

# IT'S <br> ToO <br> MUCH 

 4's's bumper festive issue is crammed fit to bust.^ THE BEST GAME OF 1990 Vote for YOUR favourite...
ћ SERIOUSLY NOW! 16 pages of news, help, programming \& reviews

* CHRIMBO COMPO We're giving away threempyrtheld TVs!
^ SWITCHBLADE Gremlin's console stunnegravi wed!
* MAGfC LAND DIZZY Codemasters' egg-head is back!
* THE AA KARTING DAY OUT All the gory

PLUS.All yourfavourite regulars PACK.


CHASE HQ 2 Special Criminal Investigatio

## SLHWARZENEGBER TITAL RELALL

You are drawn to Rekall Incorporated, a unique travel service specializing in implanting fantasies into the minds of those who desire to turn their' dreams into

## reality. <br> THE EGO TRIP OF A LIFETIME

 - Experiencethe horror as your dreams turn into hideous nigh is, Suddenly your every move is monitore 1 . be assasins. You E).

YOU'RE YOT YOU COURE ME You
must travel
to Mars to discover
your true identity - your missio

- is no a journey of non-stop action, strange Yutants, futy stic vehicles and a startling array of weap, wry all d.ptured in superbly executed graphics and a g play that compliments the success of the years top movie.
continuing where CHASE HQ left off.
The Arcade thriller takes you from the bright lights o
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Tরito

## If's EASTER

- . Explosive power sends .
you bulleting through various terrains hold the line or plough the fields':


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The criminals wield some
heavy hardware - but so do you! You can shoot but you must dodge their flak... heavy gunfire, trucks unloading their cargo onto you bonnet... it's the meanest pursuit game to hit the


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## AMSTRAD ACTION

 JANUARY 1991
## Regulars

## 7 INTERVIEW We talk to those in the

 know8 AMSCENE All the latest Amstrad news
11 REACTION Our readers have their say
16 ON THE GRAPEVINE What's new on the gaming scene?
24 FORUM Adam (Doc) Waring sourts out your technical queries
28 ASK ALEX Alex van Damm brings help to beginners in distress
31 CHEAT MODE BOOK OFFER Hints, tips, maps and pokes from three years of Cheat Mode...
71 THE BALROG The month gone by in the world of adventure gaming
74 TYPE-INS Programs you can key in yourself
80 SUBSCRIPTIONS How to order your regular copy of AA
84 CHEAT MODE Another six pages of help on all the latest games
90 HELPLINE Got a problem? Need help? Send a postcard to our free contacts page
93 AAFTERTHOUGHT Tales of the month gone by, from the AA team
94 SMALL ADS Anything to sell? It costs just a fiver to reach 30,000 Amstrad fans...
96 SPECIAL OFFERS Amstrad Action bargains you just can't afford to miss

## Action Test

48 FLIMBO'S QUEST A platform game cute enough to make you sick?
50 SWITCHBLADE Gremlin's first console game is stunning!
55 GRAND PRIX CIRCUIT Become a Formula One champ in your own living room...
63 MAGIC LAND DIZZY Yet another Dizzy sequel from Codemasters!
66 THE SPY WHO LOVED ME "Bad show, James!"
68 MIDNIGHT RESISTANCE Kill, kill, kill in Ocean's latest blockbuster AND MANY, MANY MORE...

## Serious

## 19 THE 50

 BEST GAMES OF 1990 Part 2 of the $A A$ end-of-year retrospective - plus your chance to vote for your favourite... favourite...

E


Certainly we should have been! Full report on the AA Fifth Birthday Karting Kompo winners' day


## 50 SWITCHBLADE

Is this the biggest, baddest and best platform game the world has ever seen?


## ABC

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$\star 1$ to 4 players option (Amiga \& ST)
$\star$ Kit Design (Amiga, Atari ST \& IBM)
$\star$ Facility to load Player Manager teams and designed tactics.
$\star$ Instinctive joystick controls to pass, dribble, shoot, head or chip a ball and do sliding tackles.
$\star$ Two players teams mode against the computer.
$\star$ After touch controls to bend or dip the ball.
$\star$ Set piece Free Kicks, Corner Kicks, Throw Ins, Injury Time, Action Replay, red \& yellow cards indeed host of features to create the atmosphere of a soccer game which is real fun to play.
$\star$ League and Cup Competition with sudden deaths penalty shoot out.

THE ONE - Ultimate soccer simulation. 96\%.
THE ACE - Brilliant. Buy, Boy, Buy. 930.
AMIGA FORMAT - Best footy game to have appeared on any machine. 94\%.
ST FORMAT - What a game! Gem to play. Magic. 90\%.
C \& VG - Championship winning material. 95\%.
GAMES MACHINE - Probably the best sports game ever. 92\%.
COMMODORE USER - No other footie game can touch it. 90\%.
AMIGA ACTION - Surpasses all other football games. 93\%. POPULAR COMPUTING WEEKLY - Nothing short of brilliant. NEW COMPUTER EXPRESS - Computer football event of the year.

 CBM 64, SPECTRUM \& AMSTRAD..............$£ 9.99$ Cas. KICK OFF 2 \& WORLD CUP(AMIGA \& ATARI ST).. £24.99 KICK OFF 2 (Expanded Amiga)

Amstrad Action was so impressed with Prisma Software's 'multimedia' approach in Learn to Read with Prof that we wanted to know more. ROD LAWTON spoke to Senior Partner Trude Salisbury about the company, the software,


- Trude Salisbury works part-time as a voluntary teacher.

We were impressed by the way that you combined books and audio cassettes and a computer game. What's other people's reaction been to this? Because it's something quite new as far as we're concerned for computer software.
Well, the education establishments are very pleased with it. We've been selling to them for some years now on another format, and the parents are delighted with it. They've found the children learn to read very quickly and
> "...it is quite unique that our program actually teaches reading. I don't really think there is anything on the market to compete."

then of course to prove that they have the books and then, having proved that to themselves, they can then go and read other books.

So did you produce the same sort of thing on the BBC, then?
Oh yes. We've been selling the BBC version to schools since 1985.

So have you modified the software at all for the home market?
Well we've improved it, shall we say. We've put more graphics in. It's been just as successful without a lot of graphics, but now, since we've gone into the home market we have put more graphics in and also added nine more words.

So the software is designed now in such a way that it can be used at home as well as at school.
That's right. That's what we're doing now -

# Learn to read with Prisma... 

we're selling to the home and schools with the new version.

What do you think of the CPC as an educational machine? Obviously, it's not as popular in schools as the BBC - what do you think of its capabilities?
It can do what we want it to do, you see. As far as I'm concerned, it doesn't really matter, the machine. The game is the same on all the machines. So if that is the machine that is in the home it will do the job.

You've obviously looked at various other people's software as well. Without necessarily being specific, where do you think other publishers' educational software falls down?
Well, it's not for me to say, is it? I would just say that we are more specific, you see, and we have found that our software really does teach reading. So you can take a non-reader, or any age, really - we've sold to high schools - if there was a need. While we would expect in the home market to mainly sell to families with children of four or five years of age. We also sell to parents of older children if the children can't read. And it is quite unique that our program actually teaches reading. I don't really think there is anything on the market to compete.

Do you think it's unique in that it combines written material with audio cassettes and computer software?
It's got to, you see, because you can't teach words without putting them into context, and then when you've learnt the words, well you want to know what you've learnt - even four-year-olds want to know, you see. So the books then prove to the child that also they can practice what they've done. And then they have the confidence for another book.

Obviously you think computers are a valuable learning tool. Do you think they'll be a central part of education from now on?
Oh yes, I don't think you can get away from that. It's just how you use them, isn't it? Quite often, you see, they're used in schools with the brighter child, or the child that has already got some knowledge of reading and other things, and the children who can't read can't use them quite as much.

With the increasing use of computers in schools, do you think it's most important that kids get used to using them, or do you think that they do actually add an extra dimension to teaching?
Well, if they're used right, you see, they're just
an essential part now, and it will get more and more so, won't it? And they're a part of the home as well - more and more families get computers. And if you can use the computer as a teaching tool to support what the teacher is doing, whether you actually use it in the school and support what the teacher is doing, or whether you use it at home and support what the teacher is doing, it can only be a good thing.
> "...if you can use the computer as a teaching tool to support what the teacher is doing... it can only be a good thing"

Are you planning further releases?
You've got Part 2 of Level 1, haven't you?
Yes.
That then takes the same words and looks at them in more detail. And then early in the New Year we will have Part 3 and 4. Part 3 helps children to make sentences - this is something children don't find very easy. And Part 4, then, deals with comprehension, to ensure that children really understand their reading - but all in a fun way. So they don't know that you're encouraging them to write sentences or teaching them comprehension. And that is Level 1. Now all these four parts can be used on their own - you don't have to start with Part 1. But each one has a different thing to do. And then we go on to Level 2, which is really the same thing, but teaching more words, you see.

Its sounds like there's quite a lot in the pipeline, then?
We've found that there was a need for the other parts. I go into a school on a voluntary basis, you see, and work with children, and through that I have found the need for the other parts. And since then we have had letters from parents and teachers to confirm that.

Are you likely to branch out in future, or are you going to see how the Learning with Prof series goes?
We're already branching out, you know! You can't stand still, can you? There are other things in the pipeline as well, which I am sure you will get next year.

Right, so we'll have to wait and see, then...? Yes!

# BUT WILL IT WORK? 

## Unexpected compatibility problems emerge with new 6128 Plua machines

Compatibility problems concerning Amstrad's new Plus range seem worse than originally feared. It's emerging that a number of products designed for use with the CPC will not work with the new computers.

The new machines are designed to emulate the old CPCs exactly - until a cartridge is plugged in, whereupon the new console hardware is activated. It seems that some existing software nevertheless does clash with the hardware.


- CPC6128 and 6128 Plus: how compatible are they?

At first it was thought that the amount of software that wouldn't work with the machine would be very low - but increasing numbers of programs are proving troublesome when loaded on the new machines. Both games and serious programs have been affected.

The incompatibility of these programs is currently being attributed to programmers not 'following the rules' set out by Amstrad, rather

## BMW JOYSTICKS!

Joystick maker Spectravideo is no longer going to be selling Konix joysticks. Another supplier for the highly-rated Speedking and Navigator models has yet to be found.

In the meantime, Spectravideo is to launch a new range of its own, collectively titled the Logic 3 range.
"Logic 3 products will be designed with three main criteria: style, engineering quality and reliability. Our products will be the BMW of the joystick market." So says Spectravideo boss Ashvin Patel, who may or may not own one of those Bavarian beasts himself. (No-one wants a joystick like a Ford Escort...)

Details are all very hush-hush at the moment, and no piccies or prices are available yet. Watch this space...!
than any technical problem with the computers.

Among those games affected are three Loriciels products - Harricana, Bumpy and Mobileman. These fail to run on Amstrad Action's new 6128 Plus but work perfectly on the office CPCs.

We canvassed the opinion of leading software house US Gold and were told that efforts are being made to ensure that all new games work on all machines. It's unlikely that previously released games that have been found to be be at fault with the software will be altered to work with the new computers, though recent games still doing well may be converted.

This action will almost certainly be taken by all major software producers, meaning that once the new machines are established, all new releases should work without problems. It does mean, however, that older games that don't work on the Plus will not be upgraded.

A similar problem occurred with Atari's 16bit ST machine, when the company upgraded it to the STE. However, the Amstrad compatibility problem would appear to be far less serious.

## Multiface frozen

The Multiface II game 'freezing' device has also been found to be incompatible with the 464 and 6128 Plus machines. The unit appears to operate normally until the 'save' function is accessed, upon which the computer locks up, requiring the machine to be reset.

It appears that Amstrad had tested the


Multiface for compatibility with the Plus or manufacturer Romantic Robot's behalf, anc gave the company the green light. Romanti Robot then started to produce the unit with th new 'D' type connector that the Plus uses. The problems only became apparent when cus tomers complained that the device did no work properly.

Romantic Robot is currently redesignin the product to work with the Plus. Accordin to the company, the problem is a fairly mino one. It's caused by incompatible softwar which needs to be rewritten, rather than hardware clash. The modifications should $b$ complete by the time you read this.

- Anybody having trouble with a Multifac that they've already bought should get in con tact with Romantic Robot, who have promise to exchange all faulty units with correctly func tioning ones.

Romantic Robot can be reached at 5 Deanscroft Avenue, London NW9 8EN, tel: 08 2008870.

## Keep it under control

Fed up fumbling with joysticks? Can't take control with the keyboard? A new widget to allow custom control for your games playing has just become available.

The Game Pro Mk2 plugs into the joystick socket of your computer. It has a couple of built-in buttons duplicating the up and down movements of a joystick, and a load of input sockets to plug further controllers in. These use standard jack plugs, so the home experimenter can construct all manner of weird and wonderful game playing devices.

In addition, there are two joystick ports built in, acting as a joystick splitter for the CPC. Now you'll be able to play two-player games they way they should be played; with two joysticks.

The unit also comes (there's more?) with two foot-pedals. Prices range from £ 19.99 to $£ 34.99$.

CpRs Design Technology is responsible for the product. The company can be found at 70 Potton Road, Eynesbury, Hardwicke, St Neots, Cambs PE19 2NN. Tel 0480 76038 (evenings only).


## 6128 Plus will load from tape!

Up until now, one of the fiercist criticisms of Amstrad's new 6128 Plus is that it will not load from tape. Its predecessor, the CPC 6128, loaded tape software easily via its built-in tape socket, but the Plus model has been restricted to disk-only operation.

Until now! WAVE, up in Cumbria, is offering a special service to 6128 Plus owners whereby their machines can be converted to load from tape. The machines will still not be able to save to tape - but few people would want to do that anyway. The principal need for the tape loading feature is for budget software, after all.

The cost of the conversion work is $£ 20$, with an extra charge for carriage. Alternatively, if you buy your machine from WAVE in the first place, the company will convert it for you free, as well as offering a $£ 25$ discount off the RRP.

For the latest details, write to WAVE at 1 Buccleuch Street, Barrow-in-Furness, Cumbria LA14 1SR, or call 0229870000.

- N.B. If you do have your machine converted by WAVE or anyone else, the manufacturer's warranty will be invalidated - you have been warned!


## THE DRIVE SAGA CONTINUES!

Microstyle has embarked on the DD-1 drive pricecutting war again with a remarkable offer on these Amstrad drives. For as little as $£ 69.99$ (plus $£ 3$ carriage) you can equip yourself with an external 3 inch drive for your 464, complete with necessary interface.

Microstyle is stressing that the offer can last only until the stocks are exhausted, so if you want to take advantage of this monster offer, get in there quick!

Regular readers will know that following Amstrad's decision to cease manufacturing these drives, there has been a price-cutting bonanza on these items. Stocks have gradually fallen, however, and the overall price trend has been upwards. Until now...

Microstyle's address is 212 Dudley Hill Road, Bradford, W. Yorks BD2 3DF, or you can call 0274 636652 (after 2 pm ).

## PICK UP A PENGUIN

Last month's Free for all section carried an incorrect phone number. Penguin Software's correct number is 0483763223 , and not as printed. By the way, if you've tried getting hold of boss Dave Carter via the directory, it doesn't work, and you'll have been making a totally unrelated Mrs Carter very annoyed.

Sorry folks, and especially Mrs Carter!

## But no, seriously

How about this for an excellent idea - a 'bundle' for the new 6128 Plus which included serious business or word processing software on a cartridge? We reckoned that the cartridge format would be very suitable medium for all sorts of serious utilities. Integrated packages that allow you to switch between applications instantly, for example. Or word processors with huge built-in dictionaries.

This would, we thought, solve two problems. Amstrad could affirm the Plus range as being gen-eral-purpose rather than just games machines, and if the software was to be given away with every machine, a serious producer would jump at the chance. We put the idea to Amstrad...

Unfortunately, Amstrad said that it had no plans for any such programs, though it would welcome the idea if a serious software manufacturer were to approach them. The company also dismissed outright the idea of a 'serious bundle', say-
 -
ing that the new models are being pushed purely as games-playing machines. "It would just confuse the market" Amstrad observed, when asked why a serious bundle wasn't on the cards. Amstrad already produces bundles with its PC machines, and clearly wishes to separate the functions of the two ranges.

- Arnor, the makers of word processor Protext, told us that it wasn't considering cartridge releases, but wouldn't rule them out as a future possibility.

We want to know what you think. Should the new machines be restricted to games only? Or should there be serious applications for a machine that is perfectly capable of making use of them? If there is enough interest we'll take it up with the companies involved.

- Will we see the brilliant Protext on cartridge? At the moment it seems not...


## THE CHARTS

Well, Shadow Warriors is still there at No. 1. You lot out there obviously like it, even though we only thought it worth a measly 68\% back in AA66!

As for Batman - The Movie and Robocop - can you believe they're still goingl It's nice to see some of the smaller software houses like Chrysalis, Challenge and Addictive getting in the charts too.

| (Software priced over C4.99) |  |  |  |
| :---: | :---: | :---: | :---: |
| 1 | 1 | Shadow Warriors | Ocean |
| 2 | 5 | Turrican | Rainbow Arts |
| 3 | 4 | World Cup Soccer '90 | Virgin |
| 4 | 3 | Chase HO | Ocean |
| 5 | 6 | Robocop | Ocean |
| 6 | 14 | Batman - The Movie | Ocean |
| 7 | 8 | Manchester United | Chrysalis |
| 8 | 16 | Foot. Man. World Cup | Addictive |
| 9 | 12 | Haroes of the Lance | US Gold |
| 10 | 2 | Back to the Future ll | Mirrorsoft |
| 11 | 20 | Italy 1990 Winners | US Gold |
| 12 | 15 | Gama's Super Soccer | Empire |
| 13 | 7 | Bomber | Activision |
| 14 | 19 | World Cup 'so Comp | Empire |
| 15 | NE | Cricket Master | Challenge |
| 16 | 11 | Heroes | Domark |
| 17 | NE | Lords of Chaos | Blade |
| 18 | NE | Int. 3D Tennis | Palace |
| 19 | NE | Turbo Out Run | US Gold |
|  | 10 | Dragons of Flame | US Gold |

## BUDGET GAMES

## (Software priced under S4.99)

| 1 | 1 | Quattro Adventure | Codemasters |
| :--- | :--- | :--- | :--- | :--- |
| 2 | 8 | A Cuestion of Sport | Encore |
| 3 | NE | Pro Boxing | Codemasters |
| 4 | 5 | Rastan | Hit Squad |
| 5 | 7 | Paperboy | Encore |
| 6 | NE | Big TroubleLit China Alternative |  |
| 7 | NE | Temple of Doom | Kixx |
| 8 | NE | Daley Thomp. Chall. | Hit Squad |
| 9 | NE | Hong Kong Phooey | Hitec |
| 10 | NE | Salamander | Hit Squad |

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## MULTI FILE UTILITY (MFU)

The CP/M+ program that lets your CPC analyse and format any of the 'large' discs formats (IBM, BBC, Osbourne and many many more) and copy files to and from these formats.

| "Head and shoulders above the competition" | AA July 90 |
| :--- | ---: |
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## Reaction

Controversy, contradiction and calumny! Our readers grind theira

## - Free for all frolics

I'm a 24 year-old electronic engineer and have had my trusty 464 for six years. I think your mag is excellent and you seem to have the right balance between serious and "fun" software.

I particularly enjoy Free for All and would be very grateful if you could tell me where to go for the PCB-Draught program reviewed in Issue 62 . I don't have a modem so I hope it's not from a bulletin board...

I only have one piece of criticism and that is you should update the "Where to go" box in Freee for All. For a number of months now the DW Software entry mentions the "marvellous WIMP environment desktop reviewed last month". There must be a few very confused readers out there (they're not the only ones ed).

One more thing - what is a clam? Is this the new form of European currency?

Keep up the good work.
Andy Mans
Newbury
P.S. If by amazing coincidence you print this letter, please please spell my surname properly!

AA: Oh. All right. It's Andy Properly of Newbury.

PCB-Draught, eh? Caroline wasn't in when we phoned so we're not sure if it's PD. If it is, it should be knocking around a few of the libraries. Try WACCI - the address is in the Where to to go box.

Well done for spotting the deliberate mistake we made by leaving that out-of-date item in Free for All. Award yourself 10 points.

A clam is a salt-water crustaceaous gas-

## ค००००००००००००००००००००००००००००००००००००००००० Down with tapes

I must be one of the few people around who supports the lack of a cassette port on the new 6128 Plus computer.

Let me explain. Once upon a time the IBM PC (what's that? -ed.) had a cassette port. Now it does not. Every user of the PC uses disks, and quite happily I might add. The way to get the whole CPC user base onto the more practical storage medium of discs is to 'force the change', and I support Amstrad if this is their intention.

Can anybody really prefer cassettes? They may be slightly cheaper to buy, but this is probably due to the larger production runs for cassettes than for disks. If a larger customer base is forced to use disk, then the price difference will close, meaning that the advantages of disk will cost little or no more than cassette.

How many 464 owners buy their machine on the basis of immediately adding a disk drive and using disk as their primary storage medium? They may still buy software on cassette, but if they then copy their cassette to disk (possibly with the Multiface) and use the cassette no more, then they do NOT support cassettes. The fact that they buy a 464 and
tape software does not infer otherwise.
my view is that if you want the advantages of disk, then go the whole hog. I support disk options for all CPC software including AA cover cassettes, and the freebie cassette games given with AA subscriptions. What's AA going to do about these? They are useless to 6128 Plus owners.

John Fairlie
Bristol
AA: If Amstrad was to phase out cassettes, would it begin by creating a computer that couldn't support them?

The 6128 Plus will certainly have that effect. And as long as it doesn't happen too quickly, leaving people high and dry, isn't the gradual reduction of the amount of cas-sette-based systems a good thing? Disks are, after all, much more convenient, more reliable, faster, and in all respects apart from price, better. It must be about time that a distinct move was made in favour of a diskonly market.

Or is it? What do YOU think? Disk? Tape? Both? Write to Reaction and get YOUR views known.

##  <br> - (Christmas) stocking the cartridge

I am thinking of buying a GX4000 console. Would you please let me know what games will be available for it by Christmas?

Ben Spires Stroud

AA: How about... Gazza, Dick Tracy and Spiderman from Entertainment International? And then there's Navy Seals and RoboCop 2 from Ocean, Epyx Games, Tennis Cup from Loriciels, Tin-tin on the Moon from Infogrames, Klax from Domark and many more. All these should, with any luck, be in the shops before Santa performs his annual soot-covered descents.

## - Favourite cover versions

To start off, I would like to say how brilliant your mag is, and how I think it can never get better, but it always does. OK, I have finished my grovelling; now to get on with my letter.

I typed out Hacker, in issue 43. It seemed to work well, but what do I actually do when I get given "POKE \&023E,0"? I have discarded the last two numbers as it told me to.

I read a letter in a past issue asking why it would cost $£ 2.95$ if you had a cover cassette. How come then, on your birthday issue you had a cover cassette (and a very good one too) but the issue cost only $£ 1.95$ ?

I think the cover of issue 62 is the best one yet. I do not know why, but it just is. Please please please answer this letter.

I also want to know what AA's favourite game is. At a guess, I would say Rick Dangerous. And is RoboCop tha Amstrad game that has stayed in the charts for the longest? You had better answer this letter or I will set him on you!

AA: RoboCop's Directive Number Seven is as follows: "No member of Amstrad Action or Future Publishing may be harmed". It's a little

REACTION
known (and totally made-up) fact that Adam 'Doc' Waring actually programmed the RoboCop software, and his silicon heart is that of a now-defunct CPC 664.

As for cover cassettes. It would cost reuch more for a cassette every month, but when we mount them (i.e. twice a year), we actually pay much of the increased cost ourselves. Such is our generosity.

Which cover IS the best? We often argue about this, and several scuffles have ensued.

## Cartridges for all and sundry?

I was reading Amstrad Action (Issue 62 page 21) when I saw an advert for the new Plus machines. It said that you could plug in console ROM cartridges. My question is can I upgrade my 6128 to load cartridges like the Plus? And if it is possible, would you tell me what the extension is called, and the retail price of it?

David Taylor
Warrington
AA: It is astronomically unlikely that such as device will ever exist. It certainly doesn't at the moment. If, in the dim and far off future it does, we'll let you know all about it (and you'll also witness the advent of porcine aviation over Warrington).

## Fair play for astronomers?

I have always believed that we computer buffs are a decent bunch of people ready and willing to share information with others, as I have done so on numerous occasions. Unfortunately, there are those amongst us who are not able to play the game.

In Amstrad Action Issue 60, Sept 1990 you published my letter seeking a copy of Amsoft's Star Watcher program to which I did not receive any direct reply.

However in your Issue 62, Nov 1990 you published a letter offering me a copy of this tape if I would ring the telephone number given. Upon doing so I was surprised to learn that it had been sold to a person in Scotland who had seen the letter with the telephone number, without giving me the opportunity to purchase it.

I realise that nothing illegal has been done but if this had been me I could not have behaved in such a reprehensible manner to a fellow computer user.

I wonder, therefore, if you would be kind enough to publish my full address and telephone number so that anyone who has a copy of this tape can contact me direct.

David Webber<br>Cummal Fayle<br>28 Ballaterson Fields<br>Ballaugh<br>Isle Of Man

Tel: 0624897462
AA: If anybody has a copy of Star Watcher by Amsoft, could they get in touch with David at the above address. Go on - restore his faith in human nature.

## 0000000000000000001


same every month. I do hope you don't mind me asking, but did the Publishers make you do the cover tape on AA61? It's just that Your Sinclair have the same tape, more or less, on their cover. They also did the free 'Cheat Mode' booklet. It's just that since Future Publishing bought YS, everything you do, YS

Catherine Dawson I nearly hit the roof. For a start she was accusing your mag of being sexist, when you have never portrayed such opinions, She then goes on to say 'you can't say... women are hopeless at computer-related subjects' - who said they were??? Is this woman paranoid or what?! OK, so you learned BASIC at eight etc... good for you. Just don't hit me with this feminist crap, OK? It's a computer mag, not Women's Lib.

All that aside, I thought she had some kind of sense saying that there shouldn't be sexism, but she went on to show that she was actually no better or less prejudiced than sexist men by saying that women were the superior sex at anything they tried. Not so bloody unbiased now, are you??

Given your 'opinions', am I right in thinking that the school you pass your mag around at is primary school, or kindergarten maybe?

Right, now where was I? Oh yes, someone wrote in saying that the Home Computer Club was a rip-off. Well, OK. In this example it was you who was at fault, but they do rip you off. For example if a compilation is brought out; let's take the Cecco collection; well it comes out at $£ 10-£ 20$, but they say that the games come as four individual ones and charge you with the reasonable price of $£ 40$ minus the $25 \%$. Total rip-off or what?

I am glad to see you have ditched the Buyers Guide. Total waste of space. It was the
also does. So do you come up with the ideas or does Future Publishing?

May I say that I was less than happy about paying an extra 50 p for a tape with a demo and a game on it. In fact, I am sending some progs in to Type-Ins, and to show you what think of the tape, I am sending the progs on it!!!

I have said it before, and I'll say it again don't put cover tapes on every month. Because if you do, you will rely on the tape selling the mag, not the contents, so you will start getting slack with the mag.

And I want a magazine, not a game demo.
Adrian Forbes
Gourock

AA: Come on, Catherine Dawson. Isn't it about time you wrote in again? We'd love to have another letter from you, and you must want to reply..

And about the Home Computer Club; they don't price the games in a collection separately; they take the Recommended Retail Price of the collection in the shops, and lower that by the stated amount. It's possible they were merely stating the price that the games would have cost if they were sold separately.

Covertapes. You might not want the programs on them, but many readers enjoy their occasional appearance (or so we fondly believe).

##  Has AA forsaken us?

I saw the new logo. Why change? It looks terribly dated and crass - as if it had come off the cover of a games-only Speccy mag. Why are games getting more and more coverage?

Next quibble: "Britain's Best... CPC 464 . 6128 Plus . GX4000 Console. Surely this leaves out original users? How about 464.664.6128.464 Plus . 6128 Plus . GX 4000 Console"?

Why has serious software got so small? I think that's about all I've got to moan about. I hope my opinions are listened to - wouldn't it be a shame to lose a reader who has all 62 issues?

Mark Baxter
Stockport
AA: The logo was really up for a redesign. We like it a lot. But everybody has their own opinion, and we only find out what you think if you tell us. And as for original users. We've stated repeatedly that we will continue to cater for all existing users. we do mirror the changes in the CPC owning public. For example games sales are increasing rapidly, consoles are selling and cartridges are being produced at a prolific rate.

It would spoil the balanced look of the cover if we had a massive box paying homage to every Amstrad CPC machine available. You just have to open and read AA to realise the extent of our coverage.

## - Veni vidi MIDI

I am writing to your esteemed publication in desperation. The problem is that I am interested in buying a MIDI synthesizer and due to the fact that I am totally ignorant of any aspect of music I have in desperation set these questions;

- What synthesizer would you recommend in the $£ 250$ region (i.e. a low budget)?
- Where could I acquire an interface and how much would it cost?
- What software would you recommend that would fully utilise the synths' power (for a low budget)?

I would be very grateful if you would answer these questions, and I'm sure that many would benefit from the answers.

Kieran Bury
Co. Sligo, Eire
AA: There are many good keyboards available for under $£ 250$. Examples are the Casio CT470 costing $£ 229$ or the Yamaha PS 790 for $£ 230$ The Yamaha includes 100 sampled sounds, a
five octave keyboard, 50 sampled drums and stereo sound.

However, your local music shop should be able to offer much more detailed advice.

In the MIDI interface department, Datel Electronics makes the Music Machine. For under $£ 50$, this offers a wealth of features for the MIDI musician. It's also a sampler and a drum machine. It comes with it's own software, so you don't need to worry about that aspect.

## - Colour in a drab world

Earlier this year, after studying the many types of dot matrix printers, I decided that the Star

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## - Money-clip art?

I feel I must write to you concerning your review in the November 1990 edition of Amstrad Action, of the recent addition to Goldmark's software range, Graphics Galore.

I recently purchased six of the clip art collections after seeing an advert in another CPC magazine. I first obtained the catalogue to see what was available and to see if it would suit my needs at this present time. This I received by virtual turn round of post, despite sending a cheque and assuming a wait of between 10 and 21 days for the cheque to clear.

I then ordered the six sets that suited my particular purpose, and again was extremely surprised at the turn round from the company. The total cost for these six sets was £62, and not, as you infer, $£ 72$. The fact being that if one requires more than one set, up to a maximum of twelve, these can all be fitted onto one disk. Only the first set costs £12; any additional sets on the same disk are then sold at $£ 10$ each.

As to the fact that some of the pictures are the same, this being just the thing I need, as at the time I am producing small newsletters for two local churches, among other projects, and the different styles are extremely useful to differentiate between the two.

As to the overall cost of this suite of programs, $£ 378$ if all the sets were purchased as above, on four disks, and not £444. As I only have a CPC 6128 and 464 , I would not like to have to purchase a PC, ST and Mac to enable me to have these facilities at my disposal. As you quite correctly stated in your review, someone else has gone to the time and expense of converting these to allow we CPC users to have facilities that were previously only available on several different systems. How much, for example, would Printmaster for the Apple Mac cost? As I understand that this has 122 pictures as its basic range.

Working as I do for a local printing firm and using computers myself, and having just started to convert ASCII files alone from one
format to another, I can understand the time and effort spent by Brian of Goldmark Systems on getting this program ready for us lesser mortals to use. This includes writing the program for actually allowing the individual pictures to be merged into our individual DTP programs.

As a follow up to using this program, I wished to try something else with it and upon phoning Brian one evening at about 9pm with my query, he then went through the method of doing what I wanted over the phone, while I did the keying as he spoke to me. Also the following night I received a phone call from him stating that he had been thinking about what I needed to do and that he had thought of a better way and that he was send-
 ing me a copy of the keying instructions to allow me to change what I had been doing to make it easier, now that's what I call back-up service.

So for my own particular DTP needs I think Goldmark have got it about right for this particular program, as to the overall price, one must assume that there is probably not an extremely large market for this program, as there would be for "games", and also the fact that very few people are going to buy the complete set of disks, then I would think that this price has to reflect the time and trouble that Brian has taken to get these pictures available for use on the CPC.

As to the recent accolades given out in AA for excellence of sales services, my own are:
Goldmark, for response time on delivery; Dowling Computers, who do not advertise with you, where I bought my Star LC10 Printer; Siren Software, again for response time; PCW World, and David Wild, although
his PD disk was a while in coming he did enclose a note of apology, which was greatly appreciated.

## David A Calero

 RochesterAA: Perhaps the best way to answer this letter is to print the following one...


REACTION

LC10 Colour printer was what I was looking fọ because it was easy to use and relatively cheap. I knew when I bought it that the colour function was limited by the lack of available compatible software. However, after adapting Tasword 464 I was able to print full colour text, although as yet I am unable to print colour graphics because of the lack of a colour screen dump program for the Amstrad CPC 464 on cassette. Please, does anybody know of a company which has marketed such a piece of software, or a way round this problem?

Andrew Glitherow
21 Outfields Drive
Cropston
Leicester
LE7 7HA
AA: Hmm. There must be thousands of teeming people out there who know the answer to this knotty little puzzler. If so, write to Andrew at the address printed.

- To upgrade or not to upgrade...?

I have been thinking of upgrading my CPC 6128 for a while, and after seeing the new 6128 Plus on the TV I thought maybe I should go for one of those. But at the moment I am unsure and need some questions answering:

1. How much could I ask for my CPC 6128 (with colour monitor)? It is in excellent condition.
2. Does the new 6128 Plus have all the functions that the CPC 6128 has (plus any more)?
3. Can you use existing CPC 6128 disk software on the 6128 Plus, and also could I use my joystick on the new machine?

Andrew Gauton
Warrington
AA: And as if by magic, we provide the answers:

1. As a rough estimate, second-hand prices for existing CPCs will be around half the original price. Thus your 6128 and monitor will be worth $£ 200$ (if it is colour - a mono screen will fetch $£ 150$ ). Please note that these figures are only estimates.
2. There is no cassette port built into the 6128 Plus. Of course, there is a cartridge port, so you can phug in console-style cartridges (such as can be used with with the GX4000) and play them instantly. This is possibly the greatest asset of the Plus range. They are effectively both a GX4000 console and an uprated CPC. Apart from these major differences, the machines retain a lot in common.
3. The new 6128 Plus would seem to run the vast bulk of CPC 6128 software. When we hear of games which are not compatible with the 6128 Plus, we'll let you know.

And finally, your joystick will work perfectly with the 6128 Plus. There are, in fact, two joystick ports, so two players can wiggle at the same time. Ideal for two-player wigglingtype games! The Plus range come complete with console-style joypads, which have two fire buttons for extra permutations with certain games.

##  <br> Ribbon development

I liked your story about your "Old Man Ribbon", which had been re-inked 720 times. However rather than plug a commercial spray re-inker probably costing $£ 8$ to $£ 12$, let me tell you how I achieve the same result for only 85p.

First, this only works with DMP-2000 or similar ribbons, where the ink is held on a felt wheel around which the ribbon runs. Thus having made sure you have the correct ribbon, pop down to myour local stationery shop and buy a bottle of Stephens Endorsing Ink for 85p. This is the ink used for re-inking rubber stamp pads.

Now remove the ribbon from the printer and carefully prise off the top of the ink wheel box using a small electrical screwdriver. Inside, you will find a felt ink wheel on which rest two small knurled rollers. The printer ribbon runs outside the two rollers, pressing them onto the wheel to pick up the ink.

A few drops of the endorsing ink should be applied to the felt ink wheel - not too much, it's strong stuff. After allowing a few minutes for the ink to soak in, clean off any surplus with a tissue and replace the top of the box, taking
care to ensure that the knurlewd rollers are place.

If your ribbon has gone bone dry, you w have to moisten it by placing a drop of ink on saucer. Hold the ribbon in the ink with a fing (messy) and pull it through with your fr hand. Once again, mop off the surplus, plac the ribbon on a newspaper and dab it with tissue.

Now pop the ribbon back in the printer an test your new ribbon. This can be repeate hundreds of times with your one 85 p bottle ink. Amstrad Action will be able to vouch $f$ the quality of the printing in this letter.

John Chambeı
Staffor
AA: The print quality of the letter sent to us by Mr Chambers is indeed very high. This does therefore seem to be a very cost-effective solution to the re-inking problem.

It does require a little care, as do many fid dlings with printer ribbons, because they have a tendency to unravel and wander off in al directions.

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 QASTRE E SRECRN




News, views, previews, scandal, gossip... the place where we bring you up to date on who's who and what's what in the big, wide world of computer entertainment...

## It's a stunner:

One of the most exciting games in the arcades at the moment is STUN Runner. (What do you mean, you've never heard of it?) You pilot a motorcycle-like machine extremely quickly through lots of tunnels and try and beat all the other vehicles. It has the most amazingly slick 3D graphics, and apparently uses lots of polygons.
"So what", you cry, "there's no way that any home micro version can hope to keep up with the arcade machine."

Ah, well, Domark has realised this, and instead


- STUN Runner: out soon on the Amstrad but no 'proper' 3D.
of all those poly-wotsits and stuff, the programmers have turned it into a sprite game in an effort to get things moving along nice and quickly. Look out for the review soon, folks!
Adam was getting ever so excited. He wasso looking forward to meeting the great man for real. His dreams, though, were shattered ${ }^{\circ}$ when Gazza got punched on the hooter by Steye McMahon, and ran off to Newcazza to be with his Mam.

