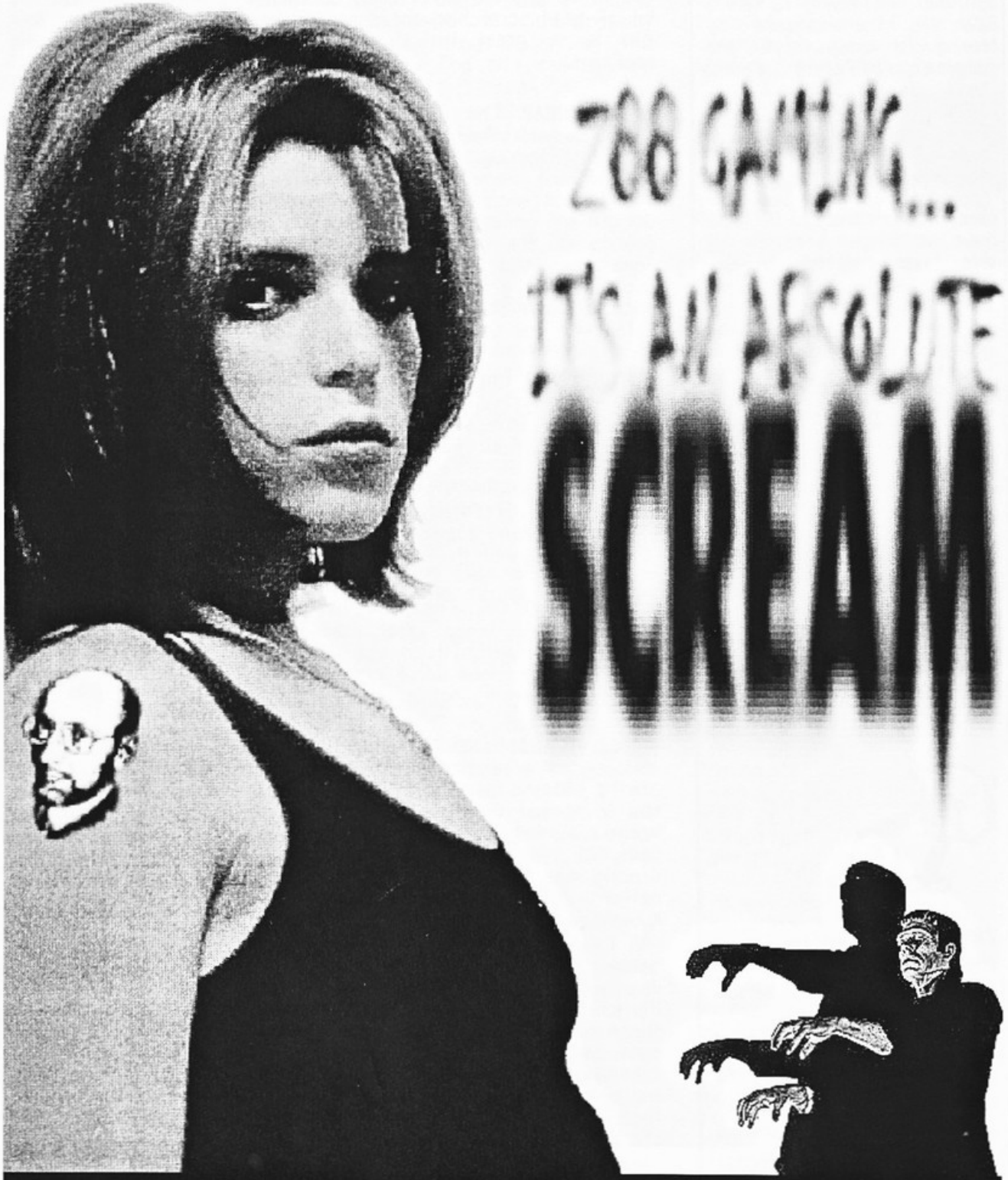
Z88 GAMER

Issue 1

taking Z88 gaming into the next millenium FOR FREE



Z88 GAMING...

IT'S AN ABSOLUTE

SCREAM

FRANKENSTEIN LURCHES ONTO THE Z88

WELCOME TO Z88 GAMER

This is the first issue and as such is probably lacking in any decent articles as I seemed to have spent most of the time trying to get a look to the magazine by trying out various styles and umpteen different fonts. Next issue should be different as I'm not starting from scratch so will hopefully be finished a lot quicker. So here goes a grovelling plea to all you Z88 users out there. If you have an article, a review or even just a letter to say how crap the mag is then don't hesitate - get it sent in. I need all the help I can get to fill this rag. And besides I'm sure you don't all want to read what I've written each issue cos it'd soon get boring.

Stuff can be sent to

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Or you can contact me by e-mail at

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It's The mutts nuts!!

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20th September 1999.

Some people may say that the Z88 is hardly deserving of a magazine at all but a magazine dedicated mostly to playing Z88 games has to be bordering on the insane. It's not as if the Z88 has a wealth of games to choose from and most of them it has to be said are utter crap, so then why bother? Well after a lot of head scratching and pondering here is my list of why the Z88 is so great that I want to shout about it from the rooftops.

1. **IT'S CHEAP.** The Z88 isn't manufactured anymore and hasn't been for some time and only a handful of loony companies still sell them all kitted up and ready to go. Worth a mention too is the second-hand market - by looking in magazine and newspaper adverts and even on the 'net you can find people selling their unloved and unwanted Z88 and accessories for just a few measly pounds. On the comp.sys.sinclair newsgroup I have even read of some jammy sod who picked up a fully working Z88 from a car boot sale for a measly four quid. So basically for less than the price of most PlayStation games you could have a fully functional laptop with the swankiest word processor in town.

2. **IT'S EVEN CHEAPER TO RUN.** Just four AA batteries last around twenty hours, putting the Z88 in the same league as the GameBoy for true portability at a price that doesn't burn a hole in your pocket. Four Panasonic AA's can be picked up for only a quid from a lot of market stalls if you shop around. There is also a mains adapter that can be used if you have access to a plug socket (preferably someone else's) and in true Sinclair fashion the mains adapter gives off enough heat to keep a small village warm in winter.

3. **SWITCHED ON.** The Z88 has one distinct advantage over Windows based laptops that makes it a much more accessible machine. You switch it on and it's ready to use, no waiting for Windoze '98 to load up. A great advantage if you need to take notes at a moments notice.

4. **ALL WARM AND FRIENDLY.** The above three reasons are obviously of great help but not the main reason why me and many others still use our Z88s. Mostly the still thriving Z88 community has to be put down to all the hard working people who put so much effort into putting the great into Z88. People like Andy Davis, Vic Gerhardi, Garry Lancaster, Dominic Morris and Denis Groning who are always willing and helpful when it comes to all matters Z88. Sort of makes you all warm in your guttywuts knowing you are part of such a friendly bunch.

So go ahead, if you see a Z88 looking all miserable and alone give it a good home. After a while you'll soon begin to appreciate all it's characteristics, its good points and its bad points. And for those of you who already own a Z88 but have left it to gather dust on top of the wardrobe, get your arse upstairs, blow the cobwebs off and try out some of the new bits and pieces that are available. And as the majority of them cost nothing except for the price of a telephone call you've nothing to loose except a bit of small change.

Enjoy the rag and I'll hopefully see you all next issue.

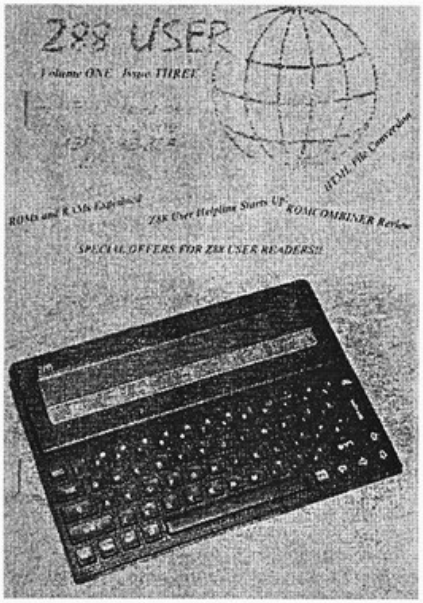
Paul

NEWS FROM Z88 LAND

it's not the nine o'clock news

Z88 User

The latest issue of Z88 User hit my doormat recently and it includes all sorts of great articles—including how to



transfer files between a Z88 and a Sinclair Spectrum of all things. Unfortunately Darren has decided to call it a day due to lack of time and a lack of material been sent to him. This is a real shame as Z88 User is very informative and has included all sorts of useful bits and pieces for the serious Z88 owner. So if you have an article you want to see printed or just want to read lots of juicy Z88 material then please do drop Darren a line at:

Z88 User, Darren Branagh, The Falconry, Glenmacnass, Glendalough, Co. Wicklow, Republic of Ireland.

Alternativeley you can e-mail him at:

darrenbranagh@hotmail.com

Alchemist Research

If you have had trouble logging on to the Alchemist web site it is probably because you are trying the old url. The site can now be found:

http://website.lineone.net/~alchemistresearch/sinclair/index.htm

Or you can e-mail Andy directly at:

alchemistresearch@lineone.net

The latest issue of AlchNews is slightly delayed due to the fact that Andy is in the middle of moving house.

PipeDream Viewer

Any Z88 users who own a PC will I'm sure at one time or another have used Denis Groning's utility for viewing PipeDream files on a PC. Now as well as saving the file as RTF the latest version gives you the option of printing the file out, saving as standard ASCII text or even as HTML. Needless to say this has become an invaluable tool for me and I'm sure many other Z88 owners will find it just as helpful. Details of Denis' web site can be found on page 19.

Z88 Forever

While on the subject of updates Garry Lancaster's site has a whole wealth of updated goodies. WhatNow?, the adventure game utility (version 1.04 is reviewed elsewhere in this issue) is now up to version 1.05. The major improvement is the added support of Amstrad CPC GAC adventure games which should swell the line up of available games—and keep this magazine in material for a few more issues at least ☺

Other updates include improved versions of the Z88 compression tools ZipUp and UnZip, the programming

```
Z88 CamelForth v1.90
  OK
: HI
    CR ." Forth is fun!!" ;  OK
HI
Forth is fun!! OK
```

language CamelForth and beta versions of Wav Player and HTML Viewer for you to try out.

www.menaxus.demon.co.uk

Z88 FAQ

I recently had a copy of an old Z88 FAQ (frequently asked questions) which was badly out of date. This gave me the idea of starting a new one, including all the available information I can find. Possible items to include that I can think of are:

History of the Z88
Versions of OZ
Connecting to other computers
Z88 suppliers
Where to get software
Troubleshooting
Printing
Using a modem
EPROM's
Flash EPROM's
Commercial software
Maintaining your Z88
Z88 applications
Z88 games
Z88 Publications

I'm sure there are many more subjects to include and if you can think of any or want to contribute to it then drop me a line. I'll post any updates on the Z88 mailing list and on my website and possibly some other sites if people are interested.

