

After Ceausescu's death in 1990 over 120,000 children were discovered living in grim institutions. In the county of Jud Bihor in Western Romania, children who had been assessed as 'mentally retarded' at the age of three were sent to an institution in the country village of Cadea. They were housed in old buildings that had broken windows and no heating or plumbing. It was dark and dirty and for the majority of the time the children were confined to their cots. Most of them were tied to the bars by strips of cloth tied tightly around their wrists and ankles.

The children were always dirty, hungry and cold - sixty to seventy died every winter. Their original 'retardation' was the result of early illnesses such as pneumonia and bronchitis, and years of confinement at Cadea only compounded the problem. When they were finally released in January 1991, many could neither walk nor speak. All of the children rocked backwards and forwards in their distress; their eyes were glazed and unseeing. On release, many of the children were sent to hospital buildings in the mountain villages of Remeti and Bratca. It is here that the White Cross started assisting the local Romanian staff in their care.

Since the White Cross has been working with the children, over 600 people have travelled with the Mission to Romania. Some have only been able to give a few days of concentrated work, most average two months and one stayed for four years! Some work with the children, others repair the buildings and yet others deliver goods. Every volunteer is special. They raise their own money for air and train fares, insurance, food and electricity and more than half of them do it all over again and go out for a second or even third time. Old or young, with or without qualifications, the combined work and presence of these many different people has had an amazing impact on the children.

Children with blank, unseeing eyes, rocking in a world of their own are now healthy, laughing and boisterous. The accumulative effect of the White Cross volunteers with their mixture of naivety and experience, their energy, their perseverance, their hopes, their dreams and their many different ways of showing love has created a rainbow effect of bouncy, confident and individual children.

Fundatia Crucea Alba has helped White Cross Mission with the legalities of purchasing small farms, employing assistants and moving children from the mental institutions in order to live a normal family village life. We intend that these farms will be the children's homes for as long as they need. All their lives if necessary.

Buying the farms is only the beginning of a lifetime commitment to those children we take out of State care. Without a regular financial safety net we would be irresponsible if we established too many homes. We do, however, believe that this is the only way forward and are desperate for substantial funding.

The White Cross Mission is a Charitable Trust Registered in England No 1021176
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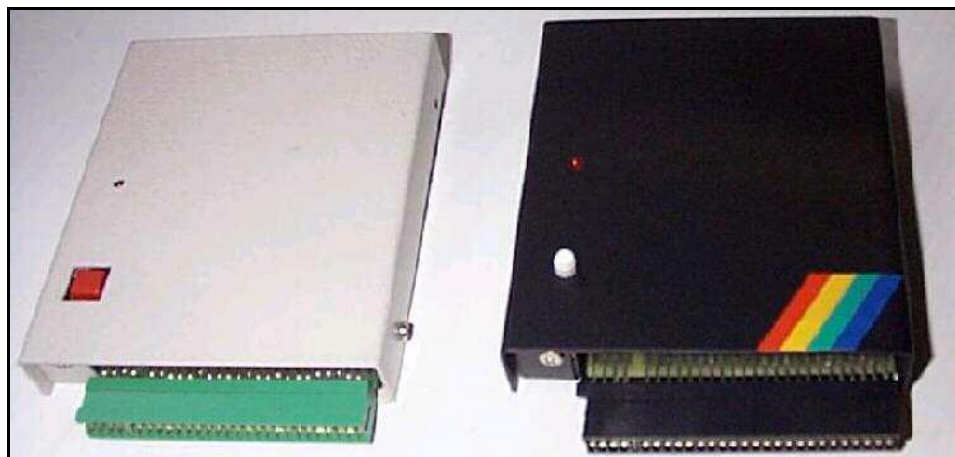
www.the-white-cross.ndirect.co.uk



07



www.zxf.cjb.net



www.worldofspectrum.org/NotThePlusD/

SO HOW DO I GET HOLD OF ONE?

Original Plus D interfaces can fetch a fair old price on **ebay** - especially if they come with a disk drive included - prices can often exceed £50. Also, they don't come around very often.

Alternatively you could try building your own Plus D clone. Designed by Philip Mulrane, you can download the schematics for this from the 'I can't believe it's not the +D!' pages at www.worldofspectrum.org/NotThePlusD/. Philip's own clone is pictured above on the right.

Sintech (www.sintech-shop.de) have been making and selling these clones for a while now, so you don't have to be an electronics whiz to be able to get your hands on one. The Sintech

clones come uncased, however. So you might have to try your hand at a bit of metalwork (the Plus D's metal case doubles as a heat sink) if you're one to blush at the sight of it naked.

Another thing to bear in mind is that Plus Ds generally don't like modern floppy disk drives. You have to remember that at the time of its original creation high density drives weren't around yet - and today it's not possible to walk into a high street shop and buy anything other than a high density drive. Also, modern floppy drives are designed with the PC in mind. Happily, Sintech can also supply you with a compatible drive for around £17.

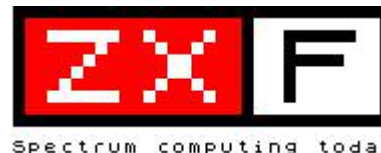
SO HOW DO I EMULATE ONE?

If you can't wait for the next version of **Spectaculator** (or can't afford it), **RealSpectrum** from **Ramssoft** (www.ramssoft.bbk.org) has supported the Plus D for some time now. The support this emulator gives is mightily impressive actually - not only can you work with Plus D disk images on your hard disk (these go by the extension .IMG), but you can actually access real Plus D formatted disks from your PC's floppy drive. Alas, this feature is not available in **RS32** - the Windows port of RealSpectrum - and the DOS version in which it is available tends not to work on Windows XP systems. You can still work with Plus D disk images in RS32, however.

What's more, search for "Plus D" on **Sinclair Infoseek** at WoS and, right at the bottom of the page, you'll see a file called 'plusdtools.exe'. Download and run this and it will extract to a number of small DOS programs which appear to run quite happily on Windows XP, using your PC floppy drive to work with real Plus D formatted disks. They include:

SCAT.COM - CAT A: or B: of diskette (Type "SCAT /?")

SPIM.COM - Copies diskette image to Harddisk (Type "SPIM /?")



SPRING 2004 Issue 7

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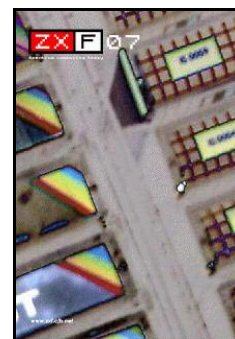
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If you enjoy **ZXF** and you want it to continue then consider yourself duty bound to let me know this (mailto:cwoodcock.co.uk or by the feedback form). All other feedback will be gratefully received too.

ZXF now has a voluntary purchase scheme. If you have downloaded and enjoyed an issue of **ZXF**, and if you are able to afford to, please consider paying £1 for your issue via the Paypal button on at the **ZXF** website ('magazine' page).

If you would like to contribute to future issues of **ZXF** - even if it's just to write a letter - **please do**; contact me again by the email address below.

Editor: Colin Woodcock (mailto:cwoodcock.co.uk)

Website: www.zxf.cjb.net

Contributors this issue: Kevin Bennet, Matthew Harrodine, Matthew Westcott, Nick Humphries, Darran Jones, James Zeun, John King and Thomas Eberle. A big thankyou also to all letter writers.

