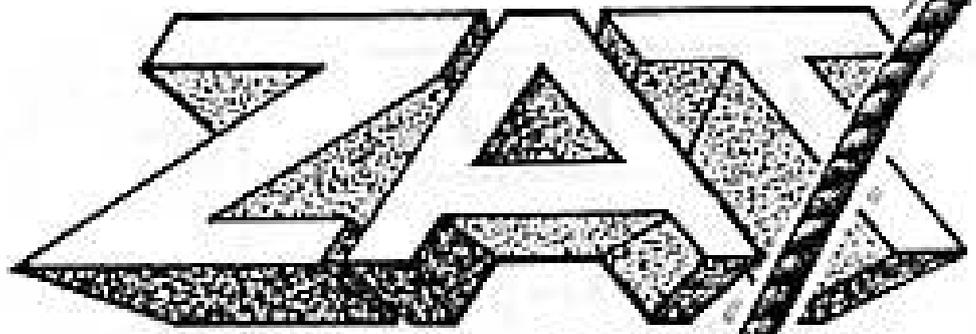


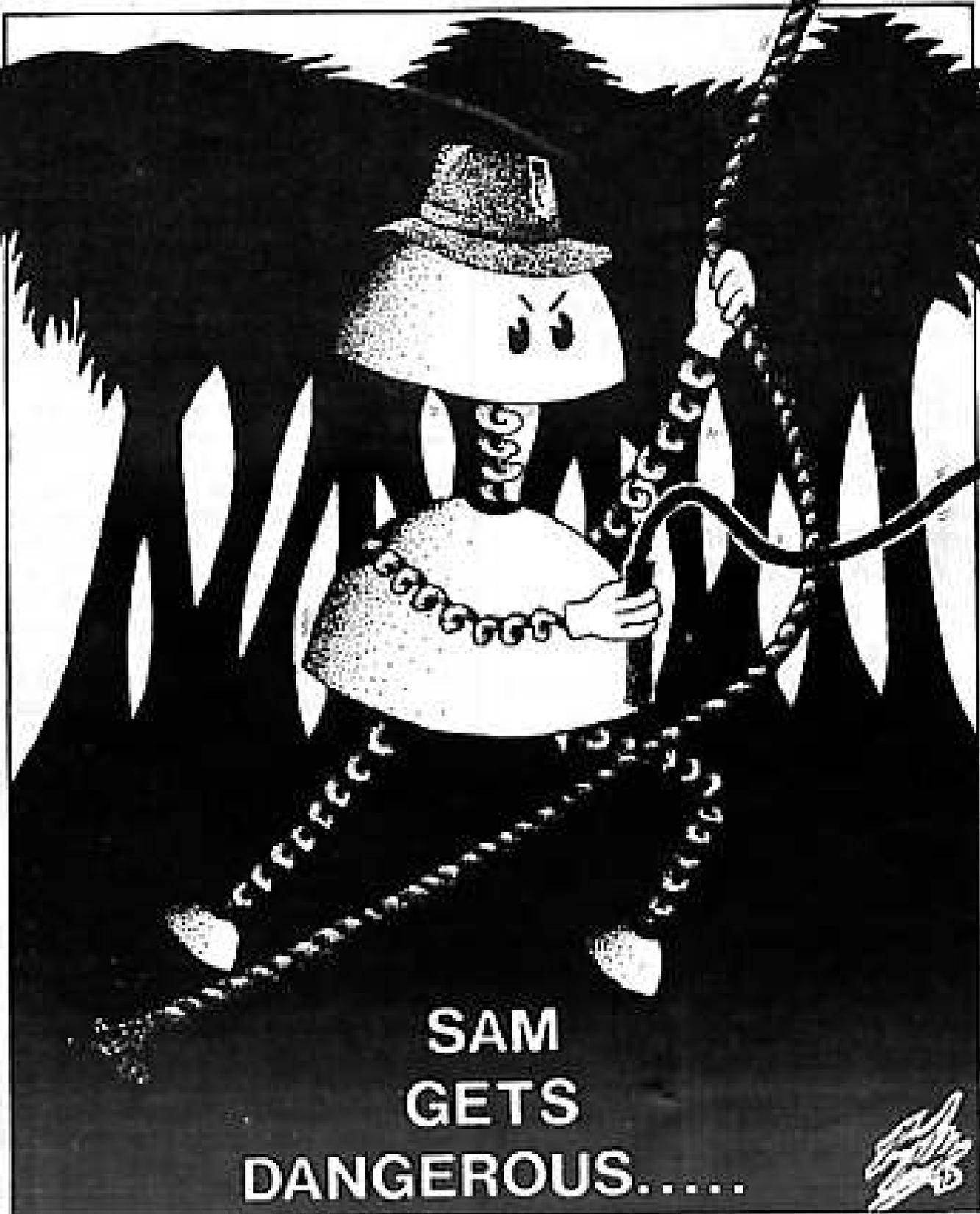
ISSUE 15

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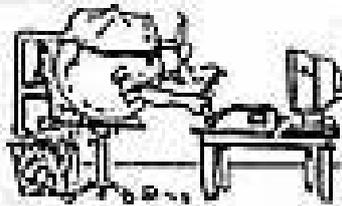
FOR SAM COUPE & SPECTRUM



SAM
GETS
DANGEROUS.....

A stylized signature or logo in the bottom right corner of the illustration, likely belonging to the artist who drew the cartoon.

CONTENTS



EDITORIAL

by D. BLACKBURN

COMPUTER

- 3 SOAPBOX: Are game consoles any good?
- 5 BACKCHAT: Adventure Game Creators.
- 7 INTERVIEW: Jon North.
- 10 MINDGAMES
- 11 POSTMAN'S KNOCK
- 13 PUBLICA DOMINIUS
- 14 PLAYPEN: Among the reviews this issue are Rick Dangerous, Golden Axe, Astroball and a preview of Plasmoid.
- 18 MEANBIZ: KE Disk review, plus Turbo Loader and gossip from David.
- 22 CHIPSHOP:
Codebreaker: Part 7.
Program Box: Z80 Output program.
- 29 NEWSFLASHES
- 31 ARCADE ALLEY

GENERAL

- 2 EDITORIAL
- 4 RESUBSCRIPTION DRIVE
Cover by David Addey.

ZAT Issue 15 Aug-Sept 92.

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and Andy Davis

P.R./Advertising: D. Ledbury

Contributions from M. Scholes, R. Swann, J. Crawford, D. Addey, Mike A.J., S. Kemp and D. Tonks..

Printed at Madeley Peoples Centre. Next issue due out on 25th September!

As this issue was being prepared, news came to us about circumstances regarding the future of Samco and the SAM Coupe. In order to see what developed, we decided to hold back a week before going to print to see what transpired. More of this in Newsflashes. Next issue is already well away and at present will be available in September.

This issue marks an end of an "era" (so to say); after 14 issues, this is my last issue as Editor. Next time, it'll be the scribbling muses of David appearing here instead of my "words of wisdom".

Why am I leaving. Well mainly it's due to the fact that as you read this, issue 1 of Square One (ZAT's Non-connected S.F., Fantasy and Adventure zine) comes out. Originally a close friend, and writer for ZAT, Mick Garbutt, was to lead the way with S1, but that was not to be. Some time ago, Mick was diagnosed with Leukaemia. It was a shock to most of us, and as a result, Mick asked me to Edit S1 in his place, although I do so, working closely with Mick. As I am also involved with a group of Mick's friends who are raising money for him and his family, I felt that it was necessary to devote as much time to S1, and to the Benefit, as possible, so I decided it would be best to pass the torch to David to allow me to do this, and more.

I've enjoyed Editing ZAT, but don't think for a moment that I am leaving altogether. Next issue I assume the position of Consulting Editor, which simply put means that I can keep a eye on ZAT, help David out and still contribute to the zine. If anyone does want a copy of S1, details appear on page 32. I want to thank everyone that has contributed to ZAT for the last two years, and also to you the readers, who keep us in business, and who are judge, jury, and watchmen, and women, on how ZAT brings you news, information, and comment on the SAM and Spectrum. See you around some time.

Darren Blackburn, 24th July, 1992.



Are you a real man? Or real woman, for that matter - old hippies like me ain't sexist, natch? Or do you want a pathetic little games machine?

Fantastic graphics, fantastic stereo sound and... and Heathrow Airport has been closed due to a display by the "Three Little Piggies Aerobatic Team."

I've actually had the "opportunity" to test these machines, to be kind I'll refer to them generically as the "Pinocchio Boy Games Machine."

If the LCD screens are at the forefront of LCD colour technology, I hope I never see any of the also-rans because, boy! - If you want to see pallid, wishy-washy colours with weak and ill-defined graphics, go for it. - But count me out!

What about the stereo sound? Oh dearie me, excuse me while I laugh, but annoying little bleeps and squarks are STILL annoying little bleeps and squarks, but perhaps twice as annoying!

With the cost of the machines and cartridges I can't help wondering just WHO is supposed from the new microbe sized computers. (I CALL them computers because I happen to have a somewhat vicious and warped sense of humour.)

Having been involved in marketing and P.R. (yes folks, you too can have fun and interesting jobs as you get older. Heaven knows, there are few other compensations...), I think that I can spot a con when I see one. "Right-oh, Tarquin" (or the Japanese equivalent thereof) "Let's invent a new games

system. We'll angle it towards a "young people" market and we'll make it use cartridges which will make it harder to pirate the games or have them produced by people that don't have to pay us vast sums!"

And so the young public have the "joys" of the "Pinocchio Boy" toys foisted upon them, not to mention their long suffering and poorer parents! With the ultra-hard sell on television, in the press and backed up by a few fake "news" stories in magazines and papers the poor devils really do not stand a chance.

If someone you know wants to buy you a "Pinocchio Boy", for goodness sake stop them! Point out politely that if you want doddgy, low resolution graphics on a small hand held games machine they may as well buy you a £299 games watch at the local market and spend the money on something you would really like!

Okay folks, costing time! Lets suppose tha you pay £150 for your "Pinocchio Boy" and £40 per rip-off...Sorry! Sorry! Of course, I meant to say mega exciting, super, wicked games cartridge. So with one machine and ten games (gawd, what a lot, I DON'T think) you could pay £550!!

For that you could buy a SAM, a very high quality NLQ printer, a good colour monitor and STILL have £50 or so to spend on software!

Something tells me that quite soon there will be a lot of very disapointed people out there who will realise that they have been taken for mugs via the papers they read and their electronic friend in the corner, the television. A lot of "Pinocchio Boy" toys will end up being sold through the small ads with the pathetic collection of one or two games "given away" with the machines. - It's already happening!

The 'Pinocchio Boy' is an useless item (in my opinion) because even though they may have powerful chips, they can't be used for real applications. One version of the computer-as-mind-mushing toy CAN, I believe, be used for something approximating a real application, but only by using expensive add-ons. Even more pathetic, isn't it? Well, should we allow the Americans and Japanese to flood the minds of our kids (ie children, brothers, sisters, friends) with brain mushing trash? No, we should not! Get out there and push

SAMI! It's British and gives pleasure as well as stimulation.

There is a difference between honest marketing (which can be fun for all, even the buyer!) and grabbing people by the throat and shaking them warmly by the wallet... What do you think?

Readers! Here's your chance to air your views in ZAT! Write today to "Bubble-Sort", the new section for Reader's Views!

ZAT RE-SUBSCRIPTION DRIVE

This issue marks a point where many ZAT readers are due to re-subscribe, after now having had their full years worth of magazines.

To re-subscribe to ZAT, for a full year (6 issues), now costs £7.20 - or £9.00 in Europe. Or, if you aren't able to pay for a full year, you could pay £3.60 (£4.50 Europe) for 3 issues.