There was to have been a big press do at White Hart Jane (bome of Tottenham Hotspur, Gazza's team), to promote Gazza's new footie gamécalled cazza. ynfortunately, the footie star suffered a broken nose, and couldn't make it, It was especially disappointing because we intended to get Mr Gazza to autograph an exclusive box of Kleenex. Never mind, we'll just have to go without (boo hoo).

## Disks <br> 

People with disk drives must be fed of of budget games always coming on tape. Electronic Arts, which hasn't been terribly active in the Amstrad scene of late (boo!), is relaunching its range on budget - on both cassette and disk.

Initially, two games will be released on EA's Star Performer label. There's Chuck Yeager's Advanced Flight Trainer (Mastergame, AA42), and Skate or Die (the less said the better, really).

The tape-based games will sell for the usual $£ 2.99$. If you want the disk versions then you'll be expected to shell out $£ 6.99$.



## Good God!

You know it's going to be one of those days when you wake up with a severed horse's head on the pillow next to you..

The Godfather appeared in 1972, and told the story of a bunch of Italians killing each other. The sequel followed two years later in '74, but it took another 17 years for them to get round to making the third one.

Godfather III hits the silver screens in March next year.


- Would you buy a used Ferrari from these men?

Thanks to US Gold, it'll be appearing on your monitor screens at around the same time. The Birmingham company will really be making the most of this licence, produc ing both an adventure game and an arcade style game to appeal to all kinds of gamer.


## Codies compilations

Fans of the Dizzy games will no doubt be all eggs-cited about the prospect of another Dizzy game. The long awaited Dizzy Four - Magic Land Dizzy will be in the shops soon. However, the hard-boiled hero will be released on a compilation containing all five Dizzy games to date (including the spin-off Fast Food).

The Dizzy Collection will sell for $£ 9.95$ on tape (a disk version won't be available). Now, this may be attractive for those new to the Dizzy games, with the games working out at less than $£ 2$ each. However, Dizzy fans who own the other games already may not be quite so eggs-tatic about buying the compliation. Alas Dizzy 4 won't be released on its own as a budget title until after Christmas.

Codemasters has another full-price package due out soon. Called Megahot, it comprises the eight best-selling Codies budgies (excluding, of course, the Dizzy games).

The line-up includes Mig 29, BMX Sim, Grand Prix Sim, ATV Sim, International Rugby Sim, Fruit Machine Sim, Advanced Pinball Sim and Pro Tennis Sim (that's enough sims -ed).



Before the advent of the home computer, and all those soccer sims with it, people used to spend their time flicking bits of plastic around a lumpy pitch on the living room carpet.
In fact Subbuteo is still an incredibly popular pastime. Over five million people play around the world. And you'll soon be able to join them- without moving away from the keyboard of your favourite computer.

Electronic Zoo has been granted the licence for the computer version of Subbuteo. Now that may seem a strange idea for a footie game - but not according to Electronic Zoo. The company points out that there have been hundreds of attempts at simulating soccer on computers - with varying degrees of success. Rather than trying to simulate an eleven-mernber team sport - pretty difficult to do successfully - it is interpret. successfully - it is interpret- and roll around a lot, too.) tons.


- Just like the real thing! (Subbuteo players fall down

3 The name Subbuteo is from the Latin name for Hobby Hawk - Falco Subbuteo.
4 The game was invented by a Mr Peter Adolph in 1947.
5 The original Subbuteo players were made out of cardboard. Their bases were coat but-

6 Early Subbuteo sets did not include a playing cloth. Instead, instructions were given for drawing one out on an old army blanket.
7 The most popular Subbuteo team is Liverpool.

8 Footballing brothers Bobby and Jack Charlton are respectively Presidents of the UK and Irish Subbuteo Associations.
9 More than 100 million Subbuteo figures have been manufactured.
10 Over 700 different strips have been available since the game's invention. (There are around 500 now.)

## WIN! WIN! WIN!

Blectronic Zoo is celebrating the launch of Subbuteo by throwing ten copies of the real Subbuteo table football game in your direction.

All you need to do to enter is answer these three sporting questions (you'll need to be on your toes, though, 'cos they're a bit tricky):

1 What popular sport does table football emulate?
(a) Football
(b) Tennis
(c) Caber-Tossing

2 What well known sport is featured in the TV programme The Match?
(a) Synchronised Swimming
(b) Football
(c) Golf

3 What sport did the famous footballer Nobby Styles play?
(a) Rugby League
(b) Curling
(c) Football

Entries on a postcard to: Flick Off Comp, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW. Make sure that they arrive by 31 st January 1991. The usual rules apply Muitiple entries will be bumed and so

- Subbuteo shocks - ten things you didn't know about subbuteo (and probably didn't want to either)

1 The longest game of Subbuteo lasted over four days.
2 A Subbuteo league has been formed by Carmelite nuns in Italy.

## Nex $\theta=0$

Coming soon on the console will be Nauy Soals from Ocann. As far as we know the game has nothing to do with blue-coloured marine mammals. Instead its based on a film that nobody seems to have heard of. Apparently. the Ravy Seals are a bt fike the SAS, only theyre American, and are part of the Navy rather than the Army: The plot of the film to that tome country mon have been taken hostage and its the Seals' fob to get them out them. Where there are houtages, there are torrorits too so tote of those have to kilied


In the game, theres planioy of alaugiter to Kill kill killloh, er, and don't forget the hostages... be sure, as your character makes his way acoess the plattorm-based levels. An added twist Is that crates of Stinger missiles need to be blown up with bombs planted en route.

Ocean seems to be making the most of the consoles advanced features, from what we saw of the development version. The sprites are big and detailed, the scrolling is smooth
 face after Christmas

## Gremlins 2

Those lovable little creatures are back again. You know, the cute cuddly ones that turn in to erocious fiends shold you accidently feed hem at the wrong time.
The whole of the AA team sadly missed put on the film (I didn't, but I wish I had - ed), so we cannot devulge any of the plot. We'll can nake a guess, though. The gremlins are probaoly causing all sorts of mayhem, and the hero, ve anticipate, ends up killing them all.
We were sent these screen shots by Elite, he company producing the game of the film. It ooks good, and well



Entertainment Software

# 50 BEST CAMAES  

## Yes, it's part 2 of Amstrad Action's huge end-of-year retrospective. What are the 50 best games of 1990? ROD LAWTON concludes the round-up. This month: July to December...

You know it's a funny thing with games. There are some which grab you by the throat and shout "Play Me!" straight away, and others that you don't really notice very much at first but sort of sneak up on you and gradually work their way into your affections without you really noticing.

And what's just as funny is that quite often it's the immediately spectacular games that you lose interest in first and the subtler ones that you're playing later. Which is one reason we're bringing you this end-of-year round-up, so that we can right a few wrongs and set a few records straight. It's also a great opportunity to dig out all our favourite games and play them again on the pretext of working..

So here, then, is part 2 of our round-up, where we look at all those hits that came our way between July and December. Did they all stand the test of time? Did they all get a fair deal? Do we still play any of them now?

Most importantly, though, it's YOUR chance to cast your vote. Once you've read what we think, turn to page 45 for our special voting form whereby you can elect the year's best game.

Ready? OK, here we go with the second half...

## Bloodwych <br> Image Works <br> 92\%

AA58
"Bloodwych could never be called exciting, although life can get fraught. It's the mental exercise that's the fun. If you are to solve the mystery of Bloodwych, then every square inch of the fortress will have to be searched."

The original Dungeon Master was a huge hit on the 16 -bit machines. Described cruelly by some as being about as exciting as wandering around an NCP car park, it gave you the task of guiding a party of warriors, wizards and the like around a labyrinth of tunnels, battling all manner of monsters and hazards. Bloodwych is the follow-up, and lets two
humans play at once as well as adding other bells and whistles to the original concept.

Bloodwych is pretty well unique. Possessing unrivalled immediacy and realism for a role-playing game, it provides a huge challenge for determined adventurers. Good one, Image Works.

## gonsole Ocean

 92\%AA60
"When you've finished admiring your new console and pretending it's some thing out of Stingray, you are ready to play Burnin' Rubber, the first ever Amstrad console game. Could this be the start of a new era of gaming?"

Burnin' Rubber is the free game supplied with the GX4000 console and Plus machines. But although it's free, that doesn't mean it's no good! In fact, Burnin' Rubber is the finest racing game ever seen on an Amstrad. You drive a le Mans car round a twisting, dipping circuit, through tunnels, past other cars... and end-over-end through the scenery, more than likely. There's nothing new in this game, just sheer speed, playability and graphic polish. Two things are truly spectacular. Your 16 -colour hi-res hardware sprite, and the subtly shifting colours you race on

through the dusk and into the night.
So if it's so good, why only (!) $92 \%$ ? Well, Burnin' Rubber does get gradually tougher as you go on, but basically very little happens. You crash or you keep going, that's all there is to it. Nigel Mansell can go home from Monaco after two hours, Derek Bell can leave le Mans after twenty-four, but a really hot Burnin' Rubber racer could go on indefinitely...


Gremlin
66\%
AA58
"Monty games haven't changed. They've been given a shot in the arm but the format has been mined to exhaustion in previous versions."

Harsh words indeed, especially since Impossamole was actually quite a good arcade platform puzzler. In it, our furry friend had to find and destroy five tough Guardians on five equally tough worlds. The action didn't go down too well at the time, the supremely frustrating Impossamole being rated a lowly $66 \%$.

But what do we think now? Impossamole isn't as good as Rick Dangerous II, but it's perilously close to a Rave...

## Klax

## Domark 89\%

AA58
"...Terminal mindbending is the outcome, as is complete and total addiction. If you ever manage to score a Klax your life will never be the same again, the game quickly becomes an obsession."

Klax followed in the Tetris vein, that of using a very simple principle coupled with arcade-style reactions to provide a stupidly addictive little game. In Klax, variouslycoloured tiles flip towards you down a table and you have to collect them (up to five at a time) on a paddle and then drop them into a pit so as to form horizontal, vertical or diagonal lines of the same colour. These tiles then disappear. Each successive level poses a different, tougher challenge, and you could be playing and swearing at - this one for months.

We game Klax 89\% originally, but in all conscience it has to be worth a Mastergame.

## AMC <br> Dinamic <br> 83\%

AA58
"With nine hits before you die and five lives, it looks as if Dinamic has finally got the difficulty level right. AMC is easy enough for the beginner to start while being hard enough to test the best at the finish."

FEATURE

Another walking, stalking death-dealing scroller, Astro-Marine Corps is also yet another tough, good-looking blast from Spain. Eight levels, collectable weapons and large, impressive foes all go together in a well planned and well constructed game. And that's about it, basically.

AMC got a Rave back in AA58, and it looks just as good now.

## Fighter Bomber <br> Activision <br> 89\%

AA59
"Happiness is a laser-locked target. Fear is a locked SAM. Trouble is they tend to coincide. Fighter Bomber gives desktop pilots a taste of both with an adventure in techno-war..."


- Fighter Bomber mixed flight sim accuracy with arcade action.

The trouble with most flight sims is that they're dull. The trouble with most airborne arcade games is that they're simplistic. Fighter Bomber attempts to combine the best features of both.

The only thing that stopped it scoring a Mastergame was the limited number of missions, and the fact that novice pilots might never persevere long enough to become aces.

## Stunt Car Racer Micro Style 96\%

AA59
"Stunt Car Racer is simply the best. Drive baby drive, put that pedal to the floor and go crazy. Why? Because you have to be slightly touched to even consider taking on this crowd of speed nutters..."

Stunt Car Racer made even the formidable Hard Drivin' look as if it was standing still. Using similar techniques - honest, straightforward, no-cheatin' 3D graphics - Stunt Car economised on on-screen detail but made up


- Stunt Car Racer - minimum graphics, maximum thrills!
for it in speed and playability. You race around a series of stunt tracks that make roller coasters look like a pram ride in the park, competing against opponents even crazier than you are...

We must have thought it was good - we gave it a massive $96 \%$ back then! Worth it for its playability and speed, but we're not so sure about the graphics any more. They really were on the thin side of non-existent.

## Escape from the Planet of the Robot Monsters

 Domark 78\%AA59
"Overall, Escape from the Planet of the Robot Monsters is a polished and entertaining game. The one-player mode is good, but the simultaneous two-player option will make for many a long hour of happy blasting."

This game harks back to all those isometric 3D epics of yesteryear in its style. Your job is to rescue a bevy of beautiful female hostages from swarms of evil robotic guardians in a multi-screen bash-em-up. Graphics are thoroughly up to date, and a two-player option does more than simply double the fun.

We rated this one just below a Rave, but we think we were a little cruel - it really is good enough to deserve that rare accolade.

## Lords of Chaos Bladesoft <br> 84\%

AA59
"Lords of Chaos has one hell of a reputation to live up to after Laser Squad. It's a complicated beast, and a lot of manual-reading and getting killed is called for before you start to achieve anything."


- Lords of Chaos was Laser Squad with magic.

LOC is a role-playing game with excellent seen-from-above graphics and enough gameplay to last you a lifetime. Each character moves individually and possesses his or her own characteristics. The trouble is, how could it follow Laser Squad? The last thing it needed was more gameplay..

We gave Lords of Chaos 84\%. Without Laser Squad, though, it would probably have scored a Mastergame... .

## Deliverance

Hewson
89\%
AA59
"With perseverance it's possible to progress, each time getting a screen or two deeper into
the game and further out of Hell. If you're loo ing for one of the stiffest arcade challeng ever, Deliverance is the answer. It's a hard on but beatable, eventually."

Raff Cecco is one of the industry's le endary programmers. His distinctive graphi have ensured him a cult following on the CP


- Deliverance was great-looking but oh so tough.
and Deliverance (Stormlord II) is his best yt It's a platform shoot-em-up which needs ultr fast reflexes, rapid tactical thinking and almo inhuman perseverance. Very tough indeed.

Deliverance scored 89\% - almost Mastergame. Despite the polish and the grap ic excellence, it loses out on sheer difficulty

## International 3D Tennis Palace 81\% <br> AA5!

"...the emphasis heavily on tennis first, the second and the international bit following way behind."

The first time you see 3D Tennis you' going to think it's somebody's idea of a jok Drawn in sketchy vector graphics, it looks li an abortive Speccy game of the early '80s. Su is the price, however, of genuine - and fast 3D. Palace has bravely gone for the re approach versus the pretty one, and come with a tennis sim like no other. Play it lo enough and you'll realise that this is serio stuff, a program that makes other tennis sir look like candyfloss.

But what do we think of it now? Well, scored $81 \%$ at the time - those graphics rea are off-putting - but if you're talking serio tennis it's got to be the one.

## Monty Python's Flying Circus <br> Virgin <br> 84\% <br> AA6

"Yes, it's time to don your silly hat, lock $t$ door and put down that Cabinet Minist you're about to enter an extremely surr world..."

How on earth can you make a comput game out of a phenomenon like the anarch disjointed and basically nonsensical Mor Python? Well Virgin has tried, and come with a rather good game. It's basically a sho and-collect-em-up populated by large numbe of Python favourites. Your hero is Mr Gumb who is out to reassemble his brain so that

FEATURE

game rates very highly. Just be careful that Old Nick doesn't get you..."

As is usual with Dinamic games, Satan comes in two halves. Complete the first and you get the password for the second. The idea is that once you've got that far, there's no need for you to have to play the (by now) easy first level again. What more is there to say? A tough platform shoot-em-up with great graphics, as we have come to expect from this Spanish software house.
Our rating was $83 \%$, making Satan a Rave. become an accountant. He starts off avoiding a series of 16 -ton weights and being followed by a bush with legs, and then he has his head transplanted onto the body of a fish before he goes off collecting tins of spam...

Python scored 84\% and deserved every bit of it. Absurd and hilarious on the surface, it was also a deep and challenging little game underneath.


- Monty Python had you collecting tins of spam...


## Iron Lord Ubi Soft 92\%

AA61
"...it stands head and shoulders above the others in the genre. It is fun to play, and wonderful to look at. There is enough here to satisfy the most demanding adventurer..."

Iron Lord seems to have been around on the other formats for ages, but has only recently made it to the CPC. To describe it as a graphic adventure/role-playing game would be not to do it justice. Your job is to regain the throne of your kingdom by amassing an army from your land's citizens and leading it against the evil usurper. There are archery matches to win, arm-wrestling and gambling, heroes, villains, battles and everything else you could wish for in a medieval epic.

We gave it a Mastergame, and in its field there's no doubt that there's simply nothing to touch it. A whole world crammed into two disks (yup, it's that big).

## Satan <br> Dinamic <br> 83\%

AA61
"Satan is tough, challenging and very playable. The scrolling is smooth and graphically the

Fair enough, really, because although the game was about as well done as it could be, that style of game has been pretty well done to death by now.

## Night Hunter <br> Ubi Soft <br> 73\%

AA61
"Arcade game standard it ain't, but if you like the idea of a nicely-drawn, atmospheric romp around a big castle, with a bit of thought and a bit of difficulty, give Night Hunter grave consideration..."

You normally consider Count Dracula the bad guy, but in this platform suck-em-up it's your job to make sure he gets enough blood to keep him going all through the night. You've got to explore a the rooms and corridors of an old castle for three bits of parchment and five keys which, between them, will get you off that level and onto the next. Oh yes, and you've got to get off the level before dawn, or you crumble away into dust...

We gave Night Hunter 73\% originally, but that was a bit unkind. The four-colour graphics make up for in detail what they lack in, er, colour, while the characters, animation and sound effects really are very funny. Add to that great playability and you've got a game with really deserves a Rave.


- In Night Hunter, Dracula was the good guy!


## Skate Wars Ubi Soft 80\%

AA61
"Excellent graphics and oodles of playability. Not much variety, but the range of hazards on successive levels added to the sheer fun factor makes up for all that."

Skate Wars is a kind of ultra-violent ice-
football. The players are encased in spiked steel armour and the ball itself is solid steel. The niceties of tackling are limited to smashing into your opponent hard enough to send him flying, and hazard include concrete mushrooms and bottomless pits

Skate Wars scored 80\% originally, let down principally by its lack of depth - there are many different rinks, but still the same side-toside kicking/running/crashing. Having said that, the graphics really are nice and the game so playable that two human opponents could be arguing over it for months.


## Fire \& Forget II Titus <br> 84\%

AA61
"The only thing left to worry about is the price. Nearly $£ 30$ is one hell of a lot compared to the traditional $£ 15$ or so of traditional disk-based CPC software."

Fire \& Forget II is a cross between a racing game and a Thunderblade-style shoot-em-up. Your vehicle - a Thunder Master II no less -

FEATURE
can either scoot along the road dwindling towards its vanishing-point on the horizon, or take to the air to attack its foes. You're following a convoy of terrorists on its way to wreck an international peace conference, by the way.

What you've got to ask yourself with a console game is whether it adds enough to the state-of-the-art of CPC gaming to double the price of the software. Fire \& Forget II would be stunning on the CPC, but for a new generation of games it falls a little way short. It's good, but not that good.

## Sim City Infogrames 82\%

AA63
"...a city simulator. Now that may sound like a bit of a daft idea for a game, but just wait 'till you sit down to play it!"

Sim City gives you a large, undeveloped landscape, a whole wodge of money, and the


- Building your own metropolis in Sim City.
ability to designate commercial, residential and industrial zones, build roads and railways and erect power stations, sports stadiums, ports and airports. Construct a city so wonderful that everyone wants to go and live there - but remember, people don't like pollution from factories, expensive housing or traffic jams, as well as being generally rather finicky...

Very good, but not quite a Mastergame. Sim City is endlessly fascinating, but a little sluggish to play and graphically dodgy.

## Italy 1990

US Gold 88\%

AA58
"As time ticks on in the World Cup 1990 competition, the Goldies have beaten the offside trap and seem certain to score a winner!"

Yet another World Cup tie-in, Italy 1990 proved very good-looking and exceptionally playable. Too easy against the computer, but with two humans it was terrific fun.

There were loads of new footie games in 1990, but none which combined both graphics and playability like Italy 1990.

## Time Machine <br> Activision <br> 76\%

AA62
"This form of time travel can get very frustrating as you puzzle your life away, but if you're


- Time Machine - 3D graphics, 4D gameplay...
not too bothered by Speccy ports and silence, and if you enjoy being flummoxed, step into the Time Machine and head back to the dawn of history."

We'd never seen anything like Time Machine. It's an arcade puzzler set in five different historical time zones over the same bit of landscape. You have to whizz back and forth collecting, moving and manipulating objects in what is pretty well the world's first four-dimensional puzzle.

Time Machine fell just short of a Rave when we first reviewed it. The graphics were just too feeble to really carry it off. Now if it had been programmed specifically for the Amstrad (and been given some sound), well...

## Puzznic

## Ocean

## 84\%

AA62
"Puzznic is one of those games based on a very simple idea. Appearances are (as ever) deceptive, though, and underneath it all there's oodles of mega addictive gameplay. You'll be unable to put it down until you've finished."

Ocean has come up with another puzzle game, this time shuffling coloured tiles around until you can get them next to each other so that they disappear. Walls, lifts and all sorts of different layouts over eight large levels will keep you puzzling for ages.

There's enough gameplay to justify its $84 \%$ Rave rating at the time, but not enough arcade immediacy to make it a Mastergame.

- Ocean's Puzznic was a great brain-teaser.


## Kick Off II <br> Anco <br> 86\%

"Kick Off II is simply AA63 playable footie game to date. While it's still not as polished as other soccer games, it represents a big improvement over the original version."

The original Kick Off was fast and playable, but almost entirely devoid of anything
which could be called graphics. Kick Off remedies this in great style, as well as addir new features to boost the gameplay even fu ther.

We liked it so much we gave it $86 \%$. N quite polished enough for a Mastergame, b probably the year's most playable footie sim.
conassu
coinesing Shadow of the Beast

## Gremlin

84\%
AA63
"Shadow of the Beast is a game we thought we'd never seen on the Amstrad."

There are several levels to explore in this horizontally-scrolling bash-emup that set the world buzzing with its graphics on the Amiga. With beasties to bash, objects to collect and end-oflevel guardians to destroy. The fourcolour graphics are detailed and effective, and the gameplay easy enough at the start and tough enough at the end - it's what counts.

The major quibble was the restart point once you were dead - right back at the blinkin' start! That stopped it getting a Mastergame in AA62 and it still hacks us off now. Otherwise, a great conversion.


## ,



## THE BEST GAMES OF 1990: READERS' VOTING FORM

| 1 | Rick Dangerous II...................................................Micro Style.. | ..Micro Style................. $97 \%$. | 97\%...............AA62 |
| :---: | :---: | :---: | :---: |
| 2 | Stunt Car Racer .....................................................Micro Style. | Micro Style.................. $96 \%$. | 96\%................AA59 |
| 3 |  | ..System 3 ....................94\%. | .94\%................AA55 |
| 4 | Ghostbusters II..................................................Activision. | ..Activision...................94\%. | 94\%...............AA52 |
| 5 | Burnin' Rubber .....................................................Ocean. | ..Ocean........................ $92 \%$. | .92\%...............AA60 |
| 6 | E-Motion ..............................................................US Gold. | ..US Gold......................92\%. | .92\%...............AA57 |
| 7 | Iron Lord.........................................................Ubi Soft | ..Ubi Soft..................... $92 \%$. | .92\%...............AA61 |
| 8 | Bloodwych ......................................................Image Works.. | ..Image Works................92\%. | .92\%...............AA58 |
| 9 | Castle Master ....................................................DomarkIncen | ..DomarkIncentive........ $91 \%$. | .91\%...............AA56 |
| 10 | Turrican..............................................................Rainbow Arts. | ..Rainbow Arts.............. $90 \%$. | .90\%...............AA57 |
| 11 | Chase HQ ......................................................Ocean. | . Ocean ........................ $90 \%$. | .90\%...............AA54 |
| 12 | The Untouchables ...............................................Ocean. | ..Ocean......................... $90 \%$. | .90\%................AA53 |
| 13 | Jack Nicklaus Golf.................................................Accolade. | ..Accolade.................... $89 \%$. | .89\%................AA53 |
| 14 | Klax....................................................................Domark | ..Domark ..................... $89 \%$. | .89\%...............AA58 |
| 15 | Fighter Bomber....................................................Activision. | ..Activision....................89\%.. | .89\%...............AA59 |
| 16 | Fantasy World Dizzy...........................................Codemasters. | . Codemasters .............. $89 \%$. | .89\%...............AA52 |
| 17 | Operation Thunderbolt........................................Ocean. | ..Ocean........................ $89 \%$. | .89\%...............AA52 |
| 18 | P-47 Thunderbolt....................................................Firebird | ..Firebird ...................... $89 \%$. | .89\%................AA54 |
| 19 | Deliverance ................................................................ ${ }^{-}$. | ..Hewson...................... $89 \%$. | 89\%...............AA59 |
| 20 | Italy 1990 .............................................................US Gold. | ..US Gold...................... $88 \%$. | .88\%................AA58 |
| 21 | Pipe Mania.........................................................Empire. | .Empire.......................88\%.. | .88\%...............AA57 |
| 22 | Rainbow Islands .................................................Ocean. | ..Ocean......................... $88 \%$.. | 88\%................AA55 |
| 23 | Fiendish Freddy...................................................Mindscape | ..Mindscape .................. $88 \%$.. | .88\%................AA55 |
| 24 | Kick Off II.............................................................Anco.. | ..Anco.......................... $86 \%$.. | 86\%...............AA63 |
| 25 | Puffy's Saga ........................................................Ubi Soft. | ..Ubi Soft......................85\%.. | .85\%...............AA56 |
| 26 | Lords of Chaos .....................................................Bladesoft | ...Bladesoft ................... $84 \%$. | .84\%................AA59 |
| 27 | Shadow of the Beast...............................................Gremlin | ...Gremlin ......................84\%. | 84\%...............AA63 |
| 28 | Puzznic ...........................................................Ocean. | ..Ocean....................... $84 \%$. | 84\%...............AA62 |
| 29 | Monty Python's Flying Circus .................................Virgin. | ..Virgin..........................84\%. | 84\%...............AA61 |
| 30 | Fire \& Forget II..................................................itus . | ..Titus .......................... $84 \%$. | 84\%...............AA61 |
| 31 | AMC .................................................................Dinamic. | ..Dinamic......................83\%. | 83\%...............AA58 |
| 32 | Satan...............................................................Dinamic. | ..Dinamic...................... $83 \%$ | 83\%...............AA61 |
| 33 | Sim City ...........................................................Infogrames | ..Infogrames ................ $82 \%$. | 82\%...............AA63 |
| 34 | World Cup Soccer - Italia '90 ..................................Virgin. | ..Virgin.........................81\%. | 81\%...............AA57 |
| 35 | International 3D Tennis ..........................................Palace . | ..Palace ....................... $81 \%$. | .81\%...............AA59 |
| 36 | After the War .....................................................Dinamic. | ...Dinamic.....................81\%. | .81\%...............AA52 |
| 37 | X-Out.....................................................................inbow Arts. | ...Rainbow Arts..............86\%. | .86\%...............AA56 |
| 38 | Hard Drivin' .......................................................mark. | ..Domark ..................... $80 \%$. | .80\%...............AA53 |
| 39 | Skate Wars .......................................................Ubi Soft | ..Ubi Soft..................... $80 \%$. | 80\%...............AA61 |
| 40 | Dr Doom's Revenge..............................................Empire. | ..Empire....................... $80 \%$. | .80\%...............AA56 |
| 41 | Dan Dare IIII.........................................................Virgin.. | ..Virgin..........................79\%. | 79\%...............AA53 |
| 42 | Escape from the Planet of the Robot Monsters...........Domark | ..Domark ...................... $78 \%$. | 78\%...............AA59 |
| 43 | Kick Off.............................................................Anco.. | ..Anco.........................78\%. | 78\%...............AA55 |
| 44 | Oriental Games ............................................................ | ..Firebird ......................78\%. | 78\%...............AA56 |
| 45 | Moonwalker...........................................................US Gold. | ..US Gold......................78\%. | 78\%...............AA52 |
| 46 | Time Machine....................................................Activision. | .Activision.................... $76 \%$. | 76\%................AA62 |
| 47 | Night Hunter.....................................................Ubi Soft. | ..Ubi Soft....................... $73 \%$. | 73\%...............AA61 |
| 48 | Pro Tennis Tour.................................................Ubi Soft. | ..Ubi Soft......................72\%. | 72\%...............AA53 |
| 49 | Lost Caves .......................................................Players. | ..Players .......................71\%. | 71\%...............AA52 |
| 50 | Impossamole.....................................................Gremlin | ..Gremlin .....................66\% | 66\%...............AA58 |

? Other (please quote game name)


#### Abstract

OK, you've read our ramblings about the best releases of the past year - but what do you think? We're conducting a reader poll whereby each one of you can vote for your fave of 1990. Simply complete the form below and return it to us by February 28th, and we will compile the definitive readers' chart of 1990. So what are you waiting for? - send it in!


0pposite are the top 50 games of 1990 , chosen by the $A A$ end-of-year committee and arranged in order of their original scores. What we want you to do is choose your own favourite out of those listed and put a tick in the box next to it. At the end of February we will be getting all the returned forms together and compiling the definitive games chart of 1990. Done that? OK, now cut out this form (a photocopy will do) and send it off to:

## AMSTRAD ACTION READERS' CHART, AMSTRAD ACTION, BEAUFORD COURT, 30 MONMOUTH STREET, BATH, AVON BA1 2BW

Don't forget, we want these coupons in by the end of February. And as a little inducement to you all, ten readers will be chosen at random and sent a special mystery gift for their troubles...

If you want the chance to win this freebie, just jot down your name and address here:


## Forum

## Professor Waring wades through another sackful of techie troubles..

Troubled by technology? Baffled by the basics? Have you got a problem or question that you just can't find the answer to elsewhere? Perhaps you have a tip that other readers will find immensely useful. Forum is the place where those problems get solved, those questions get answered, and those tips are passed on. Write to Forum, Amstrad Action, Future

## - Copy Cat

Help! I've been trying to write a machine code routine for a program that I've been working on. I want to copy a screen from one place to another, the problem is that my routine is just not fast enough. It has to happen within one screen refresh. (It's for a game I'm trying to write, and at the moment it flickers like crazy.)

My routine goes like this:

## LD $\mathrm{HL}, 488 \mathrm{~B} 0$ <br> LD DE, \&CB80 <br> LD BC, \&4800

LDIR
I've tried variations to make it quicker, but nothing I do seems to make much difference. I do hope that there is a way -I'm tearing all my hair out!

Jack Spanney
York
Actually, Jack, the quickest way to copy the

## Publishing, Beauford Court, 30 Monmouth Street, Bath BA1 2BW.

All technical queries should be sent to this address. Due to the pressures of producing the best mag around, we are unfortunately unable to answer telephone enquiries. For the same reasons, we cannot enter into any personal correspondence. Don't enclose SAEs with
screen memory is not to copy it at all! Instead you use a technique that has the appearance copying the memory, but in reality it does no such thing.

The screen memory is simply a bank of normal RAM. There is a video chip that converts the RAM into a picture. This can be programmed to read the screen from different memory locations, either at \&0000, \&4000, $\& 8000$, or the default address, \&C000. These are changed by altering the HD6845 chip's start address registers:

LD $\mathrm{BC}, \mathrm{ABCDC}$
OUI (C), C
LD $B C, 4 B D x x$
; $x<=\$ 00,440,480,4 C 8$ depending on RAM page
OUT (C), C

In BASIC try this to simulate it:

18 OUT abCeo, AC:OUT ABDOQ,8
20 IF INKEYs=" THEN 28

#  - Give us a poke... 

I have just bought an Amstrad CPC 464, and although I have read the manual provided, am not much wiser. At the moment I am just using it for games so I started buying your magazine for help, tips etc.

Unhappily, I do not understand how to put in the cheats, pokes etc, this is very frustrating, could you please please please print a "thickies" guide to using them.

I'm sure I cannot be the only new reader with this problem. In time I'm hoping to become more knowledgeable in these matters, but in the meantime, could use some help.

I do not want to resort to "blackmail", but how can I keep buying your mag if I don't understand it!
P.S. Your mag is brilliant, and I do enjoy
reading the letters. (Those that I can understand anyway!)

Marie Butler Chesterfield Derbyshire

We have recently started a beginners' section, just for people like you. Our new columnist Alex van Damm will answer all your queries about anything you're not sure about in her Ask Alex section. There's no need to feel daft, Alex was a beginner too once (Of course, I never was), and will treat all letters seriously, no matter how trivial they may seem.

I have passed your letter on to her. Hopefully she'll be tackling the prickly subject of pokes in this, or a forthcoming issue.
your letters - they'll end up in the bin.
We try and answer as many letters of different subjects every month but because of the sheer volume of letters we get, we cannot guarantee to print every letter we receive. Rest assured that all your letters are read, and we select those to try and encompass as wide a variety of topics as possible...

30 OUT ABCBO, AC:OUT ABDOQ, ACB
Note that this doesn't physically move th contents of the screen at all. It merely switch es whereabouts the video is read from. It commonly used by games programmers in technique called 'flipping'.

Two screens are used. One screen is buil $u p$ whilst the other is being displayed. Whe the computer has finished drawing up the hic den screen, they are 'flipped' using the abov machine code routine. The hidden scree becomes the displayed screen. The old dis played screen is cleared, and the next scree is built up. This process is repeated man times a second, and results in smooth updat of computer screens.

The advantage of this method is that th screen appears to redraw instantaneousl] Only a couple of instructions are involved, an the effect is smooth, flicker-free animatior The disadvantage is that it requires hug amounts of memory - two 16 K screens, that half the computers memory.

I hope you haven't lost too much hair.

## - Bouncing balls

I hope you can help me. I am trying to get ball bouncing around the screen within a s area, but I am having problems getting start and wondered if you could help me.

I buy AA regularly and if possible could $y$ help me with a poke as well. The game Rockford from Mad Games and there is address to write to on the game card.

I hope you can help.
Mr K Rowar Manchest

Here's a quick lesson in writing a bouncy ba routine.

The ball will have two co-ordinates, one c the horizontal and one on the vertical axi These will be incremented or decremente depending on the direction that the ball travelling. When the ball hits the boundary the pre-defined area, it will change direction.

Here is a simple listing to illustrate how it's done. It's a bit flickery and blocky, but you should get the idea.

5 MODE 1
$18 x=10: y=18: x d i r=1: y d i r=1:$ RDN Set the co-ordinates and directions.
29 LOCAIE $x, y$ :PRINT " ":REN Erase the old ball.
$38 \times=x+x d i r i I F x \geqslant 38$ OR $x<2$ THEN $\times d i r z=-(x d i r)$ :REM Move the ball left/right. swap direction if it exceeds boundaries.
$40 y=y+y d i r: I F y) 22$ OR $y(2$ THEN $y d i r=-(y d i r)$ : REM Move the ball up/down. Suap direction if it exceeds boundaries.
58 LOCATE $x, y:$ PRINT" $0^{n}:$ REN Print that ball.
68 coto 28

As for your poke request, you'll have to scan Uncle Phil's Cheat Mode pages, and keep your fingers crossed.

## - Scull and crossbones

I am writing in reference to a letter you carried in AA61 by G A Doyle. In this letter, $\mathrm{Mr} / \mathrm{Mrs}$ Doyle stated that I was a beginner in the Public Domain business and that I was indulging in 'Secondary Piracy' because I was asking for some PD software in Helpline.

Although I have not been going as long as WACCI, I am not a beginner. In fact, my library has over 80 PD disks, that's more than any other library in the U.K.

Since the programs I asked for are PD, it is not a form of piracy for myself to copy programs from other libraries. Indeed, I have had other PD libraries ordering software from myself, without which, some of them would probably not have started. Also I would like to point out that my PD library was the first to get permission to distribute the Total Eclipse Trainer Demo, and since then, other libraries have followed my lead in using the program. So, I would consider them ripping me off on that respect.

Thank you for the taking the time to read this letter and allowing me to defend my PD library.

## Alan Scully <br> Glasgow

Once a piece of software has been donated to the Public Domain anyone is at liberty to pass on a copy to anybody else.

Anyone who runs a library is perfectly entitled to charge a small fee for copying and distributing that software. The prices that PD libraries charge is on the whole barely enough to cover their costs. The time and effort that most librarians but in to the running of their library is enormous.

Alan's library can be contacted at Scull PD, 119 Laurel Drive, Greenhills, East Killbride, Glasgow G75 9JG.

## - Grubby heads?

I have a CPC464, and not many tapes work in it now, we can't work out why. Sometimes a game will load with no trouble, other times the title screen will change colour and then halfway through a block of tape stops and

## Presentation is everything

At the moment, and for next two years, I will be doing a BTEC National Diploma in Computer Studies. Just recently I have found out that a large percentage of the marks come from presentation. I have terrible writing (as you can probably see) and I am worried that I may lose marks because of this (enough of the chit-chat). What I am saying is could you give me advice for a printer that is cheap, has good NLQ, plenty of fonts, light (as I think my desk is ready to give way) and fairly small (I don't think I've missed anything). Also I would need a good desktop publishing package to allow ne to set out the pages and which contains a spelling checking word processor also at a reasonable price.

Finally, could you please print the Forum address again as I had to search through mag after mag all the way back to issue 50 to find $i t!$

## Matthew Welford <br> Lincoln

The Star LC10 should meet with all your requirements. It has a list price of $£ 199$, but
you should be able to get it cheaper via mail order. You could improve your presentation even more by going for the LC200 colour option at an official price of £259, again shopping around should enable you to buy it for less. Speak to Star Micronics on 0494471111.

I think you might be going for overkill with the desktop publishing package. They're more suited to producing newsletters and the like, rather than college work. They can do fancy things, but it will take ages for them to print out your work.

