolve into wire frame shapes until you are so close that penetration is a virtual certainty. Similarly, ice masses - total if driven into - are very difficult to spot.

If you ever get past the beginner's game, a tournament level is available with a variety of enemy configurations and starting areas. (For the committed there's plenty of exploring to do, but slow response and awkward controls will mean a lot of practice is needed before you can begin to think about tactics.)

Described as an accurate simulation of tank movement, Arctic Fox does what it sets out to, showing up poor manoeuvrability and massive inertia. Unfortunately this doesn't make for good gameplay. I feel the simulation doesn't go far enough for the enthusiast, yet intrudes too much for the shoot-'em-up fan to build up much adrenalin.

Having said that, by the time I

stopped playing it was beginning to grow on me, and I may well have another go despite its failings.

Pat Wilkinson



Presentation 85%

rather confused instructions.

Graphics 70%

Don't always believe what you think you see.

Sound 70%

Sparse but effective.

Addictiveness 85%

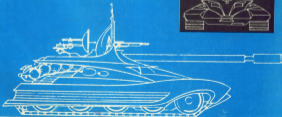
Not bad once you get going.

Value 75%

Reasonable.

OVERALL 78%

Probably keep you going for a while with perseverance.



Oriental punch up

Bamurai Warrior, Prodigal
 (3.99/4.99) Star
 Japanese on tape

CAN hear it already: "Oh no! Not another martial arts game!" But it's I've afraid. Written by the authors of *The Way of the Exploding Fist*, they are obviously trying to squeeze the last drop of mileage out of a good idea. Set in 17th century feudal Japan, you play the part of Miyamoto Utsugi known to most as Utsugi Yoimbo, a Babin Babun - great bawling bunnie, Bamun! - whose task is to rescue his friend Lord Nariyuki, a young Fende - holy bewitched! - from the evil Lord Hiko.

As much emphasis is placed on etiquette and respect as the fighting. You must bow to persons (animate) of equal and superior status, otherwise they may take offense and attack you. If someone spats you with your sword drawn, they will assume you are hostile and attack.

You may find you have to draw your sword as you can change over a rivet. This was one of the more tricky aspects of the game, especially as you only get one life. Sorry, but I hate one-life games.



Being a Bamin you are notably fast up, but you can liberate Fyo points from defeated enemies and use them to buy food which will restore energy. You can also gamble with it. You can give money away, too, and this gains karma points, as does vanquishing enemies.

Get the other job, picking up helpless animals and striking defenceless opponents loses points. And quite rightly, too. If your karma-points go too low you commit hara-ki.

As you move through the scenario you will be given a choice of paths or a doorway to enter. Some thenc-



ters may speak and give you advice, but you can't backtalk. If you're heading for the forest it does you little good to be told Ninja warriors are there!

There's a practice mode so you can hone your fighting technique, and movement and control is not as difficult as in some games. There are three attacking movements all carried out with increasingly longer presses of the fire button.

If you like martial arts games you'll like this - unless you're seen too many of them. If you haven't tried one yet, this is certainly worth looking at for the novelty value alone.

Ian Knight

Presentation 82%

No definable keys but joystick control is better overall. All score table and good instructions.

Graphics 86%

Good backgrounds, smooth scrolling and nicely animated characters.

Sound 85%

Basically OK.

Playability 85%

It plays well, but loses marks because you only get one life.

Addictiveness 82%

You may get tired of going back to the start each time.

Value 78%

Not value for a full-price game.

OVERALL 79%

Looks like it - certainly worth checking out.

Mickey and the meanies

Mickey Mouse Comix
 (3.99/4.99) Star
 Japanese on tape

WELL, if this ain't cute... Many Peoples can't fly! Here's the story: The wicked witchies of the north, south, east and west (aren't one of them a goodly?) have stolen Merlie's magic wand. The 'wicked Ogre King used it to cast a sleeping spell over Dreamland, then broke it in four and gave a piece to each of the witchies.

They immediately hotted up in the tallest towers in Dreamland, populated, of course, with numerous monsters and meanies made with some of Merlie's enchanted water.

With it so far? Good! As Mickey Mouse you must climb the towers, kill the meanies, kill the witchies, and retrieve the four pieces of wand. Only they don't put the witchies in the Amnated version - that's the trouble with using one set of lessons for various computers. Probably just as well, though, as the



game's hard enough without them.

You have a rubber mallet and a water pistol filled with magic water. Some monsters you must spout to death, others need to be pounded into submission. When you tap a monster it turns into the enchanted water from which it was made - collect it to refill your water pistol - or some other goodly like a key, bomb or shield. Some monsters split into two little ones when you hit them. Cuts, but yeah!

As you move up the towers you'll see side doors, inside which are sub-

games. If you complete them successfully you'll get a hammer and nails, and Mickey will board up the door so he leaves. You seal off the doors before you can leave the tower. If you leave a room without completing it, you have to do it all again.

The sub-games are quite difficult in their own right. There's Puddle Maze in which you must beat the wazel marmoset. In Bubble Machine you stand on a moving platform and drop hammers on the bubbles which escape from a leaky pipe below.

In Pump/Reels you hammer bolts into a leaky pipe while little monkeys keep pulling them out, and in Dropping Top you must turn off four taps in a specific order.

Graphically Mickey Mouse is really quite good, and the scrolling is very smooth. On loading, the program plays Ours! Samwers's Apprentice - what else? - which sounds out of time.

The concept isn't terribly original, but as a variation on the platform and ladders theme it has a novel touch, in spite of the subject matter.

It's not a game for babies, being just as difficult as any game of its ilk. It'll keep you amused. Mickey Mouse it may be, but Mickey Mouse it's not.

Ian Knight

Presentation 85%

No definable keys and the Mouse key doesn't work. But there's a high score table.

Graphics 85%

Cute and very clean.

Sound 85%

Apart from the theme tune just a few taps and squeals.

Playability 82%

It plays well, but I don't like having to start at the bottom of tower and start this.

Addictiveness 78%

Does you master the sub-games you'll love it, cracked.

Value 78%

Yes, it has that little bit of quality which sets it above the budget-priced games.

OVERALL 80%

Lots of nice touches, other negative at times.

DUETTE is a novel idea and, like many such, makes you wonder why no one has thought of it before, or at least why no one has marketed a music program in quite this way. It comes from a rather unlikely source, too. Chester Music is well known in the field of music publishing, and specialises in educational books. This is its first venture into the world of computer software.

As you might expect coming from such a source, Duette has educational overtones, although any benefits you derive from the package will be a result of using it, not studying it. Basically, it plays tunes, but it also prints the music on the screen as it goes, so you can follow and play along with it.

Duette was designed for solo instruments such as the clarinet, flute, oboe, recorder, saxophone, trumpet and violin, and it should be suitable for most treble clef-reading instruments.

It has 12 tunes in its repertoire, and as these will be of paramount importance when you consider buying the program, here's a list. For Elise, Beethoven's Minuet, Korodin's Polovtsian Dance from Prince Igor, the Trumpet Voluntary, Chanson de Marie, Where's Your Walk, the Minuet from Mozart's 40th Symphony, Rose Among the Heather, Rodeo March, All Through the Night, The Ash Grove and An English Country Garden.

The arrangements are fairly simple and shouldn't tax the skills of the average player. They are all in easy keys - C, G and F, with one piece in D and another in B flat.

You get a twofold count in, and an arrow points to the current bar as it plays. There are always two staves on screen; one plays while the other is

A duet with your CPC

IAN WAUGH tunes in on a new music program

being drawn or updated, as you read from the top to the bottom, back to the top again, and so on. It may seem a little strange at first, but you very quickly get used to it.

Tuning up

Before you start playing you must check your tuning. This is done from the Options page. With a pitch value of 40 in the SOUND command, the CPC's sound chip is spot on 440Hz - International A - so you shouldn't have any tuning problems here. However, you can raise or lower the pitch if necessary.

The arrangements consist of a melody line and a one or two-part accompaniment. Any of the parts can be selected for display on screen - but only one at a time - and this decision is made in the Options page, too.

Four options determine how the music is to be played. In demo mode the CPC plays all two or three parts itself. If you want to play along you can mute the selected part. This will usually be the melody, but you can



also play - and mute - any of the accompanying lines. You can silence all the parts but maintain a one beat per bar metronomic click, or you can play just the selected part.

The pieces play at their maximum speed. You can slow the music down, but you can't speed it up, though notes are particularly fast. Further options allow you to play a piece once, repeat it, or play through all the pieces in the repertoire - the Concert option.

Finally, you can change the background - but not the foreground - colour. The default setting is line, but the facility may be helpful if you have a mono monitor.

Sweet sounds

The music plays well and sounds very effective. The envelopes change at certain points, and the notation shows dynamics and phrase marks. However, long phrase marks and ties are identical - flat with curved ends

Turn to Page 22



Playing along with Duette



4 From Page 21

rather than being an *ad*. In some pieces two notes of the same pitch are joined with what appears to be a tie, when in fact it is a phrase mark. It's odd to see phrasing like this, and although it's misleading it doesn't occur very often. But to pick in this way is perhaps a little unfair, as this does not really detract from the program.

The instruction leaflet mentions a screen-freeze facility, but this does not seem to be implemented. It would have been useful in order to practise the tricky bits. You can stop the music at any point by pressing the spacebar, but then you must start from the top again.

Players of loud instruments — or loud blowers or scrapers — will find an external amplifier a great advantage. The CPC's loudspeaker does not take too kindly to having the volume turned up full.

If you read the not-so-small print on the cover, you'll see the words *Repeat* in 1. As you might guess from this, other albums are in preparation including a special Christmas collection.

The tunes are probably written with a custom tune-designer program. It would have been nice to have the

option to write your own pieces, although I know this would be no mean arranging feat. Perhaps we'll see an editor program sometime in the future. As it stands, Duetto scores highly in the ease-of-use department and an editor would only complicate matters.

Solo instrumentalists always have problems finding an accompanist, and in any event not all homes have a piano. As well as offering a partial solution to that problem, Duetto could help your sight reading and improve your timing. And it's fun!

Product: Duetto
Price: £189 (tape — CPC604), £149 (disc — CPC605) only!
Supplier: Chester Music, 7th Eagle Court, London, EC1M 9GG
Tel: 01-252 6947

POINTS FOR

- Very easy to use
- Could help with sight reading and timing
- Fun!

AREAS TO WATCH!

- Only 12 tunes and you can't repeat your own!
- No true screen freeze facility.
- Depending upon your instrument, the CPC may require amplification.

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- **SHOOTER'S CHOICE** — You can choose to shoot any ball
- **SHOOTER'S CHOICE** — You can choose to shoot any ball



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CRICKET WORLD — 1988 — The 1988 Cricket World Cup. This game is the most realistic and complete cricket simulation ever. It features 24 teams, 24 players per team, and a full season of matches. It includes a full season of matches, a full season of matches, a full season of matches...

FOOTBALL WORLD — 1988 — The 1988 Football World Cup. This game is the most realistic and complete football simulation ever. It features 24 teams, 24 players per team, and a full season of matches. It includes a full season of matches, a full season of matches, a full season of matches...

| Game | 8mm | | | | VHS | | | |
|-------------------------|--------|------|--------|------|--------|------|--------|------|
| | Price | Code | Price | Code | Price | Code | Price | Code |
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| Cricket Champions 1988 | £19.99 | C001 | £19.99 | C002 | £19.99 | C003 | £19.99 | C004 |
| Cricket World 1988 | £19.99 | W001 | £19.99 | W002 | £19.99 | W003 | £19.99 | W004 |
| Football World 1988 | £19.99 | W001 | £19.99 | W002 | £19.99 | W003 | £19.99 | W004 |

Each game includes a full season of matches, a full season of matches, a full season of matches... (Detailed description of the games and their features.)



Focus on the expanding world of the Amstrad



THE Amstrad Computer Show returns to Manchester's Q-Max Centre on October 21-23 with a record number of exhibitors, a host of new products – and a distinctive flavour.

For the theme of the show, in keeping with the northern season, will be the past Amstrad computers are playing in business, industry and leisure in the region.

Highlights of the three day event will include a 100-seat theatre – the setting for question and answer sessions with top experts, and a Meet the Editors feature involving leading computer journalists. There will also be a new Amstrad Advice stand managed by authorities on the whole range of machines.

The emphasis will be on the versatility of the Amstrad. And that image will be projected by Amstrad Street – a special display area set aside to show off some of the practical applications to which Amstrads are lending their power in the north.

Occupants for the duration of the show will include Chester Zoo, though minus the animals on this occasion.

The zoo uses Amstrads extensively in administration, breeding schemes and even menu planning for its residents.

At the show, however, the focus will be on the Amstrad's role as a matchmaker, pairing animals with people. And visitors will have a

chance to see the system at work for themselves by adopting an animal of their choice.