As we are fairly kind and generous (if not particularly rich!) sorts, we'd like you to feel that you are getting even more of a bargain by taking out another subscription. So, listed below are the benefits that ALL subscribers are entitled to, now and in the future:

- 1) A full year of ZAT! This includes FREE technical help, friendly service, and all that you know us for!
- 2) Discounts on certain items advertised in ZAT. This will include more items in future issues, as we are stipulating to all new advertisers, that they should put a ZAT Subscribers offer, with their product.
- 3) Discounts off ZAT related services. SAM Quartet, Quest Software, etc.
- 4) Plus other ideas, still on the drawing board!

Additionally, if you answer these 2 simple questions when you return your cheque, you MAY win a mystery software bundle!

1. What does AMSTRAD stand for?

A) A Messy Styled Turntable & Radio B) Alan Micheal Sugar Trading C) The National Anthem

2. How much memory did the American version of the ZX81 have?

A) 1K B)2K C) 512K

So, just send your nice cheques to:
ZAT RE-SUBSCRIPTION DRIVE (15)
10 WESTERKIRK DRIVE, MADELEY
TELFORD, SHROPS. TF7 5BJ

Please make cheques payable to ZAT, and PLEASE list your system (Computer/s, drives, printer, memory, interfaces, modems, etc) and interests, likes, dislikes etc.

Don't delay - write today, right away!

Back-chat

BY ANDY DAVIS

Seeing as how there seems to be rather a massive influx of new utilities arriving onto the SAM at the moment, I thought that this month, I'd take time out and give you some help on writing a computer game.

Now I know, if you've been following Backchat, then most new users will not be upto a standard of writing computer games, but don't worry, because the bulk of the programming has been done for you!

If you haven't already guessed, I'm talking about a compiler or creator program, and in this case, an Adventure Creator. "A.C.'s" as we can call them are extremely compact and efficient database type programs which allow you to make complex adventures without an 'amateurish' feel to them... if you go about the right way. So, what have we got to make our masterpieces on then?

The Spectrum has a choice, the commonest ones available are GAC: "The Graphic Adventure Creator" from Incentive. Free with a recent Your Sinclair covertape. Also available on a recent covertape was the GACPAC, an additional utility to smarten your adventures up a bit by adding a new character set, loading screen and generally compacting and speeding up the adventure.

QUILL & ILLUSTRATOR: Two separate packages, one for writing the adventure and the other for adding pictures. These are available from Gilssoft, but are in short supply. Give them a ring on 0446 732765 from 10am-5pm on Tuesdays, Thursdays, Fridays and Saturdays.

PAW: The successor to Quill & Illustrator, which includes the features of the above two, but with many extras, especially for the 128k owner, allowing 107k games to be written or 93k on a +3! It's also possible to escape from the adventure and call an external program or screen! The advantage of PAW is that it allows the ENGLISH system to be used (like in the Hobbit), so commands like "GET THE ARMOUR AND WEAR IT AND GET THE RED KEY. ASK ROBOT TO 'PLEASE OPEN THE AIRLOCK'" PAW costs £15.95 on tape, and £20.95 for microdrive, +D or +3. (It's also available in some special packages, at much less than this, but ask for further details. DL) The address for Gilssoft is 2 PARK CRESCENT, BARRY, SOUTH GLAMORGAN, CF6 8HD.

Of the three above, I would suggest PAW, but the disadvantage for 48 users is that when memory gets tight, you have to load in 'overlays'. This is a short piece of the PAW program which has been lost due to memory. There are 5 overlays in all, containing different parts of the PAW database. Quill, is much easier however, but what you gain in simplicity, you lose in memory. The best tip is to save each PAW overlay on a C10 tape (or C5 if possible), then when you need to load in an overlay, just select the tape. It saves whizzing through the original. In case you think 128 owners get away with it, sadly not. If your adventure is over 100k, then you will have to do the same. But then again, when did you last write an 100k adventure? It's best just to stick to using the memory allotted at the start so it can run on 48 machines. Using 'Open New Page' feature, you can use one of the ramdisk's 16k pages.

SAM Adventure programmers can either use a special version of PAW, which runs under the ProDOS CP/M system. This is similar to the Spectrum version, but features 80 column text. This has 2 disadvantages:

- 1) You need ProDOS to run the finished games
- 2) There is no graphic support.

However, the games will run on other CP/M machines, so you have got a potentially large market!

Also there is the new SAM Adventure System from Colln Jordan. This is as powerful as PAW in different ways, but has some extra features to use SAM's abilities. Both systems will be reviewed in ZAT soon.

So when you've got your database, what do you do now? Well, unless you have inside knowledge of the program to begin with, it's pretty difficult to make a successful adventure. As they are supposed to say in the big computer world- GIGO, Garbage In, Garbage Out. In laymans terms an adventure is only as good as you make it.

If you can scrounge a copy of the manual whilst you are waiting for a postal delivery of said creator, then you can start to comprehend how the system works. It may also help to pick up a dictionary and make sure you know what verbs, nouns, adjectives, adverbs, prepositions, conjugations and pronouns are. The simplest adventures cater for verb-noun entry only. But as the others are more flexible, you can find an adverb-verb-preopetion-adjective-noun system in operation. Just as a rough guide, here is a quick explanation of word types:

VERB: Doing Word / Action

Look, Jump, Kick

NOUN: Naming Word / Object

Bay, Book, Fish

ADJECTIVE: Descriptive Noun Addtn.

Old, Dark, Tall

ADVERB: The way to 'do' the Verb

Gently, Roughly, Fully

PREPOSITION: location descriptive

In, On, At, Under, By

CONJUGATION: Different Verb Fn.
Get-Gets Drop-Drops etc.

PRONOUN: Added Noun Description
each, those, it, them, us

The best advice is READ THE MANUAL. Most people flick through it whilst loading to get a rough idea. It's best to read first, then load. Luckily, the best creators come with a teaching guide, where you follow the simple stages in the book to read and type in a small adventure so you get first hand knowledge of how a game is designed and written and what factors you must remember.

When you've read the book inside out and really know how the system works, it's time to switch off the computer and get to work. In an adventure, there are many different factors. The major being: Map, objects, characters, traps, pictures, text and most importantly, PLOT. I usually have a list at home of all good locations and when I think of another, I add it to the list. Because what may be a good idea now will probably not be next month! So after a month or so, take a look through it and dismiss any ones which look stupid.

Spend time drawing a map. You dont want a perfect square design with only N,S,E,W as the exdts. Dont forget Up and Down which add a new dimension to buildings. For example a lift shaft makes a better adventure and gives the player more freedom in which floor he goes.

Next, draw up a list of characters, but dont go too mad. Interactive characters are now commonplace ever since The Hobbit and if the character is too hard to work with, the player is going to give up.

Now, a list of objects. This must relate to the object number in PAW so you dont get confused. Draw out a large

chart with the headings: KEYWORD, OBJECT NO, VOCAB NO, MESSAGE NO, LOCATION, DESCRIPTION.

So for a key which is the first object and it's full description is message 20 and found in room 1 would be:
KEY,1,50,20,1,GOLDEN KEY.

Note, all objects must be in the vocabulary otherwise the computer doesn't know what a key is. To be honest, sometimes its best to make it up as you go along, but make sure its all planned out on pen and paper first, otherwise it will get so messy, bugs will appear everywhere.

A few final pointers which make or break a good adventure are these:

- Give thought to a storyline.
- Work on the vocabulary well and make sure you can accept good, solid INGLISH lines (Hobbit).
- Always enclose a HELP feature.
- DONT use a pathetic font given 'free' with your adventure system. I can supply many clear, varied and FREE fonts. Send a SAE and TAPE to the usual address.
- If you are going to use pictures, use the short type which sit at the top of the screen and let them scroll away, NOT the text!
- Don't allow for sudden death to kill off the player and install a RAMSAVE if you can.

I hope these tips help you create a neat adventure. I would like to see some of your results, and maybe we could get them published! If you want more advice on writing an adventure, see MASTERPLAN in ZAT. [I promise this section will re-appear SOON! So long as I get time to write it! DL]

My address, as ever, is: Andy Davis, Alchemist Research, 62 Tithe Barn Lane, Woodhouse, Sheffield S13 7LN.



INTERVIEW
with..

Jon North - Interviewed by Richard Swann

Jon North is a hacker. Normally, hackers are feared and despised by software companies, but this one seems to get on well with them, even getting programs for free off them! It's because he's been writing game POKEs for all three Spectrum magazines for many years (including his own "How-To-Hack" article), and is probably the best person to help you get maximum enjoyment out of your software, provided you want to be a down-and-out cheat!

Could you give me some brief information on your background?

I started off life living in Carshalton, then I moved to Cheam, and now I'm living in Sutton. I got my first Speccy when I was 11 - that was my first computer.

How did you become involved with Spectrum hacking?

I read an article called "Tony Kendall's Arcade Addicts Handbook" in PCW magazine ages ago.

How did you learn how to hack?

I met a hacker called ZZKJ (who wrote Super Hang On) at a computer show, and it turned out that he lived in Kingston, which was near to where I was living. So he came round to my house a couple of times, and taught me how to hack. In fact, I think that ZZKJ has been my only ever influence in Spectrum hacking.

What was the first game you succesfully hacked?

Lightforce, by Gargoyle Games. I produced an infinite lives POKE for it, and I was very pleased with myself. The first POKE I wrote that was printed in a magazine was for Dragon's Lair, which actually went in both Your Sinclair and Crash at the same time!

How did you become invovled in writing for "real" magazines?

I had contacts with two ex-YS writers, ZZKJ (those are his real initials!) and David McCandless, and had sent them many complex and original hacks, plus a complete POKEs tape which was published in YS a few years ago. I started working for Sinclair User in 1989, then switched to Your Sinclair a year later after David McCandless left.

What's your preferred setup for hacking?

I use a Soft-Rom (a pheripheral which plugs in the back of the Spectrum and allows the user to stop programs at any time by installing your own software in a virtual ROM), with a disassembler (a program which translates unintelligible machine code into assembly language which can be understood by humans). I only ever use a rubber-keyed 48K Spectrum for hacking.

The best way to hack infinite lives is to do a forwards-trace (which involves starting at the beginning of the program and logically working through finding code which keeps track of lives, energy etc.). Failing that, I use backwards trace (starting at the GAME OVER message and working backwards), or "not working at all" (using a Multiface to stop programs in the middle of important parts of the program).

How long to POKEs take to write?

It depends how easy the game is to hack. Multiface POKEs take up to 2 minutes, usually less, whereas stand-alone hacks can take anything up to a day. One example I remember is Star Wars, which had a complicated decrypter (program which changes garbage into executable code using various algorithms). I'm pleased I cracked it, because the authors (The 'Haxby Hackers') thought it was unhackable!

What's your favourite protection system?

Well, I quite liked the "Star Wars" protection for the above reasons, but my favourite was a program called "MovieLoad", featured on a game called Moonstrike five years ago. It had lots of messages and pictures which pop up on the screen while the game loads. It was also quite difficult to hack! I also liked the Search Multiload which appeared on games such as Rana-Rama and Deflektor.

Have you written any programs other than hacks?

I've done a lot of POKEs programs for magazines, especially YS, where I've written two bumper pokes packs with over 100 games hacked on each one! I've also written a protection system called XLR-8, which uses very complicated code, and I'm confident that it's impossible to hack!

Some people say protection systems on the Spectrum are pointless, and cannot stop piracy because of tape-to-tape copiers. What do you think?

I have actually found that copies of my own protection system are very unreliable! I think protection systems do

serve a purpose.