Also does anyone know if the Z88 Software Library still functions in any country?

INTRODUCING THE Z88

say hello to the old boy in town

The Z88 is a portable laptop computer, sleek in design and it has a rather sexy black look to it. Among the things it is capable of are word processing, databases, spreadsheets - and it will even run the odd game. But before you read on I must point out that this little black box of tricks is not powered by a PIII processor, will not run Microsoft Office or games like Quake 2 and is over 10 years old. If this is not what you want to hear then you are better off venturing to PC World to buy one of the many luxurious and expensive laptops available there. If however you seek something that is inexpensive and will allow you to type on the go then this could be the choice for you.

I have a Z88 and am pleased as punch with it. The reason as to why I bought it was so I could do most of my word processing without been shackled to the PC all the time. It serves that function and it serves it very well. In the 2 years that I have had my Z88 I have come to appreciate it for all its good points and begun to use it for a far wider range of functions, including playing games - something that I'm sure Sir Clive would laugh at. Don't get me wrong, the Z88 does have it's niggles, but as they say round here "nowt's perfect".

What is instantly noticeable when you first pick up a Z88 is the weight; or rather the lack of, as the machine weighs in at a respectable 900 grams, so it will slip virtually unnoticed into any briefcase or bag. Although released over 10 years ago it still looks as good as it did back then with its cool black appearance. It is also very compact in size as well; just barely managing to cover an A4 sheet of paper, and as the Z88 does not have any built in disk drives it is a slender 23mm in depth. Economy wise the Z88 cannot be faulted as four standard AA alkaline batteries will keep you keyboard bashing for around 20 hours, whilst a nearby plug socket can be utilised with a 6.5v mains adapter. The rubber keyboard it possesses may bring with it derogatory remarks but is very responsive and almost silent in use, ideal for when you need to take notes without disturbing anyone. The keyboard itself has a standard QWERTY layout, with CTRL and ALT keys been replaced by square and diamond symbols. Applications built-in includes a combined spreadsheet and word processor and a diary.

As before I mentioned that this

laptop does not use a Pentium processor but infact utilises a CMOS Z80A running at 3.2876MHz. Although significantly less powerful than todays whizzy processors the Z80A still manages to be very nippy at any task you should throw at the Z88. Underneath that black exterior of a standard Z88 comes 128K of rom and 32K of ram. The three card slots at the front of the machine each allow up to 1Mb of ROM or RAM in the form of cards (similar to a Playstation memory card) to be added, thus expanding the machine's capabilities with additional memory, software and data back-up. Internally the Z88 can be upgraded from 128K to 512K. Looking at the screen may put PC snobs into a state of shock as it is only a 640x64 pixel LCD display, a feature which helped the Z88 be made so small. After using a moniter screen for so long this new screen seemed at first very restrictive to me but after a short while it was hardly noticeable as moving through documents is a breeze. The screen does have adjustable contrast but alas no back light. This has not been a problem for me but there are clip-on laptop lights available that will do the trick should you need one. Sound comes from a miniature loudspeaker, used mainly for alarms or warnings and although quite basic it has been put to good use in a few games.

OZ, the name given to the Z88 operating system, helps provide task-switching between applications so an application can be suspended at any time and re-entered again when required. The machine may also be switched off at any time without loss of data.

The applications available to the Z88 from it's 128K Rom are Diary, Pipedream, Basic, Calculator, Calender, Clock, Alarm, Filer, Printered, Panel, Terminal and Imp-Export. You can, memory permitting, have many applications running at once and switch between them using the □ key. So for example to switch to the Diary you would press □D, or you can press the INDEX key and select the chosen program from the applications menu. PipeDream is for me the main application on the Z88 and the reasoning for my purchasing it. It is a combined word processor and spread sheet and is also capable of creating simple list databases. The functions given to Pipedream are quite comprehensive, even for an application that is over a decade old, and a vast array of formatting and editing functions are included. One area that Pipedream is lacking is that it doesn't have a built in spellchecker. This though is not a problem for me as any text I write is transferred over to Microsoft Word and checked there. There is however another word processor available for the Z88 which does include a spellchecker called SpellMaster that is available as a separate Rom card.

You may be wondering how to get that large essay you have just sweated over on to your PC so you can print it out - especially as the Z88 doesn't possess a disk drive. Well help is at hand with it's built in 9-pin RS232 port. By connecting to your PC (or Mac, Amiga, ST, BBC, Spectrum) with a suitable cable and with the correct software on your computer you can transfer data with the press of a key. Believe me it is dead simple to use, even for me - and before long you will transferring all manner of data to and from your Z88.

So there you have it, a small and brief description of the Z88, and why for me it is the ideal companion for typing when away from your PC. I just don't have the time or the space to really go into great detail about each application, the technical specifications of the machine or how to best get the most from your Z88. But what it basically boils down to is that the Z88 is capable of many tasks at the fraction of the price of a machine much more expensive. My Z88 can write documents just as well as any laptop - just don't expect it to be as good as that £1000+ laptop running hundreds of pounds worth of the latest software. I doubt any Z88 owner will try to convince you that they own some all singing and all dancing wonder machine. They will however tell you that it remains simple to use, uncluttered by expensive features they don't need and it does what it does very well.

If you want more information then I would heartily recommend you speaking to any of the Z88 suppliers listed in the back who I'm sure will be more than happy to assist you in any queries you have. Don't worry - they're a friendly bunch.

THE USUAL SUSPECTS

getting friendly with the Z88 boyz

The following questionnaire was originally published in issue 7 of my Spectrum fanzine The ZX Files as part of a free Z88 supplement. It is reprinted here as most of you, especially our American friends, will not have read it and it provides a good insight into the people who put so much time and effort nto the Z88 scene.

There now follows a party political broadcast on behalf of the Z88 party. Actually it is more of a feeble question and answer session that I conducted via e-mail with some people involved with the Z88 scene. Hopefully the questions I have asked will help shed some light on the Z88 and the people involved – if not at least I get to fill a few pages quite easily. ☺

Now here are the Usual Suspects rounded up from the world of the Z88.

Garry Lancaster (GL)
Andy Davis (AD)
John Allen (JA)
Dennis Groning (DG)
Vic Gerhardi (VG)
Dominic Morris (DM)

1. Can you tell us what you have provided for the Z88 community and perhaps what you have planned for the future?

GL: Well, probably the main thing has been the "Z88 Forever!" website, which has been up now for just over 3 years, and I know has helped encourage many owners to dust off their Z88s and start using them again, as well as getting new users interested in the beast.

On the software side, I've written several applications and popdowns (all free), the most useful being the Unzip and ZipUp utilities. Others include AlarmSafe, Bootstrap and Lockup, as well as a conversion of Matthew Smith's classic Speccy game "Manic Miner" (thanks must go to Dominic Morris here for some much-needed motivation!)

Bearing in mind most people's limited EPROM space, I've also squeezed 13 of the best free applications into a single 32k EPROM compilation, and have produced "RomCombiner", which allows you to combine several ROMs into a single card. More recently, I've written "Installer" which lets you run applications in RAM, and is especially useful for software developers.

For the future, I'll be producing a system to allow GACed adventures to be played on the Z88 (eventually expanding this to include Quilled and PAWed ones as well). Mind you, I have been saying this for a couple of years now!

AD: Erm. I suppose my role is to keep Spectrum users of the Z88 connected with what's happening. I try to get as much material from the internet, where most of the Z88 scene is, to non-net connected users and relay the information via AlchNews and on paper newsletters. We were considering a paper Z88 magazine because we felt that the latest paper Z88 magazine to be launched is run by someone who knows very little of the scene and is not as well connected as us.

JA: I wrote the book "Z88 PipeDream: A Dabhand Guide" (Dabs Press £14.95 - I think it may be out of print now), a lot of free software to link the Z88 to the BBC micro and, more recently, to Acorn RiscOS based

computers. I have also written about the Z88 in a number of computer magazines, principally Acorn User and The Micro User. My articles and software from Micro User days are now available on the Internet at: http://www.bramber.demon.co.uk/john/z88/

DG: Contributions to the Z88 Users' Club and Software Library: Jul-89 Announcement of ZX Spectrum-Z88 IMP/EXP file transfer program. Nov-89 Discovery of a Printered Bug and Fix. Dec-89 ZX Spectrum-Z88 ImpExp listing of updated version. Feb-90 X010 BOOT.CLI, X011 Delete :RAM.- cli. May-90 Z110 Z88/Spectrum ImpExp, Z111 Copyfile, Z112 Label Printer, Z113 Xerox 4045 Print Driver. Apr-91 Z133 Spectrum-Link v2.00, Z001 Manual.Z88, Corrections/additions to Z88 User Manual. Sep-91 Serial Communication With The Z88,: RAM.-problems, Non Uk cli esc symbols, Nicad use, Z88 A Dabhand Guide errata, Printered tips for Canon BJ10e, Printer Editer bug fix clarification. Oct 91 Z157 FileCompare.Bas, Z158 EpromCat.Bas, Z159 ROMDMP6.BAS, Z160 Print.Bat to use a PC as a parallel printer interface. My Z88 web site http://www.algonet.se/~dennisgr/z88.htm: Sep-96 PipeView, a Windows PipeDream file viewer. Jan-97 Z88-Xport, a Windows Import-Export file transfer program. Aug-97 Z88 BBC BASIC (Z80) Viewer for Windows Sep-97 Eprom-Xport, Z88 BASIC program sending files from EPROMs using the Imp-Export protocol. Jan-98 Converting Z88 files to HTML format using a printer driver. Feb-98 Connecting a Z88 to a Modem. Feb-98 More Z88 Links. May-98 Z88 Now and Then, Z88 information sources in the past and now. Aug-98 XY-Modem, a Z88 popdown application providing Xmodem file transfers. Ymodem coming.

There is much to improve on PipeView. When XY-Modem supports Ymodem fully, Z88-Xport should have Ymodem support added. File transfers to and from EPROM could be useful.

VG: Z88 Magic, SqueeZ~88, Training Days, Over 10 years of supporting the beast.