Also in residence will be Richard Hemmingsway of Seawayway Communication, who uses a PC to help with the running of his media training courses.

In his mock-up to studio he'll be getting visitors through interviews, and demonstrating how MicroLink and Wordstream help him with his phototype test setting business.

Amstrad owners are encouraged for their innovative ideas, and 23-year-old Virginia Bankoggy will bring a touch of individuality to the Street.

She'll be demonstrating Quantum, a new generation professional utility for use with all versions of dBase.

The Prince of Wales Young Business Trust was impressed by the package, so much so that, while it didn't buy the company, it did award Virginia £1,000 to develop her ideas.

More backward looking than forward, David Computer Software will be showing how people can trace their family trees on an Amstrad CPC, thanks to a genealogical database called Geneo, while for the more commercially minded the Amstrad Office will put the Mini Office range through its paces.

Spiritual needs are not neglected, and the Church Computer User Group will be demonstrating how it's exploring the applications of computers.

Software prices lopped

MINERVA Software will be presenting its range of Learner Friendly software for the Amstrad at the show, together with its popular Random Access Database and Instant Access Utilities for the CPC.

And the good news for visitors is that all software will be reduced by a third. First Cats, for example, will be on offer at £18.95 – a saving of £10 on the original price.

For the musically minded, Electronic Research will be offering a new fast Music Editor for the CPC.

And there'll be a chance to see well-known computer musician Mike Be-

cher presenting a huge array of the latest Mini instruments playing from CPC Midtrack Performer.

Siren Software will be using the show as a launching platform for two new products. Micro Design Extra is a full disc (380k) of fonts and clip art which can be incorporated into pages produced with Micro Design. Priced at £70.95, the disc also includes a selection of large headline fonts.

Also available will be a range of 3.5in drives for the CPC. With capacities of up to 800k the drives are compatible with Amstruc, CPM 2.2 and CPM Plus. Price £70.95.



CPC gamers will be well supported by Blue Ribbon's budget (£1.99) software.

Recent releases for the CPC include Deathville and Paladin, and Wolfpack is waiting in the wings.

Blue Ribbon has recently licensed six games from Bubble Bus and the first – Wizard's Lair – is making its debut on the CPC. Again priced at £1.99, Wizard's Lair is an award winning arcade adventure.

Talent spot

THE Q-Max show will also see the presentation of the first ever North West Entrepreneur of the Year award.

Sponsored jointly by Amstrad and the region's own evening newspaper, the North West Times, the competition has already attracted considerable interest, with nominations flooding in.

"We're looking for those deserving men and women in the North West who can be seen to have made a positive contribution to the region's success in the past year", said a spokesman.

The results of the competition will be announced at the show, where the winner will be presented with an Amstrad system.

10 LINERS

WIN up to £10!

Send 10GB 10 liners to:
 GSI Computers
 Europa House, Arlington Park, Millingrove,
 Macclesfield SK10 4EP

An impossible design and a 3D surface plotter are among this month's bonus offerings. Don't forget, if you want your copy of disc back when making submissions, you need to include an SAE.

Escher's triangle

By E. Freestone

OUR first venture into the realm of impossibility is this version of the Dutch artist M.C. Escher's famous illusion. No matter which way you look at it, the sides always get twisted beyond the laws of geometry.

With a bit of luck this may entice others to try the impossible, for instance the never-ending staircase. That's the one where four staircases form the sides of a square, and following them round they always seem to progress upwards. By the way, if anyone can turn this triangle into a solid object, they'll be worth a fortune.

```

10 DIM A(2,0) 1,2(0) 2,2(0) 3,2(0)
11
12 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
13
14 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
15
16 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
17
18 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
19
20 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
21
22 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
23
24 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
25
26 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
27
28 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
29
30 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
31
32 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
33
34 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
35
36 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
37
38 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
39
40 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
41
42 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
43
44 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
45
46 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
47
48 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
49
50 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
51
52 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
53
54 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
55
56 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
57
58 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
59
60 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
61
62 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
63
64 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
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66 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
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68 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
69
70 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
71
72 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
73
74 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
75
76 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
77
78 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
79
80 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
81
82 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
83
84 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
85
86 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
87
88 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
89
90 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
91
92 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
93
94 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
95
96 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
97
98 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
99
100 FOR I=0 TO 20000 STEP 1000:PRINT I:GOTO 10
    
```

File Interrogator

By Paul Ford

WHEN developing programs or writing articles and reports, it's often hard to remember which is the most recent version. This usually results in having to load and examine each possible file, which can take a long time if you've made regular backups.

Paul's 10 Liner offers the ability to examine the first 256 bytes of any file, which normally reveals enough data to identify it.

The program will first catalogue your disc or tape, then prompt you for a filename. When this is entered, control is passed to the

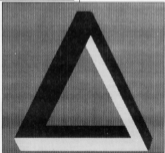


machine code which uses two temporary calls to open and read bytes from the file. These bytes are stored into a buffer, the contents of which are read and displayed by line 30.

This routine will work with any file type, but Basic programs are normally stored in a tokenised form. This means that keywords will not be displayed correctly, and you may not be able to recognise it unless you've used REM statements at the beginning. Programs saved as Ascii files - with a file after the name - will pose no problems.

```

10 DIM F(256)
11 OPEN "R" FOR FILE AS #1
12 FOR I=0 TO 255:READ F(I):NEXT I
13 CLOSE #1
14
15 FOR I=0 TO 255:PRINT F(I):NEXT I
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
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97
98
99
    
```



10GB 10GB 10GB

| | |
|------------|------------|
| 10 = 10000 | 50 = 10000 |
| 20 = 20000 | 60 = 20000 |
| 30 = 30000 | 70 = 30000 |
| 40 = 40000 | 80 = 40000 |
| 50 = 50000 | 90 = 50000 |



Lucas's Solution

By Sally Douglas



READERS of the August issue will recall, probably with humor, Henry Watson's version of an intriguing puzzle. This caused the office to be flooded with cries for help, along with a few programs that provided a solution. Sally's was the one pulled from the editorial hat, and is reproduced below for anyone still stuck.

The screen starts with four lines and four red counters in their initial positions. When the speaker is pressed an arrow briefly appears to show which counter is to be moved, and this one is then transferred to the space, leaving a space in its place.

Tapping the speaker again will move the next counter, and the process continues until they're all in their correct finishing positions.

```

10 4011000 50:100 90:1 1000000000
20 11011000 50:100 90:1 1000000000
30 10000000 50:100 90:1 1000000000
40 10000000 50:100 90:1 1000000000
50 10000000 50:100 90:1 1000000000
60 10000000 50:100 90:1 1000000000
70 10000000 50:100 90:1 1000000000
80 10000000 50:100 90:1 1000000000
90 10000000 50:100 90:1 1000000000

```

```

10 4011000 50:100 90:1 1000000000
20 11011000 50:100 90:1 1000000000
30 10000000 50:100 90:1 1000000000
40 10000000 50:100 90:1 1000000000
50 10000000 50:100 90:1 1000000000
60 10000000 50:100 90:1 1000000000
70 10000000 50:100 90:1 1000000000
80 10000000 50:100 90:1 1000000000
90 10000000 50:100 90:1 1000000000

```

```

10 4011000 50:100 90:1 1000000000
20 11011000 50:100 90:1 1000000000
30 10000000 50:100 90:1 1000000000
40 10000000 50:100 90:1 1000000000
50 10000000 50:100 90:1 1000000000
60 10000000 50:100 90:1 1000000000
70 10000000 50:100 90:1 1000000000
80 10000000 50:100 90:1 1000000000
90 10000000 50:100 90:1 1000000000

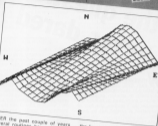
```

| LINE DATA | LINE DATA |
|---------------|------------|
| 10 = 4011000 | 50 = 21100 |
| 20 = 11011000 | 60 = 21100 |
| 30 = 10000000 | 70 = 21100 |
| 40 = 10000000 | 80 = 21100 |
| 50 = 10000000 | 90 = 21100 |



3D SURFACES

By Hong Tan Ngo



OVER the past couple of years several routines have appeared which produce varying 3D surfaces. These have all worked in weird and wonderful mathematical calculations which leave little room for you to generate your own patterns — and none that is.

The screen is divided into four segments, on which two counter lines are shown — one in the bottom left corner, and the other in the top right. They are controlled by the O,W,E,R and T keys, which make

the line travel up, down and horizontally.

When the bottom left line is complete you automatically move to the top right. After both have been drawn, you'll be given the option of joining them together to produce the surface. First you can link them from north to south, then east to west. Entering 'Y' or 'N' will either select this option or pass on to the next. If it is entered for both, you'll be given the chance to produce another pattern.

```

10 4011000 50:100 90:1 1000000000
20 11011000 50:100 90:1 1000000000
30 10000000 50:100 90:1 1000000000
40 10000000 50:100 90:1 1000000000
50 10000000 50:100 90:1 1000000000
60 10000000 50:100 90:1 1000000000
70 10000000 50:100 90:1 1000000000
80 10000000 50:100 90:1 1000000000
90 10000000 50:100 90:1 1000000000

```

```

10 4011000 50:100 90:1 1000000000
20 11011000 50:100 90:1 1000000000
30 10000000 50:100 90:1 1000000000
40 10000000 50:100 90:1 1000000000
50 10000000 50:100 90:1 1000000000
60 10000000 50:100 90:1 1000000000
70 10000000 50:100 90:1 1000000000
80 10000000 50:100 90:1 1000000000
90 10000000 50:100 90:1 1000000000

```

| LINE DATA | LINE DATA |
|------------|------------|
| 10 = 21100 | 50 = 21100 |
| 20 = 21100 | 60 = 21100 |
| 30 = 21100 | 70 = 21100 |
| 40 = 21100 | 80 = 21100 |
| 50 = 21100 | 90 = 21100 |



ANSWERED

the questions you never dared Ascii

IAN SHARPE
reveals the
mysteries of
Ascii codes

WHenever you interact with your CPC, either by typing something in, reading information on the screen or printer, or perhaps when you are hooked up to a remote computer via a modem, the flow of information is carried out by Ascii codes.

Lots of people find them confusing, particularly the control codes which perform special functions. So let's shed some light on the subject.

Before getting down to control codes we'll have a quick look at the Ascii character set of which they are a part. You may know that your CPC's memory is made up of units called bytes. A byte can be likened to a box, and each box may contain a number between 0 and 255.

As I enter the text of this article into my word processor the characters I type are stored in bytes, one character per box. I said that a byte can only store numbers, so how are all these letters held? The answer is that the word processing program has set aside an area of memory to hold my text, and represents each character as a number.

If we were to take a peek into the bit of memory which holds the start of this sentence, we would see the following numbers in consecutive bytes: 73, 102, 32, 718, 707.

In your CPC manual is a list of which characters correspond to the numbers - chapter 7 page 8 for the CPC8128, and appendix III, page 1 for the CPC484. I haven't got a CPC884 manual, but the table will be near the diagrams of the character set.

Looking down the list you will see that character 73 is I, 102 is n, 32 is a space, 718 is w, and so on. The whole text file is like this, and this is the form in which it will be stored when I save it to disk.

If I decide to print it out, the same stream of numbers will be sent to the

printer. When the magazine is printed, my file will be transferred to a typesetting machine - a dedicated computer system in its own right - which will also receive the same set of numbers.

Somehow in your CPC is a table, and when the computer is about to print a character on the screen - let's say number 65 - it looks up the 65th entry. This contains the shape of the letter A, again represented by numbers, which is copied into the screen memory. A special chip reads the screen memory every 1/60th of a second and uses it to generate what you see on your monitor.

It is important to distinguish between code number 65 and the list of numbers in the table which tell the CPC the shape of character 65.

Where do these code numbers come from? Do other computers use the same codes? Why does the list only go up to 128? What are those funny things between 0 and 31? Read on...

Investigations

Imagine you are running a bank, and at head office you use a mainframe computer to store customer accounts. It's a Megawidget 758 with buckets of memory and an army of white-coated figures swarming over it tending to its every need.

Branches have mini computers - P-Brain 128s - to handle local transactions and records. Every so often the Megawidget dials up the P-Brain so they can update each other.

So far so good, assume the P-Brain tries to tell the Megawidget 1841 Arthur Rubicak has just opened an account. It would begin the transmission with the codes for A,r,U,h - 65,114,118,104. The Megawidget would store these codes along with the ones representing the rest of the details. At some stage somebody might want to see these details on one of the Megawidget's many screens, or dump them out to one of a forest of printers.

A printer is a specialised computer, and uses the code numbers to look up

in a table what shape it should draw the character. The bundle of electronics which handles the Megawidget's display has a similar task - it must take the codes, use them to find the shape of the characters in its own table, and draw them on the screen.