Firstly, they stop most ordinary Spectrum users from cheating.

Secondly, they do make copying harder by preventing a user from breaking a program and resaving it, and work well in conjunction with code sheets and Lenslok (a plastic lens used in software protections, which required the user to determine an access code by looking through the lens), because they prevent removal of the Lenslok/code sheet code.

Thirdly, they're fun to hack, because someone like me can sometimes find messages for them hiding in programs, or because then you can gloat over the writer of the protection system!

What do you think of the future of Spectrum hacking?

I AM the future of Spectrum hacking!!!

Actually, there are hardly any hackers around anymore. Five years ago, everyone was doing it, but now there's only really me and Graham Mason (who writes for Crash and Sinclair User), plus a few other people like yourself and the "Hackers Anonymous" team, who provide most of the material for the YS Practical POKEs column. Most of the new faces of hacking are one offs who send in one POKE and nothing else - ever, or idiots who rip off other people's work and claim it as their own.

There have actually been a couple of people who've sent me my own POKEs claiming them as their own. Even people like Graham Mason and Adrian Singh (ex-writer for Sinclair User) reprinted some of my POKEs and got them printed in magazines!!!

Now I'm getting a bit sick of working with Spectrums after all these years, and I think, sadly, that the Spectrum is on its "way out", because of all the computer newcomers buying 16-bit computers and consoles.

Do you use any computers other than the Spectrum?

I've got an Amiga, which I use to write a column in ZERO magazine. I used to have an ST, but it kept going wrong all the time, so I got rid of it. I haven't got a SAM Coupe yet, but it shouldn't be too difficult to write POKEs on it.

Do you have any other interests apart from Spectrums, such as books, music or TV programmes?

Most of my "interests" are best not discussing!

I'm a great fan of Transvision Vamp, and have got several rare records by them. I'm also into House Music a bit. I can't play any musical instruments, but I know good taste when I see it!

My favourite TV programmes are Red Dwarf, Doctor Who and Whose Line Is It Anyway.

I don't do that much reading, apart from computer literature.

I've got a box overflowing with letters sent in from YS readers which can be really funny to read sometimes. Sometimes, I have trouble understanding what they're talking about! I've got a couple of computer magazine rarities, including a signed copy of Crash, although YS has to be my best Spectrum magazine. I was actually quite impressed with the content and quality of the programs in ZAT.

Finally, why do you hack?

I think it's just because I want to. It's not that I'm desperate to hack a game because I can't get past that end-of-level-baddie or whatever, it's just that it's given me some great computer experience.

I also happen to get paid for it, but that's just an extra...

MINDGAMES

by JOSEPH CRAWFORD

Hello and welcome to another edition of Mindgames. This issue I shall be giving exclusive news on the SAM/Spectrum markets, and I'll be setting another competition with a copy of Desmond and Gertrude, available from Delbert the Hamster Software.

But first of all here is the second part of **Cracking Adventures: The Professional Way** by Andy.

PLAYING THE GAME

A few do's and don'ts for successful adventure playing. First, analyse the scenario and the environment you're questing in. Now it's likely that you will come across objects, characters, locations and messages/clues which are irrelevant to the story and the completion of the adventure, but nevertheless, note them all down in separate columns on separate sheets of paper (or divided into same in a handy-sized note-pad). For example, have a sheet/column marked Characters, for Objects, Where Found, Weight, Description and so on. So if you're in a situation where you only have a limited number of turns before your light runs out or something, you don't have to waste time re-examing objects.

Mapping is also essential. The best way is to note down a brief description of the room and a little stick connecting it with the next room. It may also prove useful to number each little description with can be connected to a separate piece of paper containing the corresponding

number and perhaps a more through description or some clues you have found. When mapping, note the way a room is described: where you are, what you can see, and where you can go.

'The Chicken Option'

This is just simply the SAVE and LOAD commands or RAM-SAVE and RAMLOAD if your adventure permits it. Marching boldly towards a bunch of goblins carrying only a penknife and the obligatory lamp is just asking for trouble. So, save before you reach them and just in case they decide to separate your head from its body, all you have to do is just re-load your saved position and take a different course of action next time, much simpler than starting the adventure again, especially if it took you over an hour to get where you are. But beware, some adventures carry strong cases of A.I. or Artificial Intelligence.

Not just in the game characters, but in monitoring your progress. If it finds you are saving your position every few moves then it may knock a few points off your score, eventually making it impossible for you to complete the game with 100%.

To BASIC then. We've done all we can internally (in the game) and we can go no further, so what do we do? Well, we have to try and get into BASIC if possible. The best ways are to type LOAD or SAVE and when it requires you to start the tape, press BREAK. If the game is un-protected, you will be in BASIC!

Other games will either put "BREAK LOAD ERROR" on the screen or will simply crash if the game was protected. The best "escape" key has to be the multiface button. Give it a press and then press E for exit to BASIC. If none of these work, then you'll have to wait until next issue when I'll try and get a hold of a "super escape key" program.

This program, when run, will allow you to escape from almost any program just by pressing CAPS SHIFT and ENTER. If anyone out there has one of these, then please send it in. All senders with a working solution will get a FREE copy of Alchnews and a bonus prize, so get writing! (In adventures written by Quill but not saved via the Quill's "SAVE ADVENTURE" option, if you can exit to BASIC, [like in the GAC example], and save "CODE" 27356, [appropriate length] [max is 29831] this can then be loaded into Quill.)

Thank you Andy. Next, I shall move onto the competition that I promised at the beginning. To win this game I would like you to tell me what was the name of a Spectrum adventure which impressed everyone with its comic strip scenes, and where upon saying the word "KWAH" the character could transform into a crime-fighting super hero! The answer must be the name of the First of the games based upon this particular theme.

Answers to the new ZAF address which is 10 Westerkirk Drive, Madeley, Telford, Shropshire, TF7 5RJ. Please mark your envelope "Desmond and Gertrude" competition. All entries must be received by the 28th August. Winners will be announced in ZAF 16.

The next release from Delbert The Hamster Software is DELBERT'S WHEEL OF ADVENTURE - a compilation pack of four. Also, I have news that DTHS should (if contracts, etc get the green light) be releasing some past adventure on the label which I am told will be worth watching out for.

I've also heard rumours that DTHS are considering releasing all their past &

then I think that it is a great idea which is sure to be a success. Would the other adventure houses such as Tartan, Zenobi, etc. follow suit though? let's hope so.

Next issue I'm hoping to include an article on adventure creators by Andy Davis plus the usual dosage of adventure material for both SAM and SPECTHUM computers. Until next time Joseph Crawford.

Postman's KNOCK! with David Addey

Welcome again, to the wild, wacky, wonderful and weird world (ahem) of Play-By-Mail adventuring. This issue I've featured two games - KJC Games' IT'S A CRIME, and HORUS Games' CHRONICLE OF KINGS. The Deeper Realms. First up, It's A Crime...

For a start, I'm going to call it IAC from now on, to save time. I suspect several of you may have already heard of the game before, as it was recently voted at the Gamesmaster International awards as the best PBM game ever. I have to agree with this - I've played many PBM game, and IAC is definitely the best. It's set in New York in the late 1990's, a city on the edge of collapse, and pits you, as the leader of a gang of new recruits against 500 others spread throughout the city.

Your task is to become Godfather of the city; you do this by generally being the meanest, baddest, wealthiest, and above all least dead gang in the city. Turn printouts are laser printed and comprehensive, like all KGC games, and orders available to you include controlling blocks, arson, robberies, mugging defenceless city dwellers, ambushing nearby gangs, buying and pushing drugs, gaining weaponry for your gang - basically, if it's illegal or immoral, you'll be involved in it.

There's also a new variation of the game



same game, but with added features, and the emphasis on gangs with your mission being to control more blocks than other gangs. Both games have two turn costs. A "single turn" costs 1 credit, and it gives you four orders, whilst a "double turn" costs 2 credits, and gives you ten. Credits cost 95p each, the turn frequency is every ten days (though slower games are available), and you can get a free rules pack and start-up position for either game (don't forget to state which you want) from **KJC GAMES, FREEPOST, CLEVELEYS, LANCS, FY5 3BR.**

I've decided I'm definitely going to abbreviate the name of the next - **Chronicle Of Kings The Deeper Realms Of Avalon** is a bit much really. We'll call it "Kings". It's a fantasy adventure wargame, with 500 players.

Set in the lands of the New Continent, it apparently features "magic and dragons", to quote HORUS Games. The turn sheets you receive are definitely comprehensive, covering on average six or seven sides even at the beginning of the game. The game is basically one of conquest, with your task being to build an empire from what is initially a small settlement, by building armies, constructing forts, towns and cities, and exploring the many provinces around you.

I have to say I had extreme difficulty keeping track of exactly what was going in the game I played in, and that, after my first six turns, I had not encountered another player. There were, admittedly, problems over the printing of the rule-books for the game when I played, so I was not totally informed as to all the rules, but I certainly didn't find the game easy to understand.

That said, though, I think Kings is a

game that has potential - and also perhaps more depth than some others. I think it's really a matter of taste - those people who like more of a challenge, and a game with the emphasis on strategy, may well like to give it a try. Cost - £1.50 for your first 11 orders, 12p for each further order (magic orders extra).

Free startup from **HORUS Games, Francis Ave, Southsea, Hants PO4 0HN.** Next issue - Space battles galore in Capitol..... D.A.

Since there's spare space, you maybe also interested in the Adventure coverage that will be featured in Square One (First issue due within the July/Aug interim). Firstly there's P.B.M. games, (which you've just been reading about)

The main topics of discussion are Live Role Play and Board Games, both of which are proving to be very popular and innovative over the past few years. Live Action (LAP) will feature reviews of L.R.P. clubs, and associated topics. Leaded Dice covers varied game systems, from Dungeons and Dragons to Role Master. Both are aimed for a audience who may never of heard, or seen, their ilk as well as the already "established" population.

Square One will also be covering computer Adventure game systems, but unlike ZAT, it'll boast articles not only for Sam Coupe and Spectrum, but of other computer systems, names of which currently elude us.

Anyone wanting to contribute to SI, or wish to have an issue (£1.25 which includes postage and packaging), can write to Square One: 103 Chiltern Gardens, Dawley, Telford, Shrops, TF4 2QJ.

Contributions to ZAT can be forwarded via 10 Westerkirk Drive, Madeley, Shrops, TF7 5RJ.

PUBLICA DOMINIUS

By Mike A.J.



This issue I shall be reviewing Guy Middleton's 7th demo, Terminator 2. Supplied on 3 TDK branded disks with custom labels, T2 looks like a class PD product. On BOOTing disk 1 you get the normal menu from Guy (info on demo/film/ other s/w available) and then into the demo. No sound again, but almost 900 screens this time, with up to 195 loaded at one time. Guy has digitized in the cinema format (wide screen) in 4 shades, each taking up 1/8th of a MODE 4 screen.

To begin, we're presented with some standard intro screens including Arnie's face metamorphosing very slowly into its metallic version (not the best effect I've seen!), then into the main body of the demo; the continuous digitized graphics. These are displayed in a variety of colours, selectable by pressing, e.g. , 'B' for blue shades. Unfortunately, most of the colours make the graphics worse than the standard grey shades ('W'). Guy has digitized various sequences from the film and although they're all very smooth, none of them actually make you think "Wow, that's good". The demo skips around the film (not always in order) with the data arranged for minimal disk swapping rather than continuity.

Quantity not quality seems to be the motto. No matter how many screens were digitized, trimmed, squashed and crunched (the demo took over 6 months to make) you still have a basic concept which is great for the first few times of viewing, then you start thinking "is that it?". If you're into digitized demos, check out the best one yet. If not, you can use the disks for blanks afterwards!