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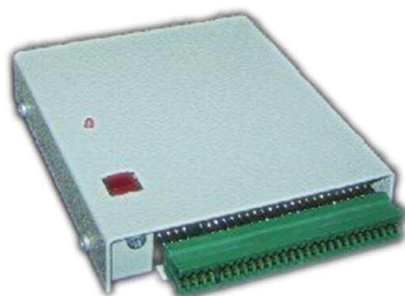


ROUGH GUIDE TO THE PLUS D

As ZXF07 is being written, Jonathan Needle is working on Plus D support for the next version of Spectaculator. Just in case you're wandering what all the fuss is about, here are a few bits of information for you...

SO WHAT'S A PLUS D THEN?

Released in 1988 by **Miles Gordon Technology (MGT)**, the Plus D was a disk interface that allowed you to connect to your Spectrum pretty much any of the standard disk drives of the day. The interface was the successor by about two years to MGT's magnificent **Disciple** interface (a rival to the **Sinclair Interface 1** which sat underneath the Spectrum - just like the IF1 - and also could connect to most standard disk drives as well as boasting ZX Net compatibility) and included also a 'magic' snapshot button and a parallel printer interface. It was compatible with most software designed for the Disciple and - due to the Disciple's own heritage - ZX microdrives. The original Plus D was black; the interface was later bought up by **Datel** and re-clad in a beige case (pictured right).



WHAT'S SO SPECIAL ABOUT IT?

The Plus D was more than just another disk interface. The functionality of a Spectrum 128/+2 fitted with a Plus D system (interface and disk drive) far exceeded the functionality offered by the other main upgrade route for Spectrum owners at the time - the Spectrum +3. And upgrading to a Plus D was cheaper. At the start of 1989, for example, a +3 with a **Multiface 3** (a peripheral for the +3 by **Romantic Robot** with its own 'magic button' for creating snapshots files - the +3 itself came with nothing like this) would have cost you £245; a Plus D system was faster, larger (up to 780k), had a much more sophisticated OS, was more compatible with existing Spectrum software than the +3 was, and cost just £140. The sheer power of a Plus D system, therefore, made it extremely popular with those who owned it. Although it was never supported by commercially released games, a very loyal user-base evolved; the system was supported by the long running **Format Magazine** (pictured left) of the **INDUG** user group.



MUSIC

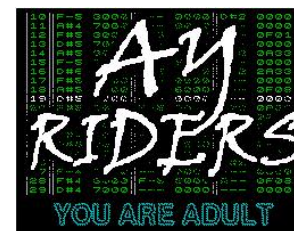
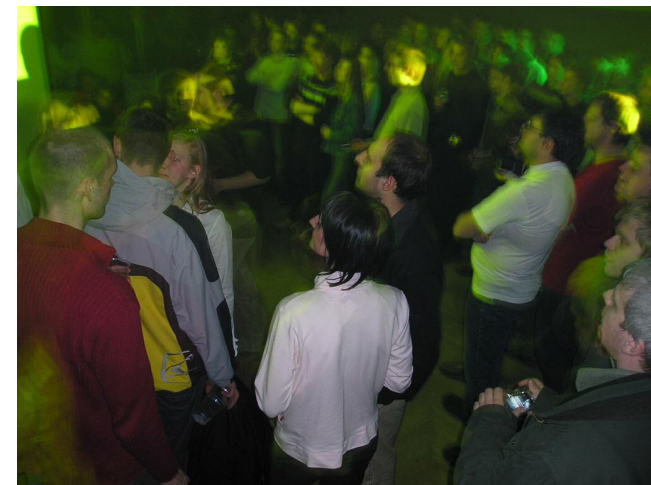
THOSE BUSY RIDERS

>New album/ZX album/Warsaw gig

Once again those 8-bit tune masters, the AY Riders, have released a new record. '8 Bits is enuff' is their third MP3 release of music crafted entirely from the Spectrum 128's AY chip and follows on from their 2003 album of covers, 'Do you remember?'. The team have changed slightly since then, with Megus moving on to PC music, to be replaced by a new member, the clearly very talented C-jeff. And this is their longest release, with no less than 31 tracks. <http://ayriders.zxdemo.org/>

So, with three records under their belt, the next milestone has to be live performance, right? And it all happened at OFF Club in Warsaw on 28 February, pulling in an audience of over 200, reportedly. Pictures, from which this one is taken, available at the Riders' site - and a report by Rider **Matthew Westcott** starts below.

Whilst you're there you might also like to check out a new release of the Riders' original record **You are adult** for the Spectrum itself. This is the first of the records to be released in this way (in .TAP format) so that the music can be listened to the whole album on the machine that actually created it. It's a rather snazzy interface too.



AY RIDERS PLAY WARSAW

>Matthew Westcott (aka Gasman) reports on the concert

2am, Sunday 29th February 2004.

Everything was quiet after a night of non-stop chip music. 250 revellers were heading home, dazed from experiencing a concert like no other. Equipment was packed up and piled high in car boots, and we were on the drive back to the home of Wojtek, the main organiser, to catch some rest. That's when Wojtek posed the question: When you first heard the suggestion of an AY Riders concert, what was your initial thought?

Factor6, TDM and I were in agreement - we all thought it was a stupid idea.

It was back in September, at the drunken get-together known as International Vodka Party, that the idea was raised. Yermzyey announced to the assembled Riders that a club owner in Warsaw wanted to host a live performance of the band. We immediately started wondering how on earth

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ZXFM

>Starglider Radio Launches

What do you do when you're bored on Boxing Day? Launch a radio station, that's what! So decided **CSS** veteran **Starglider** this year, spotting an eight bit gap in the growing phenomena of online radio. Ok, so there's no Chris Moyles to talk between the tunes on this new ZX Radio service, but when they're all Spectrum AY tunes who needs that sort of banter anyway?

Containing an ever expanding playlist, from which tunes are played at random, **Starglider Radio** is even open to requests (although the list - at the moment - is being restricted to game tunes only). You can listen to it at www.starglider.dynu.com/radio/



bit computer. Indeed, for the money these were impressive features but they weren't quite what they seemed.

The Motorola 68008 wasn't a true 32 bit processor, the multitasking was simple and the windows were fixed tiles with no overlapping. The supposed full travel keyboard wasn't popular either, being merely plastic keys over a rubber membrane. Reliability issues with the twin built-in microdrives were caused by cramming 100Kb onto a cartridge; remember that ZX Microdrives held 85Kb and weren't perfect at that! Add to that the fact that Psion's software needed to make lots of use of the microdrives and it was a recipe for disaster. The very first QL's held part (or all, there are conflicting stories) of the ROM in a box or dangle outside the machine connected to the ROM port. Sinclair's official excuse? The original ROM wasn't big enough for all the juicy features! Unofficially, it may have been because Sinclair had the boards manufactured before the ROM was finalised. This was further evidence that the launch was rushed.

Just one month later, Amstrad launched the CPC464 which for just £30 more could be had with a dedicated colour monitor and a proper disc drive. The CPC made equal inroads as a games and business machine thanks to its bundled CP/M operating system, 24 colour palette and true 80 column text mode. The CPC is the machine Sinclair Research should have created and I feel that this is only reinforced by Amstrad's "bargain" buy out later in the decade.