It should be obvious, therefore, that if the manufacturers of the P-Brain, the Megawidget, and the printer weren't all working to a common standard, the code for A would produce a recognisable A shape on the P-Brain's display, something different on the Megawidget's, and something different again on the printer.

The lack of a standard would make the interchange of information between computers nigh impossible, so in the early days of computing just such a standard was produced - the American Standard Code for Information Interchange, or Ascii - pronounced *ashley*.

Any computer or peripheral using this code will produce an A shape when presented with code 65, have a space in response to 32, and draw a full stop if you give it a 45. Ascii isn't the only code system, but you are unlikely to meet the others.

In this tiny old typesetting machine, my CPC, and my dot matrix printer all know that 65 is an A. They may draw the A from their shape table slightly differently, but it's always recognisable as A.

The Ascii character set only covers the basic letters, numerals and punctuation marks. As it happens, when these basic needs had been taken care of only the codes 32 to 128 had been used leaving 8 to 31 and 127 to 255 spare, the idea being that one code number would occupy one byte.

Other manufacturers take advantage of the spare numbers between 128 and 255 to give extra characters such as the ones you see in your manual. The point about these is that they are not covered by the Ascii standard, so it is likely that another computer or peripheral will have different characters occupying these positions. Character 127 and those between 8-31 have another function, and don't do the same thing under all circumstances.

We'll come to that in a moment, but to sum up what we have learnt so far,

0 1 2 3 4 5 6 7 8 9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [\] ^ _ ` a b c d e f g h i j k l m n o p q r s t u v w x y z { | } ~

The characters printed by codes 237

the codes 32-126 can be relied upon to produce the same result on most computers and printers. For those between 128-255 the opposite is true. On your CPC, however, they are nothing more than printable characters. Some — mainly the ASCII set — can be displayed by pressing keys, so you can type in:

```
PRINT "ABC"
```

Others, however, aren't given a place on the keyboard, so we can't easily type them. In this case you have two options. Firstly you can use the CHR# command with the character number:

```
PRINT CHR$(240);CHR$(241);CHR$(242)
```

The other way is to temporarily allocate the character to a key using KEY and KEY DEF. The following assigns character 240 to expansion token 141, which is then placed on the Tab key (number 88) with the ability to repeat that's the '1' if the key is held down:

```
KEY 141,CHR$(240)
KEY DEF 88,141
```

This isn't the place for an explanation of KEY and KEY DEF, so if you want one please write in. I will say that if you've been following the mail pages you will know that there are problems with it.

Take control

Now to the main point of this article: The mystery numbers 8 to 31 and 127. These characters lead a double life in that they can produce a visible character on the screen, but they can also produce special effects.

Try this:

```
10 FOR I=8 TO 31
20 PRINT CHR$(I) + " "CHR$(127);
30 NEXT I
```

Now you've met control codes in both their incarnations. By default when you print them they have a special effect, and to make them show as a visible character you have to use, you've guessed it, a control code. Printing character one — CHR\$(1) — says to the CPC: "The next character I

send you may be a control code, but I want you to show it as a visible shape".

Let's have a look at another code, this time something a bit more useful. Printing character 24 gets the CPC to swap pen and paper inks so that all subsequent printing is in inverse video:

```
10 PRINT " "CHR$(24);"PROGRAM"
20 NEXT I
```

This masterpiece of programming prints the first word in ordinary text and then comes across CHR\$(24). The CPC recognises this as an instruction rather than something to be shown on the screen, and acts on it by swapping background and foreground inks. After another word has been printed, another control code is encountered which reverses the effect of the first one.

Here's an alternative way of achieving the same effect:

```
10 PRINT "a" AND 127
```

When you see the ' character don't type it in but instead press the Control and X keys together. This will produce the symbol you saw against character 24 in the earlier example, and when the PRINT statement executes it will act on the control code to reverse the colours.

Now try the same thing again, this time pressing Control G straight after the opening quote, and run it. Did you hear a beep? Not? Well turn the sound up and have another go. The character produced by Control G is CHR\$(7), which if you try printing it will give a tone from the speaker.

If you want to find which keys to press to get the various codes, look at the table I've mentioned in the

manual, and you'll see them in the single print. Remember, though, we can't print these symbols in listings, so don't put them in submissions.

This is another way you can incorporate these codes in a program:

```
10 PRINTCHR$(24);" "CHR$(24)
20 CHR$(24);" "CHR$(24)
30 PRINT CHR$(24)
```

Let's have a look at another example, one that needs a parameter. When you print CHR\$(4) it does the same job as MODE. Now with MODE you have to tell the CPC which one by putting a number after it, and so it is with CHR\$(4).

The routine built into the CPC which deals with CHR\$(4) is programmed to grab the next character and take its ASCII value as the mode to be set. Thus the next character might be CHR\$(7) giving us Mode 1. You may be confused by the remarks in the user guide about the parameter being taken MOD 4. In fact this is a mistake, it should

Turn to Page 28 in



4 From Page 27

read MOD 3. Only three screen modes are allowed - zero, one, or two. If you tell CHR\$(4) to set Mode 3 it has to have some way of dealing with this illegal number.

Basic has error messages, but the routines which deal with control codes don't. The way it deals with an illegal value is to reduce it to zero and do something it can use, and the way it does it is with the mathematical operator MOD. This is also a Basic keyword if you want to play with it. The effect of

```
PRINT MOD 3
```

is to divide 3 into 3 as many times as it will go, and print the remainder. Any whole number MOD 3 will produce zero, one, or two, so any character you pass to CHR\$(4) will be brought within usable range.

Now you may be wondering why you might want to use CHR\$(4) instead of MODE. Confining the discussion to Basic - the codes can be used in any language - the main reason is one of space and speed. Say you had a program which printed the message Press a key in the middle of a Mode 1 screen at various points. You would probably do something like this:

```
## MOD 1:LOCATE 10,10:PRINT Press a key
```

This is OK once, but unnecessarily long if you're doing it in various places. How about this?

```
## CHR$(4)=CHR$(10):CHR$(5)=CHR$(10):
CHR$(11)=CHR$(10):Press a key
.
.
## PRINT CHR$(4)
```

Line 10 is a bit longer than the original, but if you save repeating it and just PRINT CHR\$(4) a few times there is a saving.

Have the list titled Basic Control Characters in the user guide to hand, and let's dissect line 10. It assigns a string of characters to CHR\$(4), and if we looked into memory we'd see that the string comprised the following Ascii values:

```
5,7,11,14,18,22,15,28,15,11,
10,13,28,28,15
```

The ones from 00 onwards are the message, the ones before it are the control codes. The first of these is CHR\$(4), and we've just seen that it can substitute for MODE. Following it is CHR\$(11), which CHR\$(4) is waiting for to tell it to set Mode 1.

After that comes another control

code, CHR\$(15). This has the same effect as LOCATE, and from the previous example you would expect it to take the next two characters as the x and y coordinates to locate at. This is indeed the case, the subsequent characters being 14 and 12.

If you weren't intending to print the listing on paper, you could shorten

of a disc, then print them in black to form the shape. Now substitute the following lines:

```
## LOCATE 10 TO 2:LOCATE 10:CHR$(4)=CHR$(11):CHR$(5)
## LOCATE 10,20:CHR$(4),CHR$(14),200
## LOCATE 15,5:CHR$(11) CHR$(15)
CHR$(11) CHR$(15)
```

to the editor, and you can now print CHR\$(4) anywhere in the program to get the required shape. In case you can't work it out from the control code table, after the first two characters in CHR\$(4) - 200 and 203 - have been printed the text cursor will be in the character cell following them.

CHR\$(11) moves the cursor back one, the next CHR\$(5) does it again, and CHR\$(15) moves it down a line. This puts the cursor in the right place to print the final two characters.

If you wanted to, you could incorporate further control characters to change pen and paper colours, or perhaps sound a beep.

To end our whistletop tour round Ascii codes, I hope you can now see that they are easy to use and can offer great advantages in terms of realness and size. This piece has been little more than an introduction to the subject, so now I've given you a start I suggest you experiment further to find out their full potential.

The lack of a standard would make the interchange of information between computers nigh impossible.

line 10 by using control keys:

```
## CHR$(4) CHR$(11) CHR$(15)
```

Again we can't print the characters you see on the screen, and furthermore CHR\$(15) isn't a key. Put it on the 8 key as the numeric keypad shows, and press the lined keys for subsequent 5's.

```
## 8,CHR$(15)
```

```
Control 8
Control 4
Control 8
Control 8
Control 5
```

Another interesting possibility is when you want to print a large character made of smaller ones. For instance you might redefine characters 252-255 with the SYMBOL command in such a way that when printed as a block of four they form a larger shape. Type this in:

```
## CHR$(252)=CHR$(11),CHR$(15),CHR$(15),CHR$(15)
## CHR$(253)=CHR$(14),CHR$(20),CHR$(24),CHR$(25)
## CHR$(254)=CHR$(11),CHR$(15),CHR$(11),CHR$(11)
## CHR$(255)=CHR$(11),CHR$(15),CHR$(15),CHR$(15)
## PRINT CHR$(252) CHR$(253) CHR$(254) CHR$(255)
```

It defines four characters as quarters

And that's not all...

The way control codes work on your Amstrad's screen isn't the whole story. I said at the start that Ascii codes are standardized, but in the case of control codes this isn't quite true. On other computers and peripherals a combination of CHR\$(13) and CHR\$(10) almost invariably starts a new line, but on a printer there isn't much point in having a code for MODE.

Indeed, not all computers are capable of operating in different screen modes, and if they do the numbers won't mean the same thing.

You will find, therefore, that peripherals and other types of computer react differently to many codes. Where possible some similarity of function is maintained, for instance CHR\$(13) clears the screen, but on a printer it starts a new page.

A look through your printer manual will show you what the other differences are, and it's worth noting that CHR\$(12) has a special meaning. On the CPC it just prints a character, but on a printer it will delete the previous character sent to it.

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HOW TO ENTER

Answer the six questions below, complete the tie breaker - in the next entry and original entry you can, and send the entry form to the address shown. Entries which must arrive by November 18, cut to on the form or a photocopy. However, only one entry per household is allowed.

THE QUESTIONS

1. Name the world famous steeplechase run yearly at Aintree racecourse.
2. On which racecourse does the Derby take place?
3. Which jockey (jockey is currently Flat Racing Champion)?
4. Which English jockey was recently stripped of his GB license for sex offences?
5. What is the minimum distance (in furlongs) over which a flat race can be run?
6. What is the name of horse racing's ruling organisation?

ENTRY FORM

Answer the six questions in the space provided, complete the tie breaker, and post this form to the address below.

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2. _____
3. _____
4. _____
5. _____
6. _____

Tie breaker. Complete the following sentence in 12 words or less.

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SOMEbody once said: "There's no such thing as a free lunch." Well, every rule has its exceptions, and this is one of them! We're giving away the biggest best-sell magazine cassette ever. It's packed with demos of commercial programs, previously unpublished games, and samples of the standard of utility listing we're famous for. There's plenty to look at, play with and use, so send off that card right now. You don't even have to pay the postage!

And remember, if you don't have access to a tape deck, for a paltry £1.50 - that's less than the price of a blank 3in floppy - you can have a disc version. The offer's only open in the UK, and the closing date for applications to arrive is November 30.

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What you'll find on your FREE CPC Computing tape

PSYCHO PIG UXB

US Gold

EDITED BY

COOKING bacon is one thing, cooking it while it's still on the hoof and trying to cook you is another! In this dastardly tale of mass poricide your task is to clear the scene of your fellow pigs.

After selecting the controls - joystick or user-defined keys - and one or two-player games, it's time to fly. Scattered around are bombs, all on



timers. Walking over one picks it up, and pressing fire sends it towards another player. Get it right, and he'll be blown to bits. Get it wrong, and you may end up with a burning (literally) desire to go flying. All in heavily bad taste, but fun. The music's good, too.

If you want to play further levels and skip US Gold's little ad popping up, turn to page 62 for details of how to order the full version at a special price.

PROTEXT

Amstrad

EDITED BY

SINCE its introduction, the Protext word processor has attracted praise from many quarters, and our demonstration looks only the save and print options. Protext loads in two parts. First comes a short Basic program which can be modified to set up links, key definitions and so on. This loads the main Protext binary file. You can then switch between Basic and Protext at will, and provided you don't load a Basic program while text is in memory



your file will be preserved unless you type NEW.

Run the demo version, type IP to get into Protext, and then:

LOAD FILE

to load the instruction file. Press Escape to get into edit mode, and move round the document with the cursor keys. The file includes further instructions and information.

Protext is available on tape or disc, but imagine the convenience of having it on a rom! You don't need to load the word processor, just type IP at any time and you're there instantly. You also get the benefit of around 400 text spaces, and the rombox opens the possibility of expansion with further add-on roms. Turn to page 26 for a special deal on rom software and the Rambox rom box.