GRAPHICS: 75% (slightly fuzzy screens,

small viewing area but smooth animations with infrequent LOADING)

SOUND: 0% (no sound at all)

PRESENTATION: 50% (fairly poor title screen and slow metamorph)

LASTABILITY: 40% (great viewing the first few times)

ORIGINALITY: 40% (looks very reminiscent of Guy's 6 other demos)

TECHNICAL ACHIEVEMENT: 90% (wide screen, compressed, real-time decompression, nearly 900 'screens')

OVERALL: 50% (quite expensive, but a lot of effort went into it)

T2 was produced by Guy Middleton and costs £5. Contact Guy at: 35 Victoria Mount, Leeds, LS18 4PU.

Now for a quick plug: AJ Incorporates' DemoDisks 8 and 9 are being compiled as I type (almost); including 'Get Ready For This' by 2 Unlimited, sampled & sequenced by Daniel Cannon, 'Coma' stereo sample demo by PC Techno (over 2 mins of the stereo Amiga track), a quick stereo rhythm by Silents, sampled by myself, and the classic Lemmings tune known as 'puds_main_part' to Amiga PD demo rippers out there, the whole track sampled by moi.

Also coming soon from AJHQ is my new SAM screen MODEs, including resolutions of 512x384 and 16x16 colours in standard MODE 4. The first use of these enhanced modes will be to create a ultra-high quality slideshow of digitized monsters and creatures from 'Fiend Folio' (D&D book) using a Spectrum (?) digitizer. This will be the first AJ slideshow (the one in Fastline is NOT by us) and may feature some music created using E-Tracker (write to SAMCo for details on E-Tracker).

That's all I've time for, so until next time I'll say "Keep writing those proggies" (If you want a fair review in ZAT, send the finished item to the main address, and I'll see what I can do).

Mike A.J



PLAYPEN

compiled by
POLLYSHEPPARD

Welcome to yet another edition of Playpen. As usual we have a number of games to review, or preview, as the case may be. For the SAM, there's **Astroball** (including a look at the Spectrum version too), and a game called **Plasmoid**, which looks very interesting indeed.

For the Spectrum, we have, as usual, a number of new Budget game releases, this time including **Rick Dangerous** (which inspired this issue's cover art), and the hilarious **Monty Python's Flying Circus**. So lets not wait a moment longer, as we begin with...

AstroBall: Revelation. £9.99 (SAM) £7.99 (Spec) Spectrum & SAM versions.

Review by David Ledbury.

AstroBall is the first release from Revelation, that also makes a duel appearance on the Spectrum. It is also the first published game by SAM newcommer Balor Knight.

All well and good, but what's the game all about? Simply enough you control a ball, which has to bounce from the bottom of the playing area (approximately 3 by 8 screens) onto platforms, and collect all the spinning coins. Preventing you on this task, is an assorted bunch of nasties: mostly in the form of green diamonds, but also one important nasty - gravity! Crash down onto the bottom of the playing area, and you've lost your life!

So that's the basic idea. There are a 20 or so screens to overcome, and an added extra on the Spectrum version: a game of Galaxians after each level! I kid you not!

On both versions, the graphics are rather "minimalistic", with perhaps the SAM version being only slightly better! (perhaps a little bit of shading wouldn't have gone amiss on the Spectrum version!) Scrolling is exceptionally good on both versions, which in SAM's case is quite clever - SAM scrolling isn't easy when over 24k of screen needs to be moved around in 1/50th second!

Sound on the Spectrum 128 isn't bad, as are the sound effects. The 48k version is quite silent though. The SAM has a suitably "bouncy" tune. Overall, AstroBall is a "basic" looking game, but never the less, a great one to play. Perhaps it owes a little in looks to the old budget classic "ZUB", but who cares! It's fun, and that's all that counts to me!

Ratings

Playability 90 Addictiveness 92 Sound 70 Graphics 70 Overall 83

NOTE: In light of events featured on the News page, the game above is currently in a state of "limbo". Balor Knight is currently trying to regain the rights to his title, with the possibility of publication of the SAM version on the "ZAT-Soft" label not being ruled out. More news next issue.

Plasmoid: Publisher to be decided £9.99 (SAM)

Preview by David Ledbury.

Plasmoid is the latest SAM game from Balor Knight, programmer of AstroBall. Again due to events reported in Newsflashes, this game is currently being "battled" for between 2 publishers: ZAT-Soft, and FRED Publishing. So, until this is decided, here's a quick preview.....

Plasmoid is a classic "scroll around space, if it moves blast it, and if it doesn't move - collect or avoid it" styled game that anyone can play in no time at all.

As with the above game, Plasmoid features some simplistic graphics -however, it also features the same degree of "smooth scrolling" that the earlier game does. [Tech note: since writing the above, I've been told that both games use a system of fast sprite movement, to simulate scrolling. So THATS how it's done!]

The game features 10 levels of game-play, which cover a large playing area, in which you have to find and collect a number of items. Preventing you is a range of nasties of all sorts: helping you is a range of "power-ups" which give you a range of abilities for a short space of time.

All I can really say about Plasmoid, is that if you've been looking for a nice and simple arcade game, in the style of the oldies-but-goodies of the past - this ones probably for you!

Monty Python's Flying Circus (Spectrum) Virgin/Tronix £3.99.

Review by Richard Swann.

And now for something completely different! Appearing about 23 years after the classic TV series, here's the computer game based on the team that gave a new meaning to silliness. I must confess that most of my family are Python addicts, so I'll try to write this review without any pro-Python bias.

The game itself was actually originally written around some of the more famous sketches of the TV series such as the Parrot Sketch or the Ministry of Silly Walks, but that resulted in a very dull idea for a game. So, the finished product is actually based on the very unusual cartoons by Terry Gilliam.

The idea of the game is that you play the part of Gumby, who's a very stupid northerner (apologies for everyone living north of Watford), who has lost his brain, has has to collect each part of it at the end of one of four multiloading levels. Each level features Gumby as a different creature, such as a bird, a fish, or even a wellington boot! The levels are, of course, far from easy, because in between lie a whole load of bizarre creatures (such as dead parrots, the Spanish Inquisition and killer Keep Left signs), who just happen to get in your way, resulting in you loosing some energy. Lose all your energy, and your head pops off, losing one of your three lives.

Fortunately, Gumby can gain extra energy by picking up tins of spam scattered about the place. Unfortunately, they are embedded in blocks of

cheese, which have to be shot first, and sometimes you have to shoot hidden switches to release the spam in the first place. You can also gain access to hidden bonus rounds, such as collecting as much spam as possible, or having a pointless argument as long as possible. All of these provide you with extra energy and decrease your score, which incidentally starts at several million and counts downwards!

The graphics in this game are first class, with some pixel-perfect redrawings of Gumby, and lively backdrops, full of colour and little clash. Sound, however is poor, consisting of only a few feeble and inappropriate sound effects and an extremely quiet rendition of the theme tune on 128K.

The game plays well, but basically it is nothing more than a flip screen shoot-em-up, similar to Cybernoid, with the Monty Python graphics added in for good measure. It doesn't really have the humour or the excitement that the TV series had, and it can get really boring wading through screen after screen, doing the same things over and over again. In short, I would say that this game looks great but plays like a dead parrot! It's a shame that the game didn't make more use of the licence rather than just drop suitable graphics into an essentially plain game.

RATINGS

Playability 65 Addictiveness 52 Graphics 90 Sound 35 Overall 56

Usually when we select games to review, we always maintain that the game has had very reasonable reviews in the mainstream magazines. In the case of the next game, we've decided just for once to break the rule, so here's an unscheduled look at...

GOLDEN AXE (Spectrum) Virgin/Tronix £3.99

Review by Richard Swann.

This game was incredibly popular in the arcades, largely due to its huge sprites and fast three player action. Unfortunately, the transition to the Spectrum has not been quite so successful. The plot isn't really important in this sort of game, and essentially involves three people, a barbarian, a valkyrie and a dwarf who have to battle through several levels and defeat the Death Adder.

The gameplay basically involves you walking from left to right and killing everything that stands in your way. If you get into a sticky situation, you can use magic spells to weaken all your opponents at once. An added feature is that you can climb onto dragons and ride on them, burning enemies with a fiery breath or hitting them with the beast's tail.

The graphics in the game don't look quite right. They look like cardboard cut-outs, and are nowhere near the size of the arcade original. Sound is feeble apart from some dramatic music at the start of the game on the 128K. The multiload that comes with the game is extremely annoying, requiring you to wait for ages between levels. The gameplay is incredibly monotonous, and simply involves you pressing all the keys in a hope of killing the enemy, moving right a bit, and doing it all over again. The whole thing is desparately dull, and probably not even worth playing a second time.

Games like this might prove to be popular in the arcades, but it's a mystery to me why, since the gameplay is incredibly basic. In short, don't even bother picking this up, because it's just a total waste of time.

RATINGS

Playability 16 Addictiveness 12 Graphics 52 Sound 36 Overall 18

Rick Dangerous (*Spectrum*) *KiX* £3.99

Review by Richard Swann.

This game is loosely based around the escapades of Indiana Jones. Rick Dangerous is an intrepid explorer, who doesn't seem to mind penetrating the darkest depths of the world, avoiding all manner of untold horrors to succeed in his secret mission. Rick has four missions to complete, each one lasting a complete level. Level one sees Rick in South America, level two in Egypt, level three in Germany, and level four in an underground missile base.

Gameplay is more or less an extension to the platform style of Manic Miner, the main differences being that each room in the level is about six scrolling screens high, and that Rick is armed with a shotgun with a few bullets, and a couple of sticks of dynamite. Extra ammo and dynamite can be collected along the way. Rick enters at one entrance of the room, and must make it across to the other one. If he gets killed, you lose a life and go back to the start of the room. There are a whole load of nasties in the way, such as spikes, guns, and even hostile natives. The natives can be disposed of by a shot from the gun, or you can throw a stick of dynamite at a group of them to blow them up in one go (if you feel sadistic). The game is full of hidden doors and walls that block the way ahead. Fortunately, a shot or some dynamite will usually get round them.

The game is very enjoyable to play, apart from one thing - there are many unexpected deathtraps lurking everywhere, and you only realise them when you walk straight into them. However, when you've figured out how to get past them once, you won't make the same mistake again, and you'll always want to come back to see what comes next. I found the game had that all important "just one more go" element. However, I think that inexperienced players may find the game a little too hard for their liking.

Graphics are cute and well presented, although the background does make things a little hard to see at times. The game doesn't feature much colour, but I think that any more than there is would make the graphics less clear than they are. There isn't much sound, but where it is, it really adds to the visual effects. One of the most addictive games I've seen in absolutely ages. I've only got as far as level two, but I'm going to complete this if it takes me all year!

RATINGS

Playability 88 Addictiveness 95 Graphics 75 Sound 70 Overall 90

That's all for this edition of Playpen. If you've played a game and think it's worthy of a review, then please do send in your comments. Until then..

Meanbiz

6 DARREN BLACKBURN
7 ANDY DAVIS and CO.

Once again welcome to another edition of Mean Biz. Although I may no longer be Editor after this issue has gone to print, I will still be here to organise and do the waffle in-between the serious material presented within the column. Right, what do we have for your pleasure this time. To begin with, here's yet another DANIEL CANNON expose. KEdisk is a shareware utility from Geoff Winkless, which maybe a god-send to some of the Sam Coupe populace...

