WHITE ⁜ CROSS
MISSION

After Ceaucescu'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

52, Gwel-an-nans, Probus, Cornwall, TR2 4ND, United Kingdom