PIXELATOR

By Robin Nixon

EDITED BY

This expert utility is for editing Mode II screens on a pixel-by-pixel basis. When you run the program you'll be presented with a menu, and from here you can load or save screens, change links, and get into editing mode.

To change ink values select the appropriate option, and press the key corresponding to the ink you want to change. The left and right corner keys select black (colour 0) and white (colour 35), and the up and down arrow keys move forwards and backwards through the colour range. Press Return/Enter when you're done, and as each ink can have two colours to cater for flashing you'll need to repeat the process for the second value. Select the same colour twice if you don't want the ink to flash.

In edit mode the screen you have

loaded will be displayed. If you haven't loaded one, you'll see 256 random colours. The Copy key in conjunction with the four arrow keys selects the current plotting colour. With Control they move the window around the screen, with Shift they scroll the contents of the window, and by themselves they move the plotting cursor.

The speedier plots a grid. Or hides the window. Talk returns you to the menu, and Escape takes you back to Basic. Although Plotator is easy to use, it's an invaluable tool for detailed screen editing. If you typed in the original, the tape version has the problem with loading edited screens into Basic fixed.

AMSTROIDS

by Robin Nixon

ROM 9401111.0, 100

REMEMBER the smash hit arcade machine Asteroids? I must've spent a small fortune as interplanetary rock crushing, so I decided to write my own version to keep me from bankruptcy and probably breaking rocks for real.

All you have to do is clear each section of space asteroids, after which you'll progress to a new problem area. When your ship first appears it's blue for a few seconds to allow you to find a safe position, and during this time you won't be killed or able to fire. After that your rocket turns white, and it's no holds barred! The control keys are shown on the title screen, and you'll even find some digitised sound effects.

FOURTRIS

by Ian Sharpe

ROM 9401111.100

THIS previously unpublished listing is my version of the well-known Russian arcade game. Even the top of the screen descends a series of shapes. Each one scores a point when it appears, and the object, of course, is to score as many points as possible.

The game ends when the pile reaches the top of the screen, so the skill lies in manoeuvring the current shape to lock into the earlier ones in the most compact way. This is achieved by moving the shape left or right with the arrow keys, and rotating it with the spacebar. If you manage to get an unbroken line of blocks across the playing area, it will disappear creating more room.

Once during a shape's descent

HOTSHOT

Prism Launcher

ROM 9401111.000

In his review in the October issue of CPC Computing, Jon Davis found Hotshot incredibly addictive, and gave it the coveted Silver Award. Prism has generously donated level one of this novel and exciting game, convinced that when you've tried it you'll want the full version. So as we, so there's a special offer on page 81!

You'll need a joystick to play the demonstration, and you can compete against the computer or watch it play itself. Press the spacebar when prompted, and you'll see a countdown against player one. If you want to be in control, press Fire and enter your name. If you want the CPC to be that player, let the countdown get to zero. Allow the countdown for player two to reach zero so the CPC takes that side. On the full version, player two can be another human making this a free two-player game.

The idea is to get as many points as possible and beat your opponent. You score by knocking blocks



out from above your main robot, or alien. By holding the fire button down you can attract the ball to your launcher and subsequently launch it. Beware, getting hit by the ball in any place other than on your main robot means instant death, and if you do catch it there's a limit to how long you can hold it.

There are lots of twists and turns in the gameplay, for instance by shooting the ball up the central hole, against the floor, or even your opponent.

Controls

- Control G quits
- Push the joystick left or right to move your player
- Fire attracts the ball, and when you've caught it releasing the button launches it. In this mode the joystick attracts the nozzle



you may pause it by pressing the up arrow key, and if you're sure it's correctly positioned you can zap it down quickly with the down cursor key. The speed at which the action takes place gradually increases, so this is a test of both your reflexes and logical powers.

Not bad for what would have been just over a page of listing. I hope you like it!

CIRCLE

by Roland WaddVare

ROM 9401111.000

DRAWING circles from Basic is always slow, so here's a machine code utility that does the job in a flash. After running the program move the graphics cursor to the circle's centre, and use the

CIRCLE command like this:

```
1000 GOTO
11000 CIRCLE(100,100),100
```

Circle can draw both as well, and re and ry are the horizontal and vertical radii. The value of pen is the plotting colour.

ENHANCED TRACE

by Keith Dentham

ROM 9401111.000

THE problem with Basic's trace function - TRON - is that it prints the line numbers all over the screen, obscuring the output from your program. This clever utility intercepts TRON's output and keeps it in one place - the bottom left of wherever you've defined window save. Trace looks for the opening and closing square brackets round the line numbers, so you should ensure that your program doesn't print these to the screen.

The other nice thing about Trace

Turn to Page 84 >

► From Page 32

is that it allows you to step through your program a line at a time. After a line has executed it waits for you to press the Tab key before going on to the next.

After running the utility, whenever you use TRON follow it with:

CALL BT88

and when you use TROFF you need to disable Trace with:

CALL BT8C

A word of warning to disc drive owners. While in operation Trace works in such a way that tape filing is constantly being selected. Therefore you shouldn't remove the disc with Trace activated, and you need to use DISC to re-enable the disc drive.

If you want to escape from a program with the utility enabled, you should press Escape twice before pressing Tab.

LETTERHEAD DESIGNER

by Chris Nixon

lhdletterhead.doc

WITH apologies to all those who typed it in and got it right, we're continuing to receive so many letters from people who couldn't that we decided to settle the argument once and for all, if only to keep the editor off the ceiling when reading each morning's post! The program on tape is exactly the same as the one printed in the magazine.

In case you missed the July 1988 issue, here's a quick run down. Letter Head Designer allows you to design letter heads to enhance your stationery. It takes the form of a mini screen editor which allows you to include text, boxes, lines and so on. Then you can dump the result to your Epson-compatible dot matrix printer.

The program is controlled by means of a series of icons. Reading from top left to bottom right, these are:

| | |
|-------------|-------------|
| Move cursor | Cancel |
| Delete | Save |
| Rubber | Print |
| Delete line | Select font |
| Delete box | Write mode |
| Text | |

The Copy key or joystick fire button selects most options in the program, so you should find it vi-

PRO-PUNTER

DGA Software

ppp.punter.doc

COULD this program be the key to thrashing the bookies? This is what reviewer Mike Cowley said in the October issue of CPC Computing: "After comparing Pro-Punter with my own selections for one month, the package had seven out of ten winners to my two. Backing horses..."

After loading the program follow the menu options in numerical order to see the type of information



you would need to input before a race. Finally, go to options in the menu to add Pro-Punter's recommendations.

And when you've done that, you've got a chance to win the full system. Turn to page 52 for our free-to-enter 25% competition.

fully self-explanatory. If not, the July 1988 issue is available on the order form on page 53.

PATTERN FILL

by Ian Sharpe

ppfpattern.doc

THE CPC484 doesn't have a fill command. The CPC644/628 does, but it is only capable of a single colour fill. My version allows you to fill shapes with patterns of your own design - rapidly.

In fact there are four files on the tape:

ppfill.doc

This installs the machine code required to run the utility. You don't need it in place to run the Designer, but you do need it for the demo. To use it, move the graphics cursor to a point within the shape to be filled, and:

CALL 1888,ppwidth,pph

where *ppw* and *pph* are the width and height of the pattern in pixels, and *pph* contains the pattern to use. The graphics origin must be at 0,0 and to design patterns, use:

ppfill.doc

You are presented with an editing grid. Use the up and down arrow keys with Shift to select the plotting colour, and the spacebar to plot a point.

The pattern fill utility will crash if your pattern contains two or more pixels of the background colour vertically adjacent. Remember that the top and bottom edges will be next to each other when the pattern is repeated.

Plot your pattern in the top left of

the editing area, and when you've finished, press Tab. Black off-screen areas to the right and below the grid with the moving lines, and press Tab again. The pattern will be written in tapefile, ready to merge into a Basic program.

Study the file *ppw* and the demonstration *ppdemo.doc* to see how these relate.

SPRITE DESIGNER

by Ian Sharpe

spd.sprite.doc

If you've been following my mini series on sprite programming, you'll probably be wanting to try your hand at designing your own. To save a bit of typing, we've managed to fit all three programs from this month's article on to the tape.

The demonstration invader program is saved as *spdinv.doc*, and the associated sprite data file as *spd-demo.doc*.

WEATHERLINK

weathlink.doc

WEATHERLINK is just one of the many services available through MicroLink, the UK's leading electronic mail service. With WeatherLink you can download daily updated satellite pictures of Great Britain and display them on your CPC's screen.

On the tape is the program to decode the files downloaded from MicroLink, plus some demonstration screens - *smmap1*, and *smmap2*. Just run *smmap1*, and when prompted enter the filename of the map you wish to load.

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Utopia One of the fastest, most flexible programming languages for the CPC, it is the precursor to C and has been used to write many operating systems and other major programs where speed is essential.

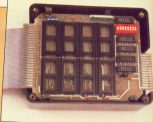
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please turn to the form on Page 53

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ADVENTURE

Join the fantasy party Gandalf on the world of adventures

YOU may remember that back in June I took a home-brew software house to task over the way it presented a game. I haven't had any feedback from that quarter, but have received some more home-brew adventures for review that show signs of my advice having been taken to heart.

From *Warped Reality* come three superbly priced adventures, and John Mackinnon has sent in a well-written game created with the Graphic Adventure Creator. I hope to be able to report on them shortly, for they deserve the success I am sure they will receive.

The ubiquitous Jason Brooks, meanwhile, seems to have discovered the perfect way to play adventures – invite some friends round and open a few cans of Skol! With the amount of adventure playing I do, I could end up as an alcoholic! I take the point though, adventures can be a social occasion.

Jason would like to know if I can recommend any games for groups of players. None come to mind as particularly suited to this sort of play, though any adventure is more fun when tackled in company. If I had to recommend any though, it would be the Infocom range. The superb responses their adventures give mean that even complete novices would be able to make sensible suggestions and learn from the results – something that isn't too easy with the standard 'You can't do that type of reply'.

Jason also asks if any of the Scott Adams games have been converted for the CPC. I am not aware of any of his older adventures having been converted, but some of the newer ones – the *Questgrate* series for instance – have been released. I too found the early Scott Adams games fascinating, and managed to solve *Prince Adventure*. You should feed the fish (go) into the lagoon then on to the coast to the crocodiles to get the wood out of the cave.

Terry Garmon has kindly sent some solutions – including one to Football Frenzy which I hope to

publish soon – and a request for help. In *Classic Adventure*, Terry has collected all 15 treasures, but has only scored 140. He should have 100 – 10 for each treasure.

Either he has not got them all to the building, or perhaps didn't stop the vase after dropping the pillow, in which case it will have broken and lost 10 points. The pillow apart, he seems to have found all the treasures.

Stephen Thompson is finding it difficult to kill the necromancer in *Sorcery+*. Having obtained the four golden hearts, you must enter his chamber and fix them in him. Stephen would also like some help with *Sealess Delta*. Before making the assault you should use the plank to lower the gannet.

An adventure that has caused a lot of problems for Inigo Dankley is *Keatilla*. To open the green door, search the Urqa-Maul that you kill in the dungeon twice. The red door is opened with the same key. The small key opens the chest.

Give your sword to receive the rope, which is used in conjunction with a stalagmite. The dried moss is used when casting the Cure Disease spell. By special feed I assume you mean the *Velvite*, it isn't necessary to complete the game, but can be found on one of the Urqa-Mauls.

Matthew Waterson has written a very informative and interesting letter in which he raises points about several adventures. In *Markford*, the Norman will at first follow and observe you.

You will get the feeling that you are being followed. After you get through the swamp he will attack if he finds you. Attack him, and he will lose his battle and run off. You will find him camped, but it could be almost anywhere.

You have to capture him – if you have the rope – and give him to the child. Since I no longer have the game, I cannot check this out for you, Matthew. I suspect that once you have the rope you can capture him when he attacks you.

Mission accomplished — and we're successfully back to the master

Guild of Thieves — Part IV of a solution by Graham Wheeler

Go to the entrance hall, move South three times, then Southeast. Examine the windmill, and shout to the miller "Stop mill". When you enter the mill he gives you some cleaning guns. Buy the lute from the miller with the obelisk and put it into the bag, which you should then close. You will trip as you leave and break the lute if it is not inside the bag.

Travel North, open the bag and examine the lute. Take the pictures, move on to the junction chamber and take the cage. Go Southeast, South then West. Open the safe, put

the pictures inside, then close the safe. Read the notice. If you have put all the treasures inside the various night safes a man should now appear and change the notice. **Note:** It is wise to save the game at this point as the next problem depends on the Mynrah bird speaking at the correct time. Several attempts may have to be made for this to happen.