KEdisk (or KEdisc depending on how you feel) is a program which will allow you to read and write to MS-DOS discs. This basically means that you can transfer files from the PC or ST to SAM and back again. If you have a MS-DOS convertor for an Amiga or Archimedes, you can also convert files from these computers, through MS-DOS, to SAM as well. Other little widgets included allow you to edit sectors on discs, compress SAM screen displays, and fix the Flash flashing palette problem.

The program is dead easy to use. Just stick the MS-DOS disc in the drive, hit RETURN, type LD (filename), swap the disc for a SAM disc, hit RETURN again, and type SV (filename).

If you want to you can print out documents by using DPRT, or see them on screen using DSCR, but probably the most important commands (after LD and SV of course) are CNEO and CDEG which convert screens from the ST art packages Neochrome and Degas Elite. Now I don't have access to an ST so I can't say how that worked (oops). But from what I've seen of the demo

slideshow also supplied on the disc it seems to do a fairly good job. Unlike other convertors it appears to scale the screen down properly so that the right hand side of the screen display isn't lost. [I did actually try this option out with some ST screens. Although it did work very well, sometimes it split the screen in 2 and put the left on the right side of the screen and vice-versa! It was soon corrected with SCROLL in FLASH though. DL]

You can easily move into sub-directories on the MS-DOS disc by typing the sub-directory name. However, you can't move back up the sub-directory tree by typing in ".." (which is the proper way to get back up a sub-directory tree on MS-DOS). Instead you have to start from the top and work down again.

The program can't cope with Master DOS sub-directories however, and can confuse a Master DOS disc for a MS-DOS disc. You can fix both problems by formatting a disc with Master DOS, making sure that you don't open any sub-directories.

The screen compressor can be used to compress your converted ST screens or original SAM ones. Again, it's all dead easy to use, and it manages to compress even digitised screens down to half size. All you need to do to uncompress it is to use a simple CALL command. The demo slideshow shows you how this works.

The sector editor is easy to use as well (has anybody got another way of saying "easy to use" or "user friendly"?). Just stick in the disc, type the track and sector numbers and you can alter that sector. You can edit it using decimal, hex or ASCII. You might find this useful for repairing directory entries or unerasing files (or putting messages in other peoples programs...).

The Flash utility stops Flash screens,

well, flashing when you load them up as SCREEN\$ files. Nothing else to say here apart from the fact that the author clearly has it in for Flash.

At the moment I'm using KEdisc to convert Archimedes screens across to the SAM, some of which you may see in the next SQ disc (ahem) [and also in a forthcoming ZAT graphics disk DL]. I'm also trying to convert Amiga samples across. You may be interested to know that this program is faster than both the Amiga and Arch MS-DOS converters.

Obviously this is going to be compared to PC-Suite from SD-Software. PC-Suite will let you format discs to MS-DOS format, KE-disc doesn't (however Geoff is working on this for the next version of KEdisc), and KE-disc will automatically convert screen displays across to SAM format (which PC-Suite won't). KEdisc also has a good screen compressor with it. And at £20 cheaper than PC-Suite, you can't really go far wrong.

You can get KEdisc at £5 from:

Geoff WinkLess,
Knife Edge Software,
8 Station Rd,
Kirby Muxloe,
Leicester,
LE9 9EJ.

Ratings:

Usefulness 90
Presentation 80
Compatibility SAM
Overall 85

Next on the agenda is a useful Turbo-loader for the Spectrum. To explain how wonderful it is, here's its author, RICHARD SWANN.

This program will give a turbo-boost to your Spectrum programs, so that files

you save and load to and from tape are a lot quicker. Most commercial programs have three types of turbo loads, but don't allow you to customise the loader to suit your own needs, or to save your own data. This loader, however, SAVE's and LOAD's files with the minimum fuss.

HOW TO USE THE PROGRAM.

You should type out the BASIC listing as shown below. Once this is done, RUN it. You now need to configure your loader so it knows what data to read and write. First of all, you will be asked the start address of the code you want to save, and the length of it. For example, if you wanted to SAVE and LOAD a loading screen (start=16384, length=6912), you would enter 16384 and then 6912.

You will then be asked a speed increase. In-putting 0 gives you the standard Spectrum loading speed, positive values increases the speed, while negative values decrease it. You are allowed numbers from -30, which is so slow its pointless, and 40, which gives mega-hyperspeed loading, but you'll probably find it unreliable. You can then SAVE your code to tape: the start is 64900 and the length is 385. To SAVE, RANDOMIZEUSR 64900, and to LOAD, RANDOMIZEUSR 64914.

```
10 CLEAR 63999
20 LET T=0, FOR N=23296 TO 23356
30 READ A, POKE N, A
40 LET T=T+A, NEXT N
50 IF T<>8772 THEN PRINT "ERROR IN
DATA FROM LINES 1000-1100", STOP
60 LET T=0, FOR N=64900 TO 64927
70 READ A, POKE N, A
80 LET T=T+A, NEXT N
90 IF T<>3179 THEN PRINT "ERROR IN
DATA LINES FROM 1100-1140", STOP
100 CLS, PRINT "RICH-LOAD has to be
told three things..."
110 PRINT "1) The START of the code"
```

```

120 PRINT "2) The LENGTH of the
code"
130 PRINT "3) The SPEED of the code"
140 INPUT "Start";S,
"Length";L,"Speed";A
150 LET S2=INT (S/256);LET
S1=S-(S2*256)
160 LET L2=INT (L/256);LET
L1=L-(L2*256)
170 POKE 64902,S1;POKE
64903,S2;POKE 64916,S1;POKE
64917,S2
180 POKE 64905,L1;POKE
64906,L2;POKE 64919,L1;POKE 64920,L2
190 POKE 65231,203-(P/1.5)
200 POKE 65016,59-A
210 POKE 65049,66-A
220 POKE 65055,62-A
230 POKE 65070, 49-A
240 PRINT "Insert a blank tape ready
to save this code."
250 SAVE "LOADER" CODE 64900,385
260 PRINT "Your FAST LOADER has
been saved to tape. It"
270 PRINT "has been saved as
FILENAME CODE 64900,385"
280 PRINT "RANDOMIZE USR 64900 TO
SAVE"
290 PRINT "RANDOMIZE USR 64914 TO
LOAD"
300 STOP

```

```

999 REM DATA
1000 DATA 33,194,4,17,194,253,1
1010 DATA 67,1,237,176,62,253
1020 DATA 50,57,254,50,231,253
1030 DATA 62,254,50,253,253,50
1040 DATA 196,253,50,13,254,50
1050 DATA 41,254,50,10,254,50
1060 DATA 125,254,50,132,254,50
1070 DATA 147,254,50,157,254,50
1080 DATA 96,254,50,204,254,50
1090 DATA 215,254,50,229,254,201
1100 DATA 221,33,0,64,17,0,27
1110 DATA 62,255,167,205,194,253
1120 DATA 201,221,33,0,64,17,0
1130 DATA 27,62,255,55,205,86
1140 DATA 254,201

```

If you know machine code, you can call the loader directly, using the following routines:

```

To SAVE
LD IX,start
LD DE,length
LD A,£FF
AND A
CALL EDC2
RET or JP

```

```

To LOAD
LD IX,start
LD DE,length
LD A,£FF
SCF
CALL FE36
RET or JP

```

In both cases, start and length should be replaced by the appropriate 2-byte numbers.

That's all from Richard this time around. Next time Richard will be delving into the secret world of Interrupts on the Spectrum. To round off this edition of Mean Biz, DAVID LEDBURY comes helter-skeltering down the chute. Firstly, a few hints of (useless?) information, followed by a quick run-down of some SAM Creation Systems.

Thanks for that "interesting" introduction Darren!

Have you wondered how ZAT actually gets it's BASIC program listings from the Spectrum & SAM to the DTP stage? And for that matter how come the odd mistakes such as a Spectrum listings developing SAM Commands happens? Well all can be revealed...

The process of changing the program listing, which unlike on some computers is not held in memory as a easy-to-understand file which COULD be written on a wordprocessor, but is in actual fact build up in memory as a combination of special codes is pretty

simple. The technique was worked out by Matthew Holt (author of SAM Manic Miner), who happened to have a few minutes free, and is as follows:

On the SAM, a program listing is loaded. Now, enter this:

```
CLEAR 30000 (or a larger number if
you have a large program)
DPOKE 23759, DPEEK 23754
LLIST FORMAT 2
RECORD TO A$: RECORD STOP
LLIST
POKE 30000,A$ (or whatever the above
address is)
```

This will now create a copy of the program listing in memory, held at the above address. By simply typing the line: SAVE "text" CODE 30000, len a\$ the code will now be saved off.

This text can now be loaded into a suitable text Editor, such as Relion Word or PCG. Other Word Processors use a different storage method, (padding out lines of 64 characters with spaces) which may require a lot of editing of the file.

Now, this works fine for SAM files. But what about the Spectrum? Well, by using the utilities on the SAMDOS disk, a Spectrum BASIC listing can be loaded from tape or +D disk, and be converted to a SAM BASIC listing. This is where the odd mistakes happen. As the utility is clever enough to alter the odd commands needed to SAM BASIC, this can mean some Spectrum listings developing SAM alterations: INK becoming PEN, etc.

Another little quick tit-bit comes (indirectly) from Dr Andy Wright:

If you have a file - either tape or disk - which you wish to load into SAM, and to discover it's length (perhaps in uploading Tasword files from Spectrum tape, and putting them on SAM DISK)

this may be handy.

```
PRINT DPEEK &4B73 MOD 16384 +
(PEEK &4B72 MOD 32) *16384.
```

The number given by the above line is the length of the file just loaded.

Right, I hope that was of some use to you!

There are now available a number of interesting game creation utilities for SAM, as mentioned in BackChat. These will be reviewed over the forthcoming issues of ZAT, but here is a quick run-down of what is on offer:

GAMES MASTER: From Dr Andy Wright. Create your own self-running arcade games, in this interesting system which combines the ease of easy to control designer, with a powerful compiled language. Large range of features, and can also use BASIC and CODE. £24.99. BetaSoft. 24 WYCHE AVENUE, KINGS HEATH, BIRMINGHAM, B14 6LQ

SAM COUPE ARCADE DEVELOPMENT SYSTEM: (SCADS) An equally easy to use program, with a sophisticated Sprite & Graphic designer program. SCADS uses an enhanced BASIC system. Price and address unavailable at present.

SAM ADVENTURE SYSTEM: See BackChat. £30. COLIN JORDAN 89 TREWENT PARK, FRESH WATER EAST, NR PEMBROKE, DYFED. SA71 5LP

PROFESSIONAL ADVENTURE WRITING SYSTEM: (PAW) £23 (APPROX) See BackChat for details.

And so another Mean Biz comes to a graceful ending. As ever, any comments or suggestions can be forwarded to the column via the new ZAT address, which should by now be in-printed into your minds. If not, check the preceding columns for enlightenment.D.B.

CODE BREAKER by Daniel Cannon

Right, before I start I hope all you lot have got assemblers by now? Sinclair User have a free assembler in the May edition of their mag. Steve Nutting will supply a demo of his SAM assembler if you send a formatted disk and a SAE to Steve's Software, 7 Narrow Close, Histon, Cambridge, CB4 4XX (don't forget to mention ZAT). I'm telling you this because next issue I'm going to start something pretty special.

This month I'm going to roll all the commands we've learned into one program. This program will encode blocks of memory given a password. I'll leave you to decide what you want to hide from the rest of the world.

First type in the program. As always, save it afterwards. Spectrum owners will have to replace 50 ORG 16384 with 50 ORG address, which can be anything you want. This should be at a fairly high address (eg. 60000) so that there is room for the BASIC beneath it, the assembler (if that has to be in the memory at the same time), and the data you want to encrypt. You should also change line 70 to 70 setstr:EQU 5633. And you should forget the *REPORT OFF command (which is only used on SC_Asembler).