DM: My output for the Z88 has actually been quite small, I think I might be up to the seventh program now, I'll list them for you:

enigma.bas - BBC Basic Enigma Machine Simulator.
sound.bas - The first Z88 sound demonstration!
screen.bas - A little shorty to display Spectrum screen¶
SoKoban - Conversion of my Speccy game with all the bugs fixed.
JSW - Well, I didn't write it but...
Sir Lancelot - Same again really

The last three were quite good fun to convert, well, at least at the start! I got seriously sick of JSW towards the end - so much so I went on holiday half way through it! (Actually this was pre-planned, but rather fortuitously timed!) - If I ever have to see another byte of Matt Smiths code again I'm sure I'll scream, the only word to describe it is horrendous.

I've got a couple of very exciting projects on the boil at the moment, which I can't really say too much about but I'll be woofly instead: The first one I'm working on with Garry Lancaster, and though it is working it needs a thorough re-write before we can release it, hopefully at the NSSS in November, but I think we'll have to pull our thumbs out to do it by then! The second one is now entering beta test phase and has been sent out to a bunch of testers who are trying their hardest to break my code, it's already in a good enough state for general release but I'd like to add a few more features before I do.

One project I can tell you something about is something that I've been playing around with for a couple of weeks, and it's a Chip 8 emulator for the Z88 and for the Spectrum as well (if I can be bothered to release it) - it's in quite a good state at the moment, and you can play most of the Chip but not SChip games, I'm fitting work for that in around everything else I've got to do as well, which means that I may only touch it once a week or so.

2. Can you remember how and why you came to own your first Z88?

GL: Early in 1995, I was flicking idly through a PC magazine and came across an advert from a firm who'd bought up the remaining stocks and were selling them off cheap. I knew how good they were from someone I knew at university, so I sent off for one there and then! I still regret not buying a 1Mb RAM card when I had the chance, though...

AD: I came across it at the second NSS show. I wasn't really looking for a machine at the time but there were loads of people prodding and pressing it and giving it some real abuse and felt that it needed to be rescued. It was actually owned by Colin MacDonald. (Hi Colin if you're reading - thanks for the sale, it really changed my life).

JA: I was lent an early machine to review for BBC Radio London (where I did a regular computer feature) and immediately recognised its potential as the mid ground between my office PC and home BBC micro - they all had the same software - PipeDream on the PC and Z88 and View Professional on the BBC. So I bought one.

DG: I had used a Sinclair Spectrum 48 with two microdrives, Omnicalc2, Masterfile and Tasword a year or two for members lists, book keeping, letter writing and technical calculations and I wanted something better. A PC AT compatible was still too expensive (4 times the Z88 price I think) and the portability of the Z88 was appealing. After I bought my Z88 in the June 1988 I was very satisfied. It was truly portable and useful. Soon I carried it in a small backsack to work every day for technical calculations in my

work as a technical engineer and on weekend evenings to the motorcycle club for administration.

VG: Always wanted a portable computer. Saw it at Birmingham NEC and got one soon after that.

DM: I'm actually a very latecomer to the Z88, I got hold of one back in April 1998 when Andy Davis asked me to write an AlchNews shell for the Z88, which sadly hasn't seen the light of day yet (now released -ED), so a long convoluted history you shall not have! Actually I remember seeing a Z88 at school when they first came out, I think my computer science teacher had one and it looked so nice though I only got as far as turning it on and then back off again before it was whisked away from me, and I was told to get back to work moving a couple of objects round the screen from BASIC (dog and man. Those were the days when Beebs were high-tech networking, hacking consisted of 'remote-ing, and you could take a computer apart and know what all the chips were for). When I first started to write programs for the Z88 what struck me most of all was the way my programming style would have to change, OZ is undoubtedly one of the most beautiful operating systems ever written, though it does occasionally verge on the over-protective at times, and I had to use it to get things done, I can tell you that it did take me quite a while to get my head around it!

3. What is it about the Z88 that keeps you using it when there are far more powerful laptop computers available?

GL: I think today's laptops are a bit of a joke, to be honest. They may be powerful in theory, but as it takes you over a minute to boot up the thing, load your word-processor and re-open your last document, they're actually much less productive than the Z88, which can be switched on instantly. They last a pathetically short time on batteries (2-3 hours, typically) whereas I get around 20-30 hours from a fresh set of AA batteries. I also prefer the keyboard, which is much easier on the fingers over a long period of time. I could go on, but you get the picture!

AD: The main reasons are that it's small, light and runs from standard AA batteries. It's got loads of built in functions and, thanks to the work of Dominic Morris and Garry Lancaster, now has some Spectrum games! I also like the fact it has an on board EPROM programmer. It's truly a portable Spectrum and ever 'meddlers' dream!

JA: I used it for some time, mostly because PipeDream is really well suited for scripting with its column structure (I was then a BBC radio education producer) and that it easily popped in the briefcase. In more recent years my job has changed and the Z88 makes few appearances these days.

DG: The portability is number one. I can sit anywhere or even lie in bed using it. Naturally then I hate using it on the mains power adapter. Instead I like having two or three sets of ordinary nicad rechargeables to change with. A set lasts two to three hours of effective work before recharging. I have never considered using an external five cell rechargeable battery pack to regain the 20 hour run time of alkalines. It would be too awkward. If however more then a week passes without use, the risk is very high that nicads lose their charge and all RAM files are lost. The power of PipeDream is number two. If only I could touch type it would be perfect for note taking at meetings.

VG: It is simple to use, fast and you don't have to wait for the operating system to come on-line.

DM: I have to admit I don't use the Z88 that much at the moment, it just sits on my desk and gets in the way of my Amiga's keyboard! - I've used it in the past to write up reports whilst sitting on trains/outside in the sun and do hope to write my thesis up on it (again whilst sitting on trains/out in the sun!) - the Z88 is great for this, it's small, light, easy on batteries. My girlfriend has a P133 laptop that weighs several pounds, is very prominent and eats batteries like they're chocolate, it's a nice machine (though I wouldn't touch PCs with a bargepole), but give me the Z88 any day!

4. What are your favourite applications you use for the Z88 and why?

GL: PipeDream is the one I use all the time; it's just very well designed, like the Z88 operating system itself. Of the commercial offerings, I find the Assembler Workbench incredibly useful.

AD: Mostly the new applications on Garry Lancaster's Z88 FOREVER ROM. Plus PipeDream, of course.

JA: PipeDream. It was ground breaking, even if eccentric. The late Mark Colton (its author) realised that all these productivity tools could be put together. It is a shame that Mark's death has stopped development on PipeDream and its PC and RiscOS successor, Fireworkz, which I still use on a daily basis.

DG: PipeDream unchallenged, for calculations, word-processing and simple database use. It's so useful to have all those functions in one program.

VG: PipeDream - because you do not have to 'plan' the layout of the spreadsheet.

5. Have you taken time out to play any of the games that are available and if so which one's?

GL: Yes, I've played all the recent crop of games (Zetriz, Sokoban, Jet Set Willy, Sir Lancelot, and of course Manic Miner!) They're great if you're stuck at a desk over lunch with nothing to do. I do tend to spend more time writing

software than actually using it, though!

AD: I've played Jet Set Willy a great deal, and Sokoban.

JA: I never really saw the Z88 as a games machine, so have never really explored its games.

DG: Yes, Zetris and Sokoban. I started using computers when I was over thirty. Perhaps because of this, game playing doesn't come so high in my priorities.

VG: Not yet, but I like the sounds that come out of the latest ones!

6. What would you like to see been developed for the Z88, be it an application, game or hardware?

GL: I'd love to see more Speccy games converted across, although the choice is quite limited by what could reasonably fit into the Z88's screen. On the hardware side, it would be nice if somebody could produce a reasonably-priced 1Mb RAM pack, as these are impossible to get hold of now...

AD: A compiler of some sort, be it BASIC or PASCAL. We've got FORTH, which is really good.

DG: Bug free operating system OZ. Infrared serial communication. TCP/IP and SLIP for simple Internet use as email, telnet and ftp.

VG: An Internet browser and mail server - but there's dreaming for you.

DM: The one thing that would make the Z88 nicer would have to be a larger screen, if it was three times the vertical size it is it would be absolutely brilliant - and you'd be able to have games that don't have to scroll! All points addressable graphics would be nice as well - so basically I'd like a resolution of 640x192 hardware driven playing area - would make for some really nice looking applications - have a look at the Psions to see what I mean. Of course, that's all a bit of dream, it will never happen, but being realistic, what would be nice would be, actually I don't know, the Z88 has all the basic applications built in that you could ever realistically need, a built in address book would be handy though.

7. Finally, have you anything else you would like to talk about relating to the Z88?

GL: The Z88 is a great computer, but really it would be nice to see a new portable along similar lines using some of the technology available now, ten years on. Unfortunately the major manufacturers today seem intent on providing "cut-down" PC's which aren't at all satisfactory. I think it would take someone like Clive Sinclair to produce a worthy successor...

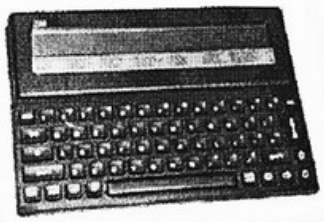
AD: I think it's an ideal progression or companion to the Spectrum. Every person I know who has been vaguely interested in one has instantly purchased one. I just wish that the prices would drop a little to allow more people to enter the scene. I also hope that more people than just myself would get involved in transferring 'net stuff to paper, I'm still very busy with AlchNews.

JA: In its day it was a revolutionary machine for the price, I think it must have suffered from the public perception of Sir Clive Sinclair after the launch of the C5 which was a great pity.

DG: *When is an EPROM fully erased?* An EPROM stores bits of data in very small capacitors a little like small batteries. A 32k having 262144 of them. A cell is programmed by loading it with an electrical charge and erased by ultraviolet light releasing the charge. The charge (or voltage) is interpreted as a logical 0 when above a certain threshold level or a logical 1 if below the threshold level. Now the problem is that if the charge is very close to the threshold value, a change in temperature could cause the cell to change value. The moral of the story is that an EPROM should be erased two or three times longer than it took to read empty, to be reliably erased. Actually the same goes for programming. A byte is over-programmed twice as many times it took to read the correct value the first time. Credits for this information goes to Richard Russel, who implemented the Z88 BBC BASIC.

Accidental corruption of EPROMs. EPROMs, regardless of if they are used for storing files (EPROM) or have applications programmed on them (ROM), can be damaged if they are located in slot 3 when the Z88 is first powered up after the Z88 has been unpowered by batteries going low or batteries removed for too long. They can of course be erased and reprogrammed but the files or applications are lost. I.e. never put application ROMs in slot 3 and be careful with EPROMS.