Open the door, shoot, then remove the gun. Go in and examine the champagne bottle. The bottle says that if you say hooray after it is shaken, it will explode. Say to the Mynrah bird "Hooray". The bird must say hooray — if it only squeaks, keep saying it until it repeats hooray. Join

Guild of Thieves — List of treasures

| | | | |
|--------------|--|---------------------|--|
| Fossil | Inside the lump of coal found in the basket in the lounge. | Incense burner | On the altar in the temple. |
| Oil painting | In the gallery. | Miscellanea | At the top of the stairs SE of the temple. |
| Chalice | Inside the bear cage in the dining hall. | Statuette | In the shrine. |
| Ruby | In the red box in the cellar. | Brooch | On the bench. |
| Diamond ring | Inside the red ball in the billiard room. | Chips | At the rock heap. |
| Dress | Inside the wardrobe in the spare bedroom. | Platinum | On the lute obtained from the miller. |
| China pot | Under the bed in the spare bedroom. | Gem | In the wax head room. |
| | | Plastic bag (trash) | Inside the piano stool in the music room. |
| | | Cube | On the machine in the cubical room. |

Guild of Thieves — Ingredients required to make the antidote

| | | | |
|-------|---|-------------|----------------------|
| Heart | Inside the station chest (bicycle room). | Berries | In the cemetery. |
| Eye | In the skull (inside sarcophagus in crypt). | Snake skin | In the jungle house. |
| | | Woolen cube | In the junk room. |
| | | Sashet | In the cauldron. |

the long queue. Show the plastic card to the taller, who takes you to the manager's office, drop the cage, shake and drop the champagne bottle.

Open the door — the manager shows you out and locks the door. Put the gun in the keyhole. This slows down the manager's re-entry to his office and gives you an extra move for the bird to say hooray. If all goes well, the Mynah bird should say hooray and the bottle will explode, blowing the roof off the office. If not, reverse and try again.

Put the plastic die in the pocket, the anticube in the keyhole, and get



the late. Drop everything but the late — now remember the clue on the watercolour — play the late, say "Unfavourable Pendra". You will float. Go South, examine the keyhole, get the anticube, move East.

Roll the die. The luck fairy asks for a number — Two. Go down, roll the die. You are again asked for a number — One. Southeast, roll the die — Six — down. Roll the die, — Five — East. Roll the die — Four — down. You will see all your treasures and a valuable cube on a machine.

Put the anticube and the die on the

H-E-L-P

One of the new Code Masters games — *Wessex* — is making Raymond *Phelan* some grief. Can anyone tell him how to get into the top room in the *Dragonair Inn*, and how to get into the palace at any other time without being shot after he has obtained the parchment? A full solution would be very welcome if anybody has one.

D. Hornswallow has written asking for help with *Lord of the Rings*. Can anyone tell him what the old stones are used for? Incidentally D., a full solution to *Ripart's Revenge* was published in the June issue.

Stephen Thompson has a query that I should be able to help with, but can't. Can anyone tell him how to get out of the public's dungeon in *The Apple*?

machine — the alarm forgets to ring — get the anticube and cube, get the white (a light source), take everything but the die. Read the signpost. Now remember which card suit was missing from the card box, and take that direction to reach the white room.

Move Northwest twice, take the succulents and rub your feet with them. Go to the junction chamber, and when asked if you wish to continue say "Yes". Move East three times, South, East again then Northwest. Enter the boat. The master sees that you have all the treasures — game completed.

Stitch the monster up

Frankenstein — Part II of a solution by Graham Wheeler

Starting in the cottage, say "Why are you crying?". You are told that the husband was murdered by the monster. Sleep (you have nightmares), move North (you find that both of your hosts have committed suicide), go South twice, East twice, South twice again, then West. Pray. A priest comes. Say Hello. He tells you that the blacksmith saw the monster.

Go East, North, East, North, West then South. Look around, and you see a hammer on the wall. Get the

hammer and hit the nail — which rings. He is twice more and the blacksmith appears. Say "Where did you see the monster?" He tells you he saw it on the other side of the valley. Say "Can I work for money?" He lets you work for him for a week to earn some money. Move North, East, South, East — in the hunting shop you automatically buy a gun and cartridges then leave — North, West twice, North, West, South — in the store you buy food then leave — then East twice. Examine the shed — you see a cable car to the North — North; you are taken across the





valley where you leave the cable car.
Travel East. You wander until you find and enter a hut. Look around. You see a paper which you take and read. You find the message is from the monster. Look (you see him - he beckons to you then leaves). Move East then North (he beckons from the top of an unclimbable gorge), South, East five times, look around; you see a shape in the wall.

Rub the wall - you see the shape is a body encased in ice - North - you can see the body and think you can't now fire at the wall without being crushed by ice. Aim the gun at the wall and fire it. Move South - you see an ice pick has been freed from the body.

Take the ice pick, go North twice, South from West. You notice it is brighter because the ice has not quite closed over. Cut a hole in the ice, go up, cut a hole in the ice again (you are tired and confused), rest, move up, cut a hole in the ice, rest - you find your strength is waning - drop the pick. Up - free at last.

Go North - you see a chateau ahead, North, West, up, East - one of



the boards is creaky and unround - East twice. You see the monster in the room. He tells you he will kill you now. West, jump West - you jump over the unround board. The monster follows but his weight breaks it and he falls. West, down, East. The monster is aiming; aim the gun at the monster and fire it. He dies and a diary bearing the name Prometheus falls from his pocket - this is the password to Part II. End of Part II.

SOUND OFF

I have had a letter from Lee Hodgson, a member of *Essential Myth* - the team responsible for *CGL's Book of the Dead*.

I am writing as a member of *The Promethean Myth*, authors of *Book of the Dead*. I received a reader's letter concerning our game, and I would like to clear our name in this matter.

Firstly, our conversion was a carbon copy of the Spectrum original, or later until *CGL* got hold of it. When we saw our first review - in your magazine I think - we were astonished to see that the game now starts in the wrong market, thus ruining the whole adventure - and the reviews! We assumed *CGL* would notice, but sent another copy so that it could be remastered.

I feel very sorry for people who

paid a lot of money for the game to get no enjoyment out of it. I would suggest that owners of bugged copies return them to *CGL* for a properly converted version, or their money back. This may cost us some royalties, but we hate to see people losing out.

What makes it worse is that adventure players are not likely to buy any more games carrying our name, even though we are not at fault.

Thank you for writing, Lee. It's nice to get some feedback from the other side of the industry, and I for one would not hesitate to buy a game written by your team. *CGL* says it is replacing bugged copies, but I have yet to receive the new version I was promised.

Return to Doom
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A mammoth game with matching puzzles

Return to Doom sees the awesome return of Peter Kilbreath, author of some of the most fantastically intricate adventures ever seen on the BBC Micro.

An earlier offering - Countdown to Doom - concerned the crash-landing of your spaceship on a planet with a highly convoluted atmosphere. Being the only person ever to have escaped, you are the last one to answer a distress call picked up from a ship which has also crashed on the planet.

The fact that one of the passengers is the Ambassador of Regine adds to the urgency, and you head off at full speed.

You land in a jungle clearing. Initial explorations reveal problems in all directions, though most are not bearings. To the West is an object essential to the completion of your mission, and a means to precipitate those matters into a hazardous game involves an owl - or is it a cat? - solution.

Now you must briefly head East before returning to see what lies to the south. The door should prove to be less of a problem if you realise that the muck has been made by an intelligent being. Entering the

shaft and venturing down without first realising the significance of the air draught is likely to prove dangerous. Having solved the problem, you are in a position to obtain a prescription which will lighten your burden later.

Now you are ready to proceed to the main body of the game, which consists of your ship. Doubtless, like me, you will foolishly fall into the animal trap, but there is a way past or rather, over it.

Climbing upwards will see you attempting to get a heavy object. If you are observing the location descriptions carefully, on your descent you may be able to find a use for it enabling you to jump to a new conclusion.

After this, you are faced with the cliff mentioned in the game's introduction. The object needed to gain access to the cliff was found along your route, though that rock may have evaporated it.

You will find that you are captured as soon as you pass into the cliff. If not, you have missed a vital part of the game and should restart from the beginning.

Time is of the essence here, and only one escape route is allowed. If

your equipment is stolen at you enter you should try to think what you could use before it is taken.

All the information and objects necessary to progress after your captors have left is available - if you know how to use it.

Having escaped from the dungeon and regained your possessions, you are in a position to tackle one of the most awkward situations I have seen from this author.

I'm not going to give any more of the game away, though you may be surprised to learn that all the items will only net you 10-out of 100 - and those are awarded for entering the shaft.

There are a lot of sudden death situations, and exhaustive saving of your position is highly recommended. If this seems off putting, let me clarify by saying that the situations are well advertised in advance - there simply don't seem to be any alternatives at the time!

To give you an example, after successfully passing some Allies, who attack if they can see you, and being followed by little creatures who steal any possessions dropped to map a maze - which incidentally, isn't - I found the only way to escape

from a swamp was by entering an alternate world.

I was then told I didn't have a further requisite object, and was promptly dumped back in a location I couldn't escape from. Luckily, I had a saved game position to return to.

By accident - mine was a pre-production copy without documentation - I discovered a built-in Help facility which answers most of the problems you encounter. By this time I was nearly at the end of the game, but I can see this facility being put to much use.

I have a few minor niggles. It would be nice if the display was in Mode 2 - an 80 column screen looks much more professional. And the price is a touch high. I seem to remember previous games from this author costing £3 less.

Finally, I lament the lack of an Explorer command. I often use this to repeat information given about an object - especially when it may have had it for a while - and to have to drop the object and look seems rather unnecessary. Perhaps Peter will consider this aspect for his next adventure.

Unless something remarkable happens in the next couple of months, this undoubtedly is the best-only adventure of the year. It is amazingly intricate and carefully constructed. Unfortunately, the size of the game - 98k including the built-in Help facility - precludes CPC64 owners without a disc drive from playing it.

Grantell



Presented by R.A.

My title was preproduction. Hope fully, it will come in a nice instead of an awful plastic wrap.

Atmosphere 85%

Peter Kilbreath has a knack for placing you in a highly believable situation.

Excitement factor 100%

None!

Value for money 85%

Based on the size, intricacy and playability - I would be even happier if it were cheaper.

Overall 90%

A superb adventure which will hopefully make Peter Kilbreath as well known on the Amiga scene as he is on the Spectrum one. Highly recommended.

Finding the right words

PHIL LAWSON surveys three popular word processors



**TASWORD
464**

The Word Processor

**A
Tasman Software Program
for the
AMSTRAD CPC 464**

**BRUNWORD
6128**

Complete Wordprocessor
with
BrusSpeed & DataFile

Brunning  Software

THERE can't be many people who don't need a word processor, and next to disc drives, printers are the most popular add-ons for the CPC. Obvious word processor users are writers, businessmen, secretaries and students, but even the average home enthusiast could often benefit from a professional appearance to a letter or CV.

When choosing a package many people head straight for their local dealer in the hope he'll steer them in the right direction. This can lead to all sorts of problems if he's just a box shifter and doesn't really know the software.

I've lost count of the times I've gone into a computer store to be confronted by a clueless wonderer who doesn't know his interface from his office. The chances are you'll walk out obtaining the most expensive package he's got.

As a relative newcomer to the CPC I thought it'd be interesting to give you my impressions of three popular word processing packages.

The aim is to give those of you who are thinking of taking the plunge or upgrading, an idea of the sorts of things to look for, some of the advantages and capabilities of a word processor, and my rating of the programs on test.

I've chosen to look at Protect, Taword and Brunword because they're pitched at a similar price level and seem to be chasing pretty much the same market, albeit with different approaches.

I haven't included the world famous Msi Office II wordprocessor in this comparison because it isn't a

Making the mail

Mail merging is a technique of combining text from one file with another during printing. The most popular use of this is to read names and addresses and place them into a standard letter. Taword 6126 and Brunword have this facility as standard, whereas Protect requires either Postmerge or Postmerge Plus to be present.

standalone program. At the price Msi is good, but it isn't aimed at or competing with the packages I'm looking at here.

The essential thing to find out about any piece of software before buying it is, does it perform all the functions you require?

Before making with the cheque book, draw up a list of requirements. But be careful, if you take your specification to extremes you will be left with a choice of only a few mega-products with price tags to match.

The idea is to cover the essentials, plus a bit to cater for your needs as you become more sophisticated, without going for something several times better than the job merits.

For instance, many writers are paid by the number of words they write, so for them a word count facility is a must. It, on the other hand, you're just writing the odd letter it isn't as important. The moral is that although one word processor may have more features than another, that doesn't necessarily make it the best one for you.

How do they compare?