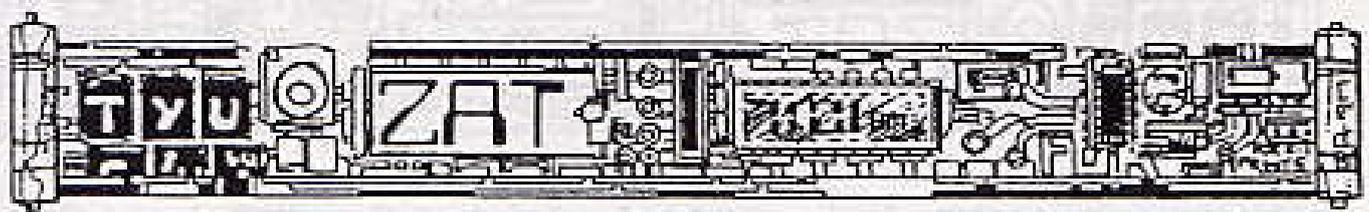
```
00010 ;PROGRAM 1, Password
protection program.
00020 ;Length 180. Not relocatable.
00030 ;START ADDRESS.
00040      *REPORT OFF
```

```
00050      ORG 16384
00060 ;ROM ROUTINES.
00070      setstr,EQU  £0112
00080 ;SYSTEM VARIABLES.
00090      lastk,EQU  23560
00100      flags,EQU  23611
00110 ;JUMP BLOCK.
00120      JR      doxor
00130      JR      name
00140 ;VARIABLES.
00150      start,DW  0
00160      length,DW  0
00170      passwd,DM  "123456"
00180      xorbyte,DB  0
00190 ;SECTION 1, MAIN PROGRAM.
00200 ;STEP 1, FIND XOR BYTE.
00210      doxor,XOR  A
00220      LD      B,6
00230      LD      HL,passwd
00240      doxorl,XOR  (HL)
00250      INC     HL
00260      DJNZ   doxorl
00270      LD      (xorbyte),A

00280 ;STEP 2, FIND OTHER
PARAMETERS.
00290      find,LD   HL,(start)
00300      LD      BC,(length)

00310 ;STEP 3, ENCODE A BYTE.
00320      encode,LD  A,(xorbyte)

00330      XOR     B
00340      XOR     C
00350      XOR     (HL)
00360      LD      (HL),A
00370 ;STEP 4, ALTER START AND
LENGTH.
00380      alt,INC  HL
00390      DEC     BC
00400 ;STEP 5, LOOP IF NOT FINISHED.
00410      LD      A,B
00420      OR      C
00430      JR      NZ,encode
00440 ;STEP 6, ELSE RETURN TO
BASIC.
```



```

00450      RET
00460 ;SECTION 2: ASK FOR NAME:
00470 ;STEP 1: PRINT MESSAGE:
00480      name:LD  A,2
00490      CALL setstr
00500      LD  HL,mess
00510      CALL prtstr
00520 ;STEP 2: PARAMETERS:
00530      LD  B,0
00540      LD  DE,passwd
00550 ;STEP 3: MAIN LOOP:
00560      getkey:CALL rdkey
00570      CP  12
00580      JR  Z,del
00590      CP  13
00600      JR  Z,enter
00610      RES 5,A
00620      CP  "A"
00630      JR  C,getkey
00640      CP  "Z"+1
00650      JR  NC,getkey
00660 ;ALPHA KEY ROUTINE:
00670      alpha:LD  C,A
00680      LD  A,B
00690      CP  6
00700      JR  Z,getkey
00710      LD  A,C
00720      LD  (DE),A
00730      INC  B
00740      INC  DE
00750      PUSH BC
00760      PUSH DE
00770      RST 16
00780      POP  DE
00790      POP  BC
00800      JR  getkey
00810 ;DELETE KEY ROUTINE:
00820      del:LD  A,B
00830      AND  A
00840      JR  Z,getkey
00850      DEC  B
00860      DEC  DE
00870      PUSH BC
00880      PUSH DE
00890      LD  A,B
00900      RST 16

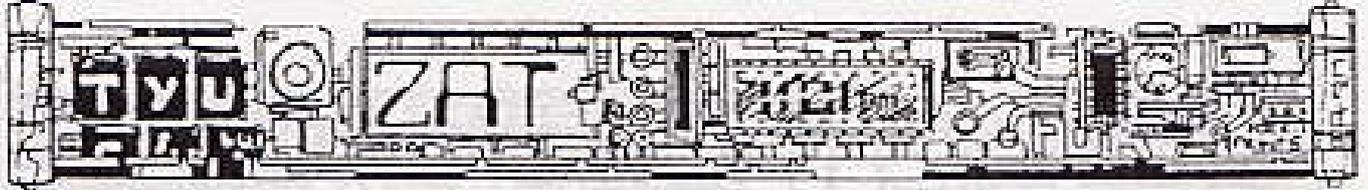
```

```

00910      LD  A," "
00920      RST 16
00930      LD  A,8
00940      RST 16
00950      POP  DE
00960      POP  BC
00970      JR  getkey
00980 ;ENTER KEY ROUTINE:
00990      enter:LD  A,B
01000      CP  6
01010      JR  NZ,getkey
01020      JR  doxor
01030 ;READ THE KEYBOARD:
01040      rdkey:LD  HL,flags
01050      rdkey1:BIT 5,(HL)
01060      JR  Z,rdkey1
01070      LD  A,(lastk)
01080      RES 5,(HL)
01090      RET
01100 ;PRINT A STRING:
01110      prtstr:LD  A,(HL)
01120      CP  255
01130      RET  Z
01140      PUSH HL
01150      RST 16
01160      POP  HL
01170      INC  HL
01180      JR  prtstr
01190 ;MESSAGE:
01200      mess:DB  22,0,0
01210      DM  "Enter 6 chr
password: "
01220      DB  255

```

SAM owners should use a POKE 16384, MEMS(32768 to 32948) to move the code into the System Heap. This is an area of memory which is not used by the computer at all, it's just left for you to use however you need. It starts at 16384 and is about 2K long (plenty of room for our routine). If you have the Lerm or Comet assemblers then I'm afraid I don't know how to do that. Try and follow your assembler handbook to assemble the code to 16384.



I've split the program into fairly simple steps so that it's easy to understand. First I've given names to various numbers using the EQU command. This tells the assembler to remember the name given, and at assembly time, replace the name with the correct number. This has two advantages: It makes reading the listing easier, and if you find out that you have to change an address later on you don't have to plough through the listing replacing numbers, you just need to replace one near the start (as we saw in the Spectrum example).

Next is a "jump block". When the jump block is called it simply jumps to whatever routine is required. Well why not call the routine directly? If you decide to change the routines in the future then their start addresses will most probably change as well. So calling the modified routines with the old start addresses will probably crash the computer. Instead of going through all your BASIC programs changing the call addresses you could simply call one fixed address, an address in the jump block, which then jumps to the correct place.

Next are a few variables. Remember to make the PASSWD 6 characters long (as I've done in the DM statement). After this is the main program.

Now we come upon a new command, XOR (eXclusive OR). You've seen it before in the sound routines, and I've just been saying that it "flips bits". Well here's how. First you must have two numbers to XOR together. One is always in the A register, and the other is in whatever register or number which is given in the XOR command. The two

numbers are then XORed, and the result is placed back in the A register.

The command works by going through each bit in both numbers, and working out the answer on the following basis: 0 XOR 0 = 0. 0 XOR 1 = 1. 1 XOR 1 = 0. As an example below when we XOR two numbers together:

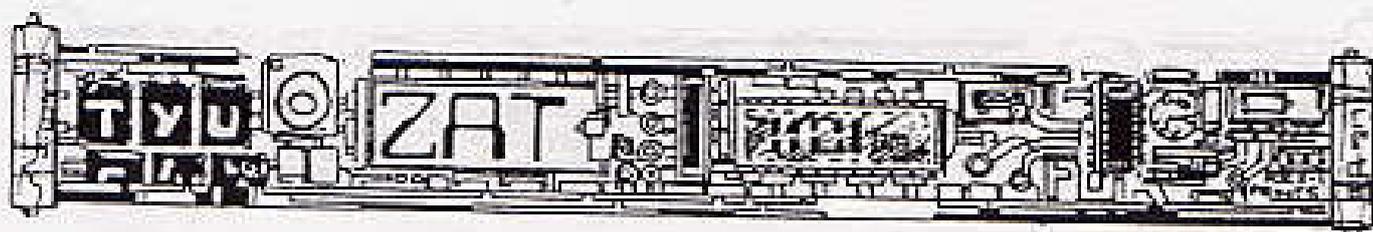
```
A = 10101010
XOR 11001011
= 01001101
```

Another way to remember it is that the top row bit is "flipped" if the bottom row bit is 1. This is how I remember it, and it is more practical as well. For example we wanted to "flip" bit 4 to produce sound in Codebreaker 2 and 3. This can be done with XOR 00010000, ie. XOR 16.

Now if we XOR A, we XOR a number with itself. And since each both bits XORed will be either 0 (0 XOR 0 is 0) or 1 (1 XOR 1 is 0), you can see that the result will always be 0. This result then goes in the A register. In other words it is another way of doing LD A,0. It is faster and takes 1 byte less memory.

Because there are 6 password letters, B will be used to count them, and HL points to the start of the password. We then XOR the value in the A reg with the byte pointed to by HL, and the result goes in the A register. Next we move HL on one address, and loop back if the entire password hasn't been XORed in the A register. What this small routine does is to create a password number from the 6 password letters. This is then stored for later use.

There are other ways of creating a password number (eg. you could add the



ASCII codes of all the letters together, for example). But I'm using XOR because it's fairly easy to use. Now we point HL to the start address of the data we want encoded, and BC holds the length of the data.

We then get the XOR byte in the A register again, and XOR it with the B and C register. This further mixes the password number with the length to go. It is then mixed with that memory location pointed to by HL, and the result is stored at that address. This is to make the hackers life even harder, because to get at your data, as well as knowing the password number, the length of the data must also be known as well (and if you're very mean you could encrypt the data in different parts with different lengths and passwords!).

Now we move HL up one address, and knock one off the length. Now we have to check if the length is nothing, because after each address the length counter will have been subtracted by one. When the length is nothing, both B and C will also hold nothing, and we will have come to the end of our data. New command number two!

OR is similar to XOR but here the result is calculated from the following rule: 0 OR 0 = 0 0 OR 1 = 1 1 OR 1 is 1. In this case the answer of each bit is 1 if the first bit OR the second bit is 1.

So if we put B in A and OR it with C, the result should be zero if all the bits are zero (ie. both numbers in B and C are zero), or not zero if any of the bits are one (ie. either B or C holds a number). Once ORed, the F register, as usual, will tell us if the result is zero or not zero. We can use this idea to keep

looping until BC is 0.

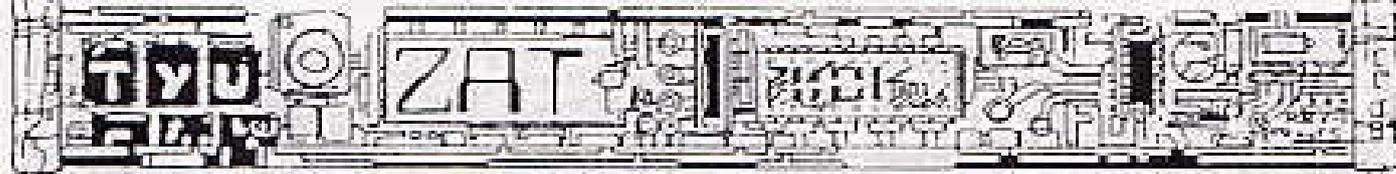
Why can't we just use DEC BC : JR NZ,encode? Well Zilog (who designed our wonderful processor), decided not to check if register pair is zero once we've DECed it. So examining the F register will not produce the correct result. Thus (I like using that word) we must check it manually. But they did decide to build in the zero check if you just DEC a single register. Weird I know, but the Z80 is full of little quirks like this.