The ZX81 won't die...

Sinclair's original blockbuster, the ubiquitous ZX81 was still around and selling well. Rumours that it was due to be canned were seemingly true but by February Sinclair had changed its mind; the

machine just kept on selling. Except of course in the USA where by the time May had rolled around, Sinclair's licensee Timex had announced that it was giving up on the computer market altogether. Timex bosses correctly predicted market saturation and difficult times ahead for the microcomputer industry.

A makeover for the Spectrum...

The Spectrum+ was launched late in 1984 and although it wasn't really a new machine it helped to rejuvenate Spectrum sales, especially for the all important Christmas period. Quite simply, the Spectrum+ was a standard 48Kb Spectrum in a different box with a QL-a-like keyboard. It cost £179.95 while the original rubber keyed Spectrum remained available at £129.95. In fact, people could even buy just the box (£50 for the privilege!) and recase their existing Spectrum. Sinclair never missed a trick.

It is disappointing that, with all of Sinclair's attention turned towards the QL, no new technology or real improvement was available or was made with the Spectrum+. There were no new Sinclair peripherals announced for the Spectrum during 1984 and in fact some, like the ZX Printer, were shelved. Sinclair was neglecting the core of its business.

The early Spectrum+ keyboards had a tendency to fall apart as Sinclair skimmed on the thickness of the plastic and the strength of the glue. More bad publicity ensued and retailers reported that anything up to 30% of Spectrum+ computers sold were returned because they were faulty. Sinclair stated this was due, in part, to "inexperienced first time users". A little unfair maybe? To compound things, the Spectrum+ used the Spectrum Issue 3 board which had been the subject of criticism earlier in the year for introducing software incompatibility. Yet more bad publicity but on this occasion,

Sinclair's defence was valid; software producers had been making assumptions about undocumented aspects of the firmware.

In May, Sinclair struck a deal with Samsung Electronics of Korea to manufacture and sell the Spectrum in the region. This was only one of many licenses granted for manufacture, assembly or sale of the Spectrum overseas but as an event, this deal stands out. Clearly, and perhaps unsurprisingly, Samsung's quality control was much better and it wasn't long before Sinclair halted UK production and began retailing the Korean Spectrums in the UK. Turn over your Spectrum or Spectrum+ and have a look - can you see a Samsung stamp on the base?

Software...

Although I said in retroSpective 1983 that I knew of few or no Spectrum cartridges I was proved wrong. And not just by the picture of many cartridges that appeared alongside the last installment! February 1984 saw the launch of further ROM based titles for the Interface 2. These included the classic 'Jetpac' by Ultimate.

Generally though, third party software houses were beginning to have a tough time of it. In May, Spectrum stalwart Imagine Software cut prices of its software titles to £3.95 each. This was probably a desperate bid to improve sales. The following month, after threats from dealers to stop stocking Imagine software altogether, they were forced to put their prices back up to £5.50. By September Imagine was gone - dissolved by court order and inviting the attention of the fraud squad although no charges were ever brought. Rabbit Software, most famous for their 'Race Fun' title, was also liquidated. On a more positive note, BT entered the fray with its own Firebird label offering some pretty decent titles

night... Yertz ended up having to supervise every transition between tracks, while acting as translator for the rest of us. Getting the timing right for the changeovers was a nightmare, and usually involved plenty of shouting and improvised hand signals across the table.

And yes, there were some technical problems... the dreaded edge-connector wobble made an appearance just a few notes into my track 'Primality', after I tapped the keyboard a little too hard, causing the music to crash into oblivion. On a couple of occasions, stray beeps and keyboard clicks escaped from computers that really should have been muted out. The mistakes weren't really a big deal, though; most of the time the audience were enjoying themselves too much to notice or care, and the rest of the time they accepted it for what it was, the inevitable consequences of using genuine 20-year-old retro hardware - after all, that's what live music is all about, right? - and in general the audience were very appreciative. Perhaps a bit too appreciative on a couple of occasions, in fact... one such time was during my second attempt at playing 'Primality', when a girl came up and tried to start a conversation with Yertzmyey. All the frantic gestures in the world couldn't keep her away from the stage - she clambered over a bit too enthusiastically, and nudged the table causing my +2 to crash again :-/ ... luckily it was near the end of the track anyway, and TDM was poised to launch into his next track, Electric City.

All the while, the large projector screen played a continuous display of demos, prepared by Yertzmyey - and although we had no real way of synchronising the visuals to the music, this proved very effective. It was a very proud moment for me when my own demo Losing Victoria came up, and I saw people in the audience

taking time out to admire the visuals.

In the 90 to 120 or so minutes that we played, we managed to cover an eclectic mix of styles, from the chilled to the hardcore, all while keeping the pace up for the more energetic visitors. It's been a tricky business to reassemble the playlist from our combined memories of the night, but here's our best shot:

Yertzmyey: Koto Mix
Gasman: Summer Mood (Megus)
TDM: Neverending Story
Factor6: Blah Blah Gal
Yertzmyey:
[Gasman: Primality, aborted]
TDM: FA Intro
Factor6: I Am Fine (X-agon)
Yertzmyey:
Gasman: Primality
TDM: Electric City
Factor6: Bits Main
Yertzmyey:
Gasman: Losing Victoria
TDM: Genetic Error /End
Factor6: Angeldust
Yertzmyey:
Gasman: Around Past (C-Jeff)
TDM: Super Grand Prix
Factor6: DJ Factor6
Yertzmyey: 30 Minut
TDM: Exception
Factor6: Co Ja Vim (X-agon)

My only real regret about the concert was to do with the way the venue was set up - there was a disconnect between the audience and ourselves, because we were stuck behind a wall of computers and monitors (hmm, I suppose that concept worked a bit better for Pink Floyd...) and the big screen was at right-angles to us, so they weren't facing our direction for much of the time. As a result, we didn't really get to hear much audience feedback for ourselves, but the messages that were relayed on to us by Wojtek were overwhelmingly positive. The comments ranged from heartfelt thanks from nostalgic old-timers, all the way to rave reviews from newcomers experiencing the music as if it was from another world.

One bit of feedback we did

receive first-hand came shortly after midnight, just as the organisers were starting to turn the lights up and usher people away. A big burly guy came up to the non-Polish-speaking members of the group, and demanded to know why we'd stopped playing... for a moment it looked as if we were going to be threatened at knifepoint to start up the music again! TDM meekly pointed him in Wojtek's direction, and on seeing the friendly animated chat that followed, it quickly became clear that he was just one more very enthusiastic fan...

And so to the future. The experience was one we're keen to repeat, and while we have no more confirmed dates at the moment, there's been some talk about future gigs elsewhere in Poland - and daydreams about venues further afield, too. I for one hope that the day will come when Megus and C-Jeff will be able to join us for a performance. For now, the folks of 8 Bit Front have their sights set on a much bigger concert in Warsaw - thousands of visitors rather than hundreds - in a very dramatic-sounding location (I can't give too much away yet). The plan is to give the band and the computers a more central role, while the demo visuals light up the stage around us. And, most importantly, we want big screens showing the soundtracker display.