DM: Finally, I have to say a big thank you to everyone who helped me when I first started writing programs for the Z88 - it's truly amazing how friendly everyone is - it's such a complete contrast to the Spectrum arena where everyone is too busy stabbing each other in the back to get anything done. It's a long time since I wrote something for the Spectrum, and these days there's very little incentive to do it, the Z88 scene is far friendlier, vibrant, enthusiastic, ego-free and to be completely blunt an awful lot more interesting.



Thanks to everyone who participated in the interview. Look out for more in forthcoming issues.

WHATNOW?

take your imagination for a ride

A review by Paul White

The Z88 was not designed for playing games. My Z88 was not bought for playing games. Yet like the teenager who convinced his parents that getting a Pentium III would help him do his homework deep down we both know playing games is much more fun. WhatNow? is a remarkable utility created by the Garry Lancaster which I'm sure will revolutionise the Z88 gaming scene and make the Z88 a tempting buy for any seasoned text adventurer. It's purpose is to convert text adventure games created with the Spectrum utility GAC (Graphic Adventure Creator) so they can be run on your Z88 and played anywhere you desire. WhatNow? comes in three flavours, ROM images to be blown to a suitable ROM card, the ram installable version or the emulator version to be run on your PC. Why anyone would want to play adventure games on a Z88 emulator is beyond me as there are numerous Spectrum emulators that will play all Speccy games much quicker and easier. Having myself decided to install the ram version I quickly proceeded to try out one of the three adventures that Garry has converted over to the Z88. Loading is simple and painless, type the name of the game and enter. What immediately brought a smile to my face was the sight of seeing adventure game graphics been drawn on the Z88 screen just as they are done on a real Spectrum with the outlines of the pictures been filled in with colour as if it were been poured in by some invisible hand and jug. It made me feel all glowy inside with retro warmth. Sad aren't I. Whereas an adventure game on a Speccy will have the picture at the top of the screen Garry has cleverly utilised the width of the Z88 screen to display any pictures at the right-hand side in their full monochromatic glory. Another nifty bit of coding by Garry is how he has managed to get WhatNow? to convert Spectrum coloured graphics into monochrome ones by clever use of dithering - nothing is lost except for the colour clash. Other options included in WhatNow? include the ability to turn graphics on or off, to have the text scroll or pause when the screen is full, load, save, restart, quit and close - all pretty much self explanatory. There is however one other option that has got this reviewer dribbling at the mouth with excitement, the ability to extract GAC files to use with WhatNow? from SNA, TAP and TZX files that are found scattered over the Internet or on emulator CD ROMS. There isn't the option to extract from Z80 files but anyone who has a Spectrum emulator or one of the myriad of utilities like the wonderful Taper can easily change this to a WhatNow? friendly file. With lots of GAC adventure games available on the Internet there are a wealth of games to be plundered for your Z88, including Matt Lucas, a game I never quite got around to completing on the Spectrum. Loading the game back up after all these years had the memories flooding back, including remembering to "tip vase", a problem that had me stumped a decade ago. The icing on the cake is that the latest version of WhatNow? now supports UDGs (user defined graphics). By copying a file created by Garry into the same ram device as the game itself any UDGs are now properly displayed. So now when playing

Matt Lucas the gun appears as a gun and not as some strange text character. At the time of writing this review there are now UDGs for Matt Lucas, Book of the Dead, and Runestone of Zaobab.

Overall this is a simply stunning utility that I'm sure a lot of people will find invaluable. Garry deserves all the praise and thanks I'm sure he'll get from the release of this utility. WhatNow?, along with his other utilities like the essential RomCombiner have helped breathe new life into many Z88s around the world and the Z88 scene would be a poorer place without him. It's hard to put into words what a wonderful utility WhatNow? is - Jimmy Krankie summed it up best when he said "it's fandabbydozy!"

Rating

A first class utility that will add hours of adventuring fun to your Z88. A big thumbs up from Z88 Gamer.

DESERT ISLAND EPROMS

Assuming there is a plug socket in the nearest palm tree and you have a mains adapter for your Z88 what would be the five must have items for your Z88's EPROM card? It doesn't matter what they are, whether they are games, utilities or both. Send your selection by e-mail, post or by a message in a bottle to the usual address.

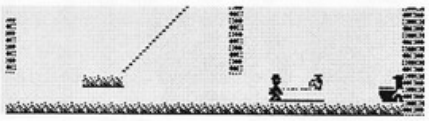
To kick off the proceedings I've chosen my favourite bits and pieces for the Z88.

PipeDream
I know it comes as standard on any Z88 but that doesn't stop it from been my favourite and most used utility on my Z88. After using Microsoft Word I initially found it quite frustrating to use but after a while I have really warmed to it. From writing documents to long database listings nothing does it better.

WhatNow?
A new kid on the block maybe but one that has given a new lease of life to my Z88's gaming needs. What it does is convert text adventure games (currently only Spectrum ones that were created with the Graphic Adventure Creator) so they can be played on the Z88. It is I'm sure a complex beast within but on the outside it is a joy to use and with the promise of more supported adventure formats to come this little beauty is sure to be used many more times to come.

City Bomber.
Number Z017 in the Z88 Library, City Bomber has to be one of the most addictive yet simplest games ever devised. You control the bomb release button of a bomber plane that flies left to right across a cityscape. Dropping the bombs allows you to demolish a few floors of a building should you hit one and with this in mind you need to try and hit as many buildings as possible. Each time the plane makes a sweep of the buildings it drops down lower and lower each until you either complete the game and land safely or fun into the side a building. If you do so then it is game over. Just to make things more interesting you can only drop one bomb at a time, so should you miss a building you need to wait until the bomb slowly and painfully hits the ground. Many people may think this is the crappest game ever devised and by today's standards it probably is. But this was the first computer game I ever played in my distant youth and so it will always have a place in my heart.

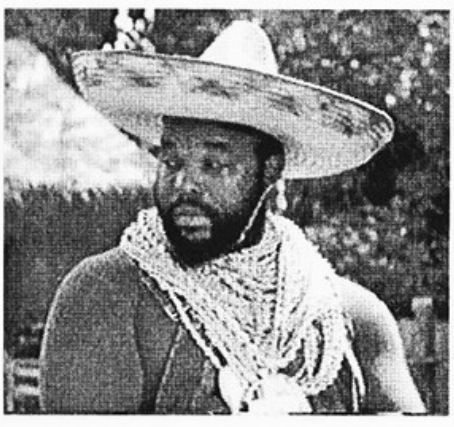
Jet Set Willy
Infuriating platform game that has become legendary among Speccy users the world over. I don't think I could add anything to what has already been said before other than the Z88 version is exactly the



same except for an added feature that squashes the screen so you can see everything at once.

SoKoban
A game that wouldn't look out of place on a £20 GameBoy cartridge. Screen after screen of mind boggling block pushing head scratching nail biting shenanigans that really does push the Z88 in the graphics department.

Mr T's handy Z88 hints #1



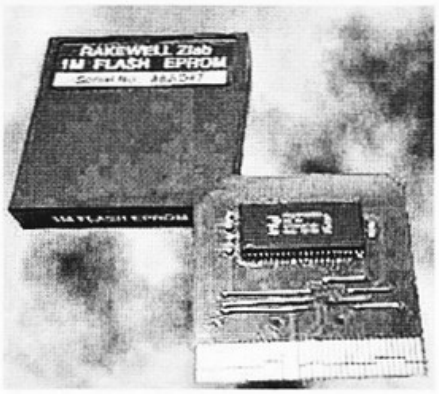
Does your Z88 keyboard look like a complete dirt magnet with all sorts of icky bits of fluff attached to it? Well then fool you better buy some keyboard wipes from one of dem PC shops. With a quick wipe from one of these beauties your Z88 will be looking real clean again. Keep a couple at hand and pop a few in your Z88 carry case if you have one. Chicks don't like grubby looking keyboards so always keep some in case of emergencies, there's nowt more embarrassing than letting a lady seeing your dirty keys. And if I hear of any you suckers exposing your grubby rubber I'll come round and kick yer ass from here to Buttsville.

See you next issue suckers.

1MB FLASH EPROM

size really does matter

Review by Paul White.



It doesn't matter if it's your mighty PC or your humble Z88 one thing that you will eventually want more of is storage space for your files. For the Z88 there are a few options. You can buy yourself more ram in either the form of an internal upgrade or as a separate ram card. While extra ram is always welcome this is not the place to store the only copy of a valuable file you've been working on for the last week (so says the voice of experience). While the Z88 OS is definitely the most stable and reliable I've had the pleasure of using there is always room for error - even if it is a simple case of forgetting to replace your Z88's batteries. If you do this then kiss the contents of your ram goodbye. Option two is to buy a floppy drive for your Z88. If anyone knows where to buy these in the Uk then please let me know. The last option is to buy an EPROM card. Available in several sizes ranging from 32k upwards these little beauties will allow you to save any files safe in the knowledge that no matter what happens to your Z88 that BAFTA award winning play you have just written will be completely safe. That's fine up to a point but once the EPROM card is full and all the files have been copied to your PC, printed out or finished with then you are left with the task of formatting the card. This as most Z88 users will know involves inserting the EPROM card into an eraser, a device that needs to be plugged into the mains and left to format your card - leaving you with the ideal opportunity to make yourself a cup of tea. While not the end of the world it can at times be frustrating as you impatiently wait for the EPROM to be erased, temporarily shackling what should be a completely independent and portable machine. This is where the Flash EPROM boldly steps in, a whole 1MB of storage space that can be formatted whilst still inside your Z88, negating the need for that EPROM eraser. At £59 it is not the cheapest EPROM in town but when compared to other EPROM's and what you get in storage space for your money then it starts to look a much more attractive offer.

While you may get more for your money in real terms this alone is not the reason for buying one. Saving files to a Flash EPROM instead of a standard EPROM is much quicker, apparently 48 times quicker, so saving that large file now takes seconds instead off minutes. And it's not just in saving files that the Flash EPROM is quicker at; formatting a full 1MB only takes 10 seconds while formatting my standard 128K EPROM took many minutes.