I think you're better off with a straightforward word processing package such as Brunword or Protext. Brunword includes a spell checker as part of the package, and Protext has one as an optional extra. Contact Brunning Software, 34 Helston Road, Chelmsford, Essex CM1 5JF. Telephone 0245 252854. Or Arnor 611 Lincoln Road, Peterborough PE1 3HA. Telephone 073368909.

Just for you, Matthew, Forum's address appears at the top of the column.

resets the computer.
Yesterday I tried your cover tape game Ironman and it had a 'read error $b$ ' in the same place four times. I called my dad over to watch and then it loaded perfectly! I have thought that the tape heads might need adjusting. I have seen head alignment kits occasionally but not recently. Do you know where to get an alignment kit, or somewhere where this could be done cheaply? If the heads are OK , what else could be wrong with our 464 ? If you could give me any help I would be very grateful.

There are plans in our house of getting a DD1, and Multiface II, but we need the tape to transfer games to disk (NOT LEND OR SELL), only for disk back-up. Is backing up of commercial games OK?

Thanks for any help.

## David Overall Streatham London

It sounds very much like either an alignment problem or possibly dirty heads. Alex ran an article on cleaning and adjusting the heads last issue.

If the games you want to save to disk are for your own use only then I can't see any problems. Incidentally, you don't have the automatic right to make back-ups, even if they are exclusively for your own use. However,
the software houses are far more concerned about piracy than worrying whether you make the odd back-up.

## - Idle thoughts

An idle thought. Why didn't the Amstrad research and development people include a word processing chip in the new 6128s? Or at least space to add, say, Protext and Prospell inside the machine so it doesn't end up looking like a Christmas Tree?

## David O'Dell

Worthing

## West Sussex

The cartridges that the new machines use normal ROMs inside. There is no reason why a word processor cannot be blown onto the ROM and supplied on cartridge form.

However it may be that serious manufacturer's feel that the large number of units that have to be manufactured makes the proposal unfeasible.

## - On the level

I have, for several aeons now, used my 6128 and the excellent Mini Office 2 package for my word processing needs, particularly for school projects and letter writing. It has served me
very well indeed, but now I have dragged myself another rung up the ladder to do A-levels I find myself in need of something a bit better. What I really want is a word processor that will exploit more of the printing capabilities of my DMP2000, such as subscript, italics and underlined printing. I've heard that BrunWord Elite is pretty good, but have you any other suggestions?

Another program I need is one that draws and prints mathematical graphs, where you can type in an equation and it does the rest. Up till now I've been using one called Omnigraph on the RM Nimbus machines at school. Again, any suggestions?

Finally, many are the evenings when my Bubble Bobble tape has failed to load, and unfortunately it doesn't seem to like the Multiface 2. Does anyone know where I can get a disk copy? I hunt through $A A$ every month but to no avail (where upon I lapse in uncontrollable sobbing).

Anyway, congrats on the storming mag, here's hoping for some answers.

Russell Doano Gwent

Brunword should be perfectly adequate for your needs. It has a variety of fonts, and is specially designed to work with dot matrix printers.

As for Omnigraph, I'm afraid my software collection doesn't run to that. We did print a similar thing in Type-Ins recently, for solving quadratic equations. Probably nothing like what you had in mind. If anyone is familiar with such a maths program then get in touch.

## Eight-inch disk

Please can you help? I wish to know where I can get hold of an eight-inch disk drive, interface for connecting to 6128 , and $O / S$ of suitable quality and also how much this lot will cost.

And now a note for any budding ornithologists out there. I have written a BASIC program which translates English names of British into their Latin equivalents. It contains over 500 different species and is fairly fast considering it is only in BASIC. It is disk-only, so if you want a copy, just send a blank disk and SAE to me and you will receive a copy pronto!

Just one more point... Why is it so difficult to get a letter printed? I have lost count of the amount of times I've written and this is probably my last desperate attempt before I finally give up. Great mag though!

## Lorne Murphy 35 Longridge Ave Saltdean Brighton BN2 8LG

What on earth do you want an eight-inch disk drive for (apart from impressing the girlies)? No... I won't ask. If anybody has actually done such a thing then get in touch, please...

Similarly, if you're into birds, send a disk and stamped address envelope to Lorne.

What do you mean you never get your letters printed? You just did, didn't you?

## Mouse training

For those who own a Kempston mouse and have been baffled by the instruction sheet (I Wonder if they wrote the Amstrad manual?). I have managed to uncover the port addresses where the x and y co-ordinates are stored and may be accessed. Type:

PRINT INP (\&FBBE)'638/255 to view the x co-ordinate of the mouse cursor
PRINT INP (\&FBCF)*398/255 to view the y co-ordinate of the mouse cursor
PRINT INP (\&FAE7) to view the state of either mouse button.

Note that only numbers in the range 0 to 255 can be stored at these locations, therefore both the x and y co-ordinates must be magnified to cover the entire screen. The port location \&FAB7, used to detect the state of the mouse buttons, returns the value 124 when both buttons are pressed simultaneously. 125 when the left button is pressed, 126 when the right button is pressed, and 127 when neither button is pressed.

The following short listing demonstrates how the Kempston mouse may be implemented into your own programs:

1. DREMDC UTILITY for Yeenston Mouse
2. Mritten by Matthev Mrescott
$3^{\prime} 1990$
18 mont 1
28 DOADER ?
$38 \mathrm{IKX} 8,0$
40 IXX 1,28
$58 \mathrm{mox} 2,2$
68 INX 3,2
70 TM
00 SWind 295, a7, 397, , $117,487,477,478,471,198$



$120 \times 7 \times$
$138 \mathrm{Y}+\mathrm{WY}$
140 cosus 310

158 If mexitet trix 180
I60 If MESOX OR MYOY TIM 260
170 coro 158
198 cosie 310
1508970248
$208 \mathrm{x}+\mathrm{7x}$
218 Y 5 Fix
28 IT meosian tim 240 ISSI 120
$258 \mathrm{y} 5 \mathrm{5N}$
240 Daw $x+16,7+1,1,8$
258 coto 200
258 cosun 310
$290 \times 77 x$
258 \% \%7\%
350 cesin 310
3006070 I50
318 wove $X, Y, 2,1$
380 PaNt CES (25S):
398 mivex
Moving the mouse with neither button depressed will move the arrow cursor. Pressing and holding a button will cause the arrow to disappear and, when the mouse is moved, a line to be drawn. Beware that crossing the highlighted border whilst holding a button will prompt undesirable effects. You may move the mouse at any speed, the line will not break. This is a small section of an art package I have written for the Kempston mouse. I have written several other utilities, including a mouse-driven filing system. The best art package available for the Kempston mouse is the Advanced OCP Art Studio, which allows you to select the mouse from the input devices menu (see the manual). If you own a Kempston mouse (indeed, any mouse), this package is an essential.

Matthew Prescott
Australia
Grday Matt, and cheers for those hints, mate. Bonza. (Australian for thank you.)

## Interface for disk drive

I recently bought an FD-1 Disk drive as my first disk drive for my 464. I bought I because it was selling for only $£ 15$. I am now stuck, I can't seem to find anywhere where I can buy the interface to connect the FD-1 to my computer. Could you please tell me how I could get hold of one.

If anybody out there is willing to sell me one at a reasonable price, I'll be most grateful.

Duwayne Brooks
77 Wydeville Manor Road
Grove Park
London SE12 0EP

The 464 disk upgrade is the DD-1. It comprises the interface and FD-1 disk drive. I'm sorry
to tell you that the interface is not available separately.

If you cannot get hold of the interface on its own (anyone who can help, please contact Duwayne at the above address), then you may have to resort to buying a complete DD-1 - the disk drive and interface combined. You coula then quite happily use the FD-1 as a seconc drive.

## - Disk drive drama

I recently bought a bundle of seven Amso disks containing 50 games through an advel in AA. I want to erase some of the games release disk space. However, when I catalogu the disks, the only file shown is DISC.BAS - 1 F System Files Exist. Under CP/M DIRSYS list
the games files. I have tried to remove the system status and revert the files to directory status using the SET command from CP/M.

With the CP/M disk in the drive (I have a 6128) and typing SET at the A> prompt results in an ERROR: NO OPTIONS SPECIFIED message. With the games disk in the drive typing the command results in SET?

I cannot copy the SET.COM file to the games disk as it is not system format, or the the games disk back to the CP/M disk as they are system files only. I have tried help on side 3 of the operating system disks, and have been through the manual from front to back. Please help before I give up and go fishing!

Steve Makin<br>Dover<br>Kent

You need to make the SET command wait until you've put the games disk into the drive before executing the command, Steve.

To do this you need to insert a B: between the command and the parameters. On a sin-gle-drive machine this will prompt you to insert another disk in the drive before commencing the operation.

Go into CPM and type:

## SET B!*,* [dir]

You will be asked to put in another disk. Insert the games disk, and sit back while all your files are converted. All you need to do now is erase the ones you no longer require.

## - Power down

I have a major problem concerning my upgraded CPC464. A few years ago it was sent away to a repair company. Now I am having major problems getting any power to the computer.

The five volt DC input socket appears to be loose. A pencil wedged between the 5 volt plug and the monitor lead lets the power through, but one small bang on the table shifts the cable and the ON lamp goes off. I then have to spend several minutes fiddling with the pencil and the wire to get it working again.

As I thought the problem was in the computer, I took off the cover and examined the rear connections. On the bottom of the PCB one of the solder joints leading to the socket was cracked. I re-soldered it, and set the computer up again. Nothing happened, so I spent some more time at it. I have to use the pencil still.

I tested the plug by using an alternative

## Thank you very much

I would like to thank Chris Medway and Val Robinson for their suggested solutions to my problem, in issues 58 and 61 . I now have my Amstrad and Printer working in beautiful unison and have produced many more pages to add to my increasing collection.

John Tucker Flitwick Bedfordshire

Well said John.
power supply. The computer would still not work, so I assume it is the socket that is faulty. Could you please tell me what is wrong with it, and what I can do to make the computer work properly?

Adam Lloyd Tunbridge Wells Kent

It must be most unsatisfactory to have such a temperamental problem. As you say you've tested the circuit board for cracks, and cannot seem to fix the fault from there, may I suggest that the problem could lie in the socket itself.

Over the years of plugging and unplugging, it could be that the insides of the sockets have become tarnished, or that the springiness has gone, and so it's not making proper contact with the plug.

You seem to know one end of a soldering iron from the other, so I have no qualms in suggesting that you replace the power socket. Your local electronics supplier should have the necessary replacement part.

## - Computer fan

I am a young computer fan and I wonder if you possibly could help me. I own an Amstrad CPC6128 and recently my A drive broke down, and I am having a hard time getting it fixed at a reasonable price in Denmark

Would it be possible for you to give me some information about companines doing repair work on the Amstrad commputers in Great Britain

## Kim Olsen <br> Hilleroed <br> Denmark

If it's a serious fault, it's likely that the drive may need to be replaced entirely. If that's the case, then CPC (no relation) will be able to supply you with one for $£ 89.05$. However, send your broken drive back to them, and they'll let you have it for $£ 70.01$.

You will need to fit the drive yourself, so if you're a ham-fisted oaf with the dexterity of a arthritic hippo, then Id leave the soldering to somebody else.

Get in contact with the company before you send that international money order. The address is: CPC, 194-200 North Road, Preston, Lancashire PR1 1YP. Or why not run up an expensive international phone bill? Call them on 0772555034.

## - Improve your memory

I have recently taken over a CPC664 system from someone who has upgraded to a PC. To bring the 664 up to date, I need to expand it a little.

I understand your reluctance to publish hardware projects but, since I am an electronics technician, I am sure that I could build, and debug before connection, any add-on devices at a far lower cost than commercial gear. A good example is the local price of $\$ 159$ for a 64 K memory expansion. I can buy two 4464 memory chips for just $\$ 4.50$ each. Total cost, if I construct it myself, should be under twenty dollars. (My spare time at no extra cost.) Also there is ample room to fit inside the case. (instant 6128!)

Given the age of the CPC machines, I believe there may be many readers with some technical knowledge, who have expanded the memory to 6128 size or bigger.

Colin Harvey Elwood Victoria Australia 3184

The reason we've steered clear of hardware projects in the past is not to do with the technical capabilities of our readers. It's the fact that if a mistake is made, it could result in lots of unhappy people with large repair bills. An error in a section like Type-Ins is annoying, but can easily be rectified in the next issue. Obviously the same cannot be said of a hardware project. However, we are considering introducing simple projects to see how it goes. If we can get together a failsafe system, then we may embark on some more ambitious projects. Anyway, for the time being, I have printed your address. Anybody who has built such a thing can get in contact with you.

BEGINNERS

## As $k$ Alex

## FII

Hello again fel-
Iow Amstrad users! I'm back to set you straight on all those niggly little problems that have you all lost and bewildered!

This month 'ill be talking about pokes. What are they, what do they do, and how do you use them? 'ill also be talking about how to type listings in.

Up 'til now, all my post has arrived courtesy of Adam - he's given me let-
ters that are more suited to my page, rather than Forum, which was where they were addressed. Now I don't mind answering these second-hand letters, but l'd love to have some of my own! So c'mon! I haven't had a letter addressed to me yet! So get them sent in, I'm so looking forward to receiving them!

## How

## Key Confusion

Mr B Becket from Kettlethorpe in West Yorkshire has written in about not being able to find certain keys that appear in listings. I hope you don't mind little me answering your questions rather than Adam! Anyway, he says that he cannot find the keys marked $\mathrm{f0}$, f 1 , f 2 and so on, the $\wedge$ also remains elusive, as does the I key.

I think that part confusion has come from the differences in the keyboard between the CPC6128 and the CPC464. (Both Plus machines share the same layout as the CPC6128.)

For a start the keys on the 6128's numeric keypad are prefixed with an ' f '. On the 464 they just have the numbers. Whenever you read that one of the ' $f$ ' keys is used to access a function, use the number keys at the right hand side of the keyboard.

The ' $\Lambda$ ' key looks more like ' $\dagger$ ' on the Amstrad keyboard. The reason for the confusion is that different fonts display different symbols to represent the same character. Hmm, I think I'd better explain further...

AA use professional Desk Top Publishing

equipment to produce the magazine, whic uses a variety of fonts. Fonts are simply typ faces. They define the style and shape of tt letters that make up the words you read on page. (In case you're interested most of th writing in $A A$ is printed in Glypha font.)

AA once used Courier font for listings. Th is because it looks similar to a computer prin out. Even though it was close, it wasn't pe fect. The up arrow character was a prin example, looking very different from the or that the Amstrad displays on screen (or is the keyboard.)

The AA team decided to incorporate a sp cial new CPC font into their publishing equil ment. The new font is an exact copy of th Amstrad's character set. So now any listin printed in AA appear precisely as they do

The I symbol actual looks a wee bit different on the ke board. There's a little gap in th middle of it. I've no idea why the printed it that way - it's very confu ing! Anyway it's obtained pressing SHIFT and @.

Hope this sorts out yo keyboard! If you have any oth problems, get in touch!

## Is your Amstrad IBM-compatible?

Bruce Sandeman has written in with a question about IBM compatibility.
"I would like to know if the 6128 is IBM compatible?" he asks.

I'm afraid the answer is a most definite No, Bruce. Sorry! IBM compatible means that the computer will run software, and connect to peipherals designed for the IBM PC computer To do this they have to be virtually identical as the IBM - which is a boring old business machine. It's alright if you have a load of stuffy old accounts to sort out, but they're not nearly as much fun as a CPC, I can tell you!

The Amstrad is much more of an all round home machine. It's friendlier, you can learn to program it quite easily (it must be easy - I managed it!), and of course is miles more popular when it comes to games.

Bruce goes on to ask: "If it's not PC compatible, is it possible to connect a 3.5 inch disk


- No, the CPC is not IBM compatible. And a good thing too, we say!
drive, and save programs in IBM format?"
I think I know where you're coming from Bruce! I'll just bet that you use a PC at work, and want to carry on with your facts and figures at home. This time the answer is thank-
fully a big Yes! It's perfectly possible. You need to buy two items beforehand. A 3.5 inc disk drive (never!) and a utility to read an write to IBM format disks.

To make your shopping easier, I'm going recommend one mail order firm who can su ply both items to you. The PC transfer utility unique to the supplier, but you'll be able find 3.5 inch disk drives from various source take a look through the adverts in AA.

The program is called 2 in 1 , and in review published in AA a few months ag came out tops as the best utility of its type. costs $£ 24.95$. The disk drive costs $£ 79.95$ pl $£ 3$ carriage, so added together the total wou be $£ 106.90$. Not too big a price to pay to kee you from working late at the officelSend yot order to Microstyle, 212 Dudley Hill Road Bradford, W Yorks BD2 3DF. You can ring the first on 0274636652.

## Typing in programs...

Now you've got your shiny new computer, it might not be a bad idea to learn how to use itl Typing in printed programs is in fact quite easy..

A program is simply a list of instructions that tells your computer what to do. Because of this, programs are often referred to as listings. The computer doesn't understand these directly, though - it works in machine code, a horribly complicated language made up from numbers. To make things easier for the rest of us, easier 'languages' have been developed that both humans and computers can understand so that you and I can learn to put programs into the computer.

The Amstrad has a built-in language called BASIC. This stands for Beginners' All-purpose Symbolic Instruction Code. At the start of every line there's a number. This tells you whereabouts in the program that particular line sits. So, for example, line 10 goes before line 20. This means that if you want to insert a line in between two existing ones, you'd simply choose a line number in between. With the above example, adding line 15 would work.

To type in listings you don't actually have to understand what the instructions do! But you do have to make sure that they are typed in exactly, otherwise the computer won't be able to understand the instructions that you're giving it.

If you do make a mistake you can move the cursor (the square block where the letters appear as you type them) back and forth through the line with the cursor keys - those four keys with arrows on them. Note that you can still see the letters 'through' the cursor. Mistakes can 'rubbed out' using the CLR and DEL keys: CLR gets rid of the character directly below the cursor; DEL erases the character to the left.

You have to tell the computer when you've finshed each line. To do this you press the RETURN or ENTER key. The computer will check to see whether you've put a line number at the beginning. If you have, it will me put into the correct place in the listing. If not the command will be acted upon immediately.

Apart from learning how to type your programs in, you'll need to know a few keywords that are connected with typing in listings. These don't have line numbers, because you want the computer to act straight away:

- When you've finished entering the listing, you may like to see what the program looks like. To do this just type LIST (followed by RETURN, remember!). Your program will appear on the screen, with the lines in their proper sequence.
- As I said before, listings need to be typed in accurately to work. The teeniest mistake will result in an error. If you spot a mistake in your listing you'll need to rectify it before it'll work. You could re-type the line all over again, but there is a much easier way. You can edit your work with the EDIT command. If the error is in
line 30 then just type EDIT 30 (don't forget that RETURN!) The troublesome line will appear with the cursor within it. Use the cursor keys and CLR and DEL to correct the line. Press RETURN when you're done.
- It's all very well having your little programette typed in, but it's not much use unless you know how get the thing started! RUN starts the program.
- When you've got bored of the listing pressing ESC twice quits the current listing.


## Type-ins

If you don't understand BASIC, you won't be able to make your own programs! Instead you'll need to get your listings from somewhere else. Pages like Type-Ins in Amstrad Action are ideal. These are programs that others have submitted to the magazine for publication.

It's probably a good idea to start with the smaller listings. The bigger ones can take hours to type in, and are prone to be full of mistakes! (Due to your typing by the way, not
because the magazine's at fault!)
The listings in Type-Ins are presented in such a way to make them even easier to enter, with less possibility of mistakes. The first thing you'll notice is that before each line there's a strange code in brackets. DON'T type this in! This is a special reference number to help you make sure that they're typed in correctly. To use them you'll need a copy of Type-writer - a special AA program that is reprinted every now and again.

Don't worry If you don't have Type-writer. Just ignore those codes. The other thing you'll notice is all the dots. You won't find them on your keyboard, so quit looking! These are used to represent spaces. Every time you come across a dot, replace it with a space instead (but don't confuse them with full stops!). I expect that you're wondering why? Well it's very difficult to tell exactly how many spaces there are when there's more than one in a row. The dots show you exacltly how many spaces there should be. See - we are trying to make it easier for you after all!

## Poking problems?

One of the letters Adam passed on to me was from Marie Butler on the subject of pokes. When I spoke to him on the phone he said that it was an ideal subject for me to tackle. I explained that I didn't really understand them myself! So he said well, you'd better find out then hadn't you!

Well, l've done my research, read a bit of cheat mode, and asked his nibs (ie Adam) for advice more than once. So here goes...

A poke is one of those words with double meanings. The most general term is to describe a way of altering the code of a game to allow you to cheat! The original meaning is different (and a sight more technical!). I'll try and put it as painlessly as possible, but to understand fully, you're going to have to listen to some fairly hefty explainations!

The computers memory is made up of several thousand locations. Each individual location is called a 'byte', and quite simply can hold a number. These numbers mean more to the computer than you or me! It interprets each number as an instruction, telling it to perform some action in machine code.

A 'poke' is a BASIC command that tells the computer to change the number held in any one of those bytes. There are over 65,000 of these bytes in your CPC, each can store a number in the range 0-255.

Any program written in machine code is simply a long list of numbers held in those bytes. Those numbers represent various instructions. By poking an individual byte, you change a part of the machine code proram.

Take a typical game. Somewhere in there will be an instruction that decreases the number of lives you have, etc. If you're able change that instruction, so that instead of decreasing the amount of lives it does nothing, then you have managed to cheat it! Whenever you die in the game, instead of decreasing the number of lives you have, they will remain the same, so you'll be able to play for ever and ever. Hurrah!

Finding which byte of memory to poke can be difficult. Most games are protected, so it's not easy to be able to put your 'poke' in. You need to understand machine code too, and recognise what the computer's doing to enable you to change the vital instructions. Also some games need several pokes to make the changes. If you want infinte bombs, infinite bullets and infinite lives etcetra, then you'll have to use at least one poke for each.

So most pokes take the form of listings, which poke several areas of memory. Some are in machine code, so that they can get round a game's protection and do their dirty work without being detected!

That's why the term poke often means a blinkin' great listing! To put these listings into the machine you simply type them in as a basic program. See the item about that elsewhere on this page...

Uncle Phil's Cheat Mode section deals indepth with poking. To use most of the listings, simply type them in and RUN them. The game you wish to cheat should be in the tape or disk drive. The game will load, the memory poked, and you'll be able to cheat away!


| $\mathcal{L} \mathrm{E}$ ¢ BANK BALANCER V1．03 |  | 3 L ¢ |
| :---: | :---: | :---: |
| Software to manage any type of Home Accounts．（464／664／6128）Please state |  |  |
| Menu driven from 12 menus Capable of storing 7000 tran Each entry has No．Date，D Coding facility allows thous Automatic balance calculation Standing order definitions for Password protection of store User definable colours and Autorun facility will load and Browse through transactions Print page，section，file or $c$ Uses two disc drives if requi Disc management from with File handling includes Edit， Change amount，preset bala Example files on discm traps Telephone helpline available | th up to 10 choices each（ 10 ．to f9） ctions on one disc <br> cription，Code，Debit／Credit，Balan and triggering of standing category week， 2 week， 4 week， 1 month． ity eg．Find and display all CHEQ data．（Up to 20 characters long）． <br> splay any file of your choice on star age by page． <br> ol codes to Epson compatible prir <br> program．Erase．Cat，User．Drive <br> t date，Balance，Drive．Titio，Edif <br> ert，Remove，Search，Exchange，B <br> illogical inputs and user mistakes． <br> complete with full user manual． <br> needed． | 1 year |
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ROMDOS（rom） 29.95

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# CHEAT MODE 

BOOREAD THE SMALL PRINT!

You've seen the covermount (AA56), you've read the blurb - now buy the book! Cheat Mode II - The Revenge is here...

A11 you old timers out there must remember Cheat Mode 1, the collected hinting, tipping and poking wisdom of Amstrad Action's first sixteen issues. This magnificent 92 -page epic was snapped up in its thousands by eager $A A$ readers looking for a way to take the sting out of their fave games...

Well you ain't seen nuthin' yet. Cheat Mode II takes the best cheats from the last three years of Cheat Mode and crams it intc 130 pages of absolutely essential info.

And as if that wasn't enough, we've gathered together 150 previously unpublished listings from such poking giants as Phil Howard, Mike Wong and Graham Smith.

Mind you, typing in all those listings is OK for practiced BASIC-bashers, but can be fraught for the rest of us... which is why Cheat Mode II is also available with cassettes containing all those pokes!

Cheat Mode II costs $£ 9.99$ on its own, and £11.99 with the two cassettes. Postage and packing in both cases is $£ 1.45$. All you have to do is fill in the order form below and send it off to the address printed - and you'll become the proud owner of the most important new work since... since... well, since Amstrad Action itself, dammit!

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#### Abstract

Yup, you've guessed. Every single one of these games gets the Cheat Mode treatment in Cheat Mode II: The Revenge. Unbelievable, isn't it!


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# The Amersing Amstrad Achion Rensile Rombe 

 Rempling Dery
#### Abstract

What do you get when you combine six Amstrad Action Fifth Birthday Compo winners, the staff of Amstrad Action, six racetuned, turbocharged, rubberburning 900bhp monster go-karts (er, a bit of journalistic licence here) and a large cake?




Typically, it was the coldest day of the year so far. The wind whistled from
to us? A marshal explained. "The water just makes things a little more interesting. You'll need skill and ability to negotiate that part." In one fell swoop that wiped out the Amstrad Action crew.

On to the first practice laps. These would have been a few sensible, acclimatising circuits which would give everyone a feel for the vehicles. Would have been. But unfortunately James 'Senna' Leach was one of the people to go round first. Regular readers will know that James and karting are old acquaintances. As all the other drivers gently motored around, James belted along like a madman, forcing everyone else out of the way. His thin, reedy voice could be heard bellowing triumphantly above the combined engine noise and tyre squeals, as he threw his kart around with all this finesse, skill and daring of a drunken Liverpudlian navvy wrestling with a runaway earthmover...

Rod and Adam also got their turn at a warm-up session; Rod (I've driven a Lotus) Lawton kept strictly to the scientifically devised racing line he had worked out in the
however, travelled round in a manner that could only belong to someone who has very little tyin! him to this mortal earth.

Representing the arty side of the magazin were Paul (I'm new here you know) Tudor anı Jacqui (So am I) Spanton. Jacqui wasn't, i many of the other bud ding champi on

Siberia across the Cotswold Hills straight into the bones of the assembled competition winners and Amstrad Action bods gathered at winners and Amstrad Action bods
the Castle Combe go-karting circuit.

Everybody was kitted out in Mansell-style overalls, and as we made our way over to the track an awed silence fell over all the participants. There they were; fined-tuned, thoroughpants. There they were; fined-tuned, thorough-
bred racing machines gleaming with speed, grace and power. Glittering grace and power. Glittering
metal symbols of man's determination to push himself to his very limits.

One by one the beasts were fired into life, and there they sat, throbbing purposefully, perhaps even angrily (except one, which seemed to have a dicky sparkplug). We could hardly wait! Then we watched amazed as water was sprayed onto a section of the circuit just before the most wicked corner. Water! What were they trying to do


- James glimpsed briefly in an uncharacteristic second place (he was usually in a ditch or sliding down the track on his head.
there.
She waited for
everyone else to pile off
on the corners and then scooted
past. It was to prove a remarkably successfi strategy.

Paul (INHYK) Tudor was totally bowle over by the event, and spent all the time r wasn't racing standing at the side of tr: track, shouting and waving his arms abov his head in time-honoured Grand Prix sty (or so he assured us, although no-one els had ever seen this occur at a Grand Pr or anywhere else).

And finally, the AA Photograph Stuart Baynes. We persuaded him into kart with the help of a pair of ty levers and a tub of axle grease (he about seven feet tall and parks trucl with his bare hands). Stuart wa quite simply, as mad as an egg-cu He seemed determined to ram c


everyone else on the track, as well as demolishing all the road-side crash-barriers and any spectators foolish enough to stand within thirty yards of the track.

The AA team hurled themselves into the warming-up laps with such vigour that they were totally exhausted by the time the real racing started. In contrast, the compo winners carefully bided their time.


- Would you tangle with this man?


## THE CUTTING OF THE GAKE

Once the racing was over, anybody who could still walk was summoned to the ceremonial cake-cutting. An reverent hush descended. Adam was issued with a tiny fruit knife which Rod had con-


- Adam digs in at the ceremonial cake-cutting.


## THE WINNERS

1 Philip Haddigan had travelled down from Scotland for the occasion. He started off being calm, unflappable and gentlemanly. This was perhaps not the correct attitude to take when dealing with manic humanoids such as James or Stuart. Philip soon repeatedly formed close attachments with the crash barriers around the track. In short, people were taking advantage of his good nature by slamming him into piles of old car tyres. Quite understandably, he was not best pleased. As the day wore on, he became more and more competitive until he was rushing round the circuit with his eyes popping out and his teeth set in a ferocious grimace. Never have we seen a man undergo such a complete transformation.
2 Mrs Hawes (Leslie to her friends), had only popped across from Worton near Devizes. Years of safe motoring had ingrained into her a road-sense that made her the most considerate, capable and reliable driver on the track. Which unfortunately was a set of characteristics entirely opposite to those needed. Indeed, she was the only person to actually pull across to let people overtake her. While this style of driving is admirable on the highways and byways of Britain, it doesn't really ensure your chances of success on a slippery kart track. Leslie remained resolutely cheerful throughout the day, and kept driving solidly around the circuit while all the other tear-aways were thumping into each other, or disappearing off the track completely.
3 And then there was Richard Wildey. Another mild-mannered lad, he was transformed into a vicious, win-at-all-costs mad-

man on the circuit. He frightened all of us, even Stuart, who was almost as bad. Richard rammed off everybody he could. James in particular was foolish enough to enter into a duel with him and ended up two fields away, upside down, blubbing like a baby.
4 Simon Woodley. One of Dorset's finest. Well, we weren't sure what he was thinking for most of the time. He appeared to sizing up the odds and calculating the line of least resistance to take around the course. And what was worse, he appeared to be making copious mental notes about each of his fellow competitors. This might explain why the only time we saw him laugh was when Rod was on the circuit.
5 Richard Dobson, from Bicknacre in Essex appeared to have such a cheery, carefree nature that we were sure it couldn't last. He took to karting like a duck to water, though. He raced around so quickly that the rest of us were looking for the rails which surely had to
cealed about his person on the way to the circuit. The cake was pierced; Adam sawed away at it for several minutes (the icing was about a foot
 thick - yum!) but eventually he managed to tear off enough to give everybody a piece. Standing in a treezing field, covered with oil and bruises, eating a strange con-sole-shaped birthday cake, we all declared the day an unqualified success.


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The Amshrud Achios

CH/RIStMAS
It's pressie time again! Santa and all his little elves have been hard at work in his grotto getting together a present for all you loyal AA readers. (After all, you've been very good this year, haven't you?

You haven't missed a single copy of $A A . .$.$) So$ what's Santa got in his sack? Sit down, that's right,

# COVERTAP 

next to the Christmas tree, while the fat bearded one hands the brightly wrapped presents out. ( No , not you Rod. We mean Santa!)
(Oi! - I heard that! - ed.)


- Bang! - you're dead. (Watch out for the bombs, by the way.)



The first of the Christmas goodies on the tape is a playable level from Puzznic. It comes from Ocean, that Mancurian software manufacturer that has been keeping gamesters happy for years. Puzznic is a superb brain-teasing puzzle game, and scored a very respectable $82 \%$ (that's a Rave!) in AA62.

Each screen consist of some walls, a cursor (that's you) and lots of blocks with symbols on them. The idea is to match up blocks of the same type. You can drag them left and right with the cursor (but not up or down - the game


- Play our Puzznic demo and you'll be hooked.
has gravity, and the blocks fall when unsupported).

When you match up blocks they disappear. The more you match up at the same time, the more you score. You have to get rid of all the blocks on the screen to progress to the next one. So be careful that you don't end up with an odd one left over!

If you do get stuck, simply press the retry button. You're allowed a maximum of three retries before it's game over. There are four
screens in this demo each levels consists of four screens. In the proper game there are 144 screens to tease and torment you! So this is just a taster of what's to come!

## - Puzznic controls

The game is set to play on joystick, with ' R ' as the retry option. To redefine the controls press ' $C$ ' when on the title screen.
you'll lose one of your $t$ lives. The caves are gua too. You'll have to use cun to kill the guards, as cor loses you a life. Push rock top of them to squash them There are plenty of $c$ tricks and traps to be dis ered - lava traps... false walls... bombs... leave you to find out exactly how they all w Remember, all is not always what it seems

There are sixteen tough and challen levels to play through. The levels are


- Quick - go left! Otherwise you're mincemeat. large, about thirty times as big as the area can see at any one time!

This special version of Lost Caves h built in cheat! It allows you to select any I you like at the begining of each game. Just up and down to choose the level, and p Fire to start it. at least one of these in each level.

There are plenty of dangers. The mud needs to be dug away as you make your way through the caverns. Plenty of boulders are supported by the mud though, and if you burrow directly underneath them then they'll come a-tumbling down. If they land on your head,


- Lost Caves control:

Either use a joystick, or...

| O Up | A Down |
| :--- | :--- |
| O Left | P Right |

SPACE Start/restart

## Additionally...

M Music on/off ESC Give up



Space Froggy is a strange game. You're a frog for a start. For some reason that no-one can quite remember, you have to collect nine ROM chips. Oh, and there are 'space monsters' that try and stop you. And as if that wasn't enough, there are some tricky leaps to negotiate.


- Space Froggy looks great - and it's done in BASIC!

You can move left and right, and can jump. It's a platform game, and features moving floors. You'll have to find keys to get through some doors as well.

The game is an example of what you can do with Glenco's Sprites Alive package. The game was written entirely with this software, but as you will see, looks pretty darned good!

## Froggy Controls

Froggy is joystick only. Use left and right to move, and fire to jump.

P to pause/unpause
Q To quit, after you've paused

## Tape to Disk transfer utility

To ensure that disk users have no trouble transferring these super games from the cassette to their disk drives, Glenco has written a transfer utility especially for us.

## THINK YOU COULD WRITE A GAME?

Have you ever wanted to write games, but found BASIC just too, well, basic? Not any more! Games writing package Sprites Alive adds a number of extended commands to BASIC, which are specially written with games writing in mind. There are commands to handle all aspects of gaming, including, of course, sprites.

The package comes complete with a sprite editor. This is a drawing program that allows you to design the graphics for your games. It's easy to use, and even the least artistic person will be able to come up with reasonable graphs!

After a few hours' use, you'll soon be designing your very own games! However, you may feel that the games could do with perhaps a bit more speed. That's where the Compiler comes in.

This part of the program converts your game into machine code, adding that extra touch of speed to make your games playable. The proof is in the pudding. The game Froggy was written in Compiled Sprites Alive. So if you want to write good-quality games without learning all that com-
plicated machine code, you need Sprites Alive.
AND... Glenco has kindly come up with a special offer, exclusively for the benefit of $A A$ readers. For a strictly limited period, you can get yourself a copy of Sprites Alive and Compiler for $£ 10$ less than the normal price. Or, if you just want the basic version, Glenco is knocking $£ 7$ off that.

To qualify for your discounted copy of Sprites Alive, cut out the coupon, and send it, along with your cheque/PO made payable to Glenco Software to: AA Special Offer, Glenco Software, 15 Alford Lane, Whitehouse Farm, Stockton on Tees, Cleveland TS19 0QP. Make sure it arrives by 31st January 1991, when the offer ends.

- Two versions of Sprites Alive are available, the basic version and the compiler version. The offer price for the basic version is $£ 15.95$ (normally $£ 22.95$ ). The compiler version is available for $£ 19.95$ (normally $£ 29.95$ ). All orders must be sent directly to Glenco, we cannot deal with them here.

Please note that you need a good knowledge of BASIC to use Sprites Alive.

## AA SPRITES ALIVE SPECIAL OFFER

[^1]Address

I/we enclose a cheque for $\qquad$
Name
Please Note: Offer expires 31st Jan 1991


- Split-second timing is needed to cross the screen.
- Just bung a blank disk in the drive
- "Run" the transfer utility. It will come up with all the instructions you need. The program will transfer all normal Amsdos files, in other words, anything that isn't protected.
- After everthing's been transferred, reset the machine. No more lengthy waits for the tape to run through.

And of course, after you've got all your programs transfered from the cover tape, you can use the utility to transfer software from other tapes to disk.

## LOST AND FOUND

Lost Caves was written by none other than AA's Reviews Editor, Adam Waring. It was a couple of years ago, before he wandered into Future Publishing by mistake and got stuck here ever since.

Lost Caves was written in a small office in the Hull, a city otherwise known as the Jewel of the North (by people from Scunthorpe, anyway). The office was in an old warehouse, overlooking a converted dock in the centre of the town. Unfortunately the Council found out and Adam and his colleagues had to flee.

The programming outfit was known as Tag Computer Games, mainly because they couldn't think of anything better. Other games from the Tag stable include Ninja Massacre, Death Stalker, Moving Target and Arcade Trivia Simulator.

The question everybody wants to know is: Will Adam be producing any more games for the CPC?

Not bleedin' likely! - for the time being anyway (thank heaven for small mercies - ed). Adam's just far too busy putting together your favourite magazine.


## Bruniderd

Complete Uord Processing Package $£ 30$

BrunWord 6128 is a complete word processing Package consisting of a word processor, spelling checker and card filing programme. It out performs all other word processors for the CPC6128.