Why so important? Well, just try showing a tracker screen to someone from outside the scene and you'll see. As they gaze at the digits scrolling away, you'll hear them make a comment that perfectly demonstrates how micromusic will capture the imagination of the world, given the chance.

"Woah, it's just like the Matrix!"

© 2004 Matthew Westcott

SPECTRUM +3 SOFTWARE AND SPARES



HARDWARE:

3 inch 180K disc drive for +3. Reconditioned with 3 months warranty £10 each. These drives can be supplied with cream coloured facias in place of the black facias if wanted -- just ask.

Belts for the 3 inch drive £1 each. New. Loads available. (Just send a S.A.E. with order to cover postage -- correct for up to 20 belts).

Monitor lead to convert +3, +2 and +2A to use an Amstrad CTM644 colour monitor. £4 each.

3 INCH DISCS:

3 inch Blank discs: Second-hand good quality Amsoft or Maxell only supplied. All have been reformatted, verified and relabelled. 80 pence each or £7-50 for ten. Larger quantities available 100 for £65, 1000 for £450.

Sometimes available new 3 inch discs at £1 each, please ask.

JOHN R P KING

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GAMESTM

>New editor for Retro supplement

So, whilst **Retro Gamer** is doing a good job at winning our hearts and minds, the **Retro** supplement of monthly games magazine **GamesTM** has gone and got itself a new editor in the form of Darran Jones. Starting very positively in November 2003, with a **Crash** cover, a big feature on the Spectrum, another on **Ultimate** and a history of video gaming written apparently by **Newsfield's** mysterious **Lloyd Mangram**, GamesTM's Retro mini-mag has since earned criticism from the eight bit community for its subsequent over-focus on consoles. All this might be about to change, according to Darran, so ZXF took the opportunity to have a few words with him about this.

What's your background in retro gaming? Do you have any favourite platforms?

Playing on my Aunties Binatone system is one of my very earliest memories, but it was the good old Spectrum that was my first true gaming love. Since then, I've followed the majority of machines released and also have a special place in my heart for my import SNES which I foolishly traded for an Amiga 1200 (I had over 70 SNES games and I still feel sick about it now).

What sort of changes do you have planned for the Retro section of GamesTM?

As with any sort of changes, they will happen, but slowly. One of my biggest goals is to provide a greater balance to the section as it's always had a heavy emphasis on the console side of things. I'm also planning to make sure that our readers are aware that there are still plenty of games being released for many of these supposedly dead consoles and computers (not too long now until Turrican 3 on the C64). As of issue 19 you should start seeing several changes, with the section starting to appear as more of a mini mag in its own right.

In Live Publishing's 'Retro Gamer,' we now have a magazine dedicated in its entirety to retro gaming (and doing well, it sounds); is there an awakening going on within the mainstream magazine media towards retro gaming as a new 'gap in the market' and does your appointment reflect this?

In many ways I see gaming as being similar to fashion. Look around at the moment and a lot of cloths are now heavily influenced by the Eighties. The continuing succes of Retro Gamer is great to see and I certainly see the magazine as great competition for gamesTM's retro section. Of course, it's only little old me on my lonesome (as opposed to a dedicated writing team), but nevertheless Retro Gamer's success is a great indication to how popular retro gaming currently is.



CONGRATULATIONS TO SHAUN BEBBINGTON!

>Retro warrior to work for new magazine.

Micro Mart columnist **Shaun Bebbington** has played a major role in the promoton of the retro scene in the mainstream media; his **Retro Mart** column in Micro Mart has worked hard at promoting current developments across a wide range of platforms, including the Spectrum. ZXF is therefore delighted to learn that Shaun will be taking up a position of staff writer at **Retro Gamer**, following his extremely informative article on Commodore in issue two (worth reading for the William Shatner ads alone). Well



Blink

Author: **Colin Woodcock (Published by ZXIF)** Price: **£1.99** Website: **www.zxf.cjb.net**

Reviewer: **James Zeun**

Editor's note: James contacted ZXF wanting to review an adventure game and I offered him the challenge of writing a review for **Blink!** For those of you who aren't aware, **Blink** is the first title to be published by **ZXIF**, ZXF's very own software label. You can play the game online for free at **www.zxf.cjb.net** or pay £1.99 to receive the game on a shiny new cassette. **CW**

So there you are out for the day, browsing round a souvenir shop. When the most unexpected and unfortunate thing happens whilst picking out a gift for dear old mum. Time decides to stop, and Bart the bald, middle aged engineer recruits you to help him. Confused? You will be.

From this point on, you are thrown in to the strange and confusing adventure known as **Blink**. A time-stop story, filled with enough jokes and humor to put a smirk on an undertaker.

Being as its 2003 and **Blink** is a text only adventure game designed to run on 48K, one might think the developer of **Blink** is either insane or knows something we don't.

Developed using PAW (Professional Adventure

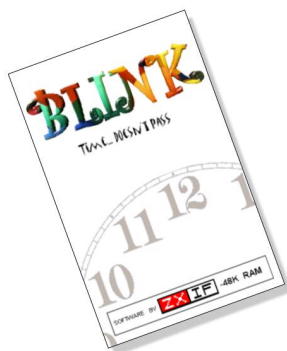
Writer...That's a mouthful eh Ed?), the game operates via a set of predefined key words. These include, NORTH, SOUTH, GET, DOWN, EAT, CLIMB ect. This might seem complicated and slightly intimidating for beginners. But for seasoned adventurers the system will be more then familiar.

In most cases all one needs is a good amount of common sense. To tell the game what it is you want to do. However at times the game can get frustrating. This is often when your objective is clear. But how you tell the computer what to do isn't.

As I said before this problem will most likely only apply to beginners. People who are not fully versed in the common commands used in text

adventure games.

BLINK is without doubt worth the money and a worthy addition to anyone's collection. If you've never tried a text adventure game. Then you couldn't go far wrong with trying this game.