That is basically the routine. We supply the password, start and length. It will create a password number from XORing the codes of the password letters. Then it will go through each memory address XORing it with the password number, and the length 'to go'. Then it will return. We can use the SAME routine for both encoding and decoding because if you XOR a number with a second number twice, the original number will be returned (try it out).

Now how to use it. Spectrum users should use the following:
 POKE 60004,256*INT (start/256); POKE 60005,INT (start/256)
 POKE 60006,256*INT (length/256); POKE 60007,INT (length/256)
 FOR a=1 TO 6: POKE 60007+a,p\$(a): NEXT a: REM p\$ is the password (6 letters).
 RANDOMIZE USR 60000

SAM users simply do:
 DPOKE 16386,start: DPOKE 16388,length:
 POKE 16390,password\$: REM 6 letters.
 CALL 16384

This will allow you to encode or decode. When you decode the length and password must be exactly the same as the encode, otherwise you will get



rubbish! Note that SAM owners can only access addresses 16384 to 65535. To get at the extra memory requires some extra programming, which is fairly complicated when it wants to be. This might be a problem because you might have some data which is outside this area. However you can use POKE MEM\$,... to copy it into this area (eg. LET screen_add=(IN 252 BAND 31)*16384+16384: POKE 32768, MEM\$(screen_add TO screen_add+24575 will copy the screen down into this area).

To encode a screen display Spectrum users should make start=16384 and length=6912. SAM users should copy the screen down and then make start=32768 and length=24576. To copy the screen back up use POKE screen_add, MEM\$(32768 TO 32768+24575).

I've also written a routine to ask for a password automatically. You must poke the start and length in as usual, but you can call 16386 or 60002 (depending on your computer) so that the password can be asked for. See if you can work out how it works (solution next time). Only capital letters will be allowed. You can DELETE off letters, and you can press ENTER once 6 letters have been typed to confirm your password.

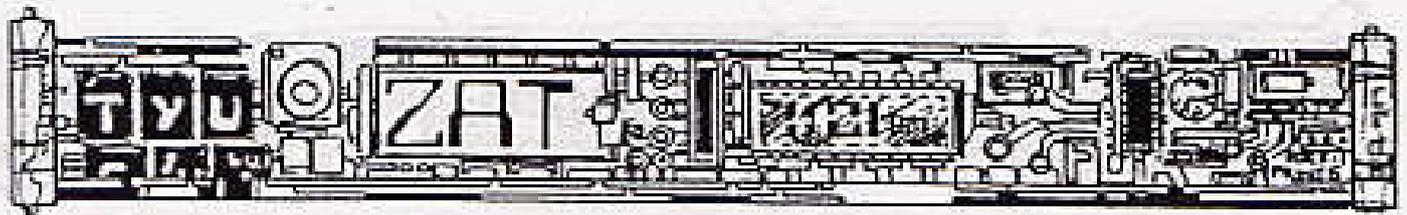
Programs 2 and 3 are the solutions to last months problems.

```
00010 ;PROGRAM 2: Keyboard read and quit
00020 ;Start 32768, end 32790, length 23. Relocatable.
00030 ;SAM owners! Can you adapt this to work with your key
00040 ;routines?
```

```
00050      ORG 32768
00060      LD A,2
00070 ;Change 5633 to 274 on SAM.
00080      CALL 5633
00090      LD HL,23611
00100      loop:BIT 5,(HL)
00110      JR Z,loop
00120      LD A,(23560)
00130      RES 5,(HL)
00140 ;if the up-arrow is pressed then return. Can be easily
00150 ;changed to whatever character you want.
00160      CP "↑"
00170      RET Z
00180      RST 16
00190      JR loop
```

```
00010 ;PROGRAM 3: Basic multi key read.
00020 ;Start 32768, end 32815, length 48. Relocatable.
```

```
00030      ORG 32768
00040 ;HL holds start address to POKE. C holds key port no.
00050      LD HL,60000
00060      LD C,254
00070
00080 ;Deal with Q. Look up block numbers in CB 5 to see how B
00090 ;chooses block number and AND selects a single bit from
00100 ;the result.
00110      LD B,%11111011
00120      IN A,(C)
00130      AND %00000001
00140      LD (HL),A
00150      INC HL
00160
00170 ;Deal with A.
00180      LD B,%11111101
00190      IN A,(C)
00200      AND %00000001
00210      LD (HL),A
00220      INC HL
```



```
00230
00240 ;Deal with O.
00250     LD    B,Z11011111
00260     IN    A,(C)
00270     AND   Z00000010
00280     LD    (HL),A
00290     INC   HL
00300
00310 ;No need to change block no. P
is in same block.
00320     IN    A,(C)
00330     AND   Z00000001
00340     LD    (HL),A
00350     INC   HL
00360
00370 ;Deal with M and SPACE.
00380     LD    B,Z01111111
00390     IN    A,(C)
00400     AND   Z00000101
00410 ;At this stage we have the A
register holding Z00000101
00420 ;if no fire key pressed or not
Z00000101 if either or
00430 ;both fire keys are pressed.
00440 ;Is no fire key pressed?
00450     CP    Z00000101
00460 ;if no fire key is pressed then
jump. At this point A
00470 ;is holding a non zero value.
00480     JR    Z,jump
00490 ;Otherwise set A to a zero
value to indicate that fire
00500 ;was pressed.
00510     XOR   A
00520     jump;LD (HL),A
00530     RET
00540
00550 ;The 5 locations will hold 0 if
the key was pressed or
00560 ;not 0 if the key wasn't
pressed. The locations start
00570 ;at 60000 (can be changed),
and are as QAOP FIRE.
00580 ;To check Q for instance use
```

```
eg. LET a=PEEK 60000. IF
00590 ;a=0 THEN GO TO move up
routine.
00600
00610 ;AND goes through the bits of
two numbers (similar to OR
00620 ;or XOR) and returns 0 AND
0=0, 0 AND 1=0, 1 AND 1=1. In
00630 ;other words it will clear any
bit in the A register
00640 ;whose bit number in the
chosen number to AND with is 0.
00650 ;in this case it will clear the
bits which are not
00660 ;important or which could
affect the result.
```

Next month be ready with that assembler! Bye.

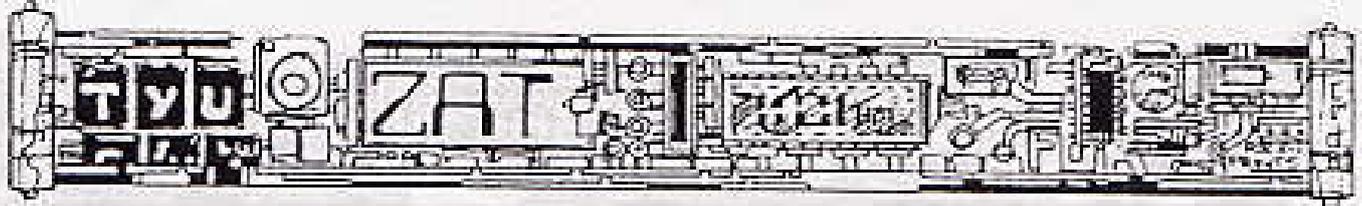
Program Box^{by} Steven Kemp

Serious Reading

As promised last issue, this issue I will be featuring a handy program for all you Spectrum coders. This program will print out the contents of nearly all the Z80 registers - except for IY (as BASIC needs that itself, otherwise it'll get lost!).

To use the program, type in the listing carefully, then save the program (Very handy this, in case you make a mistake!). Once you've done that you can RUN it whenever you want!

The code is fully relocatable - so you can stick it wherever you like in memory, within reason:



[But a little piece of advice before you type this in.

Please save the program regularly on a new tape, and make sure that ALL the DATA lines are correct before RUNNING it.

NOTE: You DON'T have to type in any REM statements! DL]

```
1 REM *****
2 REM * REGISTER V2.C *
3 REM *
```

BY STEVEN KEMP*

```
4 REM *****
5 REM *FOR ZAT ISSUE 15*
```

```
10 LET adr=40000
20 RANDOMIZE adr,CLEAR adr-1
30 LET adr=PEEK 23670+256*PEEK
23671, LET t=0
40 PRINT "Reading DATA, Please be
patient!"
50 FOR f=adr TO adr+147
60 READ a, LET t=t+a, NEXT f
70 CLS
80 IF t<> 17302 THEN PRINT "Sorry,
the DATA is wrong!", STOP
90 PRINT "Code now installed at ",adr
100 PRINT ""SAVE with, ""SAVE
""Register"" CODE ";(adr);",149"
110 PAUSE 0, STOP
```

```
1000 DATA 245,237,95,214,4,245
1010 DATA 221,229,197,213,229,229,62
1020 DATA 2,205,1,22,62,72,215
1030 DATA 62,76,215,62,6,215,193
1040 DATA 205,43,45,205,227,45
1050 DATA 62,13,215,62,68,215
1060 DATA 62,69,215,62,6,215,193
1070 DATA 205,43,45,205,227,45
1080 DATA 62,13,215,62,66,215,62
1090 DATA 67,215,62,6,215,193
1100 DATA 205,43,45,205,227,45
1110 DATA 62,13,215,62,73,215,62
1120 DATA 88,215,62,6,215,193
1130 DATA 205,43,45,205,227,45
```

```
1140 DATA 62,13,215,62,82,215
1150 DATA 62,6,215,193,72,6,0
1160 DATA 205,43,45,205,227,45
1170 DATA 62,13,215,62,65,215,62
1180 DATA 6,215,193,72,6,0,205
1190 DATA 43,45,205,227,45,62,13
1200 DATA 215,62,73,215,62,6,215
1210 DATA 237,87,6,0,79,205,43
1220 DATA 45,205,227,45,201
```

Steven will be back next issue, with some more SERIOUS READING.

BETA BASIC: £15.95

The ultimate Spectrum BASIC upgrade! Gives your Spectrum near SAM BASIC abilities! Contains the latest 48k and 128k versions on one tape.

BETA DOS: £9.95

Got a Spectrum and a Plus D interface? Then you must have this! Many GDOS commands improved in speed and reliability and many new features added.

MASTER BASIC: £15.99

The ultimate BASIC enhancement, for the already superb SAM BASIC! Many new and useful commands, and a variety of Speed enhancements on existing ones.

MASTER DOS: £15.99

The perfect companion for SAM's 1 Meg RAM Drives, and for people wishing to manipulate files. PC power disk handling ... without the price!

FILE MANAGER: £12.99

Loads of DATA to deal with? This program, with the aid of the above two utilities, will help you out!

GAMES MASTER: SPECIAL ZAT PRICE £22.50 (save £2.49!)

Ever wanted to program your own SAM game, but never felt confident enough with programming? This is for you! Fast in power, but easy to use. Games can run independantly, and can be sold freely!

BETASOFT, 24 WYCHE AVENUE, KINGS HEATH, BIRMINGHAM, B14 6LQ
Cheques made to BETASOFT

NEWSFLASHES

SAMCO SHOCK!

The worst news this issue has to be about SAM Computers Ltd. For those of you who don't already know, they have been forced to call in the receiver.

Although the current situation is bad - especially if you have ordered any hardware or software from SAMCo - as I speak there may still apparently be a slim hope of the company being revived. However, as I write this in mid-July, you will doubtless know if our hopes are true or not when you read this late July-early August.