BrunWord uses its own high speed screen routine, giving it a very fast response. The editor features are logically arranged, to be easy to learn and the spelling checker with its dictionary load into memory at the same time as the word processor. The whole system is very convenient and exceptionally fast. It is supplied with an introductory futor file.

BrunWord Features
*40, 80 or 128 columns. *Typing speed 200 words/min. *True insert or overwrite. *Justity or unjustify paragraph or whole text. *Balanced justification. *instant word wrap. *Block save, move, copy, insert and delete. *Local editing with word delete/undelete. *Adjustable margins and TABs. *Word count. *Column/Line/Page display with tile name. *Find and replace. *Help menus. *Memory files. *Single character embedded printer commands ( 18 with 3 codes and 21 with 10 codes). *Page throw markers, *Multiple copies. *Odd/even page headers/fpoters with page numbers. *Multi file printing. *Print specified pages, *Use any printer, *True display super/subscript numbers. *User defined characters, *Load/Save ASCII files from/to other word processors, *Files can be encrypted. *Maximum file size about 9 pages.

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*Memory resident programme and dictionary. *Checks 4,000 words $/ \mathrm{min}$, *30,000 word dictionary. *No American spellings, *Add up to *Helps to find correct spelling. *Automatic * Helps to
correction.

## DataFile Features

*Alphabetical, numerical, date sorting. *User defined headings. *Search routine. *Data merging. *Label printing.

## Quotes

"It may seem that I have just written a very long advert for BrunWord 6128 but I haven't, "'m just so impressed."
(Phil Craven, ACU Feb 90, page 25).
*One such is Peter Brunning's BrunWord 6128 which is without doubt in my mind, the most powerful and friendly word processor available for the 6128 today, with the possible exception of.... BrunWord Elite!: (David Dorn, ACU July 90, page 43).

## Info-Script

## Complete Data Processing Package $f 50$

Info-Script includes BrunWord 6128 and BrunSpell. The word processor and database can be resident together, giving the convenience of access to both programmes with no disc delays.

Info-Script is written around the full BrunWord 6128 word processor, enabling many routines to be common. This makes a very compact combination and allows both programmes, 6 pages of text and 1000 addresses to be in the memory at the same time using a standard CPC6128 (or 6128 plus). The great advantage of this is the speed and convenience of no disc delays.

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Data Merging Features *Simple intelligent system, \&N SA SD construct full name, full address and date, $\$ 182$ etc specify individual fields. *insert or fixed format merging. *Automatic justify after merging. *Single step (see betore printing) or multi-step. *Stop any time, go to word processor, restart same place. *Merge data from several records for summary, invoice, purchase order etc. *Arithmetic. *Running tolal. *VAT total. *Conditional loading. *Conditional printing. *Repeat patterns.

## 100 Letters $£ 15$

100 Lefters is a utility for use with info-Script, enabling pre-written letters to be easily selected and personalised. It is supplied with a hibrary of 50 letters but even the most cautious users will be able lo write simple letter patterns to expand the library to ' 100 tetters. If multi-purpose patterns are used then the upper limit depends only on the skill of the writer. A third type of lefter pattern, aimed at solicitors, doctors, schoor feachers. astate agents etc, consists of up to ten pre-writfen paragraphs. The user indicales separate letters can be added using this style.


## BrunlUard Elite

## Elite Word Processor For CPC6128 $£ 55$

BrunWord Elite has a unique advantage over its rivals, it can only be used with dot matrix printers. All other word processors are compromised to drive daisy wheel and dot matrix printers.

In the early days of computing a printer was simply a form of electric typewriter. (High quality printing, noisy and very slow). Then came the dot matrix printers, specially designed for computers. (Medium quality printing, not so noisy and much faster). Over the years, the typewriter style has become the daisy wheel printer and although greafly improved, it has been left far behind with the quality, speed and versatility of modern dot quatrix printers.
Most word processors, including BrunWord 6128, can use dot matrix and daisy wheel printers. This creates the need for a style of printer control that is acceptable to two very different types of printers.

BrunWord Elite does not have this restriction as it is specifically written to be used only with dot matrix printers. This gives it a unique advantage over other word processors and as a result it is able to provide much more advanced printer control.

This is taken even further, as BrunWord Elite is supplied with an 8 Bit Printer Status Port which allows the programme to continuously monitor the status of the printer, (as well as providing the missing 8th bit for the original CPC6128). This means that BrunWord Elite is able to respond in a more sophisticated way than normally possible. It will wait for ON LINE or 〈ESC〉 if the printer is initially OFF of OUT OF PAPER but automatically returns to the editor if the printer is turned OFF.

## 24 Pin Fonts

Before we designed the fonts for BrunWord Before we designed the lonts or BrunWord
Elite, we studied several good magazines and Elite, we studied several good magazines and concluded that the bulk of the text was printed in tonts hat derive from wo basic themes. Our tonis Fineline and Finetype are variations of these two styies, optimised for dot matrix printers. Fineline is supplied in tree sizes and Finetype in two sizes. To these we added a display font '. 'Hompuler stye type and a straightorward heavy font. Allogether here are tonts, two are middle size 21 pin tonts and fone is a small size 16 pin tont. pin tonts and

## BrunWord Elite Features

All the features and speed of BrunWord 6128 and BrunSpell, plus:-
*Print in columns * Specify page layout *Use special high quality proportional fonts *Use advanced micro justification with proportional text *Set printer margins independently *Move print head up or down paper, specified in inches from top *Set micro line spacing within text *Print line or box by specitying size and line thickness *Use absolute TABS with proportional lext Downioad a tile directly from disc during printing. *Can be supplied with info-Script for data merging.

## Headline

Headline is a print enhancement utility specially designed for use with low cost 9 pin printers. It enables virtually all the features of BrunWord Elite, including the 24 pin fonts, to be used with any 9 pin Epson compatible printer. The only requirement is that the printer must have quadruple graphics (all well known modern 9 pin printers). Even printers which do not have double height printing will be able to use all the features of Headline, including micro justification, normal, double and eight times height, and 1 to 9 times width.

## 9 Pin Elite $£ 55$

BrunWord Elite, BrunSpell, Headline, an 8 bit printer status port and 7 'type setting' fonts (fonts are 24 pin in size but only for 9 pin printers), Total price 555.00 inclusive.

## 9 Pin Elite+info $£ 92$

As above but including info-Script and a backup disc. Total Price 692.00 inclusive.

## 24 Pin Elite $£ 90$

BrunWord Elite, BrunSpell, Info-Script, back up disc, an 8 bit printer status port and $7{ }^{\prime}$ type setting' fonts for downloading to a 24 pin petting Tonts total price $f 90,00$ inclusive.

[^2] You must state which computer.
All prices are inclusive for UK. Overseas orders sent insured air mail - Europe add $£ 2.50$ : Rest add $£ 7.50$

CONRAD BESSANT continues his series on 3D programming. Last month: two-dimensional basics. This month: first steps in 3D...

Having written a simple program to rotate and shrink two-dimensional objects last month, we can now move on to doing similar things in three dimensions.

As discussed in the previous article, twodimensional objects such as triangles and squares can be described using a matrix like that shown in figure 1, where each column of the matrix represents a corner (vertex) of the object. The top number in each column is the x position of the vertex and directly below it is the $y$ position. Such a matrix is inadequate for describing a three-dimensional object, a pyramid for example, as there is no space to store the $z$ position of the vertex. The $z$ position represents the displacement into the screen, just as the x position represents the horizontal displacement of the vertex and the y position represents the vertical displacement. Figure 2 shows how these positions give rise to an object.

To describe a three-dimensional object, such as the pyramid shown in figure 2, an extra space must be added at the bottom of each column to store the $z$ position. An object matrix for the pyramid is shown in figure 3 ; as an example, note that the position of the first vertex is at $\mathrm{x}=0, \mathrm{y}=180, \mathrm{z}=0$.

There is one rather large obstacle when trying to plot something like a pyramid on the screen - the object is in three-dimensional

## DON'T MENTION THE PRINTING

Well, OK, last month the gremlin's struck again. Nothing too serious - only half a sentence at the end of the first page...!

Here is how that paragraph would have read if it hadn't been so rudely interrupted:

## ...But what is the point in doing all this, when

 similar results could have been generated using a few simple MOVE and DRAW statements? The advantage is that we can now apply simple mathematics to the matrix to transform it, in other words to rotate, change the size of and move the triangle.described in the object matrix. This would be fine for some objects, even though each line would be drawn twice, but for most objects unwanted lines would be drawn. For example, the square base of our pyramid would have diagonal lines drawn automatically between its opposite comers.

The best solution is to keep a list, for each vertex, of the vertices which we would like it to draw a line to. For example, the lists for our pyramid would be those shown in figure 4. Two zeros are used to mark the end of the list. This list can easily be stored in a $5 \times 5$ BASIC array, and then retrieved by the drawing routine when it is needed. See figure 4.

Now that we have all the information required to store and display three-dimensional objects we can write a program to do it, based on the one given last month. The program is shown as listing $\mathbf{1}$ :

## Listing 1

18 MODE 0:ORICIN 328,280
$20 \mathrm{n}=5$
30 DIM object $(n-1,2)$
58 DIM con $(n-1, n-1)$
100 FOR $x=0$ T0 $n-1$
118 READ object $(x, 8)$, object $(x, 1)$, object $(x, z)$ 128 MEXI x
138 DATA $8,180,8,-280,-180,-280,-280,-188,280$, 288,-108,280, 288,-180,-200 $288 \operatorname{con}(\theta, \theta)=2: \operatorname{con}(\theta, 1)=3 ; \operatorname{con}(\theta, 2)=4$ $218 \operatorname{con}(1,8)=0 ; \operatorname{con}(1,1)=4$ $228 \operatorname{con}(2,8)=3: \operatorname{con}(2,1)=1$ 238 con $(3,8)=4$


Lines 100-120 load the pyramid data from line 130 into the object array. Lines 200-230 set up the array containing the lists of connections for each point. Lines $500-630$ perform the drawing of the pyramid, using the connection lists, as described above. Line 20 sets $n$ to the number of vertices that make up the object (our pyramid has five vertices).

If you RUN the program in its current state you will notice that something is missing, the animation. Last month matrix transformation for two dimensional objects was explained, and although a similar method can be used for 3D, the same routine can not. This is because each vertex of a three-dimensional object has three values associated with it, these being the $\mathrm{x}, \mathrm{y}$ and z positions. Because of this we must use $3 \times 3$ transformation matrices. A sample one to rotate a 3D object anticlockwise, by just over

11 degrees around the $y$ axis, is shown in figure 5 . This can be placed in an array called transform by using lines 300-330 of listing 2. By rotating the pyramid by 11 degrees eight times, we can get the pyramid to perform a quarter of a complete rotation, i.e. a rotation of 90 degrees. As the pyramid has a square base this brings the triangle back to what appears to be its starting position, so the process can be repeated again. After four repetitions the pyramid will have completed a full 360 -degree rotation.

Multiplying a $3 \times 3$ transformation matrix by a $3 \times n$ object matrix is done in a similar fashion to that for $2 \times 2$ tranformation matrices. The routine given in listing 2 (lines 700-750) will multiply the two matrices and will take into account the extra component of the vertex positions.

## Listing 2

300 FOR $x=0$ TO $2: F O R y=0$ T0 z
318 READ transforn $(x, y)$
328 NDXI $y$ : NEXI $x$
338 DATA $8.981,0,0.195,8,1,8,-8.195,8,8.981$
480 FOR colour $=1$ T0 8
410 GRAPHICS PEN colour
790 FOR $x=0$ To $n-1$
$718 \mathrm{t}=0 \mathrm{bject}(\mathrm{x}, 8) * \operatorname{transforn}(8,8)+0$ bject $(x, 1) *$ transforn $(1,0)$ +object ( $\mathrm{x}, \ell$ ) *transforn $(2,0)$
728 n=object $(x, 0)$ *transfora $(8,1)+0$ bject $(x, 1)$ * transforn $(1,1)+$ object $(x, 2) *$ transforn $(2,1)$
730 b=object $(x, \theta) * \operatorname{transforn}(\theta, 2)+o b j e c t(x, 1)$ * transforn $(1,2)+$ object ( $\mathrm{x}, 乞$ ) *transforn $(2, 乞)$
$748 \operatorname{object}(x, \theta)=t: \operatorname{object}(x, 1)=n: \operatorname{object}(x, 2)=b$ 750 NDXI x
889 NEXI colour
989 FOR $a=1$ T0 8 : FOR $b=1$ T0 8
918 IF $a=b$ THEN INX $b, 25$ ELSE INK $b, 1$
928 NDXI b : KEXI a
938 FOR $c=1$ T0 8 : INK $c, 1$; NDXI $c$ 948 coto 990

Also included is the colour switching rol tine introduced last month (lines 400,410 an $900-940$ ). It has been slightly altered, so as only display eight animation frames, rath than 15. This is to increase speed and to mak the pyramid sharper on the display.

Running the program now will give you rotating pyramid on your screen, at a qui impressive speed for BASIC. You may notic that pixels are missing where animatio frames overlap: this is due to the over-simpl fied colour switching routine, which give worse results the more complex the object (ie. the more vertices it has). This is why onl eight animation frames were used. A improved colour-switching routine will be di cussed in the next article of this series.

Because the program runs in a continuou loop the only way you can stop the program by pressing the Escape key. If you do this, the program stops due to an error, you may no be able to see what you're typing. This is consequence of the colour switching and ca easily be put right by typing INK 1,25 .

Now that the basic routines of the prograr

Figure 1


Arrows indicate direction in which the connecting lines are drawn

Figure 3


## Figure 4

| VERTEX | CONNECTS TO |
| :--- | :--- |
| 0 | $2,3,4$ |
| 1 | 0,4 |
| 2 | 3,1 |
| 3 | 4 |

Figure 5
$\left(\begin{array}{lll}0.981 & 0 & -0.195 \\ 0 & 1 & 0 \\ 0.195 & 0 & 0.981\end{array}\right)$
have been written, different effects can easily be created by using different objects and matrices. My favourite object for 3D graphics is shown in figure 6. It is meant to be a simple spaceship, but it has been described as anything from a bow-tie to a moth! Note that although this shape is only two-dimensional, it can be moved around in three dimensions using the routines given above. The object can be loaded in instead of the pyramid by amending the lines shown below. Line 20 sets the number of vertices of the object to four, line 130 holds the postions of these vertices in $\mathrm{x} 0, \mathrm{y} 0, \mathrm{z} 0, \mathrm{x} 1, \mathrm{y} 1, \mathrm{z} 1 \ldots$ format. Lines $200-230$ determine which vertices each vertex connects to, as in the pyramid example. The zeros used to mark the ends of the connection lists do not need to be put into the array in these lines as BASIC arrays are filled with zeros as soon as they are dimensioned.
$29 \mathrm{n}=4$
138 DATA $-180,-58,150,-100,50,150,180,50,150,180$, $-50,150$
$200 \operatorname{con}(\theta, \theta)=1: \operatorname{con}(\theta, 1)=2$
218 con $(1,8)=3$
$228 \operatorname{con}(2,8)=3$
$238 \operatorname{con}(3,8)=8$
Because the program so far has been optimised for a square-based pyramid, changing only these lines is not enough to get the spaceship rotating in a full circle - don't forget the pyramid was only really rotating by 90
degrees. Because the spaceship is of a simpler construction than the pyramid, it is perfectly acceptable to have fifteen animation frames rather than the pyramid's eight. To make the program draw these extra animation frames, all you need to do is change all the eights in lines 400,900 and 930 to fifteens. Now to rotate the spaceship in a full circle of 360 degrees all we need to do is rotate it by 24 degrees 15 times, so line 330 should be replaced by the one below so as to load the 24 degree rotation matrix into the transform array, rather than the 11 degree one used with the pyramid.

330 DATA $0.914,0,0.408,0,1,0,-0.408,8,8.914$
Several useful transformation matrices are shown in figure 7, and suitable replacements for line 330 are shown below. For those of you who are not familiar with trigonometry, 'sin a' simply means the sine of angle a, so just substitute the sine of the angle you require into this slot of the matrix (an angle of $\mathrm{a}=24$ degrees is substituted into the lines below; this means 15 frames are all you need to rotate the object 360 degrees). To find the sine of an angle you need look no further than your CPC! Just type DEG to put BASIC into degrees mode and then type PRINT $\operatorname{SIN}(\mathrm{a})$, where $a$ is the angle. The same goes for COS a. As an example DEG:PRINT $\operatorname{SIN}(24)$ will return approximately 0.408 .

Rotate object anticlockwise about the x axis (24 degrees):

338 DATA $1,8,8,8,8.914,8,488,8,-8.498,8,914$
Rotate object anticlockwise about the $y$ axis (24 degrees):

338 DATA $0.914,8,8.408,8,1,8,-8,408,8,8,914$

Rotate object anticlockwise about the z axis (24 degrees):

338 DATA $8.914,8,498,8,-8,488,8,914,8,8,8,1$

Enlarge (to $120 \%$ of it's original size):
$33 \mathrm{DATA} 1.2,8,8,8,1.2,8,8,8,1.2$
Reduce (to $80 \%$ of original size):
338 DATA $8.88,8,8,0,8,80,8,8,8,8,80$
All of these transformation matrices will work on all objects such as the spaceship given above, or any other shape you define using lines 20,130 and 200-230.

Obviously our program is seriously limited at the moment by the over-simplified colour switching, and maximum of 15 animation frames.

- Next month I shall be explaining how to break the 15 -frame barrier by using better colour and screen switching, how to speed up 3D animations, and how to arrange objects and programs to create the best three-dimensional effects.
Figure 6 (


# Counting the cost 


#### Abstract

If you run your own small business you already know about all the paperwork. There's the tax man, VAT, national insurance... you spend half your time bookkeeping. And before you even start any job there's the estimate to prepare. ABC may well have a solution in Costmaster...


## COSTMASTER

E27.99 disk O ABC Software O 31 Magdalen Way, World, Weston-superMare, Avon BS22 OPG. Tel: 0934516714

First of all, make sure your costing needs are complex enough for a program like this. Basically, if what you need takes only a minute on a calculator, then you'll have little need for a computer programe which takes longer than that just to set itself up. If, however, your costing work takes up valuable time and contains many repetitive elements, then read on...

ABC Software has produced a program which allows you to cost/estimate a job. It alsolets you store details of individual jobs in a customised database which is easily manipulated, and has all a wide range of functions.

The basis of the system is a file into which you add the relevant information either manually or by merging items from the built-in price index, to build up a final costing.

There are three elements to each costing file:

- Firstly, there are the customer details. This

- The main menu. Everything is driven by the files.

- All the detail you'll ever need on your clients.
is basically a standard database containing information about the client. As well as name and address, it includes an identification number which references it with other parts of the program.
- Secondly, there are the alpha-numeric definitions (getting a tad complicated, this). These allow you to press a single key to correspond to the variable of your choice. The variables are things which change rarely enough to let them be programmed in and saved - an example would be the price of ballcocks in a plumbers' estimating program.

There are up to 36 saveable definitions,

- Thirdly, there is the cost file. This holds the results of the equations which make up the costing. It's the central function of the program.

The three sub-files above can be saved separately, and can even be stored on separate disks. An ID entry system allocates specific customers to specific definitions. This is a failsafe security device to prevent different definitions becoming crossed.

Entering and controlling text is easy. The main menu allows single keypresses for regu-larly-used items, and everywhere the Delete


- Disc management couldn't be clearer.
key will take out any mistakes. The cursor keys can also often be used to move around and change things. Mistakes are easily rectified and there are standard warnings when you're about to erase data or save changed files.

Costmaster uses the standard time-honoured format of one main menu controlling a more complex and detailed 'tree' of other menus. It is very easy to return to the high level main menu (usually by hitting ESCAPE).

A feature which we think is unique to Costmaster is the Program Monitor. This gives a recorded display of the last ten 'moves' yot made. This removes the worries that you might not have saved your files, or that you haven' updated them recently. It is a very useful fea ture, and one which many other serious soft ware packages would benefit from.

What this program does is marry together a database of customers with the necessary equations and formulae for a rapid and accu rate costing. It is powerful enough to handle as many variables and factors as a small busines: is likely to need.

The manual is factual rather than fun, bu does cover every aspect of the program. It isn' really for the beginner, though. The assump tion is that you'll know what you want to de with this program, and that you understanc costing and estimation work already. If you'n looking for a tutorial, buy a book.

James Leach


##  

- The Program Monitor (on the right) is very useful.


Individual costing variables are stored clearly.

## GOOD NEWNS

- A powerful tool. Professional and accurate.


## BAD NEWS

Occasionally fiddly, requiring concentration. Possibly too detailed for many users.

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Maps showing direct routes from the motorway and A5


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## switchblade

Gremlin's first console game takes a bit of getting used to. The graphics initially look distinctly second-rate, the gameplay seems simple and there doesn't seem to be much going on. Don't be fooled. Play on, and you'll find yourself becoming immersed in a huge, compelling and highly challenging epic...


## 05



- Does Flimbo's Quest out-cute Rainbow Islands? Page 48 has the answer..

- Can you save the world from arch-villain Stromberg? Spy Who Loved Me is on page 66...

- Another Dizzy sequel? An excellent budget outing or a jolk of a program (sorry)? Find out on page 63...

- is it worth staying up for Midnight Resistance? Page 68 has the answer.


## FLIMBO'S QUEST <br> System 3 — 89.99 cass, E 14.99 disk joystick/keys

Imagine living in a place called Dewdropland. Where the sun shines brightly every day, and people jump out of bed and look forward to the day ahead. A cute land filled with gingerbread houses, with is no unpleasantness at all. No wars, unemployment, inflation or trouble. Wouldn't it be great?


Oooh! Couldn't you just eat that cute house?
The answer is, of course, no. It would be horrible. Just imagine how bored you'd feel. You'd deliberately try and mess things up just to make it interesting.

And one man who has tried to is Professor Fransz Dandruff. He's kidnapped Pearly, Dewdropland's reigning beauty queen. As nothing in Dewdropland remotely approaches ugliness, you can imagine how utterly scrummy young Pearly is.

However, her disappearance has not gone un-noticed: her cute co-habitee Flimbo has vowed to rescue the poor dear from the slimy yet surprisingly strong clutches of Dandruff. To this end, he has set off towards Dandruff Manor, where she's being held (very tightly).

Before reaching Pearly, Flimbo must negotiate seven levels of baddies. These are the Genetically Undesirable Mutants that the Prof has been breeding in his lab. Rather than pity


I his shop will try and flog you guns, scrolls and extra time.
these poor creatures, Dewdropland's population want to see them exterminated (presumably because they're not beautiful enough to live). Flimbo has a gun, and gets twenty quid for each mutant he murders. This money is very useful, because each level has a shop. The proprietor of these shops is a curious individual known only as Dazz Bazian. He sells various useful items, such as Temporary Invulnerability, a better gun, scrolls and an extension to your time limit

The scrolls are the key to each level. You, must collect a certain number. You can get them by killing any flashing mutants, who drop them, or alternatively by saving up your money and buying them in the shops. Usually you'll get all the scrolls you need by a combination of these methods. Collect enough and you'll proceed to the next level.

As you explore each level, you come across unexpected hazards, extra rooms (packed with loot) and other surprises. All the time you'll be slaughtering hordes of mutants and collecting the little piles of dosh they leave behind.


- Zap those marauding molluscs. They're worth £20!

Each level has one of Dazz Bazian's chainstores (which, like McDonalds, all look the same inside). They also all have a secret room at each end of the playing area. There are one or two new mutants in every new level, but they behave in a very similar way to the ones that they have replaced on the previous level.

A clock ticks down in the bottom righthand corner. This time limit dissuades you from staying in a safe spot and blasting the mutants until you have enough money to buy all the scrolls you need.

## SECOND OPINION

"Gameplay is extremely limited, You just kill, kill and kill until you have enough scrolls to get to the next level. The graphics are none too special, either."

AW

The graphics are, like Dewdropland itself, bright and cheerful. They are smooth, large and cute, but because of the detail on some of the levels, can look rather confusing. Flimbo sometines merges with the backgrounds on some screens, to become a jumble of colours. The first screen suffers from this more than the others.


- The third level. Things get tricky for our little pal.

Flimbo waddles around wearing a Baby gro, and with a beanie on his huge head. This hydrocephalic appearance is as cute as any could stand without feeling nauseated. The mutants also look good. One type seems so harmless and pathetic that it's almost a pity to waste them in their droves. But at $£ 20$ a head, it's certainly worth it.

Sound is simple, and contrasts rather with the sugary-sweetness of the display. There is a nice, fluffy theme tune, too.

Flimbo's Quest is cutesy, colourful and no too difficult. There are no hard puzzles, and not many split-second leaps. There are two ways to get through the levels; firstly just kill every thing on one or two screens until you've enough money to buy your way up; secondly to explore, and to kill the scroll-bearing mutants as and when you find them.

The lack of real challenge means that you generally lose your lives by making silly mis takes, which can get very tedious. This lends the game an infuriating addictiveness. You know that you can get to the next level, but you scream and shout when you don't make it.

This is a compulsive game. It's very frus trating and you'll keep playing with grim deter mination. This is totally contradictory to the sweetness oozing out of the program, but i works, and it's fun.

James 'sweetness and light' Leact

FIRST DAY TARGET SCORE
Get to Level Three

## The Verdict

GRAPHICS
75\%
Rainbow Islands still has it, but this is close.

SONICS 56\%

- A wee bit dour.

A nice tune, though.
GRAB FACTOR......77\%

- Not too difficult to understand or play. - You can't really get lost, either.


## STAYING POWER ...66\%

- Can get a bit samey.
- Each level requires a similar approach.


## AA RATING

73\%

- Not too difficult but very frustrating.




Hiro is the last of the Bladeknights, a trained warrior with a hi-tech re-programmable cyberarm which can accept any number of different and ever more destructive weapons. He can also kick and punch hard enough to demolish walls and leap huge distance with one thrust of his mighty limbs. He's also about three feet tall, shaped like a seven-year-old Schwarzenegger and wears his cap back to front. We won't worry about that, though.

Needless to say, Hiro has a rather important task to perform. Namely, to rid the world of Thraxx of the evil Havok, who has dominated the world since the shattering of the Fireblade (you are paying attention, aren't you?). As Hiro, you must explore the Undercity beneath the surface of Thraxx, battling Havok's evil and ghastly minions and assembling the bits of the Fireblade so that you can use it against the evil geek himself.

OK, never mind the scenario, let's get cracking... oh, is that it? Hmm, click past the opening text screens and your first glimpse of the game itself is worrying. Um, the graphics only take up half the screen, and, er, there's only one colour, if you don't count black and white...

Yes, well, let's not worry about the graphics for a moment - what does it play like? Well, Hiro's a game little chap. Admittedly, there's no great urgency about his walk - more like
somebody pushing a trolley around Waitrose than battling his way to a confrontation with an evil megalomaniac. However, he is nimble enough in a tight comer, delivering devestating low kicks, high kicks and punches on demand and leaping huge gaps (with an appropriate run-up).

You start out on the surface of Thraxx and can travel either left or right. Left will take you - via a nasty creature and some nasty flames - to a hole in the ground you don't see until you step onto it (depending on whether you can step on something that only exists because it isn't there, er,

plement of vitality. If he gets hit by a monster, though, his vitality bar starts shrinking. When it gets to zero, he loses a life. To combat the various monsters he'll encounter, Hiro can deliver low kicks, high kicks and punches. It all depends on how long you keep the Fire button pressed. Let it go almost immediately and Hiro delivers a jab to the forehead. Keep it pressed a moment longer and he launches a boot at the
um...). Suddenly you're in a different - underground - world. So this is where all the colours are! Yup, once you're underground, Switchblade suddenly looks a whole lot better.

Hiro starts out with five lives and a full com-


- Hmm - bit of a sticky wicket here. You can knock off that Mansnake next to you, but you'll lake a lot of damage going down the ladder to the noxt...

- ...But if you kick that wall in, lo and behold! - a whole new room and an easy way round. Always look out for small wail blocks showling extra detail to the others...

O...Now you can just go back and kick that other Mansnake's 'ead in - at no personal risk to yourself, too. There are a number of litito puzztes like this to be solved with a little extra thought.


For Gremlin to use the four-colour mode on the console - especially when people are expecting spectacular new standards of graphics - is a brave choice, but once any initial disappointment has worked off, the overwhelming impression is of very subtle, and very, very good visuals which really do make the best of the new hardware.

The other striking thing about the game is its sheer size - it just goes on and on! And the further you go, the better the puzzles, the enemies and the fun factor.

If Burnin' Rubber on the console set new standards for driving games, then Switchblade does the same for platform adventures. It may not grab you by the short ' n ' curlies straight away, but it slowly, inevitably, sucks you in until you simply can't leave it alone. What an excellent game!

## Rod Lawton

## SWITCHBLADE TIPS

-When you can, jump onto a crate betore taking on the enemy. Most can't hurt you while you stand one level above them, but you can merrily kick their lights out.

- When entering a screen, wait for the monsters to appear. Note the point at which they gen-
 one at a time and try lo get them all. Once all the monsters on a screen are dead they don't regenerate, even when you come back later.
- Tilie carelut note of whici weapon you're carrying. You can only repeat-fire after your las1 missile has exploded and some traverse the entire length of the screen, making them useless In close-combat.
- Avold stepping off into space without knowling what's below. There are some stages in the game which involve large falls, and this can sap jour vitality bathy:
- Look out for where the vilality power-ups can be found. Plan your movements so that you pick up the energy when you most need it.
* You onty fump rs stor distance if you terp from a standing position. Take a run-up to jump further.
- lia monster appears at an awhward
phosttime then you enter a screen, leave il Immediately and try coming back.
- Monsters always home in on you, so use the plattorms and difflerent floor levels carefully to gol thiem inilo the postifion you want, whien you want.
- The boss monsters have particular move-
ment and firing patterns, You'll lose energy sussIng theirl out, tut once you have oven theso monsters will (should) prove essy meal.
- To make sure you're not missing out any bits of Fireblade, map the game as you go atong. ItII pay off tar hetter than simply inying to do if from memory, and you will find some saler short-cuts round some puzzes.
- Romember, there is no time limit, so you can analyse a problem for as long as you like.
0 It you come up agatnst a brick walt (itteratly), look carefully for square bricks showing more detall then the rest -you can klck these away.


## TECHNICALLY SPEAKING...

## After playing Switchblade for a few days, we were so impressed we took Gremlin's technical guru James North-Hearn to one side and gave him a grilling...

We've got Switchblade now, we've been playing it for a few days, and we think it's really good.
Yes, we're really pleased with it.

## It's a very big game, as well, isn't it?

It's a massive game - there's an awful lot in there.

Now we understand that you've used the hardware sprites to actually add more colours for the backgrounds?
We went to 4 -colour mode because we felt that because of the size of detail, in the 16 colour mode it would not have looked anywhere near as impressive as it does. We used the stippling effect to add shading etc, which I think you'll agree works. Because we went to 4 -colour mode we wanted to add more colour, so there's already - without any hardware sprites or anything - there's already two splits in it, which are noticeable at the top and bottom. And I think at most times we have at least six colours on and sometimes eight colours on screen. By splitting the screen and changing the palette, at the top, the play area and the bottom - if you count the colours you'll see there's always more than four. Because down at the bottom you've got a blue and a red, then you've got all the colours within the game. And there's also sometimes a different colour at the top. So that's easy to implement on the console. In addition to that, we added colour to the backgrounds by actually making the backgrounds out of the 16 -colour sprites. So we built up the backgrounds with normal background techniques, but also added hardware sprites to add colour throughout the game.


- Switchblade, technically, is done in the four-colour mode, but try counting the number in this screen shot! The programmers have used standard split-screen jiggery-pokery and the additional console hardware to 'cheat' on a grand scale.

So the sprites are in 16 -colours, but you get higher resolution for the sprites, don't you, than in normal 16 -colour mode in the backgrounds...?
What we didn't do is make very elaborate sprites, really big ones, and just plonk them on the screen for the sake of it, because that would have ruined the look of the game. The sprites are actually in key with the rest of the game. They fit. You can't tell they're in any way different from the backgrounds except that they're colourful. We've put sprites on every screen, so every screen contains well in excess of the normal four colours.

The thing is, we also took a look at the ST version - and we've been having a bit of a debate with the ST Format lads - but we actually reckon that the console version is better...
.Slightly better, yeah!

## What do you think?

For a start off, the product makes a very good console type of game. That's one of the reasons you think it is better, because on the ST you're aiming - in a sense - to do a different kind of thing.

Does this game format lend itself to the console hardware, is that what you're saying? Let's put it this way. The console hardware is such that we can implement that type of game as well - if not better - on the console than we can on the ST.

## Is that because of things like the hardware

 sprites?Yes. That's because the hardware sprites enable us to put more colours on. Also, although in this game we don't scroll the backgrounds. If we had gone to a scrolling design, obviously the console would have been able to handle that as well. We think it came out as well on the Amstrad as a product as it did on the ST. I think the thing you have to remember is we had hindsight as well. We were able to tweak any parts that we wanted to tweak because we'd already produced the ST version. But I wouldn't disagree with you. I think, up against the two, if I could play either one of them, I would probably be more likely to play the Amstrad console version.

Well there you go straight from the horse's mouth!

Er, no offence, James....))

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## GRAND PRIX CIRCUIT

COPYRIGHT (5) $1989 / 90$ ACCOLADE INC.
It's the ultimate circus. From March to November each year, the great Grand Prix show visits about twenty cities worldwide. Each city is host to an exhilarating battle of reactions, courage and nerve. There are always exultant winners, sad losers and bad accidents.

So many games have been written about motor racing that new ones are no longer seized on with glee. In short, a game following the same format as all the others would have to be something pretty special to get itself noticed.

Grand Prix Circuit from Accolade sets out to simulate the Drivers' Championship. There are ten drivers, of which you are one. Your first job is to select the car you wish to guide around the circuits. It's a tactical decision. You could opt for the Ferrari which, although not the fastest, sticks to the road like glue around

the bends. The Williams is faster, but it'll slide around a bit at speed. And then there's the McLaren. This goes like a greased weasel. But close you eyes and hope whenever you encounter a slight curve in the circuit.

There are five difficulty levels. The easiest level ensures that you won't spin off, even in the McLaren. The other drivers try to get out of
your way, and you have an automatic gear-shift. In fact, things couldn't really be easier. Skill levels three and above force you to change gear yourself. How uncouth. The drivers are also progressively better, and the damage your


ACTION passed it successfully. But if you head for a gap your damage increases and your speed drops, indicating that you've hit someone.

It is these two factors which really let down Grand Prix Circuit. The fun should be in racing nine car takes by sallying onto the verges is worse.

You can have just one race against other drivers (on the circuit of your choice), you can enter the championship, or just practise.

Every time you race against competitors, you must first drive a qualifying lap. This is theoretically intended to give you a grid position. However, it is incredibly difficult to end up in any position other than last. This is almost certainly an oversight by the programmers; the other cars' qualification times are just too fast. Another problem with the qualifying laps is that they are compulsory. It would be nice to be able to leap-frog them and get straight down to the competitive high-jinks. Even if this option were to automatically give you last place, it would be preferable to motoring round alone for a few minutes, knowing that you'll be in last place anyway.


- Choose the part of the World you wish to visit!

The races themselves can be any length you want. On Easy level it's possible to win stormingly in the MacLaren simply by driving on the grass past the pack in the first few seconds of the game. Thus each race can be only one lap long, and you'll have 160 points after eight races.

If you do win the championship, mind, you'll get nothing in the way of a prize or recognition. The game simply starts over again. This is seriously depressing for anyone who has struggled legitimately to reach this position.

The graphics, the most important part of a game like this, are not up to par. They show the road ahead, other cars and nice scenery, but they are far too slow. The digital speedo tells you you're doing 230 mph , but it doesn't feel like any speed at all.

The other cars are drawn well. But you only ever see one or two, and those from rear view. Overtaking is a joke. If you heâd straight for a car the computer will often tell you that you've other cars around a fast and frantic course. However, the action is neither fast nor frantic, and the other cars only serve to annoy you with their illogical behaviour and the poor collision detection. Otherwise, it might even have been possible to live with the fact that you have to do a qualifying lap before every race,

and also the fact that you face the same buildings and scenery every race. Incidentally, there is one building which, no matter which corners you go round, is always in front of you... You get tired of seeing it after a while.

The sound is fine (especially if you like whining engine noises), the car's responsiveness is OK, and there is some nice attention to detail, such as the corner-displayed map of the circuit with all the positions of the cars. It's just the playability that let's it down. And that means everything.

James 'Hunty' Leach

## FIRST DAY TARGET SCORE

Win the Championship on Dasy level

## GRAPHICS

62\%
$\square$ The 3D views work OK.

- But the graphics are so slow.

SONICS
65\%
$\square$ Howling V12s is about all.
GRAB FACTOR .........67\%
$\square$ Not difficult to drive.

## STAYING POWER . $57 \%$ <br> - You'll be cheesed off by always having to qualify, and by the antics of the other

 cars.

## AARATING $\mathbf{6 3} \%$

E Even Satoro Nakajima is faster than this! (Grand Prix joke.)