>LOOK

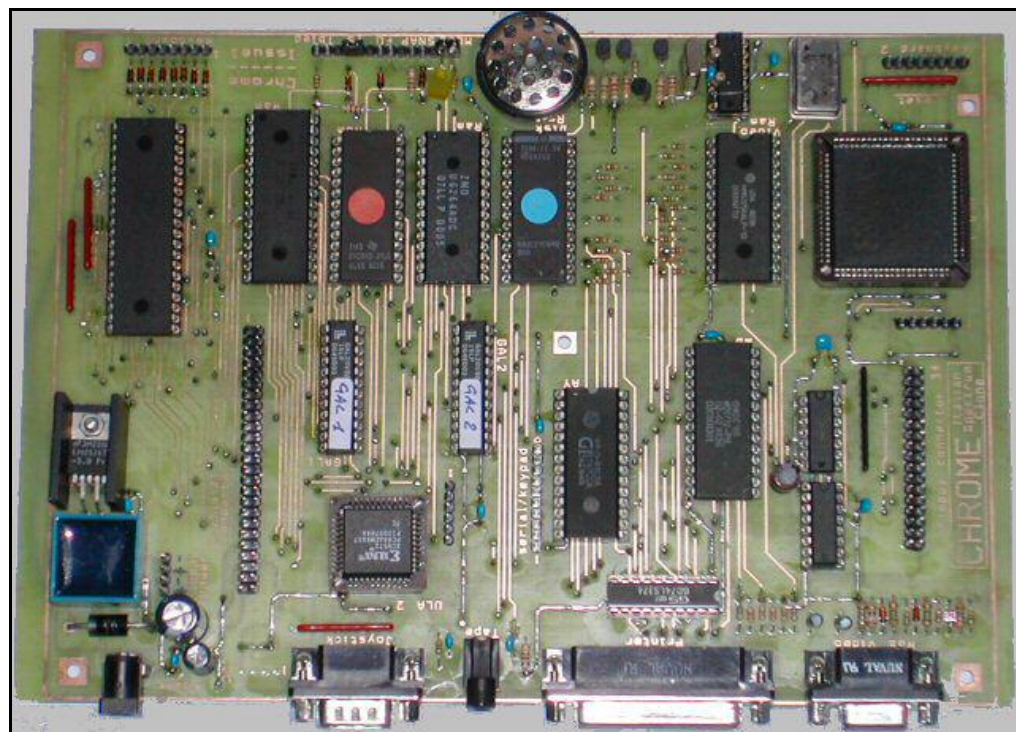
SARAH'S SOUVENIRS

A Cornish souvenir shop. Frozen in time. No really. Everything is still. Everyone is frozen. It's like musical statues done bizarre Cornish holiay style. A woman over here is gazing in fixed appreciation at a crystal dragon and her partner is stuck sneaking a glance at his unticking watch. A kid over there is tugging at his father's shirt sleeve with one hand and pointing out the latest in hollow plastic ball projectile technology with the other. An ice cream scoop hovers mid-way between an unattended cone and a pastel-pink floor tile. Everything is stopped. Except me.

Fancy getting your adventure game published with ZXIF? We can make absolutely no promises about money - Spectrum adventure games are a minority interest within a minority interest - but you will get to see your game presented professionally, and it should even get an entry on WoS! If you have a previously unreleased piece of Spectrum Interactive Fiction and would like to see it released under the ZXIF label, just drop us a line at zxif@cwoodcock.co.uk.



HARDWARE



CHROME COMPLETE

>Italian Spectrum clone finished

Many of you no doubt are aware of **Mike Wynne's SpeccyBob** project, but did you know a similar attempt to clone the Spectrum is now complete, with details available at <http://aticat.altervista.org/>. Here's a description of the project taken from the site:

Chrome project was developed starting from Speccybob design (Thanks Mike) but while speccybob was made only with TTL chips, Chrome features 2 CPLD from Xilinx that emulates not only 48K spectrum but a more powerful 128K, 7 MHz Z80 clock and floppy disk interface. This means also a very small number of chips and a compact board too.

Every logic devices are fully reprogrammable on board enabling changes to original design in real time.

Chrome Specification:

Cpu	Zilog Z80C, Clock frequency 3.58 / 7.1 MHz
Ram memory	64K (spectrum basic), 8K Disk rom
Ram Memory	160K (paged in 16K chunks), 8K Disk ram
Sound	3 channel, 7 octave, white noise, stereo output, 1 channel internal speaker
I/O	Joystick interface Kempston compatible, Expansion port, I2C interface, parallel printer out
Storage	Cassette recorder, Floppy disk 800K capacity
Display	Graphic 256x192 pixels resolution, 16 colors, Analog RGB Scart output

Chrome is a self-build project, of course - this is not something you can buy. All the schematics you'll need if you're up to such a job can be found at the website, as well as relevant links - for example to the Xilinx website. Remember folks - real Spectrums won't last forever: at some point we'll need to build some new ones, and it won't be any good relying on custom ULA chips when we do! This, therefore, is very good work.



Fun Park

Author: **Jonathan Cauldwell** (Published by **Cronosoft**) Price: **£1.99** Website: **www.cronosoft.co.uk**

Reviewer: **Kevin Bennet**

Theme park was written by Bullfrog software back in the days of the Commodore Amiga, Megadrive and 486 PCs. The game has always had a simpli-city amongst other god sims and environment games and although reworked and added to never quite emulated.

Jonathan Cauldwell

Then... sqQueesed into 4K of Spectrum RAM by Jonathan Cauldwell for the 2003 Minigame competition [Amusement Park4000] was it an act of slough, layness or genius... or of genius sloth to maximise the game for 16K of RAM with the new name of Fun Park? [1] Considering the 16Bit home computer and PC versions being so defined and sophisticated some may ask or ponder what you could genuinely do with 16K to achieve the basic playability & durability of the simple mechanics/ design? (The 4K version was awarded silver in the competition, highest Spectrum winner.)

It is excellent to see the Minigame version being developed as I hoped this would be the case due the potential shown in 1 and 4K of RAM within the competition enteries. To put the brain stretching idea into context you have a large environment game with graphics and constant variable data and gameplay that redefined the genre... and the might of the Z80 processor and 16K of RAM (also it's a chilly day and raining/ hailing outside.... always something to do with environment control.) If the game plays and works as we would expect from a sim then Mr

Cauldwell should be glazed in honey and have the bees set loose... naughty... naughty spank spank.

Cronosoft. [www.cronosoft.co.uk]

The game is supplied with and through Cronosoft on cassette or as an email .tap file for emulation. This is an excellent idea as it is self marketing for the Spectrum and its continuing as well as a really effective Windows runtime that can be running in the background. [2] The artwork of the Cronosoft inlay and the progression of the coordination of the artistry of their business is increasingly evident with this title and I am looking most forward to receiving my copy on .

After loading the game the



Spectrum presents a nice loading screen and goes to an introduction screen showing (c) Jonathan Cauldwell 2004 and a

polite scrolly. Here I thank Jonathan for his nod for my efforts in small support. Thankyou for the nod Jonathan. I am of course convinced that the scrolling colour border is nicked right from the Micromega classic 'A Day in the life'

An idea of the game and play

The game screen presents a green field with the front wall and an entrance. The manual explains the game keys, the usual QWOP/ M and SPACE with number keys for building and finance/ options. The green field is soon left behind with the building game characteristics as you define your Park and the rides, ticket prices and investments such as research (for new rides and decore) security etc. and aim to keep the little people happy. Try and resist the overspend and the loan as new and intriguing rides appear form your research department, and the challenge of clawing out of debt. Pump those little people for their cash ...hehehehe, and watch them run away...sniff boo hooo...

The author promises much deborched behaviour with pubs, ride deaths and the need for security, all in good mini-ised pixel fun with every polite and cuddly assurance for those of a sQuemish disposition. ... A while after making some good money from my park I have boosted research to the max of 99 and invented the park bench! I wander what colour it is and whether there are signs warning of the recent painting. Will have to wait until the money is rolling in before I can play with the go-

> WORK IN PROGRESS AT WWW.ZXF.CJB.NET



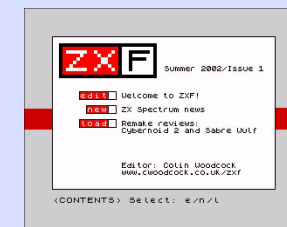
Sinclair Branded: a website work in progress.

released by Sinclair during the first couple of years of the Spectrum's life, including cassette inlays, instruction booklets and promotional material. As a taster, you can already download a complete PDF version of the **1983 Software and Peripherals Catalogue** from **WoS** (archive > company pictures > Sinclair Research Ltd), prepared by yours truly over the Christmas holiday.