Yet the Flash EPROM cannot perform these small miracles by itself, it needs the software to do so - and this comes in the form of FlashStore. Rakewell, the Uk suppliers of the Flash EPROM, supply the card with this software already installed, so all you have to do is go to the INDEX, lift up the flap, insert the Flash EPROM and then close the flap. It's as simple as that. As well as FlashStore the card also comes with Zetriz, the Z88 version of Tetris and Garry Lancaster's Z88 Forever compilation which includes essential utilities such as Unzip Lite and Installer. Selecting FlashStore from the INDEX first gives you the option of choosing which slot, handy if you have more than one Flash EPROM. Once the slot is chosen you are greeted with a screen that is separated into three boxes, the largest of the three been in the centre. The right box informs you of how large the EPROM is (depending on how many ROM images have been blown onto the card - this I'll explain in a while), the amount of free space available, the number of files saved and also the number of files deleted. In the left hand box are listed the options which if selected are carried out in the central box. These are CATALOGUE, SAVE, FETCH, RESTORE, DEVICE, FORMAT and QUIT. Catalogue lists all the names of the files on that EPROM and their corresponding size. Save allows any files in the selected Ram to be safely stored. Fetch copies a file from the Flash EPROM into Ram while Restore works the same but will copy all the files on the EPROM into the Ram. Device lets the user select any slots from 1-3 assuming a Flash EPROM is present. Format will erase everything on the card quickly and finally Quit does just what it says exiting you from FlashStore.

The great thing about the Flash EPROM is the amount of

storage space available which can be put to good use if used with a utility called RomCombiner. What RomCombiner allows you to do is take several ROM images from different cards and sources and then put them onto just one. The amount of space available to Flash EPROM users means that Z88 users can now benefit by having a vast selection of utilities and games available at the press of a key - the choice of the selection is up to the individual. For example on a Flash Eprom of mine I have the Spellmaster cartridge, PC-LINK II, WhatNow?, FlashStore, the Z88 Forever compilation and Garry Lancaster's Zip utilities ROM. Not only does this remove any cartridge swapping (Spellmaster and PC-LINK II) it also frees up a spare slot or two which can be put to good use with a ram card. Once these files are "blown" onto the Flash Eprom the files are safe and undeletable (unless you use RomCombiner to format the whole EPROM) and the remaining space is formatted into a save area which can be formatted quickly and easily at any time using FlashStore.

But what are the bad points I here you cry? Other than only been able to save files to slot 3 (a bind if you have also have a Flash EPROM in slot 1 or 2) there is nothing else I can think of. In fact so impressed was I that I bought the company. Okay so I lied a little but I was pleased enough with the Flash EPROM's performance to buy another. So in slot 2 I have all my favourite utilities and games whilst the card in slot 3 is used for saving my text files and other bits and pieces. Anyone in need of some extra storage space should seriously consider buying one of these devices - it's like putting fuel injection into your Z88.

OVERALL

A worthy addition to any Z88 and once purchased you'll wonder how you ever lived without it.

WHERE TO BUY

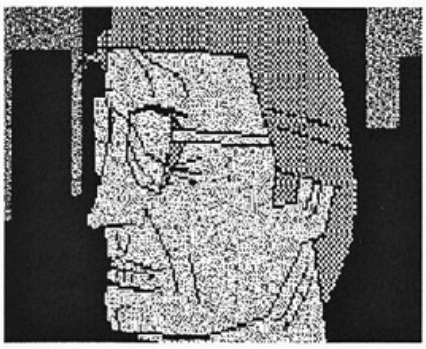
A 1MB Flash EPROM can be bought from either of the following two companies.

Rakewell Ltd, 24 Putnams Dr, Aston Clinton, Aylesbury, Bucks, HP22 5HH, UK.
Tel: +44 (0)1296 630 617
Fax: +44 (0)1296 632 491
http://homepages.nildram.co.uk/~rakewell/z88/z88.htm

Domino Cubes, 249 West 34th St. 5th Floor, New York 10001, New York, USA.
email: Domino.Cubes@pointblank.com. Tel/Fax: (212) 695-1811

Z88 ADVENTURING

Matt Lucas takes a walk on the wild side



Hello fellow adventurers. There has never been a better time to play text adventure games on your Z88 than now—mainly thanks to the hard work of Garry Lancaster who has brought us the wonderful WhatNow? (reviewed elsewhere in this issue). So now you can play a vast selection of adventure games, from assuming the role of Frankenstein's monster in the adventure Frankenstein to a man trapped inside a toilet room from the bizarre game entitled Oh Shxx. There are also a few other adventure games out there that don't require WhatNow? to run but are fully fledged games in their own rights; Puzzle of the Pyramid and The Withered Toad springing instantly to mind. So any budding adventurers out there should at least grab a copy of WhatNow? And start playing some games because from next issue I will start reviewing titles (once I get to finish them that is). But if you have any tips, reviews or comments you'd like to pass on to other Z88 adventurers don't hesitate in dropping me a line. Here for now is the solution, map, instructions and a scan of the original Sectrum cover of the text adventure Matt Lucas.

MATT LUCAS by Player's Software

Instructions

You're Matt Lucas, the best private detective in the state of Florida—the centre of the worlds drug trade. Your friend and partner John Harpinger has been kidnapped by a ruthless gang and it's down to you to rescue him.

By detecting the clues left in the kidnappers wake you should be able to track him down, but you'll need the help of your colleagues in the precinct—Lt. Davis, Cosby and Deringer. They need your help in other vice-squad operations, so time is scarce and rapidly running out...

Examine everything you find and pick up any useful objects

you come across in the game. You will need to learn to use these words:

LOOK, EXAMINE, TAKE, DROP, SCORE, TEXT removes pictures, PICTURES restores pictures, INVENTORY lists what you are carrying.

Solutions

This game is strictly deterministic, without random elements, so it is possible to give exact step-by-step solution. However, a lot of tasks in this game are not necessary to finish the game - their purpose is only for increasing the score, or they give hints how to solve some complicated tasks. So, I prepared two solutions: one long, which achieves maximum score at the end of the game, and second which is the shortest possible solution.

Solution 1 (max. score):

N, N, N, N, N, W (You will hear what will be your task), N, KICK MACHINE (what a sophisticated way to repairing a faulty machine), LOOK, TAKE MONEY, TAKE CHOCOLATE, EAT CHOCOLATE (not necessary, but increases the score), S, W, EXAMINE DESK, OPEN DRAWER, LOOK, TAKE HAIRPIN, E, E, S, S, W (the door is locked), PICK LOCK (with the hairpin), EXAMINE CARPET, ROLL CARPET, TAKE DISK, E, N, N, W, W, EXAMINE COMPUTER, INSERT DISK (look at the screen carefully, it will show to you where a club is located; you can enter the hidden club without this procedure, but it will increase the score), E, E, S, S, S, S, E, E, E, N, N, N, N, N, E, UPTURN VASE, LOOK, READ NOTE (a combination for opening the safe), DIAL 685743, LOOK, TAKE GUN, W, W, W, N, BUY MEAT, S, E, E, S, S, E, E, E (a map which you saw on the computer shows that a club is on the north from here), N (listen carefully at what two persons say, this is a hint for later), ORDER DRINK (just for scoring), TAKE WEIGHT, S, W, W, W, S, W, SHOOT PUSHER (also for increasing the score), E, S, S, W, W, W, W, W, N (a thug is here, but he will not be here before you hear a conversation in the club), SHOOT THUG, LOOK, EXAMINE WOODEN LEG, BREAK LEG, LOOK (note that Matt will become exhausted after 90 turns from the beginning of the game; if you played exactly using these instruction, this will happen just here), REST (to rest Matt; if you played using different way, type REST when Matt become exhausted, else he will die after 8 following moves), READ MAP (a hint how to pass across the sea), S, E, TAKE CONTAINER, DROP GUN, DROP HAIRPIN, E, E, E, E, N, N, N, E, E, E, S, S, TAKE TUBE, S, W (the door is locked), KNOCK (Joe will open the door), TAKE PICTURE (no chance, but it will give a clue), MOVE PICTURE, LOOK, TAKE KEY, E, S, W, W, N, INSERT TUBE INTO CAR, EXAMINE TUBE (a clue what to do next), SUCK TUBE (to fill the container with the petrol), S, E, E, N, N, N, N, W, W, W, S, S, S, W, W, W, W, S, S, E (a meat is needed to pass Alsatians without being killed), E (on the boat; Matt will fill petrol tank from the container automatically), W, W, N, N, E, E, E, N, N, N, E, E, E, S, S, S, S, W, W, N, SUCK TUBE (to fill the container with the petrol again; this is not really necessary to finish the game, but will increase the score, the reason why will be obvious later), S, E, E, N, N, N, N, W, W, W, W, S, S, S, W, W, W, S, S, S, E, E, INSERT KEY (to start the boat), S (at the sea; do you remember a map?), S, S, E, E, S, S, W, S, W, S, S (at the island; the boat is out of petrol, but you have a container full of the petrol for returning), E (Matt will rest here for a while; it will increase the score), W, S (an arrow will be thrown at Matt), DUCK (so arrow will miss Matt; due to bug in the game sometimes it is not necessary - when this may be omitted is a random), E, WAKE PORCUPINES (how?), SHOUT, E, S, E, S, TAP GRAVESTONE (you will be asked for a password), SAY OUT (do you remember the conversation from the club?), S, E, E, N, E, N, E, E, S, S, E, S, E, E, S, S, W (Harpinger is here, captured in a cage, and you need something heavy to lift the cage up), DROP WEIGHT (the end, Harpinger is free again; your score will be 180 of possible 160 - silly?).

Solution 2 (the shortest):

Comments are omitted (they are same as in full solution).

N, W, TAKE CONTAINER, E, N, N, N, N, W, N, KICK MACHINE, TAKE MONEY, S, E, S, S, S, S, E, E, E, N, N, N, N, N, W, W, N, BUY MEAT, S, E, E, S, S, E, E, E, N, TAKE WEIGHT, S, S, S, TAKE TUBE, S, KNOCK, MOVE PICTURE, TAKE KEY, E, S, W, W, N, INSERT TUBE, SUCK TUBE, S, E, E, N, N, N, N, W, W, W, S, S, S, W, W, W, S, S, E, E, INSERT KEY, S, S, S, E, E, S, S, W, S, W, S, S, S, DUCK, E, SHOUT, E, REST, S, E, S, SAY OUT, S, E, E, N, E, N, E, E, S, S, E, S, E, E, S, S, W, DROP WEIGHT.