Just imagine! You've suddenly been handed a Fourth Division team to manage to the top of the First, whilst trying to capture the FA Cup in the process. You start off with a big lump of dosh and half a team. Buy and sell the lads to get the best team available, train them, then start the season.
erteaterict

Then you get to the best bit; you actually see the 'balance' of the match, as the action swings from end to end. A large ball indicates the run of play. If it drifts towards your goal, it's panic time. If it's around the opponents goal you can rest assured your team is doing OK. When a shot at goal is taken the scene shifts to a 3D (ish) display of the pitch. The attacker is seen kicking towards


[^3]you'll be sacked at the end of the season.
So, as long as you remain
solvent and keep the team
So, as long as you remain
solvent and keep the team functioning, you should eventually rise to the top of the heap.

the goal. The defenders might intercept, the goalie might catch it, or the striker might miss. All this depends on the three skill levels of the teams; the midfield levels decide whose end the fluctuating ball heads towards, and when the goal screen appears, the attacking level is pitted against

the opponents' defending level.


- Four defenders try and stop the York lad scoring.

A large amount of excitement can be generated by this simple system. The goalmouth action can have you shouting for your team out loud. What lets the game as a whole down is the level of interaction. There isn't much, really. You buy and sell likely bods at the beginning of the season, and then all you do is make occasional substitutions when injuries occur.

Overall, though, this is more fun than most management sims, purely because you can watch your team playing. It isn't a hard game, but can get quirky: even if you are at the top of the league, if you haven't got much money

## FIRST DAY TARGET SCORE

Make it to the Third Division

## The Verdict

## GRAPHICS <br> 60\%

$\square$ Simple, but a definite bonus in a management sim.

SONICS ..........................55\%
$\square$ Cheers from the crowd, mainly.
GRAB FACTORA.......61\%
$\square$ Idiot-proof and easy to get into.
STAYING POWER ...54\%
Exciting to watch, but gameplay is limited.

## AARATING 57\%

$\square$ A curious hybrid. Neither part really works well on its own, but together they are a lot of fun.

## CUP FOOTBALL

## Cult © £2.99 cass <br> keys

Cup Football sets its sights on greater goals. European goals, to be precise. It concerns itself solely with the UEFA Cup.

You choose a European team to guide into combat with some of the world's finest squads. You are allocated a group with four other teams, and you must play a mini-league with them to decide who goes on to the quarters, and semi-finals. Each of your players has a fit-


- The running commentary scrolls up the screen.
ness rating (which tends to drop with each game) and a skill rating. This can be improved for specific players by spending money on them. However the levels might not rise, or might even drop owing to over-training. So it's always wisest not to bother with this at all.

The game is played in speeded up time, with a basic commentary scrolling up the screen. Goal times and scorers are printed as


- What a team. Watch out Europe, here we come!
they occur, so if it's a close match, things get more and more tense as the final whistle approaches.

An added feature is the ability to place bets on the teams. It is really rather hit and miss, but at the beginning of the game your team is not worth betting on, so you may as well bet


- The menu gives you are fair degree of choice.
on the opposition. Just don't get caught doing this in real life (especially if you live in Swindon).

Cup Football has more features than many management sims, but doesn't have a really polished feel. It works OK, but the games themselves take a little too long to play, and there is no way of speeding things up. There is also a tele-printer feature, which churns out
results like the one seen on Grandstand. It, as you will know if you've ever sat watching Grandstand waiting for Noel Edmonds' Saturday Roadshow, is not very fast either.

This effort apart, there a no graphics (or sound).

FIRST DAY TARGET SCORE
Win through to the next round

## The Verdict

## GRAPHICS <br> 0\%

- Only the vidi-printer (and that isn't graphics, really)
- The character set hasn't even been redesigned.

SONICS
0\%

- Nope. Not a sausage.

GRAB FACTOR ......... 42\%
$\square$ Playing in Europe is still a novelty!
STAYING POWER ...39\%

- Nothing really new here, though.


## AA RATING <br> 40\%

$\square$ Standard sim with commentary and vidiprinter.

## THE FOOT. BALLER

## Cult © £2.99 cass

keys
You just can't beat the cut and thrust of the English League. Starting at the bottom of Division Four, you must fight your way to the top. It isn't easy, primarily because your team is rubbish. But by carefully bidding for players on the transfer market you should improve until you are not quite as bad, and start thrashing everyone.

There are no graphics or sound; this is a standard text-only management sim. It has some nice features, however, such as a minute counter when each game is playing. Goals are scored 'as they happen', so you'll be on the edge of your


## - The Bath squad. Hopeless, really.


seat until the very last minute.
Each player has a skill, fitness and ability value. These combine to give on overall figure for that player. The team is divided into defenders, midfield players and attackers. The totals of all the players in these categories are totted up to give the three strengths of the team. It is thus a simple mathematical process to work out which players to buy to improve your team. This takes away some of the fun; there aren't many other factors to affect the outcome.

One big niggle is the fact that all keypresses are stored in the buffer, to return and annoy you later. If you press the 'start game' button twice, two games are played in succession. And there's nothing you can do except snarl.

The balance of Footballer is tipped in your favour. If you keep playing, you tend to move to the top of each league. This adds to the feeling that it's just a matter of loading up and waiting until you win.
FIRST DAY TARGET SCORE
Leave it playing until you win

## The Verdict

## GRAPHICS

- A seventies-computerish typeface is used.


## SONICS 0\%

- Like most games of this genre, there aren't any.
GRAB FACTOR ....... 46\%
$\square$ Quite friendly. Not complex or difficult.
STAYING POWER . $41 \%$
- But it is limited in its enjoyment.
A little too biased to the human player.
AA RATING
41\%
$\square$ Just another management simulation.


## QUATTRO COMBAT

Codemasters © $£ 2.99$ cass joystick/keys

It's dark. You Walk cautiously through the underground tunnels, sword at the ready. Suddenly an orc appears - automatically the sword flashes in an arc, cleaving the hideous creature's skull in two. Then there's a brief haze as the body magically decomposes into nothingness..
.Seen from the cockpit, two bandits come in fast at six o'clock. The lead spits from the barrel of the machine gun, and one of the enemy bursts into a crimson ball of fire. The other manoeuvers itself onto your tail. You try every trick it the book, but you just can't shake it off. You're hit, your vision goes red.

Now the enemy surrounds you, pinning you down with and lobbing grenades. You're only chance is to keep moving through the hostile jungle terrain... if you can just reach the јеер...

But a thousand oriental warriors are coming at you from all sides. The death stars leave your hands at a frightening pace, mowing them down like flies. There's a stairwell somewhere around, taking you to another equally tortuous level of the temple. But where is it...?
...Just a minute, what's going on? The scenario's a bit mixed up, isn't it? Well, yes. That's because it's not one game, but four. Quattro Combat is a compilation of four previously released Codemasters games. They're linked together through one theme: violence. All of the games pit you against overwhelming odds, which you have to overcome by inflicting all manner of death and destruction.

At under 75 pence a game, it's difficult to see how anybody could be disappointed with this compilation. Although tied loosely together with the combat theme, the games are generically different enough to make them all worth playing in their own right. All are good too, being the cream of the crop from the Codies' back catalogue.

Combat will have something for everybody. Whether you're into fantasy, planes, ninjas or straightforward warfare, there's something here to suit. Sure, the games may not be state-of-the-art, but for three quid, you get four very decent games at a very decent price.

Adam Waring

| The Verdict |  |
| :--- | ---: |
|  |  |

## SAS Combat

It's a jungle out there. In SAS Combat your soldier is taking on all comers, with a smoking gun to greet them. The game is somewhat reminiscent of Ikari Warriors. Your trooper has to make his way through a scrolling landscape, gunning down bad guys and lobbing grenades. There are one or two bonuses scattered around the battlefield.


- You're surrounded in the stabbing section.

Picking these up gives you power-ups, the most useful of which is a jeep. In this, you're invulnerable against bullets, and only a grenade can kill you.

At first the game area scrolls from right to left, but at a certain point it switches to vertically scrolling.

As well as soldiers to slaughter, there are gun towers to contend with. On the upwards-scrolling section a train makes the
odd appearance. This can be destroyed for extra points.

On reaching the end of the level, play switches to a gun-less combat section. Here the viewpoint switches to side-on, and you have to get from left to right. This time the enemy cannot be avoided, and pinpoint accuracy is needed to knife them in the guts (ug! $-e d)$. This part of the game contrasts heavily


- The jeep offers good protection.
with the earlier section, which was too easy. This is frustratingly difficult. Stab your victim a second too early or a fraction to late, and you're dead.

The graphics are blocky, bold and bright throughout. SAS Combat is perhaps the weakest of the lot, but that's not to say it's a bad game. If falls just slightly short of the mark compared to the others in the collection.

## Ninja Massacre

Ninja Massacre is billed as a sort of oriental combat game. It's not a tiresome beat-em-up however, being more like Gauntlet than anything. One or two ninjas can join in the onslaught.

The game is huge. There are fifty levels, each several times the size of the on-screen area. There's plenty of variety, too. Some screens contain puzzles, some are mazes, and some consist of nothing more than mad, murderous mayhem!

The sprites are tiny, but there can be literally hundreds of them on-screen at once. The little chaps can move very quickly indeed at times. As they reach the edge of the screen, it scrolls, revealing more of the playing area. The maps are made from walls, doors and a variety of other features. On each level you have to



- How ever many you kill, they keep on coming!
find a stairway down to the next leve Sometimes it's quite straightforward to fin this exit, but it can be more profitable $t$ explore more of the level in the hunt for food $t$ top up your rapidly-decreasing life counter.

As well as grub, there are many other co lectables scattered around the levels. Treasur chests give you extra points. Keys allow you t unlock doors. Scrolls allow you to use a magi spell that obliterates all monsters and genera tors on screen when used. Other icons affec the way your bullets work, make the monster run away, or give you invulnerability for a shor while.

With a single player it's quite a challenge but the fun really starts with two players. Her you can work either as a team, or against eac. other. You need to co-operate in som instances - the screen will only scroll so far, a it has to accommodate both players.

## Arcade Flight Simulator

Arcade Flight Simulator sees you in the cockpit of various warplanes spanning the three world wars (we're yet to have number three). In WWI you're flying early biplanes. WWII puts you in control of that ace of aces, the Spitfire. Things are up to date in WWIII. Here you're in a modern jet fighter, complete with missiles.

There are three missions to complete, each in a plane of a different era. The first has you taking off from an airstrip from the green fields of England. You have to destroy shooting ten enemy planes out of the sky before returning to your airbase and picking up a bomb, and dropping it on top of the enemy camp.

Level Two has you taking off from an aircraft carrier. You have to do exactly the same thing as in the first level, though - pot ten planes, collect bomb, and blow the base,


- That's the enemy base, but you can't bomb it 'il you pot all the planes.

- Acka! Acka! Acka! Shoot 'em out the sky.

Level Three's jet fighter scenario is set in the desert (topical, eh?). Apart from that it's exactly the same plot with different sprites. It does get tougher as you progress; there are more enemies on screen at a time.

Fuel runs out quickly whatever you're flying, so you need to visit the fuel dumps that are scattered around. Flying low over them tops up your tanks. Bullets need replenishing too. For this you need to head back to base and land.

It's not easy to shoot down the planes. Not only do your bullets have a very short range, but the planes can fly at different heights, represented by the size and detail of the sprites. You have to be at their level to shoot them down, and, of course, they shoot back too!

Because of the nature of the game, the sprites are very small. At low heights they're little more than a tiny cluster of pixels. They do get more recognisable as they gain altitude, though. It can sometimes be hard to see exactly what's going on against
the background. Bullets are particularly difficult to spot, so a careful lookout is necessary.

Sound is good. The fx change with each type of plane. The early gunfire from the biplanes in the first level change to the rasp of machine guns in Level Two. This changes again to the swoosh of missiles when at the controls of the jets.

There is a two-player game which is very different from the single-player mode. There's no mission to complete and the screen doesn't scroll. The two planes reenter the wrap-around screen on the opposite side when they fly off one edge.

It's a player on player dog-fight, and like most two-player games of this type, is extremely simple,-but provides endless hours of entertainment.

Arcade Flight Sim is hardly that, but it's an excellent airborne blast nonetheless.


- Dog-fighting is great fun in two-player mode.


## Death Stalker

Death Stalker whisks you away to an ancient world filled with magic and monsters. Your warrior is (at first) equipped with a sword with which he can chop the orcs and undead skeletons to pieces.

The quest is to go down deep into the bowels of the earth and rescue several pris-


- Aaarrgh! A pit trap means your days are over!
oners held captive, probably by some dark, evil figure. Rescue is attempted by the use of potions. You'll need one to free each prisoner, and you'll find them scattered around the mystical landscape. There are plenty of other objects to be found, too. Keys are important as they open up parts of the game hitherto unreachable. Food keeps you going - if it's


## SECOND OPINION

"Startling value-for-money. With the possible exception of SAS Combat, all of these games are well worth $£ 2.99$ on their own, but in this compilation they'll set you back just 75p each!" RL
not poisoned.
The graphics are wonderfully atmospheric. Up above ground, tall trees and towers make up the background. Enter the earth, and rocky caverns and rough-hewn passages are drawn brilliantly. Torches burn brightly on


- A prisoner! You could set him free, but if you're really nasty you can kill him instead!

- There's a couple of ghouls. Waste them before they wa
the wall, complete with flickery flames. Other things that flicker occasionally are the sprites... This is slightly annoying, but bearable.

The tune that accompanies the game adds even more to the atmosphere. It's very catchy and goes very well with the game indeed.

Death Stalker originally scored $72 \%$ back in AA41, it is the only game of the foursome that has been reviewed in AA before. The rating is probably a tad low for such a polished budget game, which explains why it's being given a whopping $81 \%$ this time round. Ah, nostalgia..

## BUMPY

## Loriciel © £9.99 cass, $£ 14.99$ disk joystick/keys

Today you're a smiling-faced bouncy ball Unarmed and totally harmless, your little task is to bounce yourself around a succession of screens, collecting points as well as many other useful, er, things (such as hammers, bananas, cream buns and droplets of water).

The first thing to do is to work out how to move. Normally, your little ball (aka Bumpy) isn't very bouncy at all. He wobbles up and down with hardly the power to move about the screen. However, if you press the Fire button, you can jump as high as you want. This facility is, as you'll soon find out, remarkably useful.

The idea is to move from platform to platform, collecting all the items which appear. These items give you special properties, such as the ability to knock down certain walls or put out the fires which occupy some of the

$$
\begin{aligned}
& \text { SECOND OPINION } \\
& \text { "Bumpy is trying to be a cutie game- } \\
& \text { but it hasn't quite worked. The ingredi- } \\
& \text { ents are all there -the little cute char- } \\
& \text { acter, the puzzle-based screens. The } \\
& \text { gameplay is fustrating, however, and } \\
& \text { relles too much on the player not hav- } \\
& \text { ing made mistakes on the earlier lev- } \\
& \text { els." } \\
& \text { AW }
\end{aligned}
$$

platforms. When you've collected the required number of items, an exit point opens somewhere on the screen. You must bounce your rotund little self through this, and on to the next level.

What makes the game difficult are the numerous traps and tricks on each screen.


Some of the platforms melt when you bounce on them: others are tilted, so that when you land there, you are automatically sent in a predefined direction. You obviously have no control over where you end up. This is how some of the traps are set up; if you don't land on exactly the right platform, you can fall and be bounced between two angled platforms, which are facing each other, for ever. It must be said that this can get a tad annoying.

As you get through the screens, you keep all the collectables you've picked up. These
mustn't be wasted, because they'll definitely be needed on later screens. So it usually isn't worth leaving items lying around in order to get off a screen safely. Best to go and get them; they're sure to be very useful later.

Graphics are not very advanced. You are just a small smiling face, the platforms are just platforms and the collectables look like what they're supposed to be; little hammers, pieces of fruit and so on. To be honest, the game looks old. (But it does play better than it looks.)


- Working out which way to go is always tough.

Sound is, like the graphics, simple. The obligatory bouncing sounds are provided, as are the bleeps when you die or pick up an item. This, plus an intro tune is the lot. There isn't much, but the effects don't feel too sparse.

Bumpy must guide himself through 100 lev-

els to complete the game. As if this wasn't enough, a level editor is included with the disk. This allows you to completely re-write all the levels. You can create screens which are as easy or difficult as you wish. It can be a lot of fun doing this, and you can save the results. However, it does get boring eventually, and you'll probably return to the screens that


- A fiendish screen, filled with goodies to collect.


Loriciel has programmed. Some certainly ar fiendish. You only have three lives, and if yo lose the lot, you return to the beginning of th game, no matter how far you've progressed. is virtually impossible to get through 10 screens of difficult bouncing with this fev lives. It would have been better to giv Bumpy a new set of lives every three or fou levels. Instead, the apparent hopelessness the task hardly inspires you.

Something else we should point out is tha Bumpy wouldn't run on our new 6128 Plus There would appear to be compatibility prob lems with some software, and you can be sur we'll keep you posted on this.

Bumpy is a nice idea, but when you loo closely you realise that it is just a simplisti platform and jumping game. In compariso with the other excellent examples around, almost starts to look like a budget game.

James 'Bouncy' Leac
FIRST DAY TARGET SCORE
Get through five screens

## The Verdict

## GRAPHICS <br> .52\%

Very simple.
No complexity needed, though.
SONICS
.47\%

- Bouncing sounds. Well, what would you expect?

GRAB FACTOR ..........55\%
Nice idea. Quite a few interesting puzzles at first.

- There isn't a great deal of variety, though.
staying power ..56\%
- Not easy. The similar puzzles cause interest to flag.
The editor function provides a neat option.


## AARATING $54 \%$

Not bad, and editing your own screens is fun, but you'll tire of the whole thing far too soon.

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## MAGIC LAND DIZZY

## Codemasters © $£ 2.99$ cass joystick/keys

Old Egg-head's back! Magic Land Dizzy is the fourth in the Dizzy trilogy. The games depict the adventures of a rather unlikely hero - a walking egg who wears boxing gloves. The Dizzy games are in the arcade adventure mould. A


- There's Dozy, but he's tast asleep.
game - just like a traditional adventure. However, it's not a case of typing in reams of boring text. Everything takes place in a graphical environment - it's a platform game in essence. The combination of the two requires accurate arcade skills and the ability to work out logical (and illogical) puzzles.

This time, Dizzy's old arch enemy, the evil wizard Zaks, is back with a vengeance! He was killed at the end of Dizzy One. Or was he? The truth is he has taken up residence in a

-The rat looks pretty hungry to me...


- Just how do you take the sword from the stone?
magic world, and is determined to take out revenge on our hapless hero.

The way he has done this is the way that will trouble Diz the most.

## All Dizzy's friends

have been taken hostage, and by magical means are trapped! Dylan has been turned into a tree. Denzil has been frozen. Dozy is in an enchanted sleep. Grand-Dizzy has been locked inside a magical mirror. Daisy has grown to the size of a house. Dora (a new character) has been turned into a frog! Dizzy has to rescue all the yolk folk and then kill the evil Zaks - this time for good!

Dizzy starts his quest at Weird Henge. At first, all directions seem closed. Wherever you may wander, the hazards seem to be impassable. After a bit of bold experimentation, and a lot of lost lives, however, you'll figure out how to get past some of those early puzzles.

## DIZZY COMPILED

Before you rush down to the shops to get hold of Dizzy in time for Xmas, there's one thing you should know...

Magic Land Dizzy will initially only be available as part of a compilation. The Dizzy Collection includes five games starring our eggy friend, and will cost $£ 9.95$.

If you already have the rest of the games then you'll have to wait 'till after Christmas to buy Dizzy IV on its own. It will be released in the first week in January at the usual £2.99.

The usual array of brain-teasing puzzles are there to stop you. If anything, they're even more difficult than before - they certainly had the AA team stumped! The bizarre assortment of objects scattered liberally around magic land at first seem to have no relation to any of the puzzles. Then, all of a sudden like, you realise that maybe, just maybe, the thing you've been carrying around for ages could be the key to the puzzle that's been perplexing you for the last half hour. Then again, maybe not.

A couple of new features have been added, although for all intents and purposes the gameplay is exactly the same. Instead of collecting


- This puzzle's tough, but not impossible..
coins as a sideline, there are jewels for the taking instead. These are beneficial in more ways than just adding to your score - they boost your energy levels as well.

Graphics are once again four-colour Speccy ports. Dizzy himself is the only multi-coloured sprite.
All the other graphics are solid red, green or white. This colour coding does have a couple of advantages, though. It often gives clues to where it might be possible to make progress later on.

A jolly little tune plays throughout the game. It fits well into the cartoon nature of Dizzy, and ultimately becomes annoying. Then again, that's what volume controls are for!

## SECOND OPINION

"Ir's a shame Dizzy IV is a Speccy port. but then again it's pretty well done, so perhaps we shouldn't complain. As with the other Dizzy adventures, this one's a little bit tough right from the start, but it will keep you going for a long time."

RL

Magic World Dizzy will be welcomed by those who fell in love with the other three games in the series - after all, it's virtually the same. Not as many gameplay enhancements have been made to Dizzy Four as in previous efforts. Maybe there's only so much that can be done with the same old format...

The puzzles are certainly tougher, though, and should provide a challenge even to those who've completed all the other Dizzy games.

Adam Waring

FIRST DAY TARGET SCORE

Rescue one of the Yolk Folk

## The Verdict

GRAPHICS
67\%
$\square$ As cute as ever.

- A Speccy port and no mistake.


## SONICS <br> 62\%

$\square$ Fitting, bouncy tune.

- A bit too jolly.

GRAB FACTOR .........88\%
$\square$ Dizzy fans will be right at home.

- A bit tough at first.

STAYING POWER . $83 \%$
$\square$ You'll play and play and play...
$\square$ Until you complete it.
AARATING $\mathbf{8 5 \%}$
$\square$ Izzy Wizzy let's get Dizzy!

## Homey, Ill be back in a flash



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Keep it warm Honey!


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## THE SPY WHO LOVED ME

## Domark © £9.99 cass, $£ 14.99$ disk

 joystick/keysAnyone seen a submarine around here? The British Navy has lost one, it seems. It's big. grey and full of men with beards. It must have rolled off the continental shelf and disappeared under the sea-bed. Oh well. It'll probably turn up soon, covered with fluff.

And anyway, we aren't the only people careless with their top-of-the-range nuclear powered ballistic subs; the Soviet Navy has also misplaced one. Hmm. This calls for unprecedented co-operation between East and West (this is pre-perestroika, remember).

## SECOND OPINION <br> "Spy Who Loved Me on the CPC looks almost as good as the 16 -bit versions, which isn't saying much, unfortunately. It's pretty enough, nonetheless, but the awful control stops it assuming any real playability." <br> RL

The Russian have assigned gorgeous pouting Anya Amasova (translated, this means Helpless Female) to this tricky case. And the plucky Brits have sent James Bond. He suspects that the only evil, twisted mind capable of this large-scale theft of military undersea vessels belongs to Karl Stromberg. Consequently, Bond and Anya set off to visit this power-mad despot in his underwater fortress, Atlantis.

This is where you come in. You are now Bond, or rather Bonds' ageing Lotus Esprit. You must drive along a winding road with more traffic cones on it than the M25. The scenery is scrolling vertically past, and the course gets ever more tortuous. To add to the fun, other vehicles belt towards

## have to ski-jump the boat.

 you in the middle of the road. Avoid them, keep off the verges and send the cones flying.Also littered around are large letter 'Q's. These must be driven over and collected. They can later be traded in for specialised equipment from Q's gadget workshop (assuming you get there). As well as all the other hazards, there are puddles on the road. Lotus's legendary handling appears to leave a lot to be desired as, every time you encounter a puddle the car spins out of control for a few seconds.

You'll eventually reach a pier. The car doesn't dive into the water like in the movie. It trundles to a halt and you both get into a small motor-boat.

The scrolling game continues. You chug off in the little boat. It is as hard to control as the car. But at least it is armed (albeit with a largely ineffectual missile launcher). You move the boat in exactly the same manner as the Lotus, and it responds the same way.


- James makes a tactical foray onto the verge.

There are a great many piers and jetties to avoid. Some lead into blind alleys and cause you to explode horribly. The sea is littered with little buoys, other boats and more (waterproof) $Q$ tokens to collect.

Once you have negotiated the hazards and headed out into the open sea, you are magically transported into the Lotus once more. It's with a sense of dejà vû that you begin driving along a vertically-scrolling road, avoiding cars and traffic cones and collecting 0 points. The main difference is that this time you must rendezvous with the Q-Truck. Drive up into the back of it, and you can equip your car with a variety of weapons. Each costs a certain number of tokens. So that's what they're for...!

Having done this, you drive off again. This is the problem with The Spy Who Loved Me; there really isn't enough to do. The only difference with this driving section is that there are jumps to negotiate, pieces of broken glass in the road, and a helicopter buzzing overhead. This is packed with gun-waving baddies, and is just begging for a missile in the rotor-blades.

The third and final level (if you get there yup, control is that tricky) has you belting off towards Stromberg's HO and a final world-saving confrontation.



- The puddles will send you spinning off.

The scrolling is pret smooth, and there is a weal of detail on the screen durin the Lotus-driving sequence What lets it down is the co trol. The car feels like it driving on ice. And when yo hit a puddle the control go completely The most su cessful way to get round th problem is to go very slow indeed past the puddles. Ye yes, I know that Bon wouldn't be seen dead dri ing like an arthritic sne round a measly puddle. B the alternative is to crash.

Whenever you do lose life, you start either back the beginning of the level, at about half way throug Naturally, this is terrib news if you've struggled f ages and have almost got to the next level.
The sound is a bit sparse. There are no c or boat noises, but a scuffing can be hea when you drive off the road. Other effec occur when you hit things.

Overall, The Spy Who Loved Me isn't ve fulfilling or satisfying. The link with the actu film is tenuous, and although the graphics a smooth and nicely drawn, they don't make for the lack of gameplay

James 'not Bond' Leaı

FIRST DAY TARGET SCORE
Get to the helicopter on Level Two

## The Verdict

GRAPHICS .................... $78 \%$
$\square$ Smooth, detailed, colourful.

- The main sprite is a little small, though.

SONICS
59\%

- Not much, really.
$\square$ What there is fits in nicely.
GRAB FACTOR........64\%
$\square$ Initially challenging and addictive.
STAYING POWER ... $41 \%$ - It gets very monotonous.


| SEETA |
| :---: |
| meGA DRIVE |

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ACTION TEST

## MIDNIGHT RESISTANC: <br> Ocean © £10.99 cass, £14.99 disk joystick/keys

When your entire family (including Grandpa, the eminent scientist) have been captured by a ruthless gang of international terrorists, there's just one thing for it. Peace talks through a United Nations envoy? We think not. The only way to negotiate with people like this is with a smoking Kalashnikov.

Your mission is to move in, and move them out. If you don't, the terrorists will force Gramps to build a big bomb and blow up the world (or arrange something equally catastrophic).

You're on your own from here on in, (the arcade version had a two-brother mode), and have to make your way through the hordes of
mechanised megalomaniacs with only a gun for company.

Midnight Resistance is a walk-along-the-platforms-and-shoot-everything-that-moves type of game. The difference is that the ways in that you can make your enemies die horrible deaths are far more varied than in other games of the genre. For a start, your weapon can spit lead through a full 360 degrees. It's also possible to crawl through tight passages, still spraying this circle of death as you go. Baddies


- Take out that laser tower before making progress.


OHitch a ride on the leop at the start of Level One.


- The power-ups give you some serious firepower


## THE WEAPONS SHOP

(End of Level One)
Here you can use all those keys you've collected to upgrade your firepower. The number of keyholes tells you how many keys you'll need.



- Level Three: Doesn't look too pleasant outside...।
sneaking up below, or trying to ambush from above, don't stand a chance.

As well as the all too common foot-soldiers, there's plenty of heavy artillery to overcome as well. These armoured enemies take several shots before bursting into a crimson ball of flame. Luckily, it's often possible to find a safe spot where you can hide from their line of fire while you're blasting them into oblivion.

There are nine levels of murder and mayhem to get through. Each one uses varied graphics, includes alternative big baddies, and has a very different feel to the rest.

The first level soon becomes quite easy after a while, only careless mistakes will get
you killed. From then on, however, it's a differ ent story, as each level is significantly tougher than the last. Luckily, at the end of each level there's a shop where you can purchase powerups to overcome the increasingly hazardous obstacles. Among the weaponry on offer are three-way shooters, and flame throwers guaranteed to roast anything in your path.

You'll have to choose carefully, though These extras are bought with keys taken from the bad guys you've slain. You're only allowed to collect a maximum of six, so you'll have to spend them wisely, taking into account from experience what you'll be up against in the next level.

O LEVEL ONE
(Don't worry about picking up all the keys, by the way - you can only carry six anyway.)

Use the jeep as protection as you travel along the road. You can stand on top as it rolls over the enemies.


The action is depicted in the Amstrad's four colour mode. The sprites are fairly large and well detailed. Backgrounds, too, are good. The lack of colour can cause problems, though, and you can easily get confused as to what's actually happening. Green Screen owners beware!

Suitably futuristic music plays on the title screen, but in the game proper, sound is sparse. Just the usual explosion and shooting sounds, with little else.

The window in which the action takes

## $S=60$ MD 0 MIMON

 Midnight Resistance is an arcade came that lacks that principal areade element - speed. Playable enough. howevar, once you get used to its slower pace of itre also, the graphliss get cluttered and contusing from time to time. RL
place is fairly small. Presumably, this has been done for speed, but to little effect - the game still plays at a sluggish pace. When the edges of the tiny window are met, the playing area is page-scrolled to reveal more of the map.

Midnight Resistance is playable enough, but nothing really special. It has lost many of
the features of its arcade parent - any real speed, and the arcade game's two-player option are particularly conspicuous by their absence.

There is something compelling about the game that keeps you coming back for more, though. Maybe it's the vast array of weapons


[^4]available? Perhaps it's the prospect of nine large levels to fight your way through? Whatever it is, it'll keep you playing well into the early hours. By midnight all resistance is useless...


## The Verdict

## GRAPHICS <br> 72\%

] Good use of the four-colour mode. - Sprites get a bit lost at times.

SONICS
61\%
Reasonable title tune.

- Not many in-game effects.

QRAB FACTOR $\quad 73 \%$
The action starts immediately.

- Slow.

STAYING POWER ...84\%

## ) Plenty of attractive weapons.

Surprisingly addictive deepite the sedate pace.

## AA RATING

77\%

A slow-moving but very playable game


# COMPLETE CLAPTRAP <br> The AA Chrimbo'page 

You thought we'd forgotten, didn't you? Never! Here's a special festive page just for all those readers bloated with Christmas pud, sozzled by sherry and fed up to the back teeth of listening to Auntie Maude describing her hernia op over the stilton...

Last year we let you have a sneak preview of the AA team's Chrimbo pressie lists. And we're delighted to be able to do the same this year (send the writs to the usual address).

## Ollie Alderton

1 Some yellow crayons
2 Some red crayons
3 Some green crayons
4 In fact a whole variety of crayons
5 Something to put them in
No, wait a minute. Start again...
1 A villa in St Tropez
2 A very powerful pair of binoculars..
(OK, you can stop right there - ed)
James Leach
1 A year's membership of MENSA
2 The collected works of Leo Tolstoy
3 A BMW M635CSiA (plus heated gear knob)
4 A soul-mate (you mean cell-mate-ed)

## Adam Waring

10 INPUT"HOW MUCH MONEY WILL YOU GIUE ME" ;
28 If a(1800000 PRINT"NOT EHOUCH, YOU MISERABLE
CHEAPSKAIING GII!":G010 10
38 PRINT"ABOUT BLOOMIN' TIME!'

## Rod Lawton

1 A case of Moet et Chandon '63
22 gross finest Havana cigarillos
3 A whole plucked pheasant (oops, close one)
4 6cwt Christmas pudding plus 142 quarts double cream
5 A stomach pump

## THE AA PERSONALITY QUIZ

Yeah, c'mon, you don't just get these in Cosmopolitan y'know...

Here's your chance to probe the innermost depth of your psyche in our specially-constructed quiz, assembled by a team of expert psychoanalysts specially recruited rom the pub next-door.

What you have to do is carefully read the questions, then note the answer that most closely corresponds with your own personality...

1. Your CPC breaks down on Christmas eve. Do you:
(a) Smash it with your joystick until it works?
(b) Phone Adam immediately, getting him out of the bath?
(c) Use a process of elimination to track down the cause?
2. Your granny asks you to explain Laser Squad. Do you:
(a) Blow her up with an auto-cannon
(b) Find the manual and explain it as you play?
(c) Admit you've never heard of it?
3. You're pushing a trolley through Sainsbury's car park and collide with a Battledroid from Zog. Do you?
(a) Smack it in the trunnion widget with your trusty thermic lance which you just happen to have with you?
(b) Be rather surprised and wonder whether you ought to tell someone?
(c) Dismantie it in the search for components for your ROM board project?
4. You're watching the Queen's Speech and your TV goes fuzzy. Do you?
(a) Assume it's Prince Philip?
(b) Phone the BBC?
(c) Stop fiddling with the telly?
5. You see Trenton Webb walking down the road. Do you:
(a) Run away in a zig-zag pattern and dive into the nearest bush?
(b) Say, "Hello, aren't you Trenton Webb?"
(c) Offer to show him your collection of screwdrivers?
6. The Great Escape is on the TV again this Xmas. Do you:
(a) Run out into the road and scream?
(b) Watch it anyway, because it's not that bad really ?
(c) Change channels to watch the documentary on recirculating trunnion spigot flanges on BBC2?

## YOUR SCORE...

For each (a) answer, award yourself 0 points. For each (b) you should give yourself 2 points and for each (c) 4 points. Now add up your score and check the assessments below to find out just what sort of CPC owner you are:
$<0.0000001$ There is nothing wrong with your brain that a small series of controlled explosions wouldn't put right.
0.8 You are a true games player who relies on sheer instinct and reaction time rather than any vestige of intellect.
8.0001-15.999 You are inclined to be pedantic. Your answers indicate a serious and commonsense approach to life which could get you into trouble in some parts of South America.
16-23 You are but one step away from being a trainspotting propellorhead. Have a care!
24 You are Adam Waring
>24 You are seriously innumerate. We suggest you immediately enrol on a maths course at your local college. Have you ever owned a Spectrum?

## THE AA CHRISTMAS CAROL To be sung to the tune of 'God rest ye Merry Gentiemen..."

We love you Amstrad A-A-Action, you're first place on the grid On matters CPC-concerned, you really lift the lid In fact we think you're such a mag.
We'll send you sixty quid
And it's Ty.y-pe-lns of comfort and joy, comfort and joy And it's Ty-y-pe-Ins of comfort and joy

We love you Amstrad A-A-Action, you are so very funny
With you upon our shopping list, the outlook's always sunny
In fact it seems a good idea
To send you all our money...

And it's Ty-y-pe-Ins of comfort and joy, comfort and joy And It's Ty-y-pe-Ins of comfort and joy

We love you Amstrad A-A-Action, we're always on the phone To tell you what a job you're doing, and that you're not alone In fact we'll send you all our praise And everyihing we own...

And it's Ty-y-pe-hns of comfort and joy, comfort and joy
And it's Ty-y-pe-Ins of comfort and joy
N.B. Repeat as necessary

# Ba/rog 

releases... updates... previews... new releases... updates... previews.

This month the Balrog treats you to a massive Cluepot and Lords \& Ladies section. The reason? Well, why not! But seriously, next month's column will be an Adventure PD Special and will be jammed so full of reviews of all the games available on PD and there won't be much room for anything else! Merry Christmas...!

## BALROG'S POST

- The definitive adventure round-up?

I'm writing to tell you all about a series of articles I have written about all the known adventures still available for the Amstrad. These articles will appear in Spellbreaker from the January issue (No. 23). These will appear in the form of game description, mentioning the cost of each game, whether it's available on tape/disk and the address of the author or place available.

I think this will be a valuable service for new adventurers wanting to know where to buy games, as nearly all the software houses have withdrawn from the 8 -bit adventure market.

I'm in regular contact with about a dozen authors at present and would gladly expand that quota, so if anyone wants their games mentioning in this series could they please write to me, mentioning prices, availability and giving me a short scenario of the game.

Tragically, many good authors have given up writing in the past because of lack of reviews - or not being given any magazine space (especially in the Pilgrim days...) and some really good games have been lost for ever. I don't want to see this happen again.

Mark Eltringham 39 Gargle Hill Thorpe St Andrew Norwich, NR7 OXX

What a great idea, Mark! It always is useful to know where to buy those old games from. More details can be obtained from Mike Brailsford (Spellbreaker editor) at 19 Napier Place, South Parks, Glenrothes, Fife KY6 1DX or call 0592757788.

## - Where are they now?

Were the Infocom games Plundered Hearts and A Mind Forever Voyaging ever released for the CPC?

Peter Captijn Holland

Officially no, although I have heard rumours of a Mac version of Plundered Hearts running on the CPC. (Strange but true!)

- Size does count

If I buy the 64 K memory expansion and the DD1 disk drive for my CPC 464, will I be able to play disk games like Hitchhiker's Guide, Corruption, Pawn etc without the 6128 ROM?

Jay Honosutomo Hemel Hempstead

You can play any Infocom game (such as Hitchhiker's Guide or Suspect) with just a DD1 and 464 - you don't need the expansion! BUT you will need both the expansion and a 6128 ROM to run any Magnetic Scrolls game (such as Corruption or Guild of Thieves). Buying a disk drive doesn't just mean you can play Infocom - it opens up the world of PAW, Topologika and Graphical Level 9's as well (later Level 9 games were text-only on cassette).

## Where is Elvira?

Was Elvira, Mistress of Darkness ever released on the CPC?

Stephen Wilson Lancashire

Elvira will not make an appearance on the CPC-sorry!