ZX PAW will be a small area of the main site dedicated to the Spectrum version of the **Professional Adventure Writing System**, gathering together a few key resources and a collection of links to other articles and online help. Essentially this will aim to be the number one resource for anyone aiming to develop new

adventures for the Spectrum using this wonderful utility.

TZXF is another new project - a version of this very magazine for the Spectrum itself. Once again, this is likely to take some time, but the conversion of the first magazine is already underway, using Sinclair's very own **Print Utilities** code to provide a nifty 42 column font for easy readability.



ZX IE Bar

>Search bar from Gerard Sweeney

An increasing number of ZX sites have search facilities on them these days; if, like me, you have come to find yourself spending ages flitting from site to site, trying to track down that 'thing I saw a few weeks ago' then this little baby'll do you well. Released on Christmas day, the Speccy Search Bar from The Tipshop's Gerard Sweeney scans all of the following for your entered search terms:

comp.sys.sinclair (via Google Groups)
Crash Online - internally and via Google
Demotopia - internally and via Google
Planet Sinclair III - internally and via Google
Sinclair User Online - internally and via Google
The Tipshop - internally and via Google
WOS (you can specify a preferred mirror) - internally and via Google
YSAC (<http://www.yoursinclair.co.uk>) - internally and via Google
YSRNY - internally and via Google

Currently at verion 1.3, the search bar installs into a little strip across your Internet Explorer window and can be downloaded from **www.the-tipshop.co.uk/ssb/**. Nice one.



ZX MAPS ONLINE

>New site for game navigation

Meant to mention this last issue, but ran out of space; it's a new Spectrum maps site by Pavel Pliva, author of **ZX Screen Snapper** and **ZX Maps Creator**. Clearly Pavel has an interest in game maps, so his new website, **www.zx-maps.wz.cz** is kind of a logical think for him to do I guess.

It's a very well-presented site, easy to navigate and one not afraid to get stuck in at the hard end. Take his map for **Nonterraqueous**, for example: an immense 6144 x 7392 pixels. It all gets easier from there.

There are currently well over two hundred maps to browse online, created by Pavel and others, ranging from **Action Biker** (I can't believe just how small the dark area actually is) to **Zorro**. There are also rather nifty zoom controls to allow you to view as much or as little of the map as you want on screen. Well worth a visit.



Fire and Ice

Author: **n-Discovery Group** Price: **Free** Reviewer: **Colin Woodcock**
 Website: www.n-discovery.narod.ru/games.htm

Let's put this simply: if **Fire and Ice** had been released in the late eighties, the ZX press would have gone mad about it. And rightly so. **n-Discovery** have produced here, as someone very appropriately termed it in the **WoS** forums, a masterpiece. They have got *everything* right. Everything.

Fire and Ice is not so much a game as it is a production; every last screen that passes in front of you, every last audio track (and there are plenty) is crafted with exceptional skill. Even the language is perfect: as soon as the game loads up you can choose between English and Russian; I can't speak for the Russian version, of course, but the English text is almost poetic in its construction - a far cry from the broken translations we often experience, noble though those efforts are.

Very clever use of interlacing is used in many parts of the game, including colour mixing in the credits to give a palette of pastel hues and an extremely subtle effect right at the start, where the black text of the n-Discovery logo is interlaced with a slightly fatter version of itself to create a shimmering, anti-aliased feel. Like I said, every aspect of this title is polished. There's even a very detailed help section where information about the game is presented as a comic-strip discussion - and in this there's even a fast forward option!

And the game itself is simple, beautifully presented and utterly, utterly addictive. Your task is to guide novice wizard Dana in her mission to extinguish the flames sent by evil wizard Druidle to melt the peaceful Coolmint Island away. Dana has been empowered with Ice Magic by the queen of the Winter Fairies and can thus create or destroy ice below her; sliding or dropping an

low compared with something as vaguely specialist as Thumb Candy.

But on the Internet... all the tools for creating your own MPEGs are easily available. That set my mind going...

What have you had to learn in order to put the film together?

I started by learning everything in Adobe Premiere as I thought I'd be using that extensively to plot out and generate the MPEG. When Adobe Premiere turned out to be quite lacking in terms of absolute control over where things go on screen (or at least it wasn't easy enough to use to see how to use that sort of functionality) I decided to write my own 2D animation system in Perl.

So, I taught myself how to take advantage of the NetPBM and ImageMagick toolkits, learnt a bit about graphics transformations, but mainly I had to experiment with what made a programme watchable. You couldn't have text flying about the screen if you wanted people to easily follow the programme, and you couldn't have too many slow bits if you wanted to keep the tempo upbeat. The soundtrack itself helps things along a hell of a lot. It's a very upbeat 80's mix of tracks and they sort of offer a fig-leaf covering up the slow image pans that run up to the in-game action.

I thought that soundtrack editing and mixing would be harder, but I seem to have got away with cross-fading tracks at the right moment. I know nothing about mixing two different beats together as you change from one song to another, but the sledge-hammer method of "sod it, do a cross-fade at an instrumental bit" seems to have worked well.

What resources (hardware, software, etc) have you needed to make it?

Oooh, this was fun.

Originally I had just one PC, a 128Mb P3-500 Win98 box called Orinoco. When I discovered I needed to render some panning animations at higher detail and calculated how long it would take for a short 20 second movie to be generated, that figure came out at around a week. That's a week without playing any games, maxing out the PC and assuming that Win98 stays up.

I could have got around it by optimising my animation scripts (written in Perl, using NetPBM and ImageMagick, and aren't optimal to say the least), but I decided to take the more interesting choice of getting a secondhand AMD Duron 1.3GHz (called Frodo) and get that running Linux. I boosted the memory to 3/4 of a gig so that all data can be processed in RAM and watched the one week processing time drop down to a few hours. To say I was chuffed would be an understatement. I bored senseless many a friend with tales of how everything sped up beyond belief.

I then bought another second hand PC, this time just a 256Mb Pentium 2 (called OBD - Orinoco's Back Door, obviously), to act as a file/web server. I quickly realised that the finished MPEG for one chapter of this programme could touch 100Mb, and with the YSRnRY website only having 400Mb disk space and 8Gb/month bandwidth, I'd have to get inventive if I wanted the movie to come out at the quality that I wanted it to be.

It's all worked out well. I use dynamic DNS so that obdwww.egyptus.co.uk always points to the OBD webserver, and my ADSL connection is stable enough to keep a webserver on, so providing people can put up with a long download it should be fine.

On the software side, there's the animation scripts I wrote in Perl, which I'll GPL soon so that other people can take them onto the next stage in development, such

as optimising them and making them a tad less flakey. I capture gameplay from Spectrum games using the AVI-recording facility in **RealSpectrum**. The other images I pinch from the **World Of Spectrum** archive and also the wonderful **Home Computer Museum** (www.homecomputer.de), the wemaster of which provided me with high-quality photos of every machine that I could think of covering in the programme. For the sound editing, I used Audacity running on Linux. VirtualDub was used to mix the audio with the video, and then TMPEGEnc was used to convert it all to an MPEG.

All the software is either freeware or GPL and it really is quite astounding what you can create with freely available software these days!