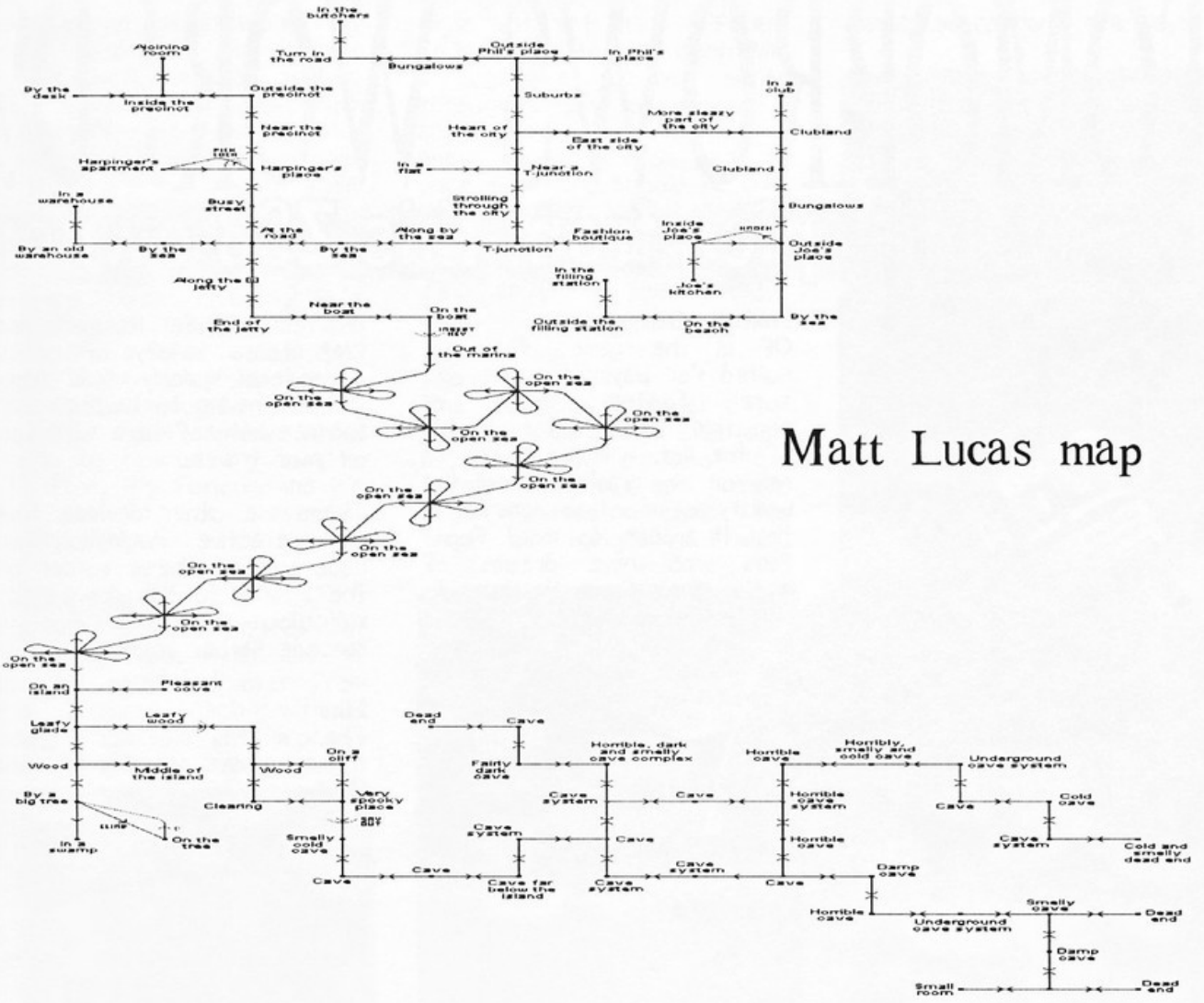
Using this solution, you will score 90 at the end of the game.

Hints:

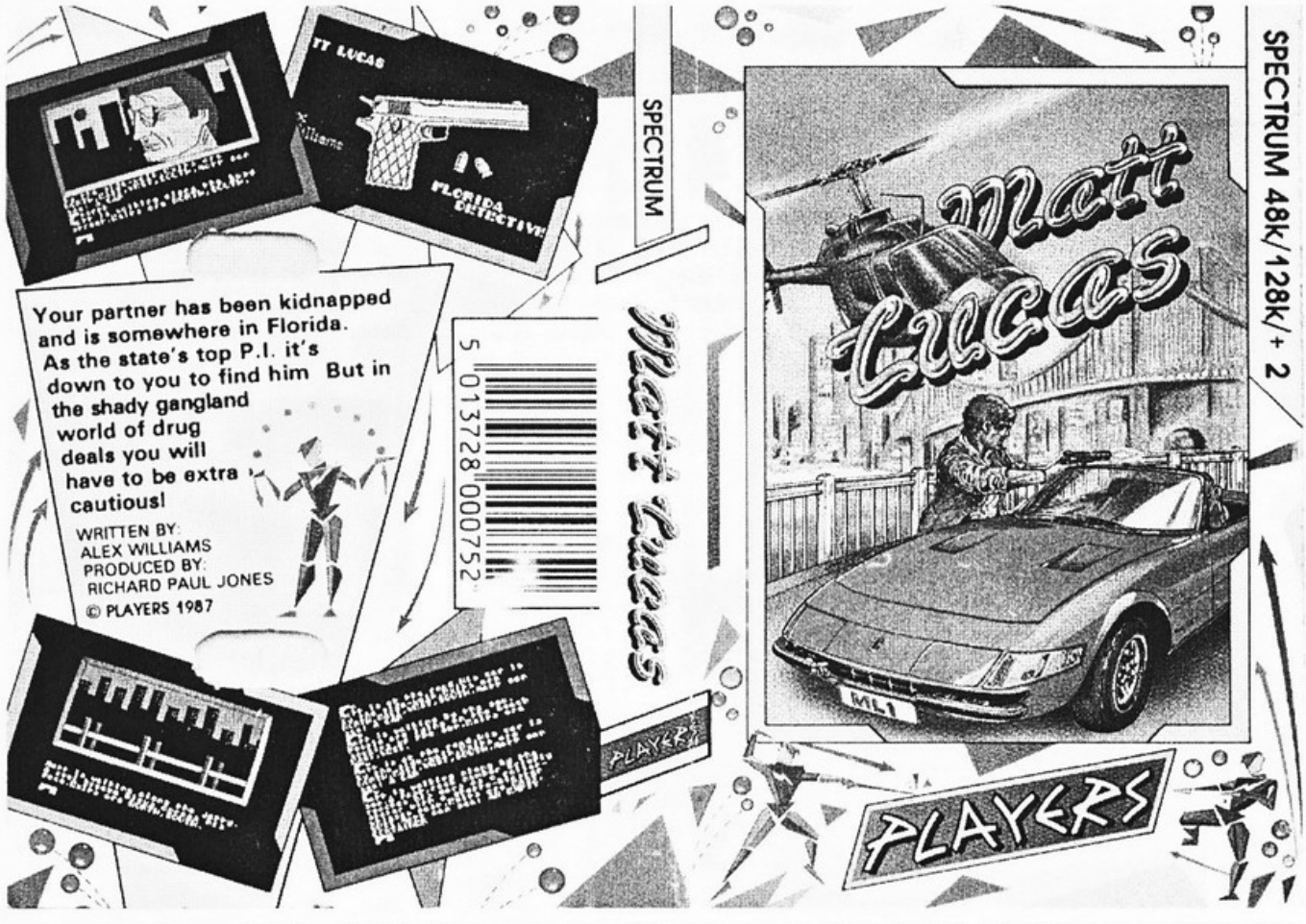
There are a lot of useless objects in the game (a banana skin, your car, sawdust, a shoe, a thug, a tyre, a bottle and a jacket). Simply ignore them. If you like silly messages, try to lift your car. When Matt see the bottle, he will become thirsty. But, don't try to drink bottle: it is a trap, because the bottle contains arsenic. Avoid the swamp: there is no exit from it. A clue about this may be seen if you climb tree on the island. Don't try to buy the jacket in the fashion boutique. You will spend money needed for buying the meat. When Matt becomes hungry in the caves, there is no help (a chocolate doesn't help). Instead, pass through the cave system as quick as possible (you will have a limited number of turns to do this).

END

Game solution by Zeljko Juric, with a help of hints given by Jim Magee

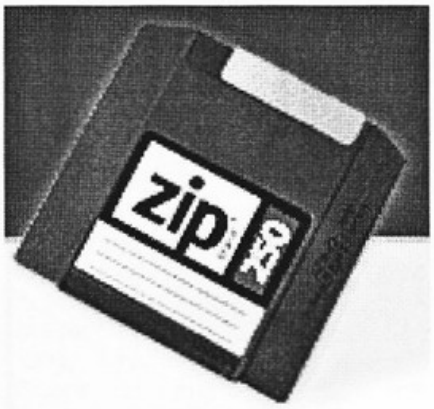


Matt Lucas map



TOMORROWS WORLD?

a grovelling plea from this Z88 owner



The Z88 is still a wonderful piece of kit even though it's over a decade young. But what it does need is a bit of pizzazz to liven it up with a few new gimmicks and some more good games that are just aching to be converted over to the Z88. Although I may not have the technical know-how of the experts I'm not that naive to think that it would be possible to code the likes of Metal Gear Solid and Quake for our favourite laptop and have a DVD adapter made. So what better way to quickly fill three pages up than tell the Z88 world of my suggestions. Are you listening Garry and Dominic ☺

Colour me up.

The I-Macs have it, so do the GameBoys and PlayStations. What I'm talking about is those funky coloured cases that you can get, often transparent so you can see all the gubbins under the bonnet. Don't you think a Z88 with a see-through aqua blue case would have to be the second sexiest thing on the planet, just great for posing on the train on those long distant excursions? Just in case you were wondering the sexiest thing has to be Neve Campbell, that sultry starlet whose presence can help lighten up even the most turgid of movies. Moving swiftly along....

Football Manager

Of all the games that are suited for playing on the Z88 surely Football Manager or something similar must be top of the list. Without having to rely on any graphics at all the beauty of Football Manager is that it appeals to most footy fans who have dreams of leading their favourite team to the dizzy heights of FA Cup and Premiership glory. Nowadays the genre has evolved into Championship Manager 3 and Premier Manager '99, and while they may have more options and are wrapped up in slick graphics the heart of the

game remains the same. So what better way of wasting away the hours on a train journey than to lead the likes of such non-fashionable teams such as Barnsley to Wembley and buying players like Beckham and Rivaldo. It's what dreams are all about.