## Oops!

In a recent $A A$ the Adventure
Probe awards were mentioned and it was stated that Ken Bond's game The Island was awarded 'Best text only 8 -bit adventure of the year' - this is, of course, not true! Although The Island is a great game, the award was actually given to Ken's adventure The Test - Sorry Ken! Fans of Ken's should look out for his latest game which is, I am reliably informed, ready now. Called The Spiro Legacy, it is a two-parter PAWed game and costs only 84.50 (disk-only) The Balg has been given a sneak preview and it looks to be Ken's best yet. Look out for the review soon. More details can be obtained from Ken at 17 Adel Park Gardens, Adel, Leeds LS16 8BN.

## Competition Results

The massive Balrog Birthday comp certainly was popular, even if it was printed incorrectly first time around! Out of the thousands of entries (OK, OK, perhaps I'm exaggerating a littie!), the following lucky people were picked:

Mike Riggall, Linconshire • Gareth Jones, Edinburgh • Joan Pancott HPilg, Weymouth - Sue Ilsley, Prestbury • Bob Adams, Welwyn Garden City • S Marini, St. Annes • Stephen Borner, Doncaster - Ben Isba, Bowdon • Lorna Patterson, Tillicoultry • K Hankin, Aldridge.

All win copies of Castle Master, Lords of Chaos, Bloodwych, Computer Adventures - The Secret Art and a years subscription to the Adventurers Club Ltd. Mike Riggall's name was first out of the shoebox so he also wins an ADLAN ROM and a
year's subscription to both Adventure Probe AND Adventure Coder - pheeww! Well done, Mike.

The answers? Well, role-playing games on the CPC are few and far between but Bards Tale, Swords and Sorcery and Rings of Darkness are all examples of accepted answers. Incentive produces GAC (Graphic Adventure Creator), ACL was started in 1985 and the Balrog first started writing for $A A$ way back in AA50 (way before Rod, Adam and James!) (Er, excuse me - at the same time as me and Adam, actually! - ed)

Sounds very interesting, Simon! Simon can be contacted at 36 Toothill Bank, Rastrick, Brighouse, West Yorkshire HD6 3EZ or telephoned on 0484719326 5-9m weekdays. Don't forget to send me the final fanzine for a look!

## - Calling all home-brewers...

I would like to hear from any home brew authors interested in a free review and advert in an electronic fanzine. No adventure turned away. Articles and contributions also wanted.. Simon Netherwood Rastrick

# Clue Sniffing with the Balrog 

A real stocking-filler of clues this month to take you through the Christmas holidays! A Ken Bond special this month, with tips for all of his games including a map of The Island drawn by Ken himself...!

Note well the names of the people below for they have come to you in your hour of need to aid and comfort you with their knowledge:

Ken Stokoe, Northumberland
Antcrusher, Seventh Plane
Jerome Young
Dave Harvard, Fareham
Jungle DJ Towa Towa, Leeds
Debby Howard, London
Alistair Crook, Leeds
Simon Avery, Chudleigh

Howard Swains and Ian Howlett

## Base

- To play tape: Find car, turn deck on, put tape in, press Play. (The hi-fi is a red herring and will only result in your death.) (A dangerous herring! - Balg)
- The combination for the safe in Part 1 is right 6 , left 5 , left to 3 .
- Get key-ring with broom handle
- Stick the photo in the space on the pass. To get the light to work, turn switch on.


## Cutthroats

- In the deep wreck, prop up the bunks with the iron bar.
- In the shallow wreck, to find some air, connect up the bottle and the compressor, then "fill tank with air". (This is a rare, fussy input from Infocom!)


## Dodgy Geezers

- Search the shop with pets for some cure for canine distemper.

- Follow the advice on the matchbook.
- Ask for a book on sewers (?!) in the library.


## Dungeon Adventure

- Drop things on sleeping giants from up in the tree. This gets you a girdle of giant strength. Just the job for all those cluttery things adventurers just can't do without!


## Grange Hill

## (especially for the Kenderian)

- To get into school, use chair leg, "break lock".
- Give a dog a bone.
- You need the Plane to get the Matches.
- Don't bother to cross the canal, you reach it from the other side later in the game.
- Climb up the phone box.


## Heavy on the Magick

- At the start, do not pick up the book of spells as it is smeared in poison.
- To get into wolfdorp, say "DOOR, WOLF"
- To be raised to the grade of zelator, go to the door in secunda porta and say "DOOR, SILENCE"
- Mirror kills medusa.
- Nugget kills werewolf.
- Pellet kills slug.
- Garlic kills vampire.


## Island

- Turn the picture frame around to get the brass key, and use it to open the locked cabin.
- Put card in gap to gain entry to the captains office.
- Cut the hawser holding up the gangway with the axe to get down to water's level.


## Panic Beneath the Sea

- Push the book to make an exit.


## Price of Magic

- The candle is for the SPY spell.
- The grimoire is for the MAD spell.
- Burn the woodpile with the candle to get ashes (used for ZAP spell).
- Wave the mirror at moonbeast.
- The wheel is for ZED spell (the bat will get the wheel if asked).


## Suspect

- Hide behind comfy chair in library and wait.
- Follow the colonel after you see him in the library.
- Put body in window box to add more time.
- Hide behind BMW and wait.
- Open trunk of BMW.
- There is a way past the dogs!


## Test

The correct order for the buttons on the first wooden door is 285953719 . Once inside, get cane, put letter in cane and light letter on elec-
tric fire. Then melt the nylon rope... (and run!) Fire the gun at the hump (it's a mine).

## Ingrid's Back

Robin Harley and R Melody offer help with Stephen Borner's problems:

- To open safe: Drop some evidence, E, get letter and hide. Wait for Jasper, examine Jasper (he then slides portrait and enters combination), get out, slide portrait, 888155 and get anything inside safe.
To get into Jasper's Bedroom: From reading room due west of Entrance Hall - Ux3, Ex2, in, N , out (In here you must press record when telephone rings, get tape and get photo from wallet).
- To get into Jasper's office: Go to Entrance Hall with Daisy, open door, Daisy, "out, wait 2, knock, wait 2, knock". When Daisy goes out the door, close door, U, wait until butler goes down, S, get paper, drawer and then stubs.


## Lord of the Rings

Chris "The Barbarian" Gore from Mallow has the answers to Stephen Borner's questions:

- To get out of the old forest, after coming out of the tunnel into the mossy part of the for-
est blow out the stub of the candle, go E. If the trees block your way then wait till they move. From the Mossy place go Ex2, SE. This will get you out of the old forest, from there go S, NEx2, ask Tom Bombadil for help, SW, ask Tom for help, NE.


## Tombestowne

Zac Taylor from Bristol has sent in clues as requested by Paul Stores:

- Get grey key from the bathroom next to the Master Bedroom. Get book from Master bedroom. Go to library (1st floor) with book, go to the left of the room, walk right and jump. You're now in the secret passageway. Go to the armoury, go to the bottom of the barrels and jump up and get shield. Go to hall. Go outside to "By the Bench". Drop book, go in tower to "End of Battlements", drop shield: this stops the arrows. Enter "Hut" and get rope on the table. Go out and go to the "Well", get bucket, drop rope and climb out of well..


## Help!

Have you got a problem in an adventure that no-one you know can solve? If so then write to The Balrog at the usual address and your plea
for aid will be printed. Please only send in requests if you are desperate - use a Lord or Lady of Adventure if at all possible!

- Alistair Crook is stuck in Heavy on the Magick - what is the password for the eye of Heaven?
- Stephen Wilson needs help in Panic beneath the Sea and City for Ransom. In the former he wants to know the PIN number for the cash card and in City he wants to know how to open the clothes chest
* Chris "The Barbarian" Gore is needy of advice in the Lord of the Rings - "In Part 1 I have Strider in my party and I keep following him around from Bree. I have found the message from Gandalf telling me to get an elfstone. I also got a message from Radagast the Brown via a bird. I pass Bree again only to get killed by the Dark Riders. Please help!"
- 'The Kenderian' needs help in The Price of Magick. He (she?) wants to know where the fieldspar lens and blue box are and how to get the wheel. (Use the bat - Balg.)


# Lords \& Ladies of Adventure 

- Four new Lords of Adventure join us this month, including Mark Eltringham with a very impressive list of solved games.

As usual, treat the Lords and Ladies with the care and respect they deserve - ALWAYS keep phoning within reasonable hours (or those stated) and ALWAYS send a stamped SAE when writing otherwise you won't get a reply! These people are giving away their time for nothing, so be considerate!

Adventure Quest • Angelique • Apache Gold • Arnold Blackwood Trilogy • Beer Hunter $\cdot$ Bestiary ${ }^{\circ}$ Big Sleaze • Black Fountain • Black Knight • Boggit - Boredom • Bored of the Rings • Brawn Free $\cdot$ Can I Cheat Death (I \& II) • Case of the Mixed-Up Shymer - Cave Capers • City for Ransom • Classic Adventure - Colossal Adventure - Colour of Magic • Crash Landing • Cricket Crazy • Dodgy Geezers ${ }^{*}$ Doomlords • Dracula • Dungeon Adventure • DAA • Emeraid Isle • Escape Alien Spaceship • Escape from Koshima • Espionage Island • Fantasia Diamond • Firestone • Football Frenzy • Frankenstein • Galaxias • Gems of Stradus * Ghosthouse • Grange Hill • Heavy on the Magick • Hobbit • Hunchback • Imagination • Ingrid's Back * Ichor • Island of Chaos • Jason of the Argonauts * Journey to Death • Kentilla • Knightmare • Knight Orc • Knight Tyme • Kobyashi Naru • Labyrinth • Lancelot • Life Term • Lords of Magic • Lord of the Rings • Lords of Time $\cdot$ Lost Shadow $\cdot$ Magicians Apprentice • Microman - Mindfighter • Mindshadow - Mordon's Quest • Mountains of Ket • Mural, Mystery of Indus Valley • Necris Dome • Never Ending Story • Not a Penny More Not a Penny Less

- Panic Beneath the Sea $\bullet$ Price of Magic • Project Annihilation • Project Volcano - Quest • Questprobe 3 - Quest for the Golden Egg-cup • Rebel Planet • Redhawk • Red Moon • Return to Eden • Revenge of Chaos • Rigel's Revenge • Robin of Sherwood Roog • Scary Tales • Seabase Delta • Seas of Blood - Shard of Inovar • Shadows of Mordor • Sharpe's Deeds • Simply Magic • Smashed • Souls of Darkon - Spaced out • Star Wreck • Storm Mountain • Subsunk • Talisman of Power • Terrormolinos * Tizpan • Top Secret • Venom • Welladay • Werewolf Simulator • Winter Wonderland • Wizbiz • Wolfman * Worm in Paradise • all Interceptor games!
Mark Eltringham, $\mathbf{3 9}$ Gargle Hill, Thorpe St Andrew, Norwich, Norfolk NR7 OXX.

Andy Capp • Price of Magic. (penpal also wanted) The Kenderian, 475 Westhorne Ave, Eltham, London SE9 5LR.

Jewels of Babylon
Chris "The Barbarian" Gore, 22 St. Anthony's Pk., Mallow, Co. Cork, Ireland.

Gnome Ranger • Gremlins • Guild of Thieves * Ingrid's Back • Mordon's Quest • Price of Magic • Return to Eden • Rigel's Revenge • Scapeghost * Village of Lost Souls.
Robin Harley, 3 Shropshire Place, Eastgate, Peterborough, Cambs PE1 5BX.

Crispin Crunchy ${ }^{\text {Crystal Theft }}$ - Gnome Ranger * Message from Andromeda $\boldsymbol{~ S c a p e g h o s t . ~}$ Jay Honosutomo, 23 Tintagel Close, Hemel Hempstead, Herts HP2 6NL. Tel between Mon-Fri, 4.30-9pm (0442) 242957

Deadenders * Gnome Ranger * Hitchhiker's Guide * Lancelot • Quest for the Golden Eggcup • Rigel's Revenge • Smashed • Venom
Richard Jamieson, 79 Land Street, Rothes, Aberlour, Banffshire AB38 7BB.

Adventure Quest • Angelique • Arnold Blackwood Trilogy • Big Sleaze • Black Fountain • Bugsy $\cdot$ Case of the Mixed-Up Shymer * Castle Blackstar * Castle of the Skull Lord - Crystal Theft • Cursed Be the City • Cutthroats • Dracula • Dungeon Adventure • DAA • Enchanter • Escape from Koshima • Espionage Island • Fantasia Diamond • Football Frenzy • Frankenstein • Gnome Ranger • Gremlins * Guild of Thieves * Haunted House * Hermitage * Hitchhiker's Guide • Hollow Graphic • Hollow Text • Hollywood Hijinx • Hunchback • Imagination • Inca Curse • Infidel • Ingrid's Back • Jack the Ripper * Jinxter $\cdot$ Kingdom of Hamil $\bullet$ Kobyashi Naru $\cdot$ Lancelot • Leather Goddesses • Lifeterm • Lords of Time $\bullet$ Lurking Horror $\bullet$ Mansion $\bullet$ Mindshadow • Monsters of Murdac • Mordon's Quest • Mountains of Ket • Mystery of Indus Valley $\bullet$ Myth $\bullet$ Necris Dome • Never Ending Story • Nova • Nythyhel • Pawn $\bullet$ Planet of Death $\bullet$ Planetfall • Questprobe • Rebel Planet • Rigel's Revenge $\bullet$ Robin of Sherwood • Robocide • Seabase Delta • Shard of Inovar • Sharpe's Deeds • Ship of Doom • Smashed - Sorceror - Souls of Darkon - Spellbreaker Spytrek • Star Wreck • Subsunk • Theseus • Top Secret • Venom • Very Big Cave Adventure • Winter Wonderland • Wishbringer • Wolfman and Zork I • II \& III $\cdot$ all Interceptor games!
Graham Wheeler, 2 Burford Close,
Southdown, Bath, Avon BA2 1JF. Tel between 10am and midnight (0225) 426919

## Type-ins

## JAMES LEACH sorts through another mailbag fi



Christmas is a time for festivities, and for making merry. And what do merry people do? They sing lustily. The fact that they do this at 3am in the road outside my house, to the accompaniment of breaking glass and swearing doesn't seem to spoil their enjoyment. It certainly spoils mine.

## ALTO

Anyway, this musical type-in comes courtesy of Val Robinson of Fulham in London. We wouldn't dare to guess which sex Val is (we've learnt our lesson), but he/she has produced a piano-style keyboard which indicates the notes as you play them. It's very simple and great fun. You just use the second and third rows of computer keys to simulate the notes. f0 to f8 are programmed to go higher up the scale.

Try playing the following Christmassy tune. It's 'Ding-Dong Merrily On High':
: ;:lkj jk: : $1:=$
〔Lgail10.'

(EiAss 339-MODE $\cdot \theta:$ BORDER $\cdot \theta:$ RESTORE
(JSAq) 48 - FoR $\cdot \mathrm{p}=2 \cdot \mathrm{TO} \cdot 15$
CKuA1) 59 . TNX -p, 13
(M1AK\}68-NEXT.p

(EnBn388' 'Drav-piano-keys on -lower hhalf of 'screen.
(PqBP $399 \cdot$ WINDOW $\cdot 43,1,28,14,25$ :PAPER $\cdot 43,1:$ PEN $\cdot 43,8:$ :CLS * 4
(OnAU) $1109 \cdot F O R \cdot x=150 \cdot \mathrm{TO} \cdot 576 \cdot \mathrm{STIP} \cdot 32$



(AGAS) 149 •PLOT - 150,156 :DRANR $\cdot 436,8$

 T0. 188.
(OWC j3178. PLOT $\cdot x, 156$ :DRANR $\cdot \theta,-$
64:DRANR $\cdot 28,8:$ DRANR $\cdot 8,64$ :HOLER $-12,-2:$ :FILL $\cdot 8$
(JoA13188-NEXI•X
(LIGAO) 198. Wout - 165,75

(PnA1)210.FILL•n
(HxAp) 2гze. Hovir. 32,8
(Doall230-NEXT-n
(LLKBq)248.' 'Draw -nusical' notes ' in up-
per half of screen.
 12


(InBp) $289 \cdot$ DIM $\cdot \mathrm{a}(27), \mathrm{b}(27), \mathrm{c}(27), \mathrm{d}(27), \mathrm{e}(27), \mathrm{f}(27), \mathrm{g}(2$ 7),h(27)

(XUAG) 309. $\mathrm{FOR} \cdot \mathrm{x}=1 \cdot 70 \cdot 26$
(IGqBu310.RECAD $a(x), b(x), c(x), d(x), e(x), f(x), g(x), h(x$ )
(BiBx) $328 \cdot$ SYYB0L- $\cdot x+199, a(x), b(x), c(x), d(x), e(x), f(x)$, $g(x), h(x)$
(InA1)330.NEXT. $\times$
(Bsaj) 340 .'





 (JnAO) $418 \cdot F O R \cdot n=1 \cdot 70 \cdot 5$
(Lkepp)429-FOR $x=3 \cdot 70 \cdot 19$
(KuAp $) 438 \cdot$ LCCATE $\cdot 42, x, n+1$

$(7 \mathrm{kAn}) 45 \mathrm{Se}$ - NEXI - $\times$


(HPA1) 488 -NEXT - $n$


 (CnBn)528-'Assign note, 'pen -and characters 'to -keys. $(\mathrm{Bg} \mathrm{Bn}) 539 \cdot \mathrm{DIN} \cdot \mathrm{t}(277), \mathrm{n}(27), \mathrm{p}(27), v(27,3), x(27)$
(IWCq) 548 .'tztone peri iod, $n=\mathrm{k}=\mathrm{key}$. nunber, 'p:pen 'nunber, vecharacter -elenent, $x=x \cdot$ coord inate. (IFsaj) 558 .'
(BtAq) $568 \cdot \mathrm{FOR} \cdot \mathrm{ze}=1 \cdot \mathrm{T0} \cdot 27$
OKANU $579 \cdot$ REAP $\cdot t(z), n(z), p(z), x(z)$


(TnAfp6600-READ $\cdot v(z, r)$
(NXAO) 610 -PEN- $42, \mathrm{p}(z)$
 $\operatorname{CINT}((\mathrm{p}(2)) / 2)-\mathrm{r}$
 $\operatorname{CINT}(\mathrm{p}(\mathrm{z})+1) / 2)-\mathrm{r}$

CNqA1 1859 . NEXI $\cdot \mathrm{r}$


(KnA1) $688 \cdot$ NEXT $\cdot z$
(Juai) 699 .'
(BuBj)7e9. 'Now for the - noise on - keypress...
(IuAv)710.MOVE $\times(1), 158: 515 L-2$
(OnAn) $720 \cdot \mathrm{ch}=1$
(LsAO) 73 ? $\cdot$ ENV $\cdot 1,15,-1,1$

(ApAs) $758 \cdot k=A S C(a s)-32$
(DnAv) $768 \cdot$ II $\cdot k) 277.08 \cdot k(1 \cdot$ THEN $\cdot 748$
( Hr C ( $) 779 \cdot \mathrm{IF} \cdot \mathrm{p}(\mathrm{k})=1 \cdot \mathrm{AND} \cdot \mathrm{k}(24 \cdot \mathrm{THDP} \cdot \mathrm{HOVE} \cdot \mathrm{x}(\mathrm{k}), 150:$ FIIL.
$p(k-1)$ :HOUER - $-18,8$ : FILL -1
(Er8i) $789 \cdot \mathrm{IF} \cdot \mathrm{p}(\mathrm{k})$ ) $2 \cdot \mathrm{THE} \cdot \mathrm{TNX} \cdot \mathrm{p}(\mathrm{k}), 6$
( AOBP P $739 \cdot \mathrm{IF} \cdot \mathrm{p}(\mathrm{k})=1 \cdot \mathrm{ANP} \cdot \mathrm{NOT} \cdot \mathrm{k}=1 \cdot \mathrm{THD} \cdot \mathrm{INX} \cdot \mathrm{p}(\mathrm{k}-1), 18$ (LuAv) $880 \cdot \mathrm{II} \cdot \mathrm{p}(\mathrm{k})=2 \cdot \cdot \mathrm{THEN} \cdot \mathrm{IN} \cdot 2,18$
(CXBn) $812 \cdot \cdot \mathrm{IF} \cdot \mathrm{k}=26 \cdot 0 \mathrm{OR} \cdot \mathrm{k}=24 \cdot \mathrm{THED} \cdot \mathrm{TNK} \cdot \mathrm{p}(\mathrm{k}), 6$

(IJ.jas)838. SOUND.ch, t (k), 1,15
(AnA1) 849 -KED
(PqAt 8589 - SOWV. ch $, t(k), 8,0,1$

(E1Bn $1879 \cdot \mathrm{TNX} \cdot \mathrm{p}(\mathrm{k}), 13: I \mathrm{IF} \cdot \mathrm{HOT} \cdot \mathrm{k}=1 \cdot \mathrm{THEN} \cdot \mathrm{NK} \cdot \mathrm{p}(k-1), 13$
(Libx) $888 \cdot \mathrm{IF} \cdot \mathrm{p}(\mathrm{k})=1 \cdot \mathrm{AND} \cdot \mathrm{k}(24 \cdot$ THES $\cdot \mathrm{FIL} \cdot \mathrm{p}(\mathrm{k}-$
1): HOVLE - $18,0, \mathrm{FFLL}-1$
(IVAn) 889 - coto 748
(Hiaj) 3 )


(Dx In) $939 \cdot$ Data $\cdot 4,28,60,124,56,16,0,0,0,8,0,0,4,4,4,18$ $8,4,4,4,4,4,28,68,254,56,18,8,8,8,8,8,8,8,,,, 8,8$ $4,4,4,4,4,4,4,4,4,4,20,56,124,8,8,8,0,8,8,8,0,249,3$ $, 32,32,32,8,8,8,8,8,32,32,32,32,32,32,32,32,50,48$, $32,32,32,32,32,32,8,8,0,8,8,8,88,62,4,4,4,4,4,4$ 4,4
 $8,8,8,8,2,11,30,15,26,8,8,6,14,8,4,3,8,8,0,4,4$, ,4,4,4,4, 126
 $2,28,255,28,56,56,112,240,288,144,255,56,124,21$ ,19,19, 19, 19, 255, 18, 20, 20, 24, 248, 18, 18, 255,18, 1 , $16,32,192,8,8,8,8,8,8,,,, 8,1,3,255,14,28,60,113$ $113,114,114,255,49,24,12,2,1,8,8,255$
(Auaj) 968 .
(Da8n)978. 'Data - for wariables associated with-- each note.

(RACII P998. Data - $381,67,2,164,213,216,2291,284,69,3,8,28$ 3,282,216, 268,59, 1,196, 253,68, 4, $, 213,216,294,2$ $9,61,5,8,209,202,211,225,58,1,250,213,53,6,8,21$ ,211,284, 201,51,1,292,199,52, 7,8, 283, 285, 211,17 $.44,8,8,289,211,224,169,42,1,356$
(PuSU) $1800 \cdot$ DATA $\cdot 159,45,9,8,208,205,211,150,35,1,388$, $42,37,18,8,228,211,294$
(BVGu) H1018-DATA - $334,34,1,428,127,36,11,8,2288,299,218$ $119,29,12,8,287,288,212,113,26,1,484,106,28,13$, ,288, 2093, $210,109,17,1,518,95,19,14,8,297,288,21$ , $89,13,15,8,288,289,210,84,28,1,588,88,14,1,8$, , $12,1,0,71,5,1,8,67,4,1,8$


## 360 DECREES

This little scorcher is from Simon Clarke Princes Risborough in Buckinghamshir Simply change the contents of text\$ in line on to put in whatever message you choose. Hour (well, seconds) of fun can be had. The clev part is how the phrase is expanded or contrac ed to fit exactly into the circle.
(K1Cq) $10 \cdot \mathrm{MODE} \cdot 1: \mathrm{nO}_{0}=16: \mathrm{INK} \cdot 8,8: \mathrm{INK} \cdot 1,26: \mathrm{INX} \cdot 2,6: \mathrm{INX} \cdot 3$ 24:BORDER-8:texts $=$ " 368 -DEGREES $\cdot$ BY -S.CLARK ${ }^{*}$ (BnB j) $20 \cdot 1 e=120$ : he $=128$ : th $=64: x=328: y=200 ; c o l=1$ (IpCn) $38 \cdot$ length=LEN(texts) $:$ steps $=368 /$ length:stizstep /no:thi=th/no:col=1
(KrAv)48-LOCATE-1,25:PRINT-TEXTS
(K1As)50 $\cdot F O R \cdot n u=0 \cdot 70 \cdot$ length -1 (KkBi)60 FOR $\cdot \mathrm{i}=0 \cdot 70 \cdot n 0-1: F O R \cdot 0=8 \cdot 70 \cdot n 0-1$ ( JoBi 1$) 78 \cdot$ IF $\cdot$ TIST $(($ nu*no $)+\mathrm{i}, 0)( \rangle 8 \cdot$ THEN $\cdot 90$ (DtAq)80-NEXI $\cdot 0, i, n u:$ EK
(FtBn) $89 \cdot$ de $=-($ nu*steps $)$-sti*i-189: th $=$ th $i * 0: D E G$
(CuBs)100.PLOI $\cdot x+($ letth $) * \operatorname{COS}(\mathrm{de}), y+(h e+t h) * S I N(d e), 00$. 1:6070.80

## MUSICAL CHORDS AND SCALES

Jontinuing the musical heme, this offering from Javid Webber of the Isle Of Man, is a serious appli:ation. It will identify the 1otes in many chords and icales. As well as major,
 ninor and augmented, it vill handle a great many other chords and iequences. One for the REAL musicians tround.

FnAu\}20 - REM
Ivaj) $30 \cdot \mathrm{t}$
PsAK) $48 \cdot \mathrm{CLS}$
F1A1 $558 \cdot$ MDDE- 2
KuAO $-60 \cdot$ LOCATE $\cdot 20,1$
*nBn)70 -PRINT"TABLLS -OF • WUSICAL CHORDS • AND • SCALES"
PnAu)80-PRINT•TAB(29)STRING(35, "-") ....
jkBp 39 - PRINT - TAB(21)"Copyright - -
David-I. Hebber, 1999"....
2tAuH180-PRINT:PRINT:PRINT:PRINT
AuCn 3118 -PRINT-TAB(8)"This'progran enables the 'nusic
ian'to check -out 'any of $11^{\prime \prime}$
;uAn $1122 \cdot$ PRINT

piano-or-stringed-instrunent."
'kAl1340-PRINT
 spose notes between any two"
10A13160.PRINT
(vBU) 170 -PRINT - TAB ( 8 )"keys and relate then -
to any of 11 -scales."......
|tau) $188 \cdot$ PRINT:PRINT:PRINT:PRINT
TkBp Y 1 1se-PRINT • TAB (8)"Press any -key to cont inue",

[tal) $218 \cdot \mathrm{CLS}$
ISCi) $228 \cdot$ PRINT $\cdot T A B(18)=T \cdot A \cdot B \cdot L \cdot E \cdots O \cdot F \cdots C \cdot H \cdot O \cdot R \cdot D \cdot S$ . . A. N.D...S.C.A.L.E.S'....

kA0) 240 -PRINT:PRINT
(iBq)258-PRINT•TAB(15)"Chords"; TAB(48)"Scales"...

,

....
 al-Kinor" ${ }^{2}$.......
 arnonic.Kinor"
 elodic.Minor"
 ungarian-Kinor"
jBX) $330 \cdot$ PRINT-TAB(15)"6...Dominant-7th"; TAB(48)"17. .Dorian-Hode"
 hrysian Hode"

ydian•Mode"
(MaCi) $360 \cdot$ PRIMT $\cdot$ TAB(15)"9...Dininished $\cdot 7$ th $^{\prime \prime}$;TAB (40)"2 B....Mixolydian"
 ...Locrian.Hode"
(EtCk $388 \cdot$ PRINT T TAB(14)" 11 . . .Dininished $\cdot 9$ th $^{*}$; TAB (48)" 22....Whole-Tone"
(CrAp)398-LOCATE 14, 22


(HnAk)428.CLS
 N...O.F...S.C.A.L.E.S.S $\ldots$..


(CuBn) $468 \cdot$ IF $\cdot \mathrm{X}$ (12 $\cdot$ THEN $\cdot$ PRINT $\cdot$ STRINGS $(16, "-*)$....
(KiA1)478-PRINT
(00CK)480. PRINT"Insert key signature'followed by ' ' $s$ ', for'sharp'and ' $f$ ''for'flat."
(DnAp)4se Print:PRINT


$$
\text { . .........3.............. } 5^{\mathrm{n}}, \text {. }
$$





(AnCi) $548 \cdot$ IF $\cdot x=5 \cdot$ THEN $\cdot$ PRINT"Minor $\cdot 6$ th $\cdot \cdot(n 6) \cdot \cdot 1 \cdots \cdots$.

$$
\text { . ... } 3 \ldots, \ldots, \ldots, \ldots, \ldots, \cdot, \ldots, \ldots 6^{*}, \text {, }
$$

(LiBu) 550 -IF $\cdot x=6$ - THEN-PRINT"Doninant - 7th - (7) - $1 \cdots \cdots$...



(TuBu) $578 \cdot$ IF $\cdot x=8 \cdot$ THEN $\cdot$ PRINTMMinor $\cdot 7$ th $\cdot(n 7) \cdot 1 \cdots \cdots \cdot$

$$
\cdots \cdot 3 \cdot \ldots . . . . . . . . . .5 \cdot \ldots . . . . . . .7^{1} \cdot \ldots . .
$$


$\qquad$ .........(din)"

 .9.......(9)"
(D1BU)680-IF $\cdot x=11$-THEN -PRINT"Dininished 9 th $\cdot 1 \cdots \cdots$ ..........3.............5............................... .........(-9)"


(LqCi) $828 \cdot$ IF $\cdot x=13 \cdot$ THDN $\cdot$ PRINT*Natural $\cdot$ Hinor $\cdot \cdots 1 \cdots \cdots$.



$$
2 \cdots 3 \cdots \cdots+4 \cdots \cdots+5 \cdots 6 \cdots \cdots \cdots+\cdots 8^{n}
$$







 .....3.......4........5...6........7.......8"....









र00At\}728-HINDOWस2, $1,88,9,24 \cdot \ldots$.
 CHA-ARB-C.CDD.DEL
$\mathrm{O}(\mathrm{sBx}) 740 \cdot \mathrm{nS}=\mathrm{CC} \cdot \mathrm{DbD} \cdot \mathrm{EbE} \cdot \mathrm{F} \cdot \mathrm{GbC} \cdot \mathrm{AbA} \cdot \mathrm{BbB} \cdot \mathrm{C} \cdot \mathrm{DbD} \cdot \mathrm{FbE} \cdot \mathrm{F} \cdot \mathrm{GbG}$ -AbA-BBB-C.DbD-EbE" $\cdot$...
(EsC.j)750-LOCATEL2, 1,1 :LINE. INPUTA2, "Basio-key:"; bs $\$$ : LOCATEL2,1,1:PRINTL2,SPACE $(2 \theta) \ldots .$.
(KuAr) $760 \cdot$ bs $\$=$ UPPERE (bs $\}$ )

(BsBx) $788 \cdot$ IF $\cdot$ INSTR("AFASBFCSDFDSEFSGTGS", bs $\$)=8 \cdot$ THEN $\cdot$ 6070.750 ....
(PaAu)7990-PRINTH2,"Basic key: ......."
(HuAX) 88e-GOSUB-1889:COSUB-899:COT0.818
(OHtAq)810-PRIMTi2:PRINTH2
(XiAv)828.IF $\times$ (12-THEN $\cdot$ GOTO 988
(BnC18830-LOCATEL2,1,4:LINE. INPUTL2,"Transposed key:
";bs $\$$ :LOCATEL2, 1,4 : PRINTU2, SPACEs(28).....
(LlAs) 840 bs $\$=$ UPPERE(bst)...
(D1Ax) $8858 \cdot$ IF $\cdot$ bs $t=" \mathrm{~S} "$ ' THEN $\cdot \operatorname{COTO} 0.830$
(NnBu)86e-IF•TNSTR("AFASBFCSDFDSETSGTCS", bs $\$$ ) $=8 \cdot$.THEN. 6010.830
(AiAu)879-PRINTU2,"Transposed key: $\cdot$ "; $\cdot$.
(FVAC)888-GOSUB-1889:GOSUB-899:COTO-98e
 THEN - GOTO - 940 . ELSE, 900
(DVAU) $980 \cdot$ FOR $\cdot d=z \cdot 70 \cdot z+28 \cdot$ STEP $\cdot 2 \cdot \ldots .$.

(K sak) $928 \cdot$ NEXI
(InAn)938.COTO-978


〈BkAk • 960 -NEXI
〔Cpan\}976.RETURN
(GnAt)988.PRINTH2:PRINTU2:PRINTH2
(FtBx)990-PRINTU2, "Do- you-want -another 'key signature$\cdots$...Press ${ }^{1 "}$
(Dran)1800-PRINTt2
(JsC.j)1018-PRINTt2,"Do you want another -Chord-or -Scal e,--Press • $2^{n}, \ldots, \ldots$
(Ftan) $1820 \cdot$ PRINTH2
 ,1,12:PRINTH2,SPACE $5(28) . . . .$.
(PrB1)1840-IF-p=1•THEN CLLSZ2:GOT0.738...


(IkAk)1078-:

\{IUBn\}1090-IF bs $\$=" C S ", O R \cdot b s t=" D F ", T H E N \cdot z=3 . . .$.






\{KkB1 $) 1160 \cdot$ IF $\cdot$ bs $\$=" G S^{\prime \prime}, O R \cdot b s \$={ }^{*} A F^{n} \cdot T H E N \cdot z=17 \cdots$




(PkAn)1210-RETURN

## BLOCK- <br> BUILDERS

This game, from Adrian Hyland of Hawarden in Clwyd, sets you building piles of blocks which fall from the sky. It's a long piece of code, but is certainly worth typing in. The quality is superb. The idea isn't a hundred per cent original, by very nicely implemented.

(TnBi) $138 \cdot$ Score\% $:=8: 8:$ Level $1 \%=8:$ KaxRous $\%=-4$
(JTAp\} 140 -Full\% $=$-False\%
(IUAP)158-RESTORE-2988
(CtAp\}168-CLEAR-INPUI
(ITAx) 178.LOCATE -6,8:PRINT, ", PRESS. . *
(ONwAs) $188 \cdot$ LOCATE $\cdot 6,9$ :PRINT.". ........ .
(OqAv) $138 \cdot$ LOCATE $\cdot 6,18$ :PRINT, "aNY , KEY"
(0pat)208-LOCATE•6,11:PRINT." ........."
(DxBk)218-LOCATE-6,12:PRINT, "TO-START"
(Jtan) 2 za.PAPER 1
(AuAn) 23 - COSUB. 948
(ToAn)248-COSUB 1578
(IIAp)250-MHILE $\cdot$ NOT F Full\%
(KnAn)266-cosub 1089 ...
(InAp) 2 ? 2 -CLEAR-INPUT
(DuAs)289-BlockedX : =-Full\%
(PPsAr)290-WHILE-NOT-BlockedX
(BsAu)300-w\% $=\cdot$ Kaxlait\%: $i s==$ TNKEYs


(IqAk)330-NEND
(HIAv) $348 \cdot \times 1 \%==\times \alpha \cdot y 1 \% \cdot=\cdot$ ghtrix $=\cdot \mathrm{rk}$
(NiBi)358-IF - is=CHRE(242) - THEN - GOSUB-680
(BpBj)360-IF - $\mathrm{i}=\mathrm{CHRS}(243)$ - THEN-COSUB-678




(CtA0) $418 \cdot \mathrm{yyk} \cdot=\cdot \mathrm{y} 1 x+1$


88) ( $)$ (8): NEXI $\cdot \pi x$

 eShape\% $(\mathrm{\theta}, \mathrm{\theta}, \mathrm{rIK}), \mathrm{xXK}, \mathrm{y} \mathrm{I}$,

(HtAk)46e-NDND
(OUAn)478-COSUB 1168
(01Bi)488-IF Rous $=8 \cdot \mathrm{~T}$ THDN $\cdot$ COSUB $\cdot 1230$
(0sAk)498- WEND
(APAn) $580 \cdot$ PAPER- 8

(CoAu)528-LOCATE-6,11:PRINT " $\cdot$.........
(JuAx) 538 -LOCATE $\cdot 6,12$ :PRINT $\cdot "$, OUER $\cdot$ "
(MrBi) $548 \cdot$ FOR $\cdot$ Pause\% $=-1 \cdot 70 \cdot 3809$ :NEXT Pause\%
(HuAk)558-4END
(DoA1) $560 \cdot$ DND
(AоA.j) 578 .,
(Ls sfu)588.' 'Check'shape'can'nove'left
(Lkai)5se.'
(AiB0) $600 \cdot x 0 \% \cdot z \cdot x 1 \%-1: y y \% \cdot=\cdot y 1 x+1:$ CanNove\% $\cdot=$ 'True\%
(HKDV) $610 \cdot \mathrm{FOR} \cdot \mathrm{n} \% \cdot=\cdot 8 \cdot 70 \cdot 3:$ CanHove\% $=$ - CanHove\% - AND - (Bo

(88)=8): $\mathrm{NEXI} \cdot \mathrm{\pi x}$
(JnB j) 620 -IF CanKove\% $\cdot$ THEN $\cdot x 1 \% \cdot=\cdot x 0 \%$
(H1An)630-RETURN
(PrAi)648.'
(KuAv)658,' 'Check 'shape 'can •nove •right
(ApAj)668.'