How will the film be made available?

Currently finalising that as I type. There's going to be the bog-standard MPEG download from the website of course, but I'm also looking at P2P. BitTorrent was "interesting" to set up, but now I think I have a BitTorrent server running off of my webserver, and I'm hoping to get an eMule/eDonkey P2P thingy set up too. As my ADSL connection can only pump out 100Mb of data an hour, P2P seems to be the way to go and I'll be heavily promoting that.

In the future, when all the parts of the programme are available, I hope to have some sort of DIY section where you can make your own DVD, and I hope to produce all the menus and that sort of thing. But I don't expect to have everything done for a couple of years yet.

And once everything's done, there are a few other ideas for programmes that I have, providing I'm not sick of it by then.

www.ysrnry.co.uk



What are you going on about?

Send your letters, viewpoints, mini articles, etc to zxf@cwoodcock.co.uk, with 'wibble' in the subject line.

Last year I was active with CF-cards, see ZXF issue 4. In order to make full use of the capabilities, extra room for a System must be found, i.e. more ROM and RAM. I thought that I did sent you the description, and that you probably found it too 'technical' for ZXF. Which is OK as such. But suddenly I was not sure, and cannot retrieve whether I did send or not.

So attached here the description of my design. Which of course (again) is mainly ment to make people 'move', offering a challenge or an issue to discuss.

I spent a lot of time thinking about a DOS for CF, nothing is ready yet but I passed a difficult point in 'thinking'. In fact I feel that I can start coding as soon as I find the time. Before I start working on a DOS I first spend my free hours on reanimating the extended Basic that I wrote many years ago, and make it fit in my new hardware. And repair a few bugs...

In the last months I spent some 120 hours behind the keyboard of my real Spectrum for this purpose, and think that I am halfway now.... The last feature I implemented there was a command line buffer. Now, when I say LOAD * 16;"myfile" and this results in an error message "File not found", I simply press "Break" (during edit!) and the line returns in the input line, allowing me to change drive 16 into drive 15. Or add "CODE". In fact the same as F3 did under MS-DOS, years ago.

I have not seen this implemented on a Spectrum yet, and feel glad that there still(!) are 'new' things to do. For some silly reason I feel proud that I am able to 'find' these. Oops, I think I gave away what makes me tick....

Keep up the good works,

Roelof.

Thanks for your letter Roelof. I don't think I received your article before, so it's my pleasure to present it below:

Here is the description of how I upgraded my 48K rubber Spectrum to 64K RAM and 64K EPROM, physically adding only one small extra chip. The result is two banks of 32K RAM and four banks of 16K ROM. The design follows the 'minimal-design' tradition of Sir Uncle, and as usual for a project like this some soldering has to be done....

The diode/resistor solution for addressing the EPROM (see H/N field) can be used in all situations where the standard Sinclair ROM has to be replaced, eg, by Geoff Wearmouth's Gosh Wonderful system....

Physically upgrading to 64K RAM is done as usual, by replacing the standard 'half defective' 48K RAM chips by normal chips (type 4164) and removing one jumper in the TI/OKI field on the printed circuit board (pcb). Only one jumper remains there, and unless the RAM-chips are Texas Instruments types, this jumper must be in the 'OKI' position. See diagram. For switching between the two banks of 32K a wire connected to 'H' is used.

The original ROM is removed, and replaced by a socket. Here a 64K EPROM can be placed, as this has the same number of pins! In order to address this EPROM, the jumpers in the H/N field on the pcb must be removed, and two diodes and a resistor must be soldered there to the point that leads to p.20 of the EPROM socket. For switching between the four banks of 16K, wires must be connected to pin 1 and pin 27 of the socket, the latter is available at the H/N field, see diagram. Pin 1 is standard "not connected" on the issue 2, 3B, 4A and 6A boards that I possess, and therefore can be used without disconnecting it first. (I expect the same for other boards)

The extra chip I use is a 74LS174 (hex D-flipflop). Computerdata can be 'latched' here in the form of electric signals. The connection with /RESET initializes all flipflop outputs to 0V when starting the computer. As shown I only use four outputs, and these are controlled in an unusual way. The state of A0,1,2, and 4 is clocked in by every IN command to an IO-port in which (binary) address A3 holds zero. The exclusive use of the A3 address line was allocated by Sinclair to its IF1 and microdrive, so the circuit as given is not compatible with those. But of course another address line can be chosen. The reason for using the IN command instead of the more usual OUT is that I expect less compatibility problems. The only drawback is that in machine code the A-register must be saved when swapping banks.

After an IN command with A4 high, addressing the LS174 becomes impossible until a hardware reset is done. This lock-feature gives the opportunity to use the Spectrum in all normal ways, when a ROM ban is locked that holds a copy of the standard ROM.

The four EPROM banks of 16K each are paged in at the normal ROM location, 0 - 16K. The two RAM banks of 32K each are paged in at 32768 - 65535.



Ultima: Escape From Mt. Drash (VIC-20)

Winning bid: **US \$3,605.00**

Ended: Mar-21-04 19:30:00 PST

Ok, so it's got nothing to do with the Spectrum, but being the **ebay** loiterers that we are (denying it is not going to help you, son), gawking at the price fetched by items of 8-bit paraphernalia is fun whatever the platform. Congrats are duly extended, therefore, to trader **fortandragon** for turning a 99 cent opener in March into a hefty three-and-a-half grand nest egg. A **VIC-20** holy grail, **Ultima: Escape From Mt. Drash**, item number 3084975541, received over 30 bids in its climb to the highest amount fetched for a single cassette that I personally have ever seen on ebay. **fortandragon** told ZXF he was "quite stunned by the price." Stunned in a nice sort of way, I'll wager.

Items like this are a target for ebay **scammers**, so if you come across one be certain it's the genuine article before bidding; if you're selling, embed a copyright message in your image so that scammers can't pass it off as their own in a future auction.



Picture copyright © 2004, Edward Fajkus. All rights reserved.