Friendliness is very important. It's no good having powerful software if you need a brain the size of a planet to understand and use it. This is where Taword lets itself down, with its many menus and easily-forgotten control sequences. It can take weeks before you start to feel at home. Remembering that Control+C means delete text, and not copy text, can give rise to a great deal of frustration and embarrassment - I speak from bitter experience.

There are many other such options, all with none too obvious controls. Pressing Escape will reveal a list, but it's annoying that the designers didn't opt for more meaningful code sequences.

Brunword and Protect are a lot better in this respect, with Protect coming out on top for the sheer number of commands available and the intuitive way they have been set

Spelling it out

Only Brunword includes a spelling checker as standard, but extra programs are available for the others. Each comes complete with a dictionary which can be expanded to include more words.

The only problem with spell checkers is that you can rely on them too much. They fall down when they encounter a word which is misspelt in such a way as to make another valid word. For instance the fifth word in this sentence.

Brunword's checker is memory resident, and therefore very fast. Protect is quick, but its companion Brunspell is slow. However, both have Taword's looking gemmatic - it's awfully slow, and I would not like to have to use it regularly.

The chances are that several of the words in the text will not be recognised, either because you spell them wrongly or they haven't been included in the dictionary. Every time this happens the checker allows you to add the word to the dictionary so if you report it as unknown in the future. After doing this with three or four documents, most of your everyday words should be taken care of.

no. By intuitive I mean that often you can correctly guess a command because Arner has gone for the obvious option.

However, not everyone can remember all the controls, no matter how well thought out they are, so some form of Help function is a must. Happily all three word processors have one.

It's very noticeable that Taword is much slower in overall operation than either Protect or Brunword, and if you're doing a lot of writing this could get in-the-way. For non-professional use, and if you haven't experienced anything better, it's livable with.

I mentioned word counting earlier, and each of the three packages includes this facility. Only Protect allows words in a selected paragraph or block to be counted, and while most people wouldn't need it, some will undoubtedly find this most welcome.

Moving text from one part of a file to another is another useful function of a word processor, and all three perform this in the same way. Using two markers, the text is defined as a block, which can then be moved, copied or deleted.

Spelling files is a big advantage that WPs have over the humble typewriter. The ability to load your text, make a

| Product | Disc | Tape | Price | Supplier |
|-----------------------------|-------|-------|-------|---|
| Protect 600 | 26.95 | 18.95 | 29.95 | Arner, Protect House, Wainman Road, Peterborough PE2 6BU 0733 238611 |
| Protect 6126 | 26.95 | | | |
| Protect | 24.95 | | 34.95 | |
| Postmerge Postmerge Plus | 26.95 | | 34.95 | |
| Taword 600 | 24.95 | 19.95 | | Tearman Software, Springfield House, Hyde Terrace, Leeds LS2 3LN 0532 528301 |
| Taword 6126 | 24.95 | | | |
| Taw-Spell | 18.95 | | | |
| Brunword | 30.95 | 24.95 | | Burning Software, 34 Heston Road, Chesham, Bucks CM1 5JF 0545 52364 |

Product information

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4 From Page 43

few iterations, and print it out on save hours of typing. With a typewriter many authors type their work twice — once as a draft on which they make corrections, and then a final copy. Amazingly, many professionals still work like this.

With this in mind, it's amazing that the CPC484 version of Tassword wouldn't work with a disc drive attached, particularly as the program has a facility to save a customized backup copy of itself. You can't save the program to disc, so you're stuck with tape unless you upgrade to Tassword 494D. This makes clever use of overlays to fit into the available memory. Conversely, you may prefer to use the CPC6128 version which caters for 64k text files, but you'll also need the dk7ronics ram expansion.

The tape versions of Protect and Brunword allow you to change between disc and tape for storing files. This is a very welcome feature for CPC484 owners if they intend buying a disc drive. Although neither program has a built-in self save facility, presumably they can be transferred to disc fairly easily, though I didn't try it. Upgrading to the disc version of a program — or vice in the case of Protect — is something the supplier do cater for, usually with a trade-in deal.

Moving the cursor around the text is nearly the same on each word processor. All three use the four arrow keys, which can be combined with Shift and Control to move greater distances. Brunword is often criticised for the lack of speed of its cursor, and moving it around the document is very slow. When typing it managed to keep up with the quite well, but if anyone uses more than their fingers, they will find it starts to lag behind.

Reading the manual

The documentation is a year's only way of learning to drive a program, and if you're newish to computers you'll be finding it bewildering. The clue is on the manual's cover to make it comprehensive, readable and crystal clear.

Paraphrasing as reference I'd rate Protect first in this area, but both Tassword and Brunword include tutorial files, complete with spelling mistakes and differing page layouts. Protect doesn't have much in the way of examples, which leaves you to explore on your own.

Another factor to consider is the amount of text the program can hold in memory. With Protect this is about 25k for the rom version, or 23k on tape or disc. If you have Proimage Plus, you Protect and a 128k machine, you have the facility to swap between two text files, one being held in the extra bank of memory.

Tape Tassword gives you about 14.5k of text, but with Tassword 6128 you can have a 64k text file. Ordinary Tassword 494D on disc gives you about 22k. All versions of Brunword have a capacity of 38k. To put that in context, this article is about 14k.

The printed word

With the dozens of printers available it's vital to find a word processor capable of working with the one you've got. Each package has the ability to change printer control codes, which should enable the majority of printers to be used.

The file of redefined printer codes is known as a printer driver, and can be

saved allowing you to swap and change printers without too much trouble. Your printer manual will describe the codes needed to set up this file.

Selecting the number of copies and the start and end positions for printing are two other advantages over typewriters, and which only the most basic packages can afford to omit.

Not everyone will want the layout of their printed text to be the same, and so a method of altering it is a must. Left and right margins control the start and end columns for each line, which can be changed very easily. Other options include form feeds, page length and continuous/single sheet paper.

Changing the print style is fairly standard, with each product allowing the usual underline, italic, bold, subscript and superscript. Tassword and Protect also allow foreign character sets, such as Danish, French and German to be used. Brunword, on the other hand, has a set of ten characters, covering the more commonly used Greek symbols, which can be redefined if required.

Each word processor allows for what are known as headers and footers, which allow messages to be printed at the top and bottom of each page, such as a title and page number. With Protect you can have different messages for even and odd-numbered pages.

The crunch

Which comes out top? After using each one for some time I found that all three were perfectly serviceable, and I'm not going to say about a particular package, "Don't buy this" because many people will be perfectly happy with it.

However, all word processors are not created equal, and for my money first prize goes to Protect, second to Brunword and narrowly beaten into third place is Tassword. These are only my views and reflect my needs, so you may well disagree.

Either way, the points covered here should give you an idea of what you're looking for in a word processor, and hopefully make the choice between the big three a little clearer. Having said that, there are packages like CPM Plus Protect, WordStar and Micropro which I haven't had room to look at. These are CPM based, and Protect is particular in worth investigating if your own needs are particularly demanding.

No doubt those of you already word processing have reasons for favouring your choice of program, so why not write to let us know? If we get enough good letters on the subject, we will publish an interesting selection separate from the real pages.

| | Protect | Tassword | Brunword |
|---|---------|----------|----------|
| Rom, Disc or Cassette | All | D,C | D,C |
| Operating system access | ● | | ● |
| Save file to memory | | | ● |
| Online help | ● | ● | ● |
| Spell checker built-in | ● | ● | ● |
| Word count | ● | ● | ● |
| Auto word wrapping | ● | ● | ● |
| File merging | ● | ● | ● |
| Microcopy (soft) text | ● | ● | ● |
| Delete block text | ● | ● | ● |
| Style change | ● | ● | ● |
| Changing the character set | ● | ● | ● |
| Print selected block | ● | | ● |
| Print multiple copies | ● | ● | ● |
| Right (justify) on / off | ● | ● | ● |
| Page and markers | ● | ● | ● |
| Search and replace | ● | ● | ● |
| Microscopic control codes and sequences | ● | | ● |
| Security codes | | | ● |

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The MicroLink Communications Pack with its powerful modem and CPC lead is designed to allow you to go online with the minimum of effort. All you have to provide is a phone and a CPC interface. (If you haven't got one already we offer an interface at a very special price and with a very special extra — it has its own coming software already built in!)

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Please debit my Access/Plus card number: Expiry date:

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QUEEN OF CHEATS

Hipness and monettes. I do a bit of southsiding in my spare time... There ain't been much else to do up here in the long dark winter... and according to the cheats I have prayed before me, it looks like we're going to be down to two pages again this month.

Curse! Gareth Marshall, that infelicitous page grabber you said didn't work, so I'm not printing it. Owing to lack of space they're left's cheats, so unless he pulls himself together it shouldn't happen again.

There's been plenty of feedback on the tips versus

pages controversy. Most people seem to want pages, but it's not unanimous, so I'll try to include more tips to keep 'em happy.

I noticed plenty more clues in the latest batch of campus entries. Some people still think we don't notice when five photocopies all have the same handwriting.

As a matter of fact somebody gave through looking for them, and sending five entries gives you no chance of winning because they all end up in the circular file bin! If you just send one, at least you're in the running.



ATV Simulator

(Code Masters)

With John Taylor's ATV Sim you can play both or single players can continue when they've reached the time limit. Unless I say different, to run a tape game, put your revoound game tape in the deck, and press Play, and type RUN.

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| 01 | ATV Simulator |
| 02 | By John Taylor |
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Clever and Smart

(Magic Bytes/Kristinaoff)

Deep West from Galford in London has proved himself both clever and smart by coming up with some hints for the game of the same name.

You may acquire extra money by taking Mr L's stamp collection to the post office where some kind gentleman will pay you £500.

When betting on the snails it is almost a sure thing to back the third one.

To be able to purchase items from the market, buy an apron from the disguised stall. When you are in the market buy either tulips or a cactus to take to Amelia. You are then able to buy other electrical goods from her.

Also buy some fruit, as this cuts down your hunger, but don't eat too much or you'll end up being sick.

In some buildings you

may only be able to interact with other people at certain times of the day. The times are disclosed in The Orines.

To be able to buy items such as shoguns, drills, guns and so on, get a workman's uniform and enter the buildings which only allow tradesmen.

If you wear a Japanese costume you will be able to buy food very cheaply.

If you find you are being pursued by a motor car, keep withdrawing in and out of the street until you find a policeman. Then, as soon as the car enters the screen, walk up to him. The car will disappear.

You can score extra points by going into the sewers and equipping the cars and mice.

Don't bother chasing bomb throwers, as there is



nothing you can do when you've trapped them.

It isn't really necessary to buy equipment to listen in on conversations, as all the relevant information is displayed when you go to a public phone box. All the equipment does is be more specific. For instance in the phone box you will be told, "Bombs bombs throwers", whereas tapping the phone will bring "Bomb thrower is travelling East".

Finally, here's an infinite lives poke.

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Inside Outing

(The Edge)

From Peter Bayley of Southampton comes the location of 10 out of the 12 diamonds. Has anybody found the other two?

● Inside a cupboard in the kitchen on the ground floor. A block of ice can also be found here.

● Drop the block of ice in the fire on the ground floor, pull the hearth away and search inside the chimney breast.

● Behind a painting on the ground floor. This room is the one with a row of tables which can be pushed underneath the painting.

● Hiding on the back of a catenary in the room that's hidden behind the wall. It is off a hallway not easy to get to. You need to use the exit in the ground floor room divided by a row of book cases. This isn't far from the last diamond.

● At the back of the room with a lot of tables blocking entrances.

● In between two sets of book cases. To get this one you must push small objects such as candles between the cases to force the diamonds out.

● In the room with a single grandfather clock, cherry glass and mouse near the bedroom. Before collecting this drop two large objects into the room to create you can look out.



● In the centre of the room with an oversized desk. Drop two tall objects into the centre to ensure you can climb out.

● Behind the book cases in the library.

● Behind another book case in a room that's concealed behind a fire. You will need the block of ice.



Survivors

(Atlantis)

If you're having trouble surviving, this page chart from Ben Lawrence of Alderson allows you to pick the start level, the number of lives, and have infinite lives and health. The program prompts you for your choices.

- 10 1 Survivors B5
- 11 Ben Lawrence
- 12 Alderson
- 13 10000, 10000 248
- 14 00000 00000
- 15 000 000000 0
- 16 000 100 10 10000 10
- 17 0001000 1000000 0
- 18 000 000000 1000
- 19 0000000000 10000
- 20 000000000 10000
- 21 100 100 10 10 1000 0
- 22 100 1000000
- 23 0000 10 10 100000 0
- 24 0000 00000 1000 1000
- 25 000 00 10
- 26 0000000 00000
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- 29 000000 0 100 0 0
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- 51 0000 100000 1000
- 52 00000 00000
- 53 0000 00000

Driller

(Creative)

We had a poke for the tape version of Driller in July.