Cheap storage

Apparently there was a floppy drive that was compatible with the Z88 created eons ago but I suspect that the only person who owns such a gadget lives in Tibet. In some magazines I've seen portable Zip drives that can be used with laptops and even one company I saw had converted it so as to play dodgy backups on the Nintendo 64. This is what the Z88 needs, a device that can transfer its media and files to a variety of other computers quickly and simply without having to have a cable and relevant software with you on your travels.

There are other devices that my overactive imagination has made up but these border on the bizarre to the down right ridiculous. Anyone for a Barcode Battler adapter?

Elite

The mother of all space trading games and arguably still the best. Guide your Cobra MkIII spaceship through the galaxy meeting along the way strange alien races, trade exotic goods and get shot at by laser wielding space scum. Although the game does have missions it is very non-linear, you go where you want and do what you want, at least until you get shot into a million pieces of space junk. If becoming a space pirate appeals to you then you can attack innocent traders and take their goods, have dog fights with Space police and trade in illegal drugs, slaves and weapons. You could of course become a law abiding trader who only deals with legal products - it may not sound as exciting but trying to avoid laser firing

space pirates and finding alien races who pay well for what other races consider worthless is just as exciting and time consuming.

After seeing what Garry Lancaster achieved with WhatNow? I'm sure that the

console panel could be displayed on either the left or right hand of the screen leaving the other half available for the play area itself. With the Z88's rubber keyboard it would be like playing the game on a Speccy 48K all over again.

Defender
Defender was born to be played on the Z88's monochrome screen. Armed only with a laser cannon you guide a tiny spaceship across an alien landscape shooting anything that moves whilst trying to rescue any humans. It's fast, it's furious and it's just perfect for conversion to the Z88.

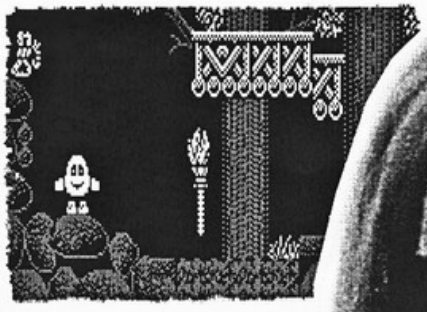
Chuckie Egg 2
We may have the likes of Jet Set Willy, Manic Miner and Sir Lancelot converted over from the Speccy, each without losing a pixel in the process

but my all time favourite platformer must surely be worthy of consideration. This is a simple jaunt through platform land that relies on pixel perfect precision jumping through lots of bizarre rooms in a factory where you must guide our hero Harry in his quest for milk, cocoa and sugar so he can make a cake. Tasty.

Tir Na Nog
Not just Tir Na Nog but also Dun Durach and Mars Sport,

classic arcade adventure games released over a decade ago by Gargoyle. Each one is similar in style but set in a different enviroment with you controlling a large well defined sprite through a game of exploration and discovery. A lot of time is spent wandering from place to place so there should be little pressure put on the Z88's processor. All great games that would surely be the Z88's answer to the GameBoys Zelda.

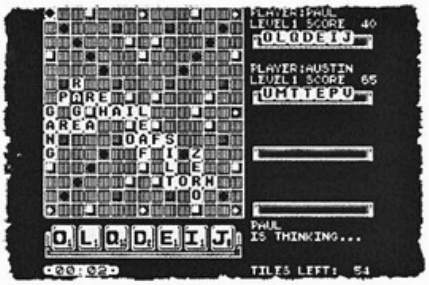
Dizzy
The platform puzzler that spawned numerous sequels including some unofficial Russian variants and helped Code Masters become the kings of budget software.



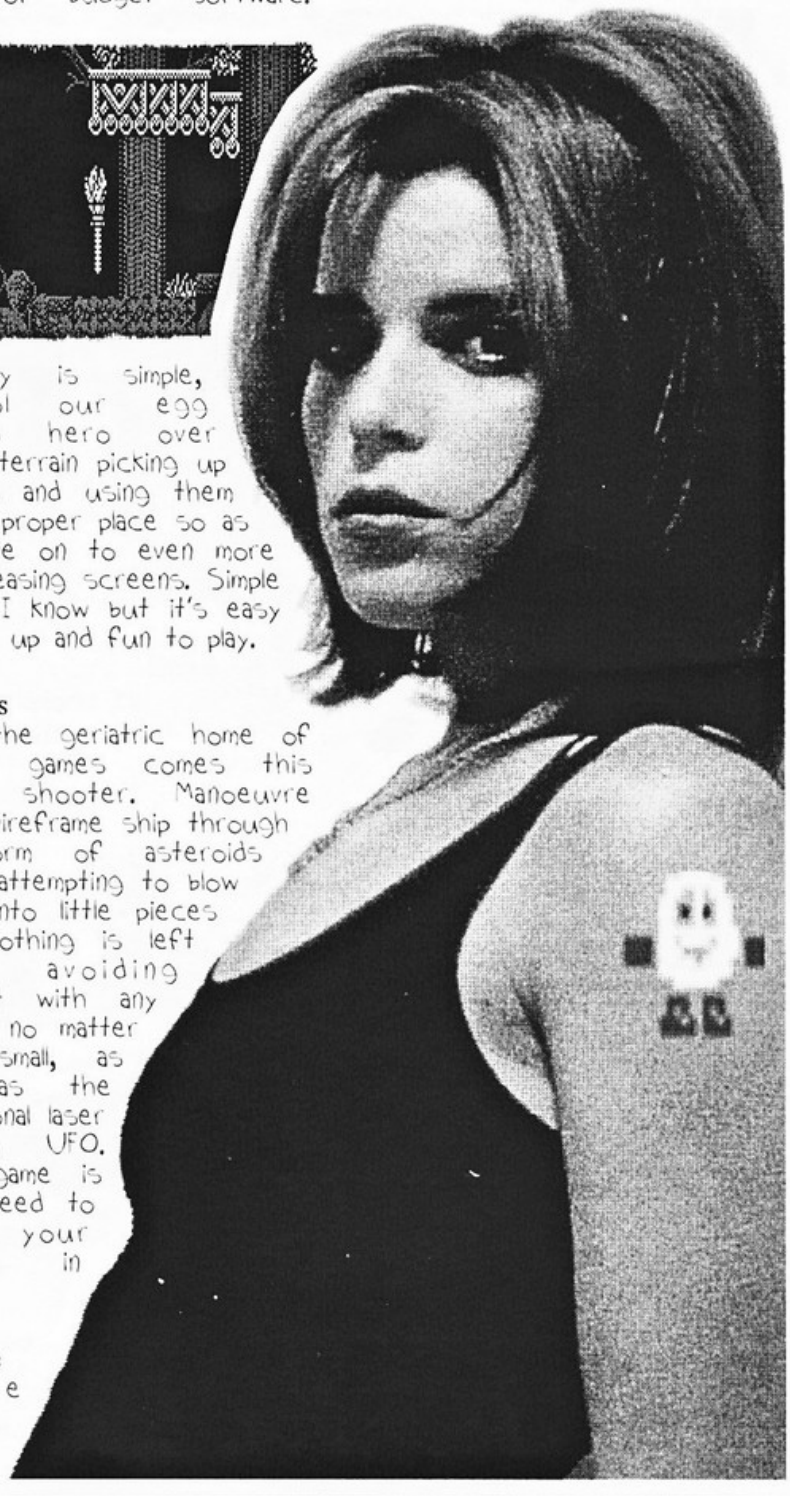
Gameplay is simple, control our egg shaped hero over tricky terrain picking up objects and using them in the proper place so as to move on to even more brain teasing screens. Simple stuff I know but it's easy to pick up and fun to play.

Asteroids
From the geriatric home of arcade games comes this simple shooter. Manoeuvre your wireframe ship through a storm of asteroids whilst attempting to blow them into little pieces until nothing is left while avoiding contact with any rocks, no matter how small, as well as the occasional laser spitting UFO. This game is guaranteed to tie your fingers in knots.

Scrabble
The Spectrum version of this classic board game still plays a



mean game and I'm sure a version just as good could grace the Z88. More for the thinker than the arcade player but I'm sure most people will find it a welcome change from platform jumping.



Z88 advertisments

After recently browsing the WWW I came across these scans that I'd not seen before hidden away on an FTP site . I've reprinted them here for your viewing pleasure.

FROM CLIVE SINCLAIR...THE NO-COMPROMISE

Z88 COMPUTER

IT MEASURES LESS THAN AN A4 PAD.
IT WEIGHS LESS THAN 2lb.
IT COSTS JUST

SPECIAL INTRODUCTORY PRICE

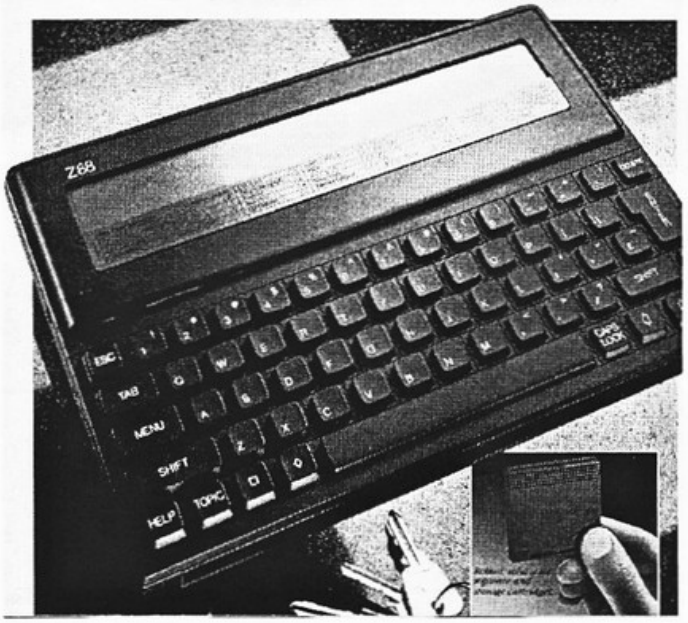
£199.95 +VAT. pbp

☐ RAM expandable to 3 Mbytes...

☐ Word-processing and spreadsheet built in, plus time- and data-management systems...

☐ Revolutionary supertwist LCD display...

☐ Completely self-contained – yet talks and listens to your IBM ...



☐ THE FACILITIES OF THE Z88

RAM standard 32K, growing (via available internals for around 2,000 words). Extra RAM available in 32K or 128K cartridges, up to three of which can be plugged in at once. Z88 can give a total of 685K (enough for a 250 page novel). 1 Mbyte cartridges available shortly. A built-in operation of the entire address prevents data in RAM while batteries are changed.