If you are unlucky enough to have had any items on order from SAMCo, then please contact the receivers at this number, **0792 654607**.

In the meantime, SAM support is far from being destroyed. The SAM Supplement, Outlet, Fred, SofTrix, ZAT and Enceladus are all (apparently) carrying on as usual. As for the others SAM Publications, they will doubtless feel the same way. Also, as Bruce Gordon is currently responsible for his own company, SAM Technology, this firm may well be able to continue with the manufacture of SAM hardware - computers and interfaces. Although obviously, he has nothing to do with monies owed by SAMCo.

The only fly in the ointment is the software released by Revelation. Certain new titles are (at present) in a state of limbo. Some old ones may remain in this state for some time. However, the receivers are apparently trying to sort out an outlet for existing titles. Likewise, new titles which are not under contract, are now being "chased" by several SAM Publishers. One such publisher is ZAT's new full-priced label, ZAT-Soft. These titles range from "The Secretary" to "Plasmoid".

In a situation like this, we are unable to be as up-to-date as we'd like, due to being bi-monthly. However further news, if any, will appear in the last ever SAM Quartet 2 - available soon - priced £2.50 as it is a double disk

issue.

But what about the Newsdisk?

As ZAT readers may well know, I was until recently the Editor of the SAM Newsdisk. But, in light of what has just been mentioned it too is obviously now in the same state of limbo as SAMCo.

But this is where ZAT could come to the rescue.

Simply enough, there now exists a vacuum where the Newsdisk once existed; an area of information once supplied by the Newsdisk, that is now locked off. This need not be the case. Listen to these 3 ideas, and see what you think:

1) The most drastic thing that ZAT could possibly do, is to abandon the paper-based format that we have had for so long.

A magnetic media would mean that there would have to be, in effect, 2 ZAT's, one for the Spectrum (on tape) and one on disk for SAM.

Both mags would cover the same range of material as ZAT already caters for, but the Spectrum version would also contain Adventures, and PD software. The SAM version would include Newsdisk styled features such as the ROM Source listing, Hardware articles, demos of new or forthcoming titles, and special technical features. Also, an improved section for ordering full-priced and PD software would be created.

The down side would be the possible increase in price, and the lack of the paper based format. However, the mag would probably have more in, and be more machine specific.

2) We could stay as we are, and do nothing.

Fine, except although ZAT is popular, I feel that there is plenty of room for readership expansion. We may be limited at present. (Just for an example, the Newsdisk reached at least 10% of the SAM ownership miles more than ZAT.)

3) The idea which several readers I have already spoken to have agreed would be the best, the combination of 1 + 2, ZAT as is (more or less) and a sister disk and tape. The disk/tape would cover the areas listed in 1,

leaving ZAT to cover the normal range of stuff. There would be NO NEED to buy the disk/tape, but there would be plenty to make it worthwhile.

The only 2 main drawbacks to this idea, are once again the price; the disk/tape could be about £1.50 - £2 per issue, although should be value for the price and only NEEDS to be bought if you want it. The other is it may mean a week or two more in between an issue - but as this idea doesn't mean creating a full magazine, the time may not be that much.

Okay, that's the ideas. We would like to hear from YOU! We've always been proud that we would ask our readers about any big decisions, and this is certainly one! If we take this road of trying to replace the Newdisk, and to create an interesting extra for Spectrum owners, then we stand to be a more potentially "powerful" publication than we have ever been! But it is up to you! Please drop a line with your opinions BEFORE AUGUST 31ST, so we know where we stand.

PLASMOID

At present it looks as though Balor Knight's new title "Plasmoid" will be released by Fred Publishing, and not ZAT. However, it is still a "must buy" game, so put it at the top of your shopping list Arcade fans!

ADVENTURE PROBE

Due to financial and personal reasons, the long-running Adventure 'zine Adventure Probe has been forced to cease publication. But all may not be lost, as Mandy has been approached by at least 2 people seeking to publish the title. As one such potential publisher is myself, David Ledbury, I will inform you next issue if it is due to return.

If I am successful, the title should re-appear at the planned Adventure Probe convention in Birmingham, on October 25th. This event is still going ahead. If you wish to attend the convention, write (with an SAE) to: Mandy Rodrigues, Probe Convention, 67 Lloyd Street, Llandudno, Gwynedd, LL30 2YP

THE HOBBIT HITS UK!

For a change this issue, here is some good news! The Hobbit, the Russian

Spectrum "clone" mentioned a few issues ago, has actually made it to the UK!

This computer, despite being designed around the 48K Spectrum, features 64K ROM & RAM, a decent keyboard, disk-drive ability, a Cyrillic & Roman lettering keyboard (Russian or English), CP/M facilities, full networking facilities, and an improved - but compatible - BASIC. The computer also can be connected to a cheap disk drive, giving the facility to be file-compatible (not software compatible) with PC files.

The Hobbit costs £79.00, and the drive (3.5") costs £59.00, and is available from Intercompex - ADB Russian Services, Unit 8c, Feinstead Wharf, Ferry Street, Island Gardens, London E14 9BS.

QUEST RELEASES

Planned releases for this month from Quest Software include:

Doomsday - full details on leaflet with mag. Includes "Cell Of The Ridges" (48K "escape" game) and Leotrope (2 part SF tale - 48k)

Leotrope - available on +D disk (seperately) for £2.50 with PD game. Also on tape.

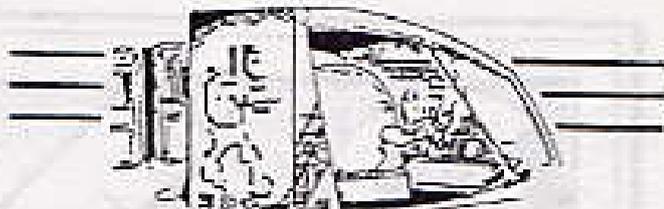
PRODOS Adventure Compilation - for SAM owners. 4 great Adventures, for only £5.50. Needs PRODOS to run, £5.00 to ZAT readers.

Disk versions from David Ledbury, 10 Westerkirk Drive, Madeley, Telford TF7 5RJ. Tape version from Scott Denyer, 9 Orchard Way, Flitwick, Beds. MK45 1LF.

Also, another VERY useful disk has just been released by ZAT, from the ever capable hands of Daniel Cannon.

Daniel, when not busy with seemingly thousands of other projects, has converted over 100 pictures from the Archimedes computer (nice machine, shame about the price!) to SAM format! And for a mere £1.50 (plus SAE) you too can sample this wide variety of pictures.

All of the pictures have been compressed by Daniel's POWER CRUNCHER program - (available on SQ2) but even so, the disk is so full that there wasn't even enough room for a DOS file! The disk is available from ZAT.



ARCADE ALLEY

Richard Swann & Co

Greetings gameplayers! Welcome to another action packed Arcade Alley, packed full of POKES for you to enjoy. Thomas Vanner seems to have been a little busy, so it looks like I'll have to take the reigns for now. Oh, and thanks must go to Steven Kemp for providing some of his POKEs again.

First of all, here's how to POKE:

- 1) Type out the listing, making sure you haven't made any mistakes.
- 2) SAVE the listing to tape so you can reload it next time.
- 3) RUN the listing
- 4) Start the game tape from the beginning.
- 5) Enjoy the game!

QUAZATRON (HEWSON)

```

10 REM QUAZATRON BY RICH
20 CLEAR 25000
30 FOR F=23296 TO 23349
40 READ A,POKE F,A,NEXT F
50 DATA 221,33,3,150,17,0
60 DATA 32,205,47,91,221
70 DATA 33,3,182,17,0,32
80 DATA 205,47,91,221,33,3
90 DATA 214,17,253,25,205
100 DATA 47,91,175,50,126
110 DATA 227,62,24,50,143
120 DATA 227,62,65,50,144
130 DATA 227,195,112,222
140 DATA 62,255,55,205,86
150 DATA 5,201
160 LOAD ""CODE,RANDOMIZE USR
23296

```

Multiface Pokes: 58238,0, 58255,24, 58256,65

MARSPORT (Gargoyle)

For immunity against common or garden aliens. It won't protect you against Wardens or Sept Warriors - but at least those aren't as common

```

10 REM MARSPORT BY RICH
20 CLEAR 24099, LOAD ""SCREEN$,
LOAD ""CODE
30 POKE 44053,0, POKE 45685,0,
RANDOMIZE USR 26960

```

SCOOBY & SCRAPPY

This program gives a choice of cheats. Type out whichever ones you want, but remember to include the last line (entitled "End Marker") in all cases.

```

10 REM SCOOBY & SCRAPPY BY RICH
20 CLEAR 65535
30 LOAD ""CODE
40 FOR N=64144 TO 1E9
50 READ A,IF A<>999 THEN POKE N,A,
NEXT N
60 POKE 64271,144
70 POKE 64272,250
80 RANDOMIZE USR 64256
90 DATA 175,50,187,223, REM INFINITE
LIVES
100 DATA 62,X,50,130,217, REM X
LIVES
110 DATA 62,201,50,239,229, REM
IMMUNITY
120 DATA 195,69,240,999, REM END
MARKER

```

RIPTOFF

The loading screen will not appear when you load this POKE, but the game will load and run as usual, giving you infinite lives.

```

10 REM RIPTOFF BY RICH
20 FOR N=23296 TO 23362
30 READ A,POKE N,A, NEXT N
40 RANDOMIZE USR 23296
50 DATA 49,255,95,243,211,33
60 DATA 120,142,17,129,2,62
70 DATA 255,55,205,86,5,48
80 DATA 241,33,28,91,34,158
90 DATA 144,195,254,143,221,33
100 DATA 0,32,17,192,31,205,155
110 DATA 142,243,221,33,0,96,17
120 DATA 155,46,205,216,142,243
130 DATA 221,33,0,143,17,0,113
140 DATA 205,216,142,175,50,99
150 DATA 138,105,53,142

```

And now, some more POKEs supplied by ZAT regular, Steven Kemp. Take it away, Steven.

Issue 13 was unlucky for some. The Cybernoid II poke ended up being printed wrongly (page 6), and I know how frustrating this can be. Line 100 should have read:

```
100 DATA 205,50,201,97,33,135
```

CHASE HQ (HIT SQUAD)

Strangely enough, this was actually one of the first games ever to be "tipped" in ZAT. (By Matthew Holt & David Ledbury) But, as it is now available on re-release, it's time for a good POKEing!

```
10 REM CHASE HQ BY STEVE
20 CLEAR 3E4-1:LOAD ""CODE
30 FOR F=5E4 TO 5E9:READ A
40 IF A<>999 THEN POKE F,A:NEXT F
50 RANDOMIZE USR 50000
60 DATA 33,52,166,54,195,35,54
70 DATA 94,35,54,195,195,0,166
80 DATA 33,115,195,17,0,64,1
90 DATA 11,0,237,176,221,33,0
100 DATA 192,17,0,63,195,0,64
110 DATA 205,79,166,62,201,50
120 DATA 253,128,195,0,91,999
```

Here's a little tip for you: Don't use turbo's until you catch up with the "baddy"! [And here's a tip from DL! Try defining your keys as S,H, O,C, K,E, D,ENTER!]

Looks like the end of the page is near, so I'll be signing off in a minute. But before I go, can I just say that I have recieved next to nothing from you lot as far as tips are concerned. Come on, don't be embarassed - we'll print anything you've got! Send your stuff to ZAT, 10 Westerkirk Drive, Madeley, Telford, TF7 5RJ.

Anyway, I'll see you next issue. In the meantime, happy hacking!

RS



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