Now here's one from Nigel Brady for the disc version which allows you to start in any area.

- 1 0-1111 0-1111
- 2 0-1111 0000
- 3 0-1111 0000000000
- 4 0-1111 0000000000 100
- 5 0-1111 0000000000 100
- 6 0-1111 0000000000 100
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All contributions for Queen of Clubs must be original material and accompanied by this form.

I certify that the attached submission is all my own work and has not been submitted to any other publication.

Signed _____
 Name _____
 Address _____
 Post code _____

If you do not want to cut the page, you can copy out this form on a separate sheet of paper.

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Ninja Master - Rise among the ranks of the Ninja in the ultimate challenge in human endurance.

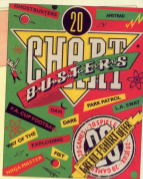
Raspouti - Quell the source of the spirit Raspouti, master of ultimate evil.

Slits and Liss - Save Shimore Castle from being bought by the Americans and shipped over to the U.S.A.

Smash - Smash the ball against the mid-space fields to complete as many break-up zones as possible.

Tony - A unique game of skill and strategy.

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Cassette
only

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Smash



L.A. Beat



Formula 1 Simulator



Brian Jenkins' Superstar Challenge

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Educational Robots

As well as being great fun, these two robots are the ideal way for you and your children to learn about programming. Commands such as, "move forward", "turn" and "dance" are entered in sequence – just as you would write a program – and when you press the GO key, off the robot goes. But you don't need to program them, you can play with them interactively by selecting one action at a time – Computrobot II has a remote control, so you can steer him all round the room from your armchair.

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FRIENDLY ROBOT

Friendly Robot can move forwards and backwards, turn, dance, run round in circles, flash his eye and play music. Up to 18 of these actions can be selected by pressing one of seven buttons, and pressing the eighth sets him in action.

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£14.95
 YOU SAVE £5



COMPUTROBOT II

Friendly Robot's big brother, Computrobot II, can dance, play music and games, draw and write, teach basic programming skills and remember up to 64 commands.

He is controlled using an infra-red remote control and comes with headlights, silver bars, a voice box, eyes, a custom name plate, a crayon holder, strong mechanical arms and a function light which flashes after each key entry.

He has a demo mode too. If you select this, he will show you all the tricks he can do and, if you give him a crayon, he will even write for you!

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OUR PRICE
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 YOU SAVE £14

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COVERS

GET SMART!

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COVERS

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Make more of your designs

Two useful utilities for owners of *Micro Design and Advanced Art Studio*

Advanced Art Studio Screen Expander by Simon Bond

PROGRAM 1 is for those of you with Rainbird's Advanced Art Studio. It displays the saved screens from AAS, even those which have been compressed. This means that you can compress your screens to save room on your discs, and still use them outside the AAS environment.

Palette files - .pal - are read (if present) to set up the correct mode, ink values and flash rate. It is always best to save a .pal file with your screens even if you don't change the ink values because the AAS default colours are different to Basic's. Lack of a .pal file can therefore result in the screen looking odd.

The only real difference between my palette display routine and the one in AAS is the way flashing colours are handled. AAS allows a sequence of 12 colours for each ink, but Basic does not support this. My version only reads the first and seventh in the sequence to allow normal two-ink flashing.

Although the utility is in machine code, it must be used in conjunction with some Basic which can easily be incorporated into a larger program. The important lines are 80, which lowers MEMM and loads the machine code, line 90, which pokes the filename into memory, line 100, which calls the machine code, and line 110 which reads the exit conditions. If location 20415 holds 255, the screen was not displayed due to a loading error. If it holds zero, the screen was drawn successfully.

The maximum length of a Basic program is restricted to about 18K due to the machine code located at 20000. It isn't really possible to locate it any higher as the screens (which are loaded above the machine code) would run out of the memory pool, probably resulting in a crash.

No matter how good a program is, there is always room for improvement. This is especially true for serious software because it caters for the needs of users who all want something slightly different. Inevitably compromises are made, and many people are left thinking, "It's good, but if only they'd..." To go some way towards filling the gaps, here are two enhancements for popular programs.

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Micro Design Print Utility by Richard Giles

If you have Simon Software's page design program - Micro Design - and own a printer such as the Shimizu CP480, you will be suffering from printouts which are compressed vertically.

With my utility - Program 2 - you can now print pages to the full width of the paper, and much quicker than the standard routine - about eight minutes for an A4 sheet. The speed

increase is achieved by using seven pins on the printhead, and the extra width is gained by printing every third pixel twice. In practice, this is hardly noticeable.

To use the program save your Micro Design page as upright A4, and as a full screen size. Now run the utility and when prompted, enter the filename. If the message Window wrong size appears, it is because you did not save the picture at full size. Assuming all goes to plan and the printer starts up, if you need to abort hold down Escape until the head reaches the end of the line.

4 From Page 63

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10 GOSUB Advanced Art Studio
20 GOSUB Screen Loader
30 GOSUB Do Page Head
40 GOSUB Do CMC Loading
50 GOSUB .....
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|-----|------|-----|-------|------|-------|------|-------|------|-------|------|-------|
| 10 | 2490 | 100 | 4300 | 100 | 5000 | 200 | 8000 | 300 | 9100 | 400 | 10000 |
| 20 | 2500 | 110 | 5200 | 200 | 6000 | 300 | 7000 | 400 | 8000 | 500 | 9000 |
| 30 | 2600 | 120 | 6100 | 300 | 7000 | 400 | 8000 | 500 | 9000 | 600 | 10000 |
| 40 | 2700 | 130 | 7000 | 400 | 8000 | 500 | 9000 | 600 | 10000 | 700 | 11000 |
| 50 | 2800 | 140 | 7900 | 500 | 9000 | 600 | 10000 | 700 | 11000 | 800 | 12000 |
| 60 | 2900 | 150 | 8800 | 600 | 10000 | 700 | 11000 | 800 | 12000 | 900 | 13000 |
| 70 | 3000 | 160 | 9700 | 700 | 11000 | 800 | 12000 | 900 | 13000 | 1000 | 14000 |
| 80 | 3100 | 170 | 10600 | 800 | 12000 | 900 | 13000 | 1000 | 14000 | 1100 | 15000 |
| 90 | 3200 | 180 | 11500 | 900 | 13000 | 1000 | 14000 | 1100 | 15000 | 1200 | 16000 |
| 100 | 3300 | 190 | 12400 | 1000 | 14000 | 1100 | 15000 | 1200 | 16000 | 1300 | 17000 |

Program 1: More Design page printer



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| 20 | 14100 | 70 | 4100 | 110 | 11100 | 210 | 12100 | 310 | 13100 | 410 | 14100 |
| 30 | 14200 | 80 | 4200 | 120 | 11200 | 220 | 12200 | 320 | 13200 | 420 | 14200 |
| 40 | 14300 | 90 | 4300 | 130 | 11300 | 230 | 12300 | 330 | 13300 | 430 | 14300 |
| 50 | 14400 | 100 | 4400 | 140 | 11400 | 240 | 12400 | 340 | 13400 | 440 | 14400 |
| 60 | 14500 | 110 | 4500 | 150 | 11500 | 250 | 12500 | 350 | 13500 | 450 | 14500 |
| 70 | 14600 | 120 | 4600 | 160 | 11600 | 260 | 12600 | 360 | 13600 | 460 | 14600 |
| 80 | 14700 | 130 | 4700 | 170 | 11700 | 270 | 12700 | 370 | 13700 | 470 | 14700 |
| 90 | 14800 | 140 | 4800 | 180 | 11800 | 280 | 12800 | 380 | 13800 | 480 | 14800 |
| 100 | 14900 | 150 | 4900 | 190 | 11900 | 290 | 12900 | 390 | 13900 | 490 | 14900 |
| 110 | 15000 | 160 | 5000 | 200 | 12000 | 300 | 13000 | 400 | 14000 | 500 | 15000 |

Program 2: Advanced Art Studio screen display

On line to fantasy

Neil Reynolds on the story behind Shades, the fast-growing multi-user adventure

DEEP in the wooded wilds of Southern England, far beyond the Stockbroker Belt where so many have ever ventured, lives a mysterious being who has created a strange and mystical land. He is the Arch Wizard Hazel – adopting the name of Neil Newell for everyday use – and the land is *Shades*.

No longer a figment of his imagination, *Shades* has been made accessible to any mass mortal who has the use of a talking bone, a modem and who is enrolled in the fabled society of MicroLink/Telecom Gold and Microsoft.

The Arch Wizard first became interested in multi-user adventures when he encountered the original multi-user game MUD running on a mainframe at Essex University.

However, he soon felt that the game could be improved in many areas, and what started as a hobby was soon taking up all his time. So it was that the Land of *Shades* came into being and mid-mannered Neil Newell became Hazel, Arch Wizard.

Shades is a vast sprawling landscape where lost souls, knights, wolves, witches and wizards prowl looking for treasure or trouble – or both. You create your own personality within the game, travelling through the mysterious kingdom, forging alliances and fighting battles in your quest for treasure.

You strive to work your way through 13 clans of innocents, Scooplayers, Necromancers and Warlocks until you attain the ultimate rank of Wizard or Witch – depending on your own personal inclination.

In this true multi-user game, other travellers you meet in *Shades* may be computer generated, but are more likely to be incarnations attached to a telephone line somewhere in the country. The character you are talking with could be your next door neighbour or a lighthouse keeper in the Orkneys – players have been known to log on from all over Europe and as far away as New Zealand.

There is no denying the party atmosphere of *Shades*, even those who are not accomplished adventurers can enjoy the game, talking to other players, acting out fantasies or just getting used to the game at their own pace. Help can be asked of fellow



Neil Newell, Arch Wizard

travellers, but then you are never sure whether their advice can be relied upon...

There is much on offer to serious adventurers too with brain-cruffling problems to solve, a whole babble of bossies and nasty characters to deal with and permutations to achieve – by fair means or foul.

So the adventure does not become too crowded and all players have a good opportunity at treasure-grabbing. Up to 16 independent games can be running at one time and

you can choose which of them to join.

You are also told who is playing in which game, so that if you have an especially good relationship with another player – or a vendetta to pursue – you can join it, if there's room.

Starting out is made easy for the novice by a special introduction area. This leads you into the game with a full information centre about the Land of *Shades*. Progressing through this you eventually arrive in the Land proper and your quest begins.

Shades currently has a user base of more than 6,000 players. Of these only 60 have achieved the ultimate rank of Wizard – given special powers and privileges so they can directly affect the progress of the game.

Indeed, even the all-powerful Hazel himself needs the gifts of the Land (sometimes invisibly) and his wrath is said to be terrible if roused by those with ideas above their station.

The fantasy is constantly under development and new locations are currently being designed and built into the game as the Arch Wizard concocts ever more fiendish devices to ensnare the unwary travellers in the Land of *Shades*.

Shades is available on
MicroLink/Telecom Gold – key "Shades"
Microsoft/Proshare – key "Shades"

Shades (Hazel)

You have arrived in a dark and gloomy tunnel here. You could walk, but it is the darkness above you. The tunnel, very real and very long, leads far to the west. In the east, the light can be seen filtering down.

Time the toughest adventures in playing Shade!
While the master leader is playing Shade!

While the master leader is playing Shade!
While the master leader is playing Shade!

Just the master more adventures in playing Shade!
The best playing the flowers in.

While the master leader has a sword and flowers out.
The best playing in, making a big one and shoulder.

While the master leader and the first start to fight!
The best has just moved west.

Why not a best 000000 followed by a terrible victory!

*Adventuring through the Land of Shades:
Keying 0002 shows the players currently in the game*

Pointing the way

How do I get the symbol in lines 240 and 260 of your animated 3D graphics program published in the August issue? It looks like a streamer. — Michael White, Guildford.

■ The top hat symbol is how many printers show the up arrow on the E key. When we changed over to topset listings we managed to start showing this as a real arrow.

However, for technical reasons we've had to go back to the streamer for the moment, though I'm looking into the possibility of having it changed back.

Unknown commands

I AM having trouble with my CPC464. Whenever I press the @ and Shift keys together I get a ?. This is sometimes used in your type-in listings, but whenever I use it I get the error Unknown command. Please help. — Matthew Chisham (age 12), Totnes.

■ The @ symbol tells the CPC that the name following it is an extra command. These extra commands are not built into Basic, but are added by means of some machine code. In the case of our listings, the machine code is part of the program — usually those lines of

COPY near the end.

If you run the program before it is completely typed in, the new commands will not be installed. You have to enter the full listing. If you have finished typing it in, and the error still occurs, you have made one or more typing mistakes. The way to track these down is with September's checksum listing.