Permanent storage Where other machines rely on cassette recorders or disc drives, the Z88 uses solid state EPROM – Erasable Programmable Read Only Memory cartridges, with very rapid electronic access and absolute reliability. Up to three EPROM cartridges can be plugged in: 32K and 128K cartridges and ultra-small microdrive sheets now. 1 Mbyte cartridges available shortly.

RS232 compatible port offers:
Printing RS232 cable connects the Z88 to popular printers. Others can also be interfaced by optically any RS232 compatible printer.
Text and data interchange. Files in ASCII or Intelligent Data Interchange Format (IDIF) can be sent to and received from other computers such as the IBM PC and compatibles, Apple Macintosh, Sinclair QL and other Z88s. Diverse programs such as Wordstar, Lotus 1-2-3 and PageMaker, to name only a few, can exchange files and data between it and the Z88. Cable and software available now.
Modem allows text and data transmission via telephone.

Power supply Optional mains adaptor or 6 AA batteries. (A Mains Charger allows about 20 hours active computing – or about a year of data RAM if mains power is switched off).

Dimensions 11" x 8" x 1", weight under 2lb.

Part SPREET mode and effects menu, one step short of Z88. Following that comes the Z88 OZ! for comfortably creating and typing.

☐ ADVANCED INTEGRATED SOFTWARE PACKAGE

The operating system of the Z88 is unique to Cambridge Computer Ltd, supporting in its main or built-in software an advanced software package, designed by Trevor Burton for the Z88.

The Z88 automatically preserves data in RAM when switched off.

The software is a set of spreadsheet and word processing applications with a single style and help system, designed from the first as an integrated package which allows text to be used within a spreadsheet, or a spreadsheet to be used within text.

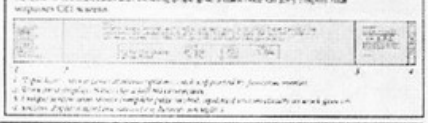
Word processing facilities include multi-document format, global search and replace, and embedded calculations, as well as all the normal word processing activities. The display shows such commands as bold, italics, underlining, and page breaks. Spreadsheet facilities next. Handling and sorting.

Other built-in software includes **database selection, calculator, free form diary, calendar, real time clock and alarm.**

An outstanding feature of the Z88 is its ability to switch between tasks within an application, and between applications, without the need to save, exit the package, or restart on return.

While composing a spreadsheet, for example, it is easy to switch directly to the diary, and then go straight back to the spreadsheet – which immediately comes on from the point it had reached.

☐ STATE-OF-THE-ART SUPERTWIST LCD DISPLAY



☐ HOW TO ORDER

The Z88 is available only by mail order. The FREEPOST coupon lists the components of the Z88 system currently available.

The Z88 itself comes supplied with 32K RAM built in, a comprehensive manual, screen-related by just both owners and computer experts, and a carrying case.

Your order will be acknowledged with information on the likely despatch date.

If you're not happy with any item you receive, return it in original condition within 10 days of receipt for an immediate refund.

Every item is covered by a one-year guarantee, and will be repaired or replaced free of charge if faulty and returned with proof of purchase date.

CAMBRIDGE COMPUTER Ltd

☐ ORDER

to Cambridge Computer Ltd, FREEPOST, Cambridge, CB4 1BR.
Please supply Z88 system components as shown below:

ITEM	QTY	PRICE EACH £	TOTAL £
Z88 COMPUTER		229.95	
MAINS ADAPTER		9.95	
RS232 TWISTER CABLE		9.95	
[illegible]			
[illegible]		16.95	
[illegible]		16.95	
MODEM		99.95	
32K RAM CARTRIDGE		39.95	
128K RAM CARTRIDGE		49.95	
1MB FLASH		129.95	
128K EPROM CARTRIDGE		49.95	
UV ERASER FOR EPROM CARTRIDGE		29.95	
POSTAGE, PACKING AND INSURANCE			7.50
Members deduct 10%		Total	

I enclose cheque/bankers order for £ ..... payable to Cambridge Computer Ltd.
☐ Debit my Access/Visa account number

Name .....

Address .....

Postcode .....

Tel. No. .....

Z88 DIRECTORY

let your fingers do the walking

The following list contains people and companies who are still providing a service for the Z88 community. If you know of any more or wish to amend these then do drop me a line.

Rakewell
Rakewell Limited, 24 Putnams Drive, Aston Clinton, Aylesbury, Buckinghamshire, HP22 5HH. Uk.
Tel: +44 (0) 1296 630617
Fax: +44 (0) 1296 632491
E-mail: rakewell@nildram.co.uk
http://homepages.nildram.co.uk/~rakewell/z88/z88.htm

Suppliers of Z88's, BBC Basic for PC, PipeDream for PC, cables, EPROM's, Flash EPROM's, modems, EPROM erasers, mains adapters, ram, books, carry cases, protectors, utilities and games.

WNR & Co
6 Ravensmead, Chalfont St.Peter, Bucks, SL9 0NB. Uk.
Tel/Fax: +44 (0)1494 871319
E-mail: agp@infopoint.co.uk
http://www.info-point.co.uk/wnr/Z88.htm

Suppliers of Z88's, ram packs, EPROM's, EPROM erasers, modems and cables.

Z88 Forever
E-mail: dharkhig@menaxus.demon.co.uk
http://www.menaxus.demon.co.uk/z88/z88home.htm

Great source of utilities, games and information.

Z88 Sourcebook
E-mail: swensont@geocities.com
http://www.geocities.com/SiliconValley/Pines/5865/index.html

Timothy Swenson's homepage which includes the Z88 User Group Library listing and the Z88 Source Book (3rd edition) which is a really useful source of information.

Z88 Development mailing list
http://z88.crescent.org.uk/Archive/

A great way of sending and receiving information, help and news about anything concerning the Z88 with other Z88 users around the world.

Z88 Bits
http://www.bramber.demon.co.uk/z88/index.html

John Allen's homepage. Information and software mainly covering connecting your Z88 with a BBC or Acorn computer.

Z88 Resources page
E-mail: richard.eby@swipnet.se
http://home5.swipnet.se/~w-57588/z__.htm

Richard Eby's homepage which includes Z88Serve.

Z88 Development Kit
E-mail: djm@jb.man.ac.uk
http://www.jb.man.ac.uk/~djm/z88dk/

Dominic Morris's homepage which includes the Z88 Development Kit.

Z88 Korner
E-mail: keith@korner.freeserve.co.uk
http://www.korner.freeserve.co.uk/Z88.htm

Keith Rickards homepage which details his use of his Z88 to use with his telescope, Z88 chess, Z88 EPROM card emulator

TF Services
29 Longfield Road, TRING, Herts, HP23 4DG. Uk.
Fax: (+44)1442-828255
E-mail: tony@firshman.demon.co.uk.
http://www.firshman.demon.co.uk/z88exp.htm

Tony Fisherman who will fit and upgrade your Z88's internal ram to 128K or 512K and also upgrade to OZ4. Call for latest prices.

Domino Cubes
249 W 34th Street, 5th Floor, New York, NY 10001. USA.
Phone: (212) 695-1811
Toll Free: (877)Z88-CHIC
E-mail: domino.cubes@pointblank.com
http://www.dominocubes.qpg.com/

US suppliers of the Z88.

Sector Software
39 Wray Crescent, Vines Walton, Leyland, Lancs, PR5 3NH. Uk.
Tel: 01772 454328
E-mail: accordion@sectorsoftware.demon.co.uk
http://www.sectorsoftware.demon.co.uk/az.htm

Suppliers of the Z88 to Amiga link.

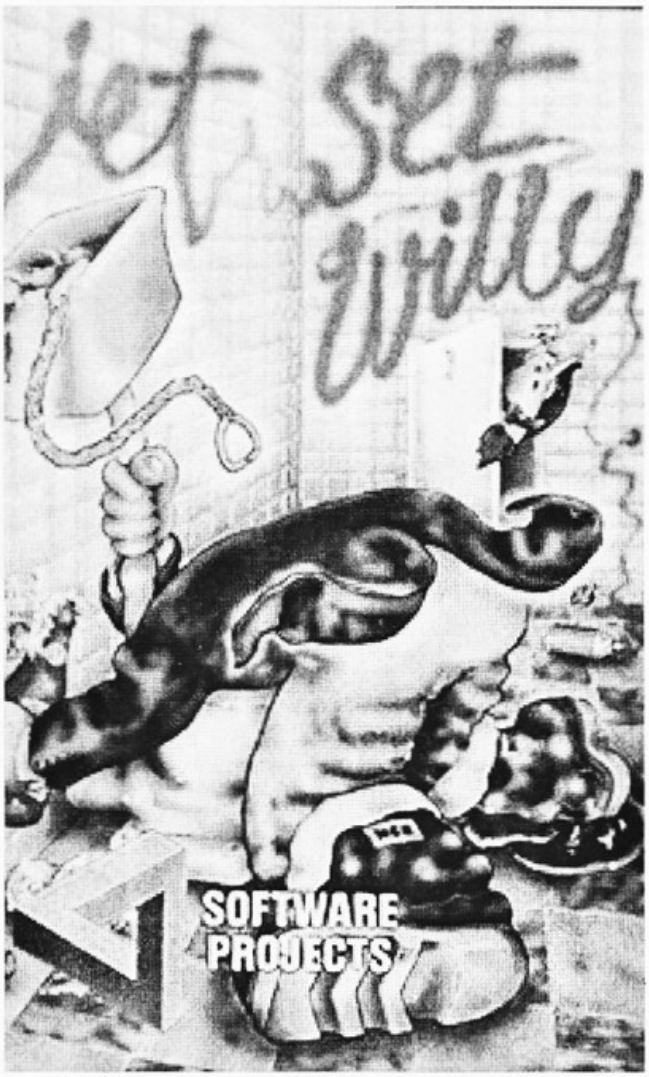
Z88 Gamer
12 Third Avenue, Wetherby, West Yorkshire, LS22 6JR. Uk.
E-mail: paulwhite@thezxfiles.demon.co.uk
http://www.thezxfiles.demon.co.uk

Free Z88 magazine with web page that offers many downloads of Z88 games.

Cambridge Computer Z88
http://www.algonet.se/~dennisgr/z88.htm

Dennis Gronings page which features PipeDream Viewer and other info and downloads.

NEXT ISSUE



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TURN YOUR Z88 INTO BIG BLUE WITH Z88 CHESS
PLUS NEWS, MORE REVIEWS AND AN INTERVIEW OR TWO, BUT NO SCOOBY-DOO