RETRO GAMER MAGAZINE 1

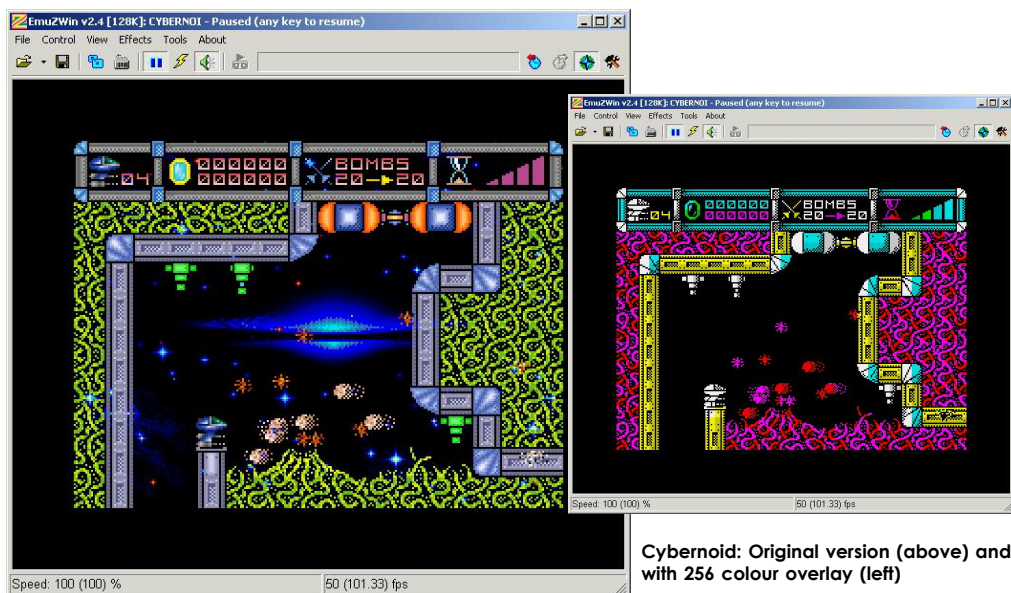
Winning bid: **£52.25**

Ended: 17-April-04 12:03:37 GMT

Barely had the news escaped that our favourite modern mag's first issue had sold out than a copy was up for grabs on ebay (and some of us were left cursing that we hadn't bought an extra copy). ZXF says 'fair dos' to the traders who spotted the opportunity, turning an outlay of £5.99 into a mighty £45 profit in this case. This is the most I've seen one go for so far; plenty more copies have been sold in the £20 - £30 range.



new EMULATORS



Cybernoid: Original version (above) and with 256 colour overlay (left)

EmuZWin

Version 2.4.1.0 by Vladimir Kladov; http://bonanzas.rinet.ru/e_downloads.htm

Big changes to **EmuZWin** since last issue; don't let the tiny number increment fool you (ZXF06 reported on version 2.2). There are a whole load of differences, for sure, but the two main features are an in-built map creator and 256 colour mode.

That's right: 256 colours. It all began with an emulator called **Spec256** by **Iñigo Ayo** and **David Goti**; a DOS emulator last updated in 1999. Spec256 added in to its emulation a parallel, graphics dedicated processor (the *Z80_GFX*) capable of allocating a whole eight bits (ie, one byte) per pixel as opposed to the usual one, making available a total of 256 colours. At the Spec256 website (www.emulatronia.com/emusdaq/ui/spec256/index-eng.htm) a small number of games were

made (and still are) available which had been modified to make use of this facility, and how we all gawped at them when this first came to light!

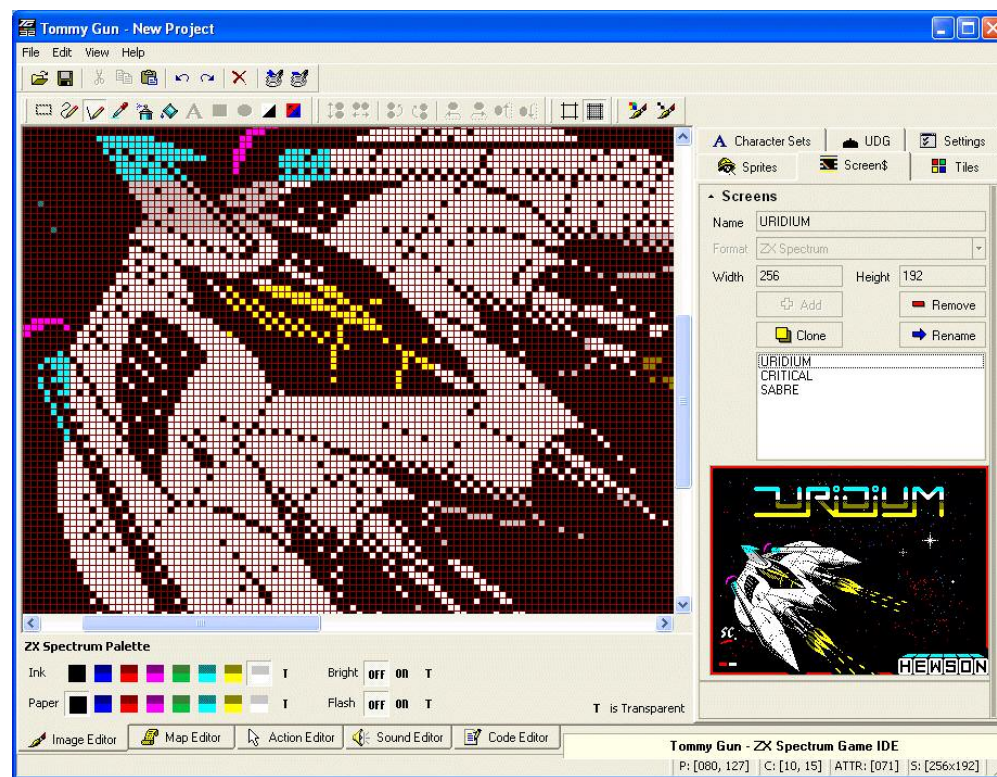
But the problem was that the actual business of converting existing games - or, more correctly, designing a 256 colour overlay for existing games - was a little on the tricky side for the casual gamer. And so no more got done. The Spec256 authors got fed-up with the lack of enthusiasm and that - as they say - was that (although it is still available).

And then in January **q_armando**, in WoS forums, resurrected the idea of the 256 colour emulator. Over the next couple of weeks the discussion was thick and fast, and then stopped all of a sudden when attempts to get in touch

with Iñigo and David discovered that they weren't very interested in the thing anymore.

And then **Vladimir Kladov** released version 2.4 of EmuZWin, complete not only with full compatibility for all Spec256 colour-modified games, but a built-in GFX editor to boot, making overlay creation a very considerable deal simpler. And already new 256 colour games are being worked on - check out www.arjun.150m.com (Manic Miner with orange trousers; hmmm...).

EmuZWin's other main new feature - the map creator - would by itself have actually made a very satisfactory update (this is the first in-built such tool that I'm aware of), this being a pleasing little feature that makes something I must admit I would previously



TOMMY GUN

>Graphics editor from Tony Thompson turns into games development tool

The award for the most rapidly developed new utility has to go to **Tony Thompson**; reported last issue as The Spectrum Graphics Suite, this application - now called **Tommy Gun** - has made serious steps towards becoming a fully fledged games development environment and is set to make many more.

The current version at the time of writing is 0.4.0 alpha; it offers a number of image editing features such as screen\$ editing (like the Uridium screen above) - which by itself, incidentally, is a very well implemented tool - sprite editing and tile editing (tiles are those repeated graphics used to make

up a screen on a game - like the plants in Sabrewulf - by the way). You can import snapshot files as well as .SCR files, Windows bitmap files, JPEG files and even files created by **Metalbrain's** excellent **SevenUP**. Yet to be fully implemented are also map editing facilities, an actions editor, sound editor and code editor: pretty much everything a code-competent games designer would need, therefore, and all under one roof. Exciting, eh?

Perhaps the most exciting development is Tony's recent decision to completely re-write the whole lot - turning a single, large program into a plugin

based application. Tony told **WoS Forums** that the next version won't look all that different from the current one to the casual user, but underneath the bonnet all the existing features will have been re-implemented as plugins, allowing coders in the future to develop their own compatible plugins - such as a game maker interface for us non-coders, for example.

At the moment the place to go for a download is still the WoS Utilities page, but once plugins start being developed, **TG** might well need a web site of its own. This could well be a very significant application for us wannabes! One to keep an eye on.