 $\operatorname{ardz}(x o c k+\operatorname{Shape\% }(1, n \chi, r 1 \%) / 2, y y \alpha+$ ShapeK $(2, n \chi, r 1 X)$ (89) $=8$ ): NEXT $\cdot n \%$
(EnBi 1 698-IT CanKovek $\cdot$ THEN $\times \mathrm{XIK} \cdot=\cdot \times 0 \mathrm{CK}$
(EXAO) 789 -RETURN ....
(OLOAj) $718{ }^{\prime}$
(OnAu)728.' Check - shape 'can rotate (DoA.j)738.'

(G1Bn)750-CanRotateX $=\cdot \times \mathrm{XX} \times(7 \cdot \mathrm{AND} \cdot x \mathrm{X} \times)=0 \cdot \mathrm{AND} \cdot \mathrm{yIX}(16$
(BnE1)760-IF CanRotate\% THEN-FOR $\cdot$ nK $\cdot=\cdot 8 \cdot 70 \cdot 3$ : CanRotat

$/ 2, y y \%+S h a p e x(2, n x, r r \%) / 88)=8)$ :NEXI $\cdot n \%$
(AsBK)779-IF CanRotate\%-TKEN-r1K- =-rrk
(0) (xAn)788-RETURN. .
(IoA.j)75e-'
(CtA0) $889 \cdot$ ' Drop shape
(CqAk)818.'
(00Bu) $828 \cdot$ CALL - 86171, eBoardx $(8,0)$, QShapex $(0,8, \mathrm{rIX}), \times 1$ $x, y 1 x$, eylx

(OmAn) 840 -RETURN
(OUA j) 7858 .'
(0tAr) 850 '' 'Reveal'next - shape
(JuAi)878.,
(BqBo\}880-ShowNextShape\% $=$-NOT ShowlextShapex
 extShapex(8,8,nextrx),11,6•ELSE-CALL• A6000,8,8Ne xtShapex( 8,8, nextr\%) , 11,6
( H jAn) $390 \cdot$ RETURN
(IsAi)918.'
(LuAn)928.' Pause'gane
(LuA.j.938.'
(EnAP) 948 - is $:=$ INKEYs

(AvAn)96e-RETURN
(CoA.j)978.'
(KKAq)988.' Get next 'shape
(TSA.j)988.'

(FnAr) $1818 \cdot$ FOR $\cdot \mathrm{n} 3 \mathrm{~K}=\mathrm{=} \cdot 8 \cdot 70 \cdot 3$
 3\%)
0(kAq) $1838 \cdot$ NEXT $\cdot n 3 \%, n 2 X, n 1 X$
(L.jAq) $1848 \cdot \mathrm{rK} \cdot \mathrm{B} \cdot \mathrm{nextr} \mathrm{\%}$
(AkAp) $1058 \cdot$ b\% $\cdot=$ 'nexth\%
(IJAGt)106e•MaxNaitx $=$ =INT(RND*6)*5
(FpAo) 1878-GOSUB•1468
 $x(8,8, r \%), 11,6$ :CALL - 46880 , nextb\%, 2 NextShapex $(8,8$ ,nextř),11,6

 $\chi+($ Shapez $(1, \pi \%, r \%) / 2), ~$ g + Shape\% ( $2, \pi \%, r \%) / 88)( \rangle \theta)$ :NEXI nx

(PJAn〉1128-RETURN
(B1ak) 1138.1
(DSBj) 1148 -' 'Check for 'any complete 'rows
(Frâj) 1158 .

$/ 2, y \%+$ Shapez $(2, n x, r x) / 88) \cdot=b x:$ NEXI $\cdot n k$
(CkAt)1178-Score\% - = Score\% +5
(DkB1) 1188-LCCATE-28,8:PRINT-USING-"HHint"; Score\%
(NXkAr) 1190 -CurrentRowk $=-18$
(KㅐAu)1288-FOR-A11Rous\% $=-1 \cdot 10 \cdot 18$
(ElAu) $1218 \cdot$ ConpleteRouk $\cdot=$ Rous $\%$ )
(InD J) $1228 \cdot$ FOR $\cdot$ Colunnz $\cdot=\cdot 1 \cdot 70 \cdot 8:$ CompleteRowk $=$ - Comple teRows-AND (BoardX(Colunnx, CurrentRow\%)(>0):NEXI - Colunn\%
(I.jC.j)1238-IF • ConpleteRow'•THDN •OSUB • 1788-ELSE Curre ntRowk:- CurrentRow\%-1
(JXAp) $1248 \cdot$ NEXT- AllRows\%
(OHAOSH258-RETURN
(Hsak) 1268 ,'
(IIBI)1278.' Calculate•bonus at at-end of 'level
(OnA.j) 1288. '
(TIBi)12s8•CurrentRow $\cdot=\cdot 8:$ Bonus $;=$ True\%
(PICr) 1380-FOR $\cdot$ Columnk $=-1 \cdot$ T0,8:Bonus\% $=$ - Bonus\% $\cdot$ AND $\cdot($ Boardx (Colunn\%, CurrentRow ) =8) :NEXT Colunn\%.

## ONaA0) 1310 -WHILE Bonus\%

(IsBk) 1328-LDCATE-6,CurrentRook+3:PRINT $\cdot "$. ........"
(HoAt)1338-Score\% $=$ = Score\% +58
(GvAv)1340.CurrentRovk, =-CurrentRowc +1

 Boardx(Colunnx, CurrentRouk) =8) :NEXT•Colunnx
(I Jal) 3378 -KEND.

(E1Bk 31398 -LCCATE $\cdot 6,12$ :PRINT, "COMPLETI"
(00Av) $1480 \cdot$ FOR P Pause $\chi=1 \cdot \mathrm{TO} \cdot 1880$ :NEXT Pause\%
(IsAo) 1410- COSUB 1578.
(B1An) $1428 \cdot$ RETURN
(0tai)1430.'
(Jrax) $1448 \cdot$ ' Select-a randon-next-shape
(JuA.j)1458.,
(DuAG)1458-5\%=DNT(RND*7)
(DnAu) $1478 \cdot \mathrm{FOR} \cdot \mathrm{nL} X=8 \cdot \mathrm{TO} \cdot 2: \mathrm{FOR} \cdot \mathrm{n} 2 \chi=8 \cdot 70 \cdot 3$
(KKAq)1489-FOR $n 3 x=8 \cdot 70 \cdot 3$
 n $2 \mathrm{~K}, \mathrm{n} 3 \mathrm{~K}, \mathrm{sk}$ )
(OrAp) $1590 \cdot \mathrm{NLXX} \cdot n 3 \mathrm{n}, \mathrm{n} 2 \mathrm{~K}, \mathrm{niX}$
(TVAr) $1518 \cdot$ nextr\% $\cdot z=$ INT(RNDW4)
(OrAs) $1528 \cdot$ nextbx $\cdot=\cdot \operatorname{RNT}($ RND $* 5)+2$
(DmAn)1530-RETURN
(JuA.j) 1546 -'
ONqAt 1 1558.' 'Set-up -next-level
(HaA.j) 1568 ,
ONuBx 1578 -Leve 1 K - $=$ Level $\mathrm{L}+1$ :LOCATE-28, 18 :PRINT-USING


(POAq) $1598 \cdot$ Rous $\%$ - $=$-KaxRous\%
(L.JB1)1600-LOCATE-28,12:PRINT-USING-"WHENH";RowsX

(01At) $1628 \cdot \mathrm{FOR}$-AllRous\% $==8 \cdot \mathrm{TO} \cdot 18$
(DuAU)1638-FOR AllColunns\% $==1 \cdot 70 \cdot 8$
(JsBk) 1648 -Boardy(AllColunns\%, AllRousK) $=-8$
(GuAv)1658-NDXT-AllColunns\%, AllRous\%
(BuAs)1658-READ $\cdot$ KoOfBlocks\%
(HuBt 1 1678.If.NoorBlocks\%=-
1-THEN - RESTORE - 2980:READ - HoofBlocks\%

(FxBk)16se READ •xs\%,ysk:Boardz(xs\%,ysk) $==1$
(LmAn)1790-NEXI- nx
(ASAq)1718-iK $==$ DNT (RND*8)
(IqBk)1728.INK. $1, \mathrm{Inksx}(0, \mathrm{ix}): \mathrm{INK} \cdot 3, \mathrm{Inks} \mathrm{\%}(1, \mathrm{ix})$
(IvAv) 1738 -CALL-A686B, eBoardx ( 1,0 )
(F1AO)1740-REFUNN
(0.jA.j)1758.'
(GqAu)1758'' Renove'conpleted rou
(PxA.j)1778.'
(LwBn) $1788 \cdot$ CALL $-468 B 2$, QBoardx $(8,8)$,CurrentRowk
(Dsar)1790-Rous\% $=$ =Rous $\%-1$
OWnB1)1880-LOCATE-28,12:PRINT-USING,"EHEHF";Rous\%

(D1Au)1828-Score\% $=$ = Score $\%+28$
OKnAv) $1838 \cdot \mathrm{CALL} \cdot \mathbf{4 6 9 6 B , ( \mathrm { eBoardx } ( 1 , 8 )}$
(JuBa)1848-LCCATE-28,8:PRINT-USDNG, "HHEH"; Scorex (EVAO) 1858 -RETURN
(GuAk)1868.'
(B, jap)1879.' Set -up gane
(LiAk) $1888{ }^{\prime}$
(GPAn) $1898 \cdot$ HODE 1
(EtBK)1980-DNX $8,13: \mathrm{INK} \cdot 1,26: \mathrm{DNX} \cdot 2,6: \mathrm{FNX} \cdot 3,19$
(DiAu) 1918 -PAPER-2:PEN-1:BORDER-8:CLS
OKrAo 1 1928-KDNORY-45FIF.
(JoAq) $1938 \cdot$ RESTORE 3568

(CtAg)1958-KHILE-1\% (a6621
(LkAn) $1968 \cdot$ READ $\cdot d \$$
(0.jAu) $1978 \cdot$ FOR $\cdot \mathrm{nX} \cdot=1 \cdot 1 \cdot \mathrm{TO} \cdot \mathrm{LEN}(\mathrm{d} \xi) \cdot \mathrm{STEP} \cdot \mathrm{C}$


(09A1)2880-NEXI-n\%
(CuA1)2810 NDD
(AuAr)2828.DDI-ť(31).
(LTAq)2839-RESTORE 3588
(JPAG) 2040-FOR $-\mathrm{a},=: 8 \cdot 70 \cdot 31$
(BuAu) $2858 \cdot$ READ $\cdot \mathrm{vk}$ : $\mathrm{tx}(\mathrm{az}) \cdot=\cdot \mathrm{vk}$
Ofial 2 2060-NEXI - az



( $G u C n) 2188 \cdot F O R \cdot n * \cdot z \cdot 1 \cdot 70 \cdot L D N(d\}): b s \cdot=\cdot b\}+B I N\}$ (VAL ("d
+MIDs $(\mathrm{d} \$, \pi x, 1)), 4)$ :NEXI $\cdot \pi \%$
(DxAq)2118-4HILE-LEH(bs))/5

(LnAq) $2138 \cdot$ POKE $\cdot 1 \mathrm{x}, \mathrm{tx}(\mathrm{aX})$
(Grap) $2148 \cdot 1 \mathrm{~K} \cdot=1 \mathrm{LK}+1$

(E0A132160-KDD
OKsAk $32178 \cdot \mathrm{KDPD}$
(CGAt)2188.CALL-466e8, aFIF3
(LpBI)2138-LOCATE-14, 14:PRINT,"PLEASE•HAIT....
(OUAp) 12280-RANDOMIZE-TIRE
OtrAu)2218-True\% $\cdot=--1$ :False\% $=-8$
(AnBO) 22ze.DIK-ShapeArrayk (2,3,3,6), Shape\% ( $2,3,3$ )
(BtBn) $2238 \cdot \mathrm{DDM} \cdot \operatorname{KextShapex}(2,3,3)$, Boardx $(9,19)$
Gufr)2248-DIM-Inks\%(1,7)
 , nX ) $-=-1:$ KIEXI $\cdot \mathrm{nX}$
(JqBp) $2268 \cdot \mathrm{FOR} \cdot \mathrm{n} \mathrm{\chi} \cdot=\cdot 1 \cdot \mathrm{TO} \cdot 8: \mathrm{Boardz}(\mathrm{n} \%, 19) \cdot=1: \mathrm{NEXT} \cdot \mathrm{n}^{2}$ (DiAr) $22278 \cdot$ RESTORE 2888
(CrBk)2288.FOR $\cdot \mathrm{nLX} \cdot=\cdot 8 \cdot 70 \cdot 6: F 0 \mathrm{R} \cdot \mathrm{n} 2 \mathrm{C} \cdot=\cdot 8 \cdot 70 \cdot 3$

ONuAp \}22se -READ $\cdot x s \%, y s \%$



（BuBn） $2338 \cdot$ ShapeArray\％$(2, n 2 \%, 1, n \mathrm{LK}) \cdot=\cdot 248-89 * \times s \%$
（IvBn）2348，ShapeArrayk（ $1, \mathrm{n} 2 \chi, 2, n 1 \mathrm{n}) \cdot=\cdot 6-2 *$ ws\％

（LxB1） $2368 \cdot$ ShapeArray $(1, n 2 \alpha, 3, n 1 \%) \cdot=\cdot 6-2 * y s \%$




（BuA0）2410 $\cdot \mathrm{nx} \cdot=-15$
（MnAp）2428•FOR $\cdot n 4 \% \cdot=\cdot 8 \cdot 50 \cdot 3$
（BtEv） $2438 \cdot \mathrm{IF}$ ．（ShapeArrayk（1，n3\％，n2\％，nLK）$=$ ShapeArrayk
 \％）$=$ ShapeArray\％$(2, n 4 \%, n 2 \%, n 1 \%)+80) \cdot$ THEN $\cdot n \% \cdot=\cdot n \%-8$
 （ $1, \mathrm{n4X}, \mathrm{n} 2 \mathrm{~K}, \mathrm{~nL} \mathrm{~K}$ ）－
2）－AND •（ShapeArray\％（ $2, \mathrm{n} 3 \%, \mathrm{n} 2 \%, n 1 \%)=$ ShapeArrag\％（2 $, n 4 K, n 2 K, n \mathrm{n} \%)+88) \cdot \mathrm{THIN}(n \% \cdot=\cdot \mathrm{nK}-4$
（LuEu） $2450 \cdot \mathrm{IF}$ ．（ShapeArray\％$(1, \mathrm{n} 3 \%, \mathrm{n} 2 \mathrm{~K}, \mathrm{~nL} \%)$ ）Shapeêrrayk $(1, n 4 \%, n 2 \%, n 1 \%)) \cdot A N D \cdot($ ShapeArrask $(2, n 3 K, n 2 K, n 1 K)$ $=S h a p e A r r a y \%(2, n 4 \%, n 2 \%, n 1 K)+80) \cdot$ THEN $\cdot n \% \cdot=\cdot n \%-2$

 1\％）$=328-$
40＊Shapefrray $(2, n 4 \%, n 2 \%, n 1 \%)) \cdot T H D N \cdot n \% \cdot=\cdot n \%-1$
（L．jAn）2478－NEXI $\cdot \mathrm{n} 4 \mathrm{X}$
（ONoBi $) 2488 \cdot$ ShapeArrag\％$(8, n 3 \%, n 2 \%, n \mathrm{DI})=n \%$
（ $\mathrm{I}_{\mathrm{j} \text { Aq }}$ ） $2498 \cdot \mathrm{NEXI} \cdot \mathrm{n} 3 \%, \mathrm{n} 2 \mathrm{~K}, \mathrm{niK}$
（KtAp） $2580 \cdot$ RESTORE 3168
（ $\mathrm{J} \tan$ ） $2510 \cdot 1 \mathrm{x} \cdot=\cdot \mathrm{C} 6880$
（LaAp）2528－MHILE•1K（a6233
（AvA0）2538－READ $\cdot \mathrm{ds}$


OHnAO $) 2568-1 \%=-1 x+1$
（Kpha）2578－NEXI•nx
（Lsak）2588．KEND
（CpAp） 25950 －RESTORE 3128
（OnAp） $2680 \cdot \mathrm{FOR} \cdot \mathrm{i} \cdot \mathrm{Z}=8 \cdot \mathrm{TO} \cdot 7$
 $\cdot \therefore$ ily
CKkAl12628－NEXI $\cdot$ ix
TrrBi子263e－ShowNextShape\％$=$ FFalse\％
（XXXAO） $2548 \cdot \operatorname{COSUB} \cdot 1468 \cdot-$
（C．BB1）2658－CLS：INK $\cdot 8,8: I N K \cdot 1,8:$ INX $-3,8:$ PAPER－ 8
 ：NEXI•nK
（LuAq）2678－PAPER－1：PDN－3
（IuAu）2680－LOCATE• 16，8：PRINT，＂NEXI＂

（HVAu）2788－LOCATE－16，16：PRINT，$=$ ．．．．．．．．．．．．．．．．．．．．．．．${ }^{*}$
（HKBP）2718－LCCAIE－16，17：PRINT－CHRS（242）；＂：LEFT $\cdot$（SP） ：DROP，＂
（FVAu）2728－LOCATE•16，18：PRINT，＂．．．．．．．．．．．．．．．．．．．．．．．${ }^{*}$
（TVBP） $2738 \cdot$ LOCATE $\cdot 16,19$ ：PRINT $\cdot$ CHRs（243）；＂：RICHT $\cdot \cdot 7:$ RE VEAL－＂
OMoAx \}2740-LOCATE-16, 20:PRINT," ........................"
（DiBu） $2758 \cdot$ LOCATE $-16,21$ ：PRIMT $\cdot$ CHRs（241）；＂：ROTATE－9：PA USE $\cdot$ ．．＂

（IvAv）2778－LOCATE－21，9：PRINT •＂，．．．．．．．．．．．．．．．．＂
（DuBk）2788－LOCATE－21，10：PRINT＂LEUEL－：$\cdot \cdots \cdot 1$ ，＂
（LuAu）2798－LOCATE－21，11：PRINT ，＂．．．．．．．．．．．．．．．．．＂

（FoAs）2810 CALL－ 86680 ，\＆C0BC

（KiBi $138830 \cdot \mathrm{TNK} \cdot 6,13: \mathrm{INK} \cdot 1,6: \mathrm{INK} \cdot 3,24$ ：PAPER $\cdot 8$
（OOAn） 2849 －RETURN
（JuA．j）2858．
（EsAO）2860．＇Shape＇data

（LヵAt）2889．DATA $\cdot 1,1,2,1,1,2,2,2$
OApAq） $2898 \cdot$ DATA $\cdot 8,1,1,1,2,1,3,1$
（CtAu\}29e8-DATA $\cdot 1,2,2,8,2,1,2,2$
（EvAs）2918－DATA $1,8,1,1,1,2,2,2$
（I jas） $2928 \cdot$ DATA $\cdot 8,1,1,1,1,2,2,2$
© K．jAu\}2938-DATA $\cdot 8,2,1,2,1,1,2,1$
（DoAuł2948－DATA－ $1,1,8,2,1,2,2,2$ ．
（Diaj） 29958 －＇
ONqAo\}2968,'LLevel-data
（GqAk）2978，＇
（Gpal）298e－DATA－8
（CXBs）2998．DATA $8,1,18,2,17,3,16,4,15,5,18,6,17,7,16$ ， 8，15
（KKtDk） $3808 \cdot$ DATA $28,1,8,1,1,1,2,1,3,1,4,1,18,1,17,1,16$ $, 1,15,1,14,8,8,8,1,8,2,8,3,8,4,8,18,8,17,8,16,8$, 15，8，14
（DnBp） $3018 \cdot$ DATA $\cdot 8,1,13,2,18,3,15,4,16,5,12,6,17,7,14$ ， 8，18
（PuCr）3828．DATA－ $16,1,15,2,16,3,17,4,18,5,18,6,17,7,16$ $, 8,15,8,14,7,13,6,12,5,11,4,11,3,12,2,13,1,14$
（JXCn）${ }^{2} 838 \cdot$ DATA $\cdot 12,1,18,1,12,2,15,3,15,4,18,4,12,5,18$ ， $5,12,6,15,7,15,8,18,8,12$
（POCs） $3840 \cdot$ DATA $\cdot 16,1,11,1,15,2,11,2,14,3,11,3,13,4,11$ $, 4,12,5,11,5,12,6,11,6,13,7,11,7,14,8,11,8,15$
（DpCu） 3 P58－DATA $\cdot 16,1,18,1,14,2,16,2,12,3,18,3,14,4,16$ ， $4,12,5,18,5,14,6,16,6,12,7,18,7,14,8,16,8,12$
（CPDq） 3 e6e．DATA． $28,1,14,2,13,2,14,2,15,3,11,3,14,4,18$ $, 4,11,4,12,4,17,5,11,5,16,5,17,5,18,6,14,6,17,7$, $13,7,14,7,15,8,14$
 $, 5,13,6,14,7,2,7,15,8,8,8,1,8,2,8,16$
（LiAn\}3888.DATA - -1
（PIAk）3898．＇
（KuAn）3180＇＇Ink－data
（F1ak）3118．＇
（DxBO） $3128 \cdot$ DATA $\cdot 6,22,8,24,15,17,14,19,7,21,26,14,12,2$ $3,4,18$
（BuAk）3138．＇
（FnAu）3148，＇，Data for＇ $\mathrm{N} / \mathrm{C}$－subroutines （OpAk）3158．＇
（NsBn）3160•DATA－21A6C8DD75894797878807879797572678
 （CnBp）3188－DATA－61DD72968797878783DD779679C888DD77 （E1Bn）31se－DATA－87DD5E84DD56050684C5E51313194F968e （BnB1）3280－DATA－1313991A4F8689131399D52BDD6526DD66 （BnBp）3210－DATA－8791FT88EDAELDAO1B1B7AC6885718F4D1
 （L1B j）3238－DATA－8588C54ECBe1CBe1CBe1CBe18688D5E521
 OASBOT3256－DATA－10F2E1D123231313C118D523232323EBe1 （IpB1）3268－DATA－4888е3EBCH110C5C9DD6ए8e268029294D44 OKuBn\}327e-DATA-292se94D44DD6E82DD66e389L511138019 （0rBk 33288－DATA－EBE12BEDB8C921A6C8DD758A4797978ee？
 （0xBk $33388 \cdot$ DATA－5F168e19DD5E18DD56118584DD7DerDDBI OKkBk $33318 \cdot$ DATA－882e1BDD7DBCDDBE82e282438331A1313CB ©qB1 $33328 \cdot$ DATA－57C45e611313131310F2C3896e1A1313CB （BiBn）3338－DATA－47C458611313131310F2C380681A1313CB OR 3 B1 133348 －DATA－4FC458611313131310F2C3886e1A1313CB
 （JrBn）3360．DATA－86880s13131A4796в8е31B1B0688368823 （JpBo 33378－DATA－36882B7CC6886710F4C1E1C9DD6683DD6E （CnBq）3388．DATA－822C2s294D44292sesDD46e5DD4E84eses （PuB1 $13339 \cdot$ DATA－DD46esDD4588e9DD5687DD5296e684E513 （CtBk $34488 \cdot$ DATA－ 131 A138567 1 A138C671A13CB3FCB3F856F （L． JBn ）3418－DATA－1A138C677EE1B7CQ10E3DD5601DD5E8EEB （JnAu）3428－DATA－ 34 EBI1148819C38E61 （Ivak）3438．＇
（JxAr） $3448 \cdot$＇Data $\cdot$ for $\cdot$ blocks
（A）A．j3 3450 ，，

 （HnBo33480－DATA－8FaF78E178E178E178E178E178E10F6F （GuBn）3430－DATA FGFQA5B4D25AASB4D25AA5B4D25AFGFO


 （TVиA．j）3530．＇
\｛CnAu\}3548.' Data - for 'displaying'title
（OpAk 3 3558，
 （KpB1）3578－DATA－EB01D5078938040158C893EBC1185BC9 （E1B1）3588．DATA $\cdot 8,1,2,3,5,6,7,8,9,18,11,12,13,14$ （HuB1）3598．DATA－15，23，27，31，39，55，63，111，127，140 （PKBn） $3688 \cdot$ DATA $\cdot 141,142,143,286,297,223,239,255$

（HvBO\}3628-DATA-E738E1581CE71C86739C668983718CB8e8 （KPBBj）3638－DATA－CA729C8805CA534065B9CE5346D7396671
 （ $\mathbf{F k B j}$ ）3658－DATA－1C6373941595CE19C861B9D28808821947
 （H×B1）3678－DATA－37816374DCE73986881CL591DPD39CL5A9 OKsBo $3688 \cdot$ DATA．SB751627399B111CCB53EDIA9AAFFA9FCA （P JBn）36se－DATA－99DB7F8474ADF8FF846D67FL24CR6D56A7 （ （ 3 JBn） $3780 \cdot$ DATA－43818F96A6D1DF3EAAA6786EB31CFDSAFC （0qBp）3718－DATA－A31B643BE7539B63A9DeB943Sesssae58E〈ArB1） $3728 \cdot$ DATA－73619E188DB6DAF3BAC6D6D980A5DAE6D8 （NuBo $3773 \mathrm{~B} \cdot$ DATA－EAT4CE86C84E61DD3418EC6D44E3BSAB34 （P JBn）3748－DATA－2EA595D341857239D3419D3419CA239667 （JrBn）3758－DATA－4DP6795B51398868DDeBASC774De666C8E （A．JBr）3768－DATA－74De674D067314E739D3419CL6D44E239C （PLB1）3778－DATA－E742EA739D341998239D3419D33A1CC339 （CtBp）3780－DATA．CE74De6739B512D8E739DeBASCE74D0666 （EnBk）3796－DATA－C8E74DP6742E532DCE739D3419CE6D4432 （DuBn）3886－DATA－3SCE742EA739D341857239D3418DeD84EE （JKBn）3818－DATA－739CE74DQ6739BSIAD8E739DBBA9CE74DE （COBn）3828－DATA－BA2D4E74De6733C73е5CE739D3419CE6D4 （KOB133838－DATA－81239CE742EA739D343897539D3419CDB6 （IXBp） 3848 －DATA－48D339CE74DP6739B57348E739DeBA9CE7 （T1Bn）3858－DATB－4CD8184CE74D06739FI5854I739D3419CE （RuBn）3868－DATA－6D7FE239CE742LA739D373965739D3419C （BKBn）387e－DATA－E45B89239CE74D06739B51D18E739DeBA9
 （CPB0）3890－DATA－9CE6D443C39CE742LA739D33F826739D34 （C1Bq）3990－DATA－19CL1959B139CF74DD6739B512D8E739De （LKB1）3918－DATA－BASCE74D163ASCE74D967354E1F826739D （P1B133928－DATA－3419CE6D44E239CE742EA739D344EE4739 OnnBk $3938 \cdot$ DATA $\cdot$ D3419CC53976419CL24D06739B513se973 （BXBp） 3948 －DATA－9DQBASCE $74 \mathrm{DPFD8SCE74DP67418E74De67}$ （B1Br）395e－DATA－39D3419CE6D4423B5CE742EA739D3413C2 （P1B133968－DATA－739D3419D35B9D3419CL6D8EA7399E180C
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## MAZE：AN AMENDMENT

We seem to have put one over on everybody who typed in the program Maze，in AA61．The purpose of the game is match all opposite coloured faces．

This is the difficult bit．Well，not difficult， exactly．More like impossible．The game be can be made to work，however，by substituting the following data lines：

368 DATA $2,3,1,5,6$ 389 DATA $1,3,2,6,5$ 400 DATA $2,4,5,3,1$ 428 DATA $6,5,2,4,1$ 440 DATA $6,4,1,2,3$ 468 data $5,1,6,4,3$ 488 DATA $5,4,3,8,2$ 500 DATA $1,3,5,4,2$ See dath $1,4,2,5,6$ 540 DATA $3,2,1,4,6$ 560 DATA $3,4,6,1,5$ 589 DATA $2,6,3,4,5$


And there you go．You＇ll be able to finish it now．

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Isn't technology wonderful? With the advent of affordable portable colour tellys now anyone can lock themselves up in their bedrooms watching Neighbours (instead of doing their homework, filling in poll tax forms, or writing begging letters to the bank manager, which is what they told the others they were doing). And video recorders mean that you can record all those episodes you missed. (Co-incidentally, you may remember we gave away a portable telly and a video recorder last ish, ahem...)

Well now we are giving you the chance to catch up with your fave proggies on the bus, at the launderette, dangling from the Avon gorge - anywhere even your trusty portable wouldn't get to.

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## Cheat Mode

Another huge wodge of tips．．．

丸 $\star$ 大 $\star \star \star \star \star \star \star \star \star \star \star \star \star \star \star \star \star \star \star \star$

Blimey，Crikey，Golly，Gosh，and other expletives you＇ve come to expect from the AA team（they really talk like that！），it＇s the night before Christmas（c＇mon use your imagination）and all through the house not a creature is stirring，not even a mouse． High above the rooftops，an old boy in red jets chimneyward clutching GX 4000 consoles for you，bottles of fizzy plonk for me．Snowflakes fall，and the earth shines crisp and white under
a pale winters moon．Somewhere in the cold distance，cheered by the ochre glow of a single candle lit lantern，and the yule－ tide spirit，carolers sing：
＂The boys of the NYPD choir were singing Galway Bay And the bells were ringing out for Christmas day＂ Well．．．，it beats sending out 35,000 cards！－Happy Christmas everybody．（What is all this？－ed）


Glamis Castle，near Forfar in Scotland is the most haunted castle in Britain！Reputed to be the real life setting for Shakespeare＇s Macbeth，in its time has seen many an evil deed．In addition to a hosts of stories con－ cerning ghouls and ghosties，is a legend of a secret＂forbidden＂room hidden among the towers which holds dark and horrific memories from the past，but its location remains a mystery．．．All this has absolutely nothing to do with Graham Smith＇s tape poke for Spooky Castle，by the way．
（OnAs） $1 \cdot$＇ Spooky Castle $\cdot$－－tape－
（HvAq）2，＇By，Grahan－Snith
（EvAs）3，＇Inf inite－lives
（Ftaj）4，＇
（LiAu） $10 \cdot$ DATA $\cdot 86,80,11,52,5 d, \mathrm{~cd}, 77$
（0iAv） $20 \cdot \mathrm{DATA} \cdot \mathrm{bc}, 21, \mathrm{fc}, 00,22, \mathrm{de}, 5 \mathrm{~d}$ （ JkAv ） $38 \cdot$ DATA $\cdot \mathrm{C} 3,71,5 \mathrm{~d}, \mathrm{af}, 32,8 \mathrm{a}, 09$ （CnAs） $40 \cdot F 0 \mathrm{R} \cdot \mathrm{j}=0 \cdot 70 \cdot 20: \mathrm{READ} \cdot \mathrm{as}$
（KpAs） $58 \cdot x=V A L\left(" \varepsilon^{*}+a s\right): y=y+x$〔LuAr\} $60 \cdot$ POKE $\cdot j+235, x:$ NEXI $\cdot j$
（FuAv） $78 \cdot$ IF $\cdot y=1975 \cdot$ THEN $\cdot$ CALL -235
（B．jAq） $80 \cdot$ PRINT＂data－error
－Multiface poke for
Spooky Castle
Address $=090 \mathrm{~A}$
Poke $=00$
（JIAP） $38 \cdot$ CALL－aBE18

（BKAS）50－LOAD－＂AMSCODE，BTN＂， 23000
\｛CuAt\} 50 －LOAD－＂GAKISSCR．SCR＂， ， 5000
\｛PxAn\} 70.Closzout
（WmAt）75－POKE－t1B83，ASC（＂＂）
 －I，UAL（ $\mathrm{za}^{2}+$ At $)$ ：NIXI
（ZZtat\} SB-DATA.CC, $18, \mathrm{BB}, 0,0,0,0,0$
（WuAn） $100 \cdot \mathrm{CALL} \cdot \mathrm{A} 1800$
of Carlisle has produced a poke which gives you just that，a breather from the hectic pace of that game．It is specifically for the Supreme Challenge disk but may work on
others．Press TAB to pause，any other key to Supreme Challenge disk but may work on
others．Press TAB to pause，any other key to restart．
（GvAl）S．IDISC

（JKBI\} 20-PRINT•PUT• IN• GAME-DISC, PRESS－A•KEY＂
Long ago in a galaxy far away Bobby Wade （who？）complained that there was no pause facility for the Mirrorsoft game Tetris．．．Well， no sooner（？）said than done．Marcus Fletcher
－


Live and Let Die
Licensed to cheat，Graham（OA7－hackers＇talk）Smith saves Queen and country from endless frustration ．James Bond，could you do this？ （Hlar） $1,{ }^{\prime}$ ，Live and Lhet－Die
 （Ptar）
（Xxas）
4, ，
，Infinite







－Multiface pokes for Live and Let Die
Address 00 Effect
Pokf missiles
7495001 Inf fuel
$7402-00$

## Stunt Car Racer

Stunt Car Racer on disk by John Girvin of Belfast gets the treatment here, with infinite boost and invulnerability. I liked the Obi-Wan-Waring thingy in AA62 John, I may use it myself one day... when everyone has forgotten of course (where do you think I get my ideas from?).
(Xsat) 1.'STUMT•CAR•RACER•hacks
(LnAp) 2.'By.John CGirvin
(IXAo) 3.'August-1999
 Good going! Brilliant!
ey...
(LanAv) 89.CALL-ABB18:CALL-ABE89

 (LkAu) $118 \cdot$ Dala $\cdot$ be, 79,32, b3, be, $21,08,01$ (Cqqac) $128 \cdot$ Data $\cdot \theta \mathrm{e}, 41,11,00,00, \mathrm{df}, \mathrm{bl}, \mathrm{be}$
 (0SAu) 149 . Data $\cdot 01, a 4,48,4 \mathrm{c}, 46,88,5 \mathrm{a}, 21$ (DDtBi) $150 \cdot$ Data $\cdot \mathrm{b4}, \mathrm{be}, 22,7 \mathrm{~b}, 80, \mathrm{c3}, 99,89$ (XpAp) $160 \cdot$ Data $\cdot 84,00,80,80$ (Jder) 179.'Infinite-Boost
(BPAs) 189-Data af , $32,77,21$
(Nwap) 139 . 'Invulnerability
(KNat) 209. Data-3e, $\mathrm{C9}, 32, \mathrm{c}, 98$
 (JIAU) $220 \cdot$ Data - $33,40,00$, Varoon, 4 a
(Ftaj) 4,'
(LnAu) 10.MODE -1:CALL-ABCC2:PEN-1
(KuAp) $20 \cdot$ addr= $=$ AEE88:RESTORE
(BkA0) 39 -READ -bytes


(Fiar) 60 -addr=addr +1 : COTO- 30



Straight off the cover of AA61 is the free game Tau Ceti, pulled to pieces by Stephen Troup of Kings Lymn. Select which poke (or all of them) you want, and go out blasting. Brighten up your world with infinite flares.
(XNAD) 10:R2S Tau Ceti
(Jnhr) $20 \cdot$ R2N:AA Cover Tape
(LiA1) $30 \cdot$-WODE- 1
(HiAn) 40-BD:PDER.0
(TuB] 3
50- INX $0,0: \mathrm{INK} \cdot 1,11: \mathrm{NNK} \cdot 2,26: \mathrm{INK} \cdot 3,24$



(GjiAo) SB.CIOSEOUT
(PxAt) 100 -Mrwon- $4,36,21,24$
(Dven) 118 PPEN-1
(clip) 120-LOAD" 11 ITME
(PYAn) $130 \cdot$ CaLL 20000
(ExAO) 140-10AD" 1 PART1"
(PiAn) I58-LOAD" 1 PART2"
(HIM)

(CWIn)
 (2iB1)
 (IKAn) $198 \cdot \mathrm{INK}-1,20$


- Multiface pokes - see listing


Andy Price has been busy again, this time putting together a poke for Codemasters' Quattro Combat compilation. The cheat works on three of the four games on the tape

- Death Stalker, SAS Combat Simulator, and Arcade Flight Simulator, so even though it's a bit long you get three for the price of one. You may be asking "So where's the Ninja Massacre cheat?", well, the inimitable Adam Waring can supply you with that, seeing as he wrote it (Not bad, Ad!). There are password entries to every 5th level - a lot better than a poke...!