Restoring dead discs

I AM having problems with a number of my discs. Every time I load them I get Drive A: Read fail, Retry, ignore or Cancel??. Is there any way these discs can be restored to normal? Or can you tell me how to stop this happening?

Another thing I can't understand is how to switch from Basic to machine code on my CPC6128. — Philip Carter (Age 18), Colchester.

■ I assume you have formatted the discs before using them. If not, there are instructions in the manual. All new discs must be prepared in this way.

If your problem is with discs which have previously been working, there are three possible reasons. Firstly, you could be using the flimsy ultra-cheap discs which have been on sale recently. These are often blue or brown in colour, and the quality is poor. Many people have had problems with these.

Secondly, there could be a

fault with your disc drive, in which case it needs to be sent for repair. Lastly, you could be removing/inserting the disc while the CPC is trying to access it, or perhaps turning the power off during a read or write operation.

Whatever the reason, the files on discs corrupted in this way are usually lost. Sometimes you can patch them up with a disc sector editor, but this is not a job for the novice.

Probably the best thing to do is reformat the discs, and keep backup copies of all important files until you find where the problem is.

You pass control to machine code from Basic with CALL, etc, where addr is the address the machine code lives at. Of course, you have to write some machine code to call, or install some written by somebody else.

Mutual help column?

I WOULD like to get in touch with CPC6128 users of Microgen and Spectrum if for mutual advice. Would you consider a column for people wanting to offering advice on a particular problem?

What has happened to DR-Tronic? I sent a letter which has some bad marks "blown away". Also, their regular monthly adverts have stopped. Even the phone gives the unbelievable tone. I think we should be told where DR-Tronic has gone.

I have a CPC6128 with silicon disc attached. Some software such as Outjob won't run until you exit, at which point the machine locks up and I have to switch off and on again. Is there a less drastic way of resetting the machine?

The silicon disc also interferes with Project's replace command — again a lock up. Any solution? Does the problem exist with Project or rom?

There was a very useful tip in the February issue which changed the colour of the border in Project when caps lock is on. Can you suggest a way to get a

This is the part of the magazine where you can share your experiences with other readers, air your views, and ask or answer questions.

Tell us what you think and don't pull any punches! This magazine is produced for you, the readers, and we rely on your feedback.

As an added incentive, remember that ETN goes to the writers of the most interesting and informative contributions. Every letter is read with interest, but because of the large number we receive every month it is not usually possible to send a personal reply.

No doubt you'll have noticed some changes in your favourite magazine recently. Tell us what you think of it so far, and what further improvements you'd like to see.

The address to write to is:

Pointing, CPC Computing, Europe House, Ailington Park, Ailington, Newcastle NE10 4NP.



lighter colour as both appear similar on a colour monitor? — D. TAYLOR, Oxford.

● DeTronics was bought out by Ram Electronics, Units 8/15/16, Redfields Industrial Park, Redfield Lane, Church Crookham, Hampshire GU14 0RE.

I might consider a contact column depending on how many people want it, and the amount of time it would take up — again is a practical problem. For the moment I suggest those wanting to see or take part in such a feature write in, and I'll make a decision based on the response.

I don't have a functioning silicon disc at the moment, so can't answer your questions. It sounds as though the silicon disc software is clashing with Protect and OldJob — perhaps another reader has a solution to this?

February's Protect case lock indicator can easily be modified. In line 80, starting four magazine lines up from the bottom is a sequence 1,2,0. A bit further on is 1,1,1. Replace the two zeros with the desired value of the first colour — for instance 1,2,2 for pale blue. In 1,1,1 change the last pair of ones in a similar way. For example 1,2,2 for red.

You will have to delete line 48 to avoid the now incorrect checksum.



Prize letter

More screen saving

AFTER reading with interest the two recent letters — and your replies — about saving screens, I thought the ability to save screens with their colours, mode and border colours in the smallest memory was rather handy.

My MultiFace II can do this, but the loading time is just as serious — usually slow — so I decided to speed things up. The firmware routine CAS_WRITE was the ideal routine. It allows a headerless file to be stored on tape as a continuous block. CAS_READ can be used to restore the file to its original place in memory.

I have enclosed the listing in the August issue to provide full details.



The first two copy the screen down to 80000 and back up to 80000 respectively.

SAVEPIC copies the visible screen (which is at 80000) down to 8A000

along with the screen colour, mode and border data. It then saves the screen to tape, but as it is being saved it is one char'd rather than JK blocks there is a useful time saving.

LOADPIC will reverse the process — load the file from tape to 8A000, restore the border, mode and mode, and copy the screen screen up to 80000 where it belonged.

If you have a disc drive,

```
10 ' Restored picture save
20 ' 7000 0007 - Jan Pointe
30 ' 000001 1111111111
40 ' 700 00044800 TO 0005 1
50 ' 10
60 ' 0004 10000000
70 ' 700 70 10 10
80 ' 0000 10 0000 10000 10
90 ' 1111
100 ' 000 0001 10000000
110 ' 0001
120 ' 000 000 10000000
130 ' 10000 10000000
140 ' 10000 1000
150 ' 000 10000000 1000 0000
160 '
170 ' 000 00000000 10000000
180 ' 00000000
190 ' 0000 00000000 10000000
200 ' 0000 0000
```

you don't need a CASPIC because the routine selects tape automatically. Even more speed can be gained by increasing the load rate for the tape deck. With the Microvare Programmer's Toolkit unit 18A00.2 will set the load rate to 3000 compared with 2000 for SPEED 19972.

I use this program to keep pictures on tape and copy them to disc when required. — Iain Fennie, Gateshead.

```
100 ' 00000000
110 ' 000 00000000 00000000
120 ' 00000000
130 ' 000 000 10000000
140 ' 00000000
150 ' 000 000 10000000
160 ' 00000000
170 ' 000 00000000 10000000
180 ' 10000000
190 ' 000 10000000 10000000
200 ' 10000000
210 ' 000 10000000 10000000
220 ' 10000000
230 ' 000 10000000 10000000
240 ' 10000000 10000000
250 ' 00000000
```

Joining the plotters

CAN you or anyone out there help me with programs to use with the school Tandy GCP-110 colour graphics plotter?

As the content I have two programs, one taken from the manual, the other from a magazine. I do not know enough about programming to write my own, but I have had some success with altering other programs for our CPC4120, so perhaps I could adapt other programs too.

Anything will do — graphs, charts, designs and so on. Reasonable costs will, of course, be accepted. — D. SMYTH, Goswold, Chel-

worth, Cotswolds, Swindon, Wilts SN6 6HL.

● The only commercial plotter-compatible program which comes to mind is Fantasy, an art program by Tessera Island Software, 14 Arthur St., Amersham, Bedfordshire MK46 2DD.

Help for beginners

I STARTED buying this magazine in May 1987 after getting my CPC400 for Christmas. I can still only do the simplest of basic programming.

I have borrowed books from the library, but have been unable to understand them as they don't tell me what I'm supposed to be doing or what results I

would get.

Wouldn't it be a good idea for you to publish a series of programs for beginners explaining how they work?

I have another problem. Upon completing a game or buying one and not liking it, I find that these games are left to one side gathering dust. What can I do with them? It's illegal to ask them, and throwing them away is a bit of a waste, I can't give them away because after constant use the packaging looks tatty.

I typed in the Scramble listing from the May issue only to find it wouldn't work. I corrected my typing mistakes and typed them. I then chose J for joystick, and then chose level one. The screen turned black and stayed like that. After a few minutes I pressed Escape.

but couldn't get the screen. I don't understand the checksum utility. I typed it out correctly, pressed the assembler and was greeted with a blank screen. What am I doing wrong?

Please can I put in an ad for a partner? I am a 19-year-old girl, and need help understanding my CPC400. All letters will be answered. — Susan Adams, 17 Croydon Rd., Plaxton, London E10 6ES.

● Back in the early days we had a regular slot called Analysis where we printed a short listing and gave a line-by-line breakdown. Programmers' Surgery is intended to fill a similar need, though not just for beginners. As it says at the

Turn to Page 60 ▶



4 From Page 58

head of the feature, if there's a specific aspect of programming you want explained, write in and tell me.

I don't think it was illegal to re-sell second-hand games, just so long as it is the original you sell and you don't keep a copy. The only exception to this might be if there was some small print

on the packaging saying you mustn't do it.

How about giving them to a charity shop? Even with scruffy packaging they're worth something.

The Scramble listing is correct, and by now you should have read the article to go with the updated checksum utility. Hopefully it will have explained things more clearly than the original, but please remember the correction we printed in October.

No doubt untold thousands of you are already sticking the stamps on letters offering help.

Configuring designer

I AM writing concerning the letterhead designer in the July issue. The designer itself is easy to use - apart from the value of *n* in line 350 and 360 being out by 40.

Unfortunately, I cannot

use any of the several screens I have saved on disc because the print option does not seem to work with my Osborne 20. In fact the only screen dump you have printed which did work with my printer was the one in the May issue. If that is to type /ACOSING for it to work - the option to configure the dump for 50lines type printers. If then that is used console codes 27, 66 and 2 to get the correct line spacing.

After typing the additional line which was printed along with the designer I can get a representation of what was originally on the screen. Could you please tell me which memory locations to poke with the codes for line spacing? - Mick Ramsey, Hemel Hempstead.

■ The codes you quote would give 572 line spacing on an Epson-competed printer. I'm surprised this worked because the May

screen dump uses 4, 8 or 7 in conjunction with 27 and 66, depending on the dump's size. It sends these codes at the start of the dump, and should override whatever you set it to before.

If you look at line 2320 of Letterhead Designer, the first two bytes are 418 and 547 = 27 and 66 in decimal. The following byte = 00 = is the one which holds the line spacing. It is set to zero because the program changes it during execution. At one point it makes it six, but on the bottom line of the dump it is changed to hold a calculated value.

The memory location to poke to replace the six is 4400E. It is impossible to change the calculated value without overwriting part of the screen dump and re-assembling it. However, if you avoid drawing on the bottom few lines of the screen area this shouldn't cause any problems.



Prize letter

A quick clean-up

WITH regard to Ian Sharpe's article on fast machine code in the August issue, and in

particular his challenge to find a faster way of filling a block of memory, here is my solution.

Although billed as a way of filling a block of memory, the screen code in the article was specifically set up to clear the screen, in other

words *NOT* the screen memory with zero.

My version, although longer in terms of space, is nearly four times faster than the quarter of the two examples quoted. It works by relocating the start to the top of screen memory and

repeatedly pushing *HL*, which is primed with zero.

The routine assumes that the screen has not been scrolled. Entry conditions: *BC* must not be scrolled. *HL* conditions: None - all registers preserved. - Ian Hoare, London.

```

: Subroutine 04710L
: Purposes - to clear the
: screen at fast as possible.

000 00000  :
01  :      : H1 for higher speed 4
P000 HL  :      : Store all registers used 71
P000 HL  :      : 71
P000 HL  :      : 71
P000 HL  :      : 71
L0 1,440  :      : 8 lines to clear 7
L0 10180,0P :      : save SP 08
L0 01,00000 :      : offset between blocks 18
L0 17,10100 :      : top of screen 78

BLP
L0 0,0  :      : notes to put into screen 43
L0 1,0  :      : pointer then 18 HL,0 43
L0 0,0  :      : counter 18 times 73

L0P
P000 HL  :      : clear 2 bytes 18 times
P000 HL  :      : 18
P000 HL  :      : 100000% 00000
P000 HL  :      : for same pointer
P000 HL  :      : add 10 for 1000
P000 HL  :      : therefore 100 1-states
P000 HL  :      : for this inner loop
P000 HL  :      : except last when 185
P000 HL  :      : 100000%00000 + 1
P000 HL  :      : total 100000 1-states for
P000 HL  :      : everything in 1P
P000 HL
P000 HL

```

```

P000 HL  :      : 15550
S000 0P  :      : repeat
000 01,0P :      : SP into HL 70
000 0  :      : clear carry 40
000 0  :      : subtract offset 70
L0 0,HL  :      : into stack pointer again 70
000 C  :      : decrease block counter 43
J0 01,0P :      : loop back for next block 33
:      : +5 for loop
:      : 100000*10000
:      : 91211
:      : 18
L0 10,10000 :      : restore stack pointer 38
P000 HL  :      : restore registers 11
P000 HL  :      : 11
P000 HL  :      : 11
J1  :      : restore interrupt 4
J01 -  :      : and return 18

END
:      : to store stack pointer
:      :
:      : Total 10000 1-states
:      : at 4 Mhz, 400 0010

: loop up with
: L0 HL,00000 18
: L0 HL,00000 18
: L0 HL,00111 18
: L0 HL,1,0 18
: L0HL 27+000000 when 00=0 100000
: 000 18

: Total 10000 1-states at 4 Mhz, 400 0010.

```

Lancelot



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