5) RAIN 10) PINK 15) YEAR 20) ROCK 25) WARD 30) HULL 35) STAG 40) BEER
(GuAx) 1.'Quattro-Conbat-Cheat-Systen
(Guar) 2.'.by-ANDY-PRICE
(JnAs) 3.'**-use- Tgpeuriter codes **
(Ttaj) 4 .
(AmAr) $10 \cdot \mathrm{FOR} \cdot \mathrm{x}=\mathrm{ABEBC} \cdot \mathrm{TO} \cdot \mathrm{ABE} 21$
(CtAt) $28 \cdot R E A D \cdot p\}: p=V A L\left({ }^{-g}{ }^{\prime \prime}+p s\right)$ (KSAp) $38 \cdot \mathrm{POKE} \cdot \mathrm{x}, \mathrm{p}$ :NEXT
(OnAAu) 48-MODE-1:PRINT"Choose Gane:"
(JrAu)
se.PRINT"1. Death.Stalker" \{0uAs\}

60-PRINT" 2 . SAS -Conhat-Sin" (GrBi) $78 \cdot$ PRINT* 3 . -Areade-Flight- Sin $^{*}$
 (HoRr) $90 \cdot 0 \mathrm{~N} \cdot \mathrm{n} \cdot \operatorname{GOSUB} \cdot 180,180,200$ (JvAs) 91 -RESTORE-440:G0T0-500 (JJAAt) $100 \cdot$ RESTORE-48e:COSUB-29e (JnAt) $110 \cdot$ INPUT"Ground -ghouls"; ys
 (OnAv) 130 -INPUT"Fireball-demons"; gs
 (01A An) 158 -RETURN
(LiAt) 160-POKE-4BE24, $43 C:$ COTO-138 (0wAt) $179 \cdot$ POKE - ABE2S, a 3 C: RETURN (NiAt) 180 -RESTORE-380:COSUB-2se (atan) 190 -RETURN
(MuAu) 200-RESTORE-420:COSUB-2se
(OnAu) 210 -CLS:PRINT"Infinite-lives:*
(OnAr) 248 -INPUT"Player-1";y\$
(TuBi) 245-IF LEFT\$ $(y \$, 1)={ }^{*} y^{2} \cdot$ THEN $\cdot 260$ (HWAO) 250-POKE-4BE24,43D

 (DVAp) 279-POXE-4BE29, 43D
(DKAn) 289-RETURN
(NTgAr) $290 \cdot \mathrm{FOR} \cdot \mathrm{X}=\mathrm{ABE} 23 \cdot \mathrm{TO} \cdot \mathrm{ABE} 2 \mathrm{E}$


## (KoAn) 310 -NEXT:RETURN

## (NtrAs) $328 \cdot \mathrm{DATA} \cdot \mathrm{ED}, 5 \mathrm{BB}, 38, \mathrm{BD}, \mathrm{EB}$

(CrAu) 339 -DATA- $22,34, \mathrm{BE}, 11,37, \mathrm{BD}$
(PnAt) $348 \cdot \mathrm{DAIA} \cdot \mathrm{EB}, 3 \mathrm{E}, \mathrm{C} 3,77,23,3 \mathrm{E}$ (OUAU) $358 \cdot \mathrm{DATA} \cdot 23,77,3 \mathrm{E}, \mathrm{BE}, 23,77$ (BiAu) $360 \cdot$ DATA $21,40,80, \mathrm{E} 3,11,08$ (AtAt) $378 \cdot \mathrm{DATA} \cdot \mathrm{BB}, 80, \mathrm{C}, 4 \mathrm{~A}, 3 \mathrm{~A}, 91$ (RuAt) $38 Q \cdot$ DATA.AF, 32, AA $, 49,3 E, F F$ (InAv) $398 \cdot$ DATA $32,86,32,32,88,32$ \{CvAv\} $480 \cdot$ DATA $\cdot 3 E, 00,32,1 \mathrm{C}, 17,3 E$ (IrAr) $410 \cdot \mathrm{DATA} \cdot 80,32, \mathrm{BD}, 18,00,80$ (PtAu) $428 \cdot$ DATA $3 \mathrm{E}, 80,32,8 \mathrm{~A}, 89,3 \mathrm{E}$ (PuAt) $439 \cdot$ DATA $\cdot 80,32,4 \mathrm{E}, 89,00,80$ (1tpAs) $448 \cdot$ DATA $\cdot 80,41,58,80, C 7,80$ (GOAt) $500 \cdot F 0 \mathrm{R} \cdot \mathrm{x}=\mathrm{ABE} 2 \mathrm{~F} \cdot 70 \cdot \mathrm{ABE} 34$
 (HPAR) $529 \cdot$ NEXT:KEMORY- \&3800:LO (BnAp) 539 -CALL-ABEBP

- Multiface pokes:
Address Poke
Effect

SAS Combat Simulator 49AA

00
grenades
3286
FF)
lives
328B
FF)
Death Stalker

| 171 C | 00 |
| :--- | :--- |
| ghosts |  |
| 18 BD <br> demons | 00 |

demons
Arcade Flight Simulator 9D12

00
lives (1)
9CD6
00
lives (2)

## Rostages

Fresh from Casualty, Dr. Mike Wong is back again with a bit of surgery on the Infogrames disk game Hostages

His diagnosis is that you ought to be able to play the second part of the game without having to mess about with the first, and his prescription for difficult games? Take Cheat Mode once a month

(NqAs) 2.', 128K only.(sorry!)
(PyAv) 3.'-Auickstart (Bypass $\cdot$ Lel-1)
(CuAv) 4,'•Press-Fire-to-activate
(MvAp) 5.'•By-Kike-Mong
(TVA, 3 ) 6 . $^{\prime}$
(CjAt) $10 \cdot$ WODE $\cdot 1:+F O R-n=150 \cdot T 0 \cdot 4 D 2$

 (IIAt) 40-IF-ce) 5518 - TITM- 218 (0-81) 58 Primy -Tusert - Hostages...(1)"

 (Fveu) $80 \cdot \mathrm{DATA} \cdot 80,0 \mathrm{e}, 41,4 \mathrm{f}, \mathrm{ct}, 89$ (fnAt) 90 -DATA- $21,93,00,22,2 f, 81$
 (PeAs) 110-Data-80, $22,27,18,03,11$ (CMAV) $120 \cdot \mathrm{pata} \cdot 81,21, \mathrm{ad}, 00,11, \mathrm{ac}$ (EnAv) 138 -DATA-37,81, 21,00, ed, Be
 (Hatau) $150 \cdot$ DATA. $36,01,23,36,02,23$ (PsAt) 150 -DATA-38, 03, 3e, 02, 32, 14 (leat) $170 \cdot \mathrm{DATA} \cdot 85,3 e, 0 \mathrm{~b}, 32,5 e, 05$ (WpAu) $180 \cdot$ DATA- $3 \mathrm{e}, 05,32,39,05,0 \mathrm{e}$
 (JnAr) $200 \cdot$ Deta- $36, \mathrm{cb}, 07,53,50$ (BkAs) 210-PRINT-"Error..."
time. Your part of the deal is to select whic level you are going to load, and then delete th lines which you don't need (not too difficult i it?) Just as a further bit of help, the password are:

Level 2) RECOVERY : Level 3) ALOYSIUS : Level 4) ANDERSON
(0qAq) 10 -REX Thunderbirds
(TnAr) 20 -REN-Infinite-Tine

\{JiAO\} 40 - KENORY - 41800
(JvAn) $58 \cdot$ CLOSEOUT
(JVAO) $60 \cdot$ LOAD ${ }^{*}!a^{*}$, , 11160
(LtAp) 70•FOR-a $=480 \cdot \mathrm{TO} \cdot \mathrm{AA} 2$
(C1Av) $\left.80 \cdot R E A D \cdot b\}: b=V A L\left({ }^{-2} \varepsilon^{*}+b\right\}\right)$
(JqAn) $90 \cdot$ POKE $\cdot \mathrm{a}, \mathrm{b}$
(IxAk) $100 \cdot$ NEXI -a
(JiAO) 118 -CaLL- 888
(IrBj) $120 \cdot \mathrm{DATA} \cdot 81,7 \mathrm{FE}, 01,21,00,11,11,00$

\{AtAu\} $140 \cdot \mathrm{DATA} \cdot 32,35,02,22,36,02, \mathrm{C3}, 00$
(BiAp) $150 \cdot \mathrm{DATA} \cdot 01,3 \mathrm{E}, \mathrm{A} 7$
(BuAt\} $160 \cdot$ RED - Pokes -only-select one
(DoAq) 170-REK-Level-One
\{InAp\}
180. DATA - 32,48,5E (JrAp) $190 \cdot \mathrm{REM} \cdot$ Level - Tvo (APAq) 200-DATA-32,FC,5F (FnAr\} $218 \cdot \mathrm{REN}$-Level-Three (CtAg) $228 \cdot D A T A \cdot 32, C 6,57$
(KnAp) $230 \cdot$ REN L Level-Four (LnAq) 240-DATA-32,46,57
(Dvat) 250 -REX-Leave-next-line
(RTAq) 260.DATA.81,82,F7,C9

- Multiface pokes for Tape Thunderbirds
(CAAt) $60 \cdot$ DATA $\cdot B 1, A 7,11,80,81$ (BvAq) 70.DATA.CD, 40, A7, $21,2 A$ (MoAs) $80 \cdot$ DATA $\cdot \mathrm{BE}, 22,5 \mathrm{~A}, \mathrm{A8}, \mathrm{C} 3$
(KWAS) $90 \cdot D A T A \cdot D B, A 7,3 E, F F, 32$ (RuAs) $180 \cdot$ DATA $\cdot 1 \mathrm{D}, 2 \mathrm{C}, \mathrm{C}, 22,48$ (PnAS) $110 \cdot$ MDHORY $\cdot \mathbf{A 8 F F F}: L D A D "!$ (InAq) $128 \cdot F O R \cdot \alpha=A B E 80 \cdot \mathrm{TO} \cdot \mathrm{aBE} 31$ (LKAv) $138 \cdot R E A D \cdot b s: b=V A L\left(" k^{*}+b s\right)$ (K Jar) 140 . POKE $\cdot \mathrm{a}, \mathrm{b}: c=c+$ b :NEXI (LPAu) $150 \cdot$ IF - C () 5101 -THEN-180. (PuAq) $160 \cdot$ INPUT"No. Lives"; cn (ItAv) 179 -POKE - ABE2B, cn :CALL-dBE89 (HnAr\} $188 \cdot$ PRINT"DATA-error*

Multiface poke for Rastan
Address $=$ 2C1D $\quad$ Poke $=$ Number

## Thunderbirds

This poke for tape version of Thunderbirds by Stephen Troup of Kings Lynn, gives you infinite

## Continental Circus

Okl so do you remember this? Some time ago we did the disk version of the same cheat. Then the month after, you were supposed to get this tape version for Continental Circus, but for some reason Rod cut it out! (he's a bit like that!).

Anyway, undeterred, here it is again - If he cuts it out this time you'll never know, but more importantly, will you care?

(inim) 2.'Tape.Poke
(Fras) 3.'Infinite Continues
(Ftaj) 4 .'
(SnAt) 10.DATA $\cdot 21,16, \mathrm{Ma}, 35,03,23$
(MkAt) 20.DATA $\cdot 35,0 \mathrm{e}, 23,38, \mathrm{he}, 03$
(Jqhr) $30 \cdot \mathrm{PaTA} \cdot 9 \mathrm{ar}, 9 \mathrm{~s}, 21,17, \mathrm{Be}, 22$
(EuAD) 40-DATA. 25,24, c3, 10, 24, dd
(MIAU) $50 \cdot$ Data. 21, c4, as, $11,8 f, 00$
(DhAu) $60 \cdot$ DATA $\cdot \mathrm{cd}, 1 \mathrm{f}, \mathrm{a6}, \mathrm{at}, 2 \mathrm{at}$, be
(Watat) $70 \cdot$ Data $22,51, \mathrm{as}, \mathrm{c3}, \mathrm{ef}, 28$ (Pofu) 80.DATA. 21,50,00, 22,05,01 (XqAu) se-DATA-21,3e,be, $11,50,00$ (WNAS) $100 \cdot$ DATA.01,07,00, ed, D0, 03 (DiAu) $110 \cdot \mathrm{DATA} \cdot 00,01, \mathrm{af}, 32,83,27$ (lsAp) $120 \cdot$ DATA $\cdot$ c3,00,04 (Wq\&p) $130 \cdot y=0: \mathrm{WEMORY}$ - 45080 (IIAS) $140 \cdot F 08 \cdot x=88280 \cdot 10 \cdot 43 E 44$
 (HsAt) $150 \cdot$ POKE $\cdot x, a: y=s+a: N E X T$
 (JpAD) $180 \cdot L 0 A D$ "circus* (HjAO) 180 -CALL - 48509 (EnAR) 200-PRENT'data-error!"

- Multiface poke for Tape Continental Circus


Address $=2763$ Poke $=00$


## Bloodwych

After many hours wandering around (not totally aimlessly) in Bloodwych, Greg Lee of Sharples in Bolton has produced some tips to help you on your way. Those monsters aren't all that bad, they just like a good brawl:

- Conversation: When you first meet a monster, offer him one gold piece. When he accepts, press the exchange icon, if you now want the object offered, press the yes icon.
- If you are short of money, continue and repeat as above. The monster will now offer an empty slot. Take it, and try to get another gold piece from your chappie. If you look, some money will have materialised in your transfer slot. This is now yours. Repeat until you have enough.
- For more keys or arrows, try exchanging an arrow or a key with the monster, and accept what he gives, empty slot or not. Continue until you have enough. Note: keys are more common.
- If you are short of food, exchange 1 gold piece with the monster, then another gold piece. The second time, the monster exchanges your money for 1 gold piece. Then do as though you had just met the monster, ie. offer 1 gold piece, exchange, and the monster offers food.
- When selecting characters at the beginning of the game, make sure you have a fighter, a Mage and an Assassin (an Adventurer does not seem much use). Thai Chang is probably the best Assassin, Murbock the best Mage and Urich the best Fighter.
- Fighting: Give your Assassin a bow and arrows and put him on the back row with the Mage. On the front row, put your fighters with the best weapons and armour. If possible, give them armour spells.
- Only fight monsters in rooms $2 \times 2$ or bigger, and on twisting corridors leading to a room. Take groups of monsters on only one at a time, and never stand and face them whilst fighting to the death, always attack
from the side. This is more important later when they start chucking spells at you.
- In big rooms, where there are 2 or more monsters, make sure that you don't get cornered, and fight while retreating. If things get too hot then get out, the way you came in preferably, and lock the door behind you, then go to sleep. Try to save the game before entering these areas as they tend to be a bit dodgy.
- Before going to sleep, make sure it is not in a cul-de-sac (a corridor with no room at the end) as it may turn out to be a DEAD end when you are discovered by a monster and are trapped!
- Potions found have the following effect:

Moonelix - Spell points.
Dragon Broth - Vitality
Snake Slime - Hit points
Brimstone ale - The lot

- Make sure you don't leave a section until you have done everything there is to do.


## MULTIFACE POKES

Cloistered again. Carl (Ebenezer) Sury of Barnet thumbed through his hoard of Multiface pokes, "Six billion and seven, and eight.. ", the midnight clock disturbed his count. "Bahl, Humbugi" he muttered, "Christmas!". No sooner had the word fallen from his lips, than a mysterious chinking and clanking of chains echoed along the hallway and stopped dead outside his door. Carl watched in horror, as a ghostly arm reached through and grabbed a handful of the precious pokes..

## NAME

| Bubble Chost | (t) | 8294 | 08 | Inf. bubbles |
| :---: | :---: | :---: | :---: | :---: |
| Hydrofool | (t) | 7575 | C3 | Stops rust |
| Uridium + | (t) | 1 FCR | 日0 | Inf. lives |
|  |  | 0962 | 903 | no homing |
|  |  | 0963 | 803 | missiles.. |
|  |  | 0984 | 日8) | all 3 pokes |
| Tiger road | (d) | 56F1 | 08 | Inf. lives |
| Molecule man | (t) | 9EBD | 08 | Inf. time |
| Gryzor | (d) | 1526 | A7 | Inf. lives |
| Antiriad | (t) | 5748 | 90 | Gives boots |
|  |  | 6474 | 00 | Gives guns |
| Prohibition | (t) | 9FB1 | B7 | Inf. hide time |
|  |  | 0869 | B7 | Inf. lives |
|  |  | 198E | 00 | No shooting back |
| Operation Hanoi | (t) | $8 \mathrm{AB3}$ | A7 | Inf. anno |
|  |  | 8ACF | A7 | Inf. grenades |
|  |  | 870 E | ค7 | Inf. lives |
| TLL | (t) | 917 A | 88 | Inf. lives |
|  |  | A6A2 | A 7 | Inf. fuel |
|  |  | 9098 | 803 | Inf. tine. |
|  |  | 909C | 183 | do both |
|  |  | A8C8 | 883 | Inf. bombs... |
|  |  | A9sB | 80) | do both |
| Renegade | (t) | 9FBB | FF | Stay on platform |
| Renegade | (d) | 9FE1 | PF | Stay on platforn |
| Flying Shark | (t) | 4FA6 | 08 | Inf. Smart bombs |
| Dan Dare 2 | (t) | 7831 | A7 | Inf. lives |
| Renegade 3 | (t) | 4DDF | C3 | Inf. lives |
| Highway Encounter | (t) | 9877 | 03 | Freeze aliens |
| Ramarama | (t) | 798C | 80 | Slows energy |
| Ramparts | (t) | 6883 | A? | Inf. energy (p1) |
|  | (t) | 6821 | 97 | Inf. energy (p2) |
| Sabre Hulf | (t) | A578 | ค7 | Inf. lives |
| Black Tiger | (d) | 5612 | ค7 | Inf. lives |
| T Bird | (t) | 1433 | A? | Inf. snart bombs |
|  |  | 15AB | A? | Inf. lives |
| Fairlight | (t) | 7DaF | 88 | Inf. life |
| Butcher Hill | (t) | 115D) | A7 | Inf. lives |
|  |  | 11FD) | A7 |  |
| Spikey Harold | (t) | $9 \mathrm{C33}$ | A7 | Inf. lives |
| Laser Squad | (d) | 4652 | 08 | Inf. money |

## THE MULTIFACE WAY

The ( t$) \mathrm{s}$ and (d)s before the address indicate whether the poke was written for a tape or disk game (Chey might work on both, it's worth a try). Just in case you don't already how to put in these BLACK BOX POKES, here are the steps to success.
a) Load the game as normal.
b) Press the RED button on the Multiface. c) Press "T" for tool.
d) Press "Y" to make sure you select the code.
e) Press "H" for HidXADECIMAL input.
f) Press "SPACE" for input.
g) Type in the ADDRRSS ( 4 characters ie. 3A7C)
h) Type in the POKE (2 characters ie. A7) i) Press "RETURN"
i) If there is more than one poke goto (i) k) Press "ESC" back to the menu.

Snoopy
Way down in Gibraltar (The gateway to Atlantis), Xavier Cerisola has been working on the solution to
Snoopy. I may come and visit you for as month or two, Xavier, I've been on the look-

out for a friend with a deckchair in the sun..
First eat the FOOD then get the TYPEWRITE from the doghouse (kennel), and write a LET TER, give it to Charlie Brown. Get the COOKIF JAR and eat the cookies. Catch the FROG is the COOKIE JAR. Go to Lucy and scare her b letting the FROG loose. Pick up the RUBBEI RING, which she drops, and put it beside th tree with a KITE in. Get the BALL and kick into the water. Go and get the CATAPULT an then return to the water. Jump onto the BAR REL then quickly onto the BUCKET (nex screen). Jump on to the BALL and keep jum pressed until you reach land. Burst the BAL LOON with the CATAPULT. Get the PUMP an go to the tree with the KITE in. Pump up the RUBBER RING and bounce on it. Get the KITI and give it to Charlie Brown, who drops a KEY Pick up the KEY and open the SCHOOL LOCK ERS. Pick up the BLANKET and give it t Linus. The game is complete.

## Ikari Warriors

David Hayes Of Neilston has been goo enough to tell us that if you redefine the key: on Ikari Warriors so that both men are con trolled by the same joystick, then choose two-player game, move one man to the edge o the screen and then move the other until the are joined together, you can now play th game with double the firepower and double the ammo. That's what I call a really cleve cheat, Dave.

## Eliminator

James Durrant from Gloucester has supplied the level codes for Eliminator:

Level 2: BLOSP Level 3: ASDEL Level 4: XPLRT level 5: GLPWM Level 6: EOCKO Level 7: LFPRT Level 8: WMCPR Level 9: - Level 10: ZPEML Level 11: ELVPQ

Level 12 CPEMF Level 13: APXYO Level 14 PWVAR


Every poke, map, hint and solution from the last twelve issues of Amstrad Action...

| Ninja mass (quattro) | Password | AA64 |
| :---: | :---: | :---: |
| Nuclear heist | Keypress | AA59 |
| Olli and lissa 3 | Tape Poke | AA57 |
| One man \& his droid | Password | AA53 |
| Operation gunship | Tape Poke | AA52 |
| Op wolf (lightgun) | Keypress | AA56 |
| Op thunderboit | Playing Tip | AA64 |
| P47 thunderbolt | Keypress | AA56 |
| Periscope up | Tape Poke | AA63 |
| Pipe mania | Password | AA59 |
| Plpe mania | Disk Poke | AA61 |
| Pirates | Playing Tip | AA59 |
| Pirates | Playing Tip | AA63 |
| Powerdrift | Tape Poke | AA61 |
| Pro boxing sim | Tape Poke | AA61 |
| Pro power boat sim | Tape Poke | AA62 |
| Pro power boat sim | Keypress | AA63 |
| Psycho hopper | Tape Poke | AA59 |
| Quattro power pack | Tape Poke | AA62 |
| Quattro combat pack | Tape Poke | AA64 |
| Rainbow islands | Playing Tip | AA61 |
| Rambo 3 | Tape Poke | AA60 |
| Rastan | Playing Tip | AA63 |
| Rastan | Tape Poke | AA64 |
| Real ghostbusters | Keypress | AA57 |
| Renegade 3 | Keypress | AA52 |
| Rex | Tape Poke | AA62 |
| Rick dangerous 2 | Map | AA62 |
| Ricochet | Keypress | AA63 |
| Rogue | Tape Poke | AA61 |
| Saigon combat unit | Password | AA55 |
| Saigon combat unit | Tape Poke | AA55 |
| Sas comb sim (Qttro) | Tape Poke | AA64 |
| Satan | Password | AA64 |
| Shinobl (AAdemo) | Tape Poke | AA52 |
| Snoopy | Solution | AA64 |
| Snowball in hell | Tape Poke | AA63 |
| Soldier of light | Tape Poke | AA59 |
| Space harrier | Tape Poke | AA56 |
| Space harrier 2 | Disk Poke | AA61 |
| Space rider jet pack | Tape Poke | AA63 |
| Spindizzy | Keypress | AA60 |
| Spooky castle | Tape Poke | AA64 |
| Starfox | Password | AA64 |
| Starion | Password | AA53 |
| Stormlord | Keypress | AA55 |
| Strider | Keypress | AA59 |
| Stunt bike simulator | Keypress | AA57 |
| Stunt car racer | Disk Poke | AA64 |
| Super stuntman | Keypress | AA55 |
| Supertank simulator | Keypress | AA56 |
| Supertank simulator | Tape Poke | AA56 |
| Tau-ceti (AAcover) | Tape Poke | AA64 |
| Tempest | Keypress | AA57 |
| Terramex | Solution | AA63 |
| Tetris | Disk Poke | AA64 |
| Three wks in paradise | Keypress | AA62 |
| Thrust | Keypress | AA59 |
| Thunderbirds | Solution | AA58 |
| Thunderbirds | Tape Poke | AA64 |
| Toobin' | Disk Poke | AA57 |
| Turbo boat sim | Keypress | AA57 |
| Turbo chopper sim | Keypress | AA58 |
| Turrican | Tape Poke | AA62 |
| Turrican | Playing Tip | AA63 |
| Twin turbo v8 | Tape Poke | AA62 |
| Twin world | Playing Tip | AA62 |
| Typhoon | Tape Poke | AA55 |
| Untouchables | Keypress | AA55 |
| Untouchables | Playing Tip | AA57 |
| Vampire | Tape Poke | AA54 |
| War machine | Tape Poke | AA52 |
| Who dares wins | Tape Poke | AA52 |
| Wizard willy | Tape Poke | AA54 |
| Wonderboy | Tape Poke | AA60 |
| Wonderboy | Playing Tip | AA60 |
| Xout | Keypress | AA59 |
| Yogis great escape | Tape Poke | AA60 |

MULTIFACE POKES

| After the war | (t) lives | AA58 |
| :--- | :--- | :--- |
| Airborne ranger | (t) f.aid | AA58 |
| Airborne ranger | (d) f.aid | AA59 |
| Apprentice | (t mult | AA59 |
| Arc light sim (Qttro) | (t) lives | AA64 |
| Army moves | (d) lives | AA59 |
| Artura | (t) energ | AA58 |
| Astro marine corps | (t) grena | AA62 |
| Atf | (sives | AA59 |
| Atv simulator | (t) time | AA62 |
| Ball crazy | (t) lives | AA61 |
| Barbarian 2 | (tlives | AA58 |
| Batman (3d version) | (d) mult | AA59 |
| Batman the movie | (-) grena | AA55 |
| Batman the movie | (- grena | AA56 |
| Batman the movie | (d) mult | AA57 |
| Battle of britain | (t) fuel | AA60 |
| Batty | (t) lives | AA55 |
| Batty | (t) lives | AA56 |
| Beyond the ice palace e | (t) mult | AA56 |
| Bigtoot | (t) lives | AA59 |
| Bigtoot | (t) lives | AA61 |
| Bionic commando | (-) lives | AA59 |
| Black tiger | (d) lives | AA64 |





Password


Feeling helpful? Just send your name, address, phone number (say if you don't want it printed) and subjects on which you're offering help to: Helpline, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2AP. Please write on a postcard or the back of a stuck down envelope and keep it short or you won't get in (or you'll get cut to 'loadsagames').

If you want help contact the appropriate Helpliner - not us. By post include a selfaddressed, stamped envelope for the reply or you won't get one. And phone only in decent hours!

Piracy is not welcome: don't try it, you'll get booted off. Keep it legal. And if you receive SAE's, for heaven's sake return them with some acknowledgement. Finally, if you want to come off Helpline just write in and say so.

I have Operation Thunderbolt and Blasteroids on disk. I want to swap for The Animator and Laser Squad Expansion Kit on disk. All mine are originals, so must yours be. Also help needed on translating code in Catch 23.
Simon Warford, 134 Draper House, Hampton St, London SE1 6SY

Selling games. Also wanted, pokes, tips and maps. Keypresses and cheats. Send SAE for list. Mark Collins, 124 Shegoneill Ave, Belfast BT15 3JR Northern Ireland

Will anyone swap Turrican for Shadow Warriors and Paper Boy? Or Batman the Movie for Operation Wolf? Only in England please.
Paul Dugdale, 80 Charter Ave, Newbury Park, Ilford, Essex IG2 7AD

I have got Italia 90 and Man Utd on tape (original). Anyone want to swap them for new games? Also I've got loads of mags to sell. AA 20-61, CWTA. ACU. Send SAE for list of cheap prices. I need to get rid of them.
Yong Pang, 12 Rheingold Way, Wallington, Surrey SM6 9NA

I own a CPC 464 computer. Help given on all games. Pen-pals wanted from anywhere aged 14-19. Male or Female. All letters answered!
Karen Orr, 128 Falside Cres, Falside, Bathgate, West Lothian, Scotland EH48 2DP

I have a CPC 464. I need help on Ninja Warriors and Pacland. Send SAE and I will give three pokes and P47 is one of them.
Peter Glikofridis, 8 Windsor Ave, Clacton on Sea, Essex, C015 2AQ

Help wanted! I can't load the poke for Cauldron I from the 8586 Book. Help also wanted on Grange Hill.
Christine McFarlane, 11 Nasmyth Rd, Barton, Eccles M30 7AP tel 0617892788

Has anyone got Psycho Pigs UXB (don't laugh) on disk to sell or to swap for Desolator, Mega Apocalypse or Bards Tale (all on disk)? Also, penpal wanted 11-14. male or female. Must have 6128 disk. Stephen Daultrey, 8 Queens Ave, Woodford Green, Essex IG8 0JE

Wanted: PD software on tape for 464, GAC + homegrown software. All letters answered! Hi Jan-Fei. Iain McKinnon, 37 Loch Laidon St, Sandyhills, Glasgow G32 9HR

Wanted: Battle Of Britain, Waterloo, Vulcan, Soccer 7, Ace Of Aces, Johnny Reb 2 (for tape). I will swap for games like Dizzy 1 and 3, RoboCop and lots more. Please send list of the above games you have to swap and SAE to:
Declan Heerey, 1 Rivet House, Coopers Rd, London SE15HT

Help offered on all aspects of BASIC and assembly language programming. Don't forget the SAE I! Sean McManus 226 Chertsey Rise, Stevenage, Herts SG2 9JQ

Help needed. We have an SSA 1 Amstrad Speech Synthesizer and Amplifier with no instructions. When the tape is loaded a face comes on the screen and says something we can't understand. Then the word ready appears. We don't know what to do! Is there any chance of anyone helping is out? Mr G K Bradbury, 40 Ashmole Place, Blackbird Leys, Oxford OX4 5TN

Has anybody got Italy 1990 (cassette only original) and AA45 for Turbo Outrun and Gazza's Super Soccer. (both these games are cassette originals) Help needed on Bloodwych, and has anybody got key-press cheat on Dizzy 1? Telephone only for help. Trevor Farnham, 92 Irwell Birch Green Skelmersdale WN8 6 JZ Telephone 0695 32291

Calling all Helpliners. Does anybody want a pen pal to a person with a 464 and disk drive, who runs a PD library (Demon PD)? If they do, or if they want some PD or they've got any PD to contribute, write to the address below... David Long, 47 Hilton Ave, Hall Green, Birmingham B28 OPE


I need some instructions for non-movement actions for Renegade, e.g. flying kicks, punches, floor punch es etc. Also wanted: maps for Short Circuit and Price of Magik, pokes for Super Robin Hood and Dizzy.
Ben Sizer, 6 Greave House Terrace, Lepton, Huddersfield, West Yorkshire HD8 0DQ

Could anyone give me a cheat (not a Multiface) for Ghostbusters 2 (level 2) and for Batman the Movie (level 1)? Also, pen pal wanted age 10 to 12. Has to have a CPC 6128 and disk drive.
David Searle, 20 Shalloch Park, Doonfoot, Ayr, Scotland KA7 4HL

Help wanted on Type-In AA28, Streamer. I keep getting Syntax Error in Line 820 . Can you help? Mr J M Pearson, 7 Muschamp Tr, Warsop, Notts NG20 ONL telephone 0623846017

Help urgently needed with AMX Stop Press. Extra fonts and clip art pages required. Will provide disks and postage.
Simon Pearce, Chapel Rise, High St, Swineshead, Boston, Lincs PE20 3LH

I can offer help with BASIC. All SAEs answered. Nick Allen, 7 Hawkswood Ave, Frimley, Camberley, Surrey GU16 5LH

Desperately Wanted; New Zealand Story on tape. Will swap for Wild Streets and Airwolf or Indiana Jones and the Last Crusade and Airwolf. All on tape. Also have a lot of cheats. If you want some please send an SAE.
Jonathan Portlock, 5 Westville, Hebden Bridge Rd, Oxenhope, Keighley, West Yorkshire BD22 9JS. Tel 053544995

Has anybody got Hacker and Hacker 2 to swap for RoboCop or Batman the Movie? Also, has anybody got a poke anywhere for Bactron or Munsters?
S Hurst, 8 Restormel Rd, Barbican, East Looe, Looe, Cornwall PL13 1EJ Telephone 050364472

Help wanted on Elite - tape POKE would be nice. I can HELP with Lords of Chaos and Bloodwych. Penpal wanted any age to SWAP GAMES and pokes tips. Chris Palmer, 257 The Hides, Harlow, Essex, CM2O 30 U .

Desparately wanted, Issues 49,50 and 51 of AA
Does anyone want to swap Batman the Movie for four of these games. Sultan's Maze, Oh Mummy, Masterchess, Grand Prix, Grand Prix Sim, Helichopper, Grand Prix Driver, Bridge It, Chiller, Batman the Caped Crusader. If interested write to:
J Rowe, 18 Lockington Crescent, Stowmarket, Suffolk, IP14 1DB

Female penpal wanted 12-14 to lend games and swap cheats, pokes. I own a CPC 464. Who'll write to a bored 13 year old? All letters get a reply! Jimmy Brax, 28 Saffron Road, Bracknell, Berkshire, RG12 4BS.

If anyone has got Stunt Car Racer or Fighter Bomber on 464 tape to sell for no more than E 5 . I would be very grateful. I am also offering to swap any one of these, for these games: Crackdown, E-Motion, Klax, Cholo, Ghostbusters II, Shinobi, Fernandez must Die, and lots more.
Khalid Murad, 26 Wardown Crescent, Luton, Beds LU2 7JS

I have got a game called Night Rider, but I am having trouble on it. At the end I can't get the Bismark I can get the U-boats, E-boats, planes and mines but I can't get the Bismark. Is there anyone who could show me how to bomb the Bismark please? Amit Ruparetia, 54 Castlcombe Drive, Wimbledon, LONDON, SW19

Help desperately needed on Rainbow Islands, Op Wolf, Forgotten Worlds, Ghosts ' $n$ ' Goblins and Black Tiger to exchange for pokes and cheats for RoboCop, Gryzor, Dizzy, Myth and Untouchables (all on tape). Also AA's needed - 46, 51, 54, 55, 56. David Woodward, 85 Drayton Rd, Sutton Courtenay, Abingdon, Oxon OX14 4HB
will swap for Thunderbirds or February to October issues of ACU. Also swap Heroes of The Lance for Bloodwych., Tolkien Trilogy or Bards Tale (on TAPE PLBASE). I've also got Adeptus Titanicus, Blood Bowl, D+D, Star Trek + more to swap for Multiface 2. (Remember to State Your Address). Contact:
J. Boniface, 119 Grinstead Lane, Lancing, Sussex, BN15 9DR

Hi there! I have Cyberball and would like to swap for Double Dragon 1 or 2.464 tape only. Are you interested?
Daniel Ware, 33 Salisbury Rd, Grays, Essex RM17 5DG

HELP! Need some kind soul to sell me Boulderdash Construction Kit on disk. Just write to me, sending details, or give me a nice happy phone call on (0302) 323266.

PS Please can I have a witty comment from Rod in brackets ? ????? (daft, ranting clot - ed) Mark Berbezier, 47 Lakeen Road, Intake, Doncaster, South Yorkshire, DNZ 5HB.

Help! Has anyone got Rick Dangerous 1 or 2 to swap for Ghostbusters 2 and Laser Squad (tape please). Also does anyone have the keypress cheat for New Zealand Story? (From AA55)
Tobi Forsdyke, 14 Dagmar Rd, Stroud Green, London N4 4PB

Penpal wanted, 16 years old, 6128 owner to exchange hints, tips, maps, pokes and Public Domain Software help on lots of games. Need help with machine code.
Brett Ironmonger, 1/32 Kenneth Hopper Place, Whangaparaoa, New Zealand.

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# AAFTERTMOUGHT <br> If this page was a horse you'd shoot it. Spectravideo waggler winners ahoy! 

We've had some wonderfully witty answers to last month's Chrimbo pressie list compo, but unfortunately we couldn't print all of them... c'mon, we did ask you to keep them clean. Here, however, are those that we could print...

Garry Smith of Carlisle wants:
A Commodore Amiga (oh, sure, very funny...)
That woman out of Baywatch complete with
double-size bed
12 condoms and a jar of.
OK, that's enough. See what we mean?
Stephen Malpas of Bristol wants:
Ultra-fabby Spectravideo joystick
Ton of lard (eh?)
BBC1's spinning globe
Framed picture of Denis Thatcher
A caterpillar's brain (got one, haven't you?)
Some custard to go with it
Teenage Mutant Ninja Parsnip
Toilet flush (on CD please)
Bob Holness

Small slide of Rod's home-made wine Well done, Stephen, but we think you forgot the straightjacket

Steve Schleising of Oxon wants: Blow-up Rubber Doll Sim (Virgin) Easter egg
TNT (Domark) (To blow up the rubber doll) 5 pairs of knee-high grey socks
"Dear Santa", says Simon Bayles of Mansfield, "You had better get me all the things I am going to ask for, or I'll come round your grotto and kick your bleedin' teeth in."
OK, you win you ghastly little oik
Dave Stokes of Roslin wants:
A real, full-size Teenage Mutant Ninja Turtle to scare the living daylights out of my son so that I will no longer have to share my home with a complete set of Turtle merchandising (oooer, a bit a politics there...)
Two silicon disks; I think I can swing this one
To the newsagent: Amstrad Action is distributed by Future Publishing
Dear newsagent,
Please reserve me a copy of the February issue of Amstrad Action, due out on the
third Thursday in January
Name:
Address:
If you're under 16, please get
your parent or guardian to sign here:
as the wife thinks she can use them to improve her figure (it's about all you will swing if she spots this, pal)
A porcupine quill, otherwise this competition will be completely pointless (er, like that joke?)
A laptop computer (organic)
Dave wanted a cowboy outfit, but we can't print which outfit because despite what he says, it is libellous. We'll leave you guessing over that one..

Congratulations, you lot! Your ultra-waggy fabbler, er, ultra-faggy wabbler... um, that is joysticks are on their way.

## CAPTION COMPO WINNER

Well, we had one or two, er, unusual entries for this one, but the winner has got to be the one we received from James Edwards of Blackburn:

- "The wife! Quick, hide in here..."


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Anco. .. 6 GMF Programmes ..... 95
Arnor 91 Gremlin ..... 15
Boxoft. 83 Home Based Business ..... 95
Bruce Everiss
Broad Systems92 Instamec83, 9591 Intrase95
Brunning Software ..... 38 ..... 79
Caspell ..... 67 ..... 67
Challenge Software
Compumart.. 60 Microstyle.64, 65
Datel Electronics ..... 34, 35 ..... 54
Dial-A-Quiz46 MJO30
Dunning ..... 78ocean
n. IFC, $3,53,98$, IBC, .92
First Choice Software
First Choice Software
First Choice Software ..... 79 ..... 79 ..... 79
Glenco Software
Glenco Software . 83 Proton Software ..... 30 ..... 61
-
Rickett ..... 9
Romantic Robot .....
Seersoft .....  3
Selec Software .....  7
Serious Games ..... $\ldots 6$
Software Superstore .....  8
Technisoft ..... 44, 4
UBI Soft ..... $\ldots$.
US Gold ..... …
Wave. .....  7
Worldwide .....  6
Wacci UK ..... $\ldots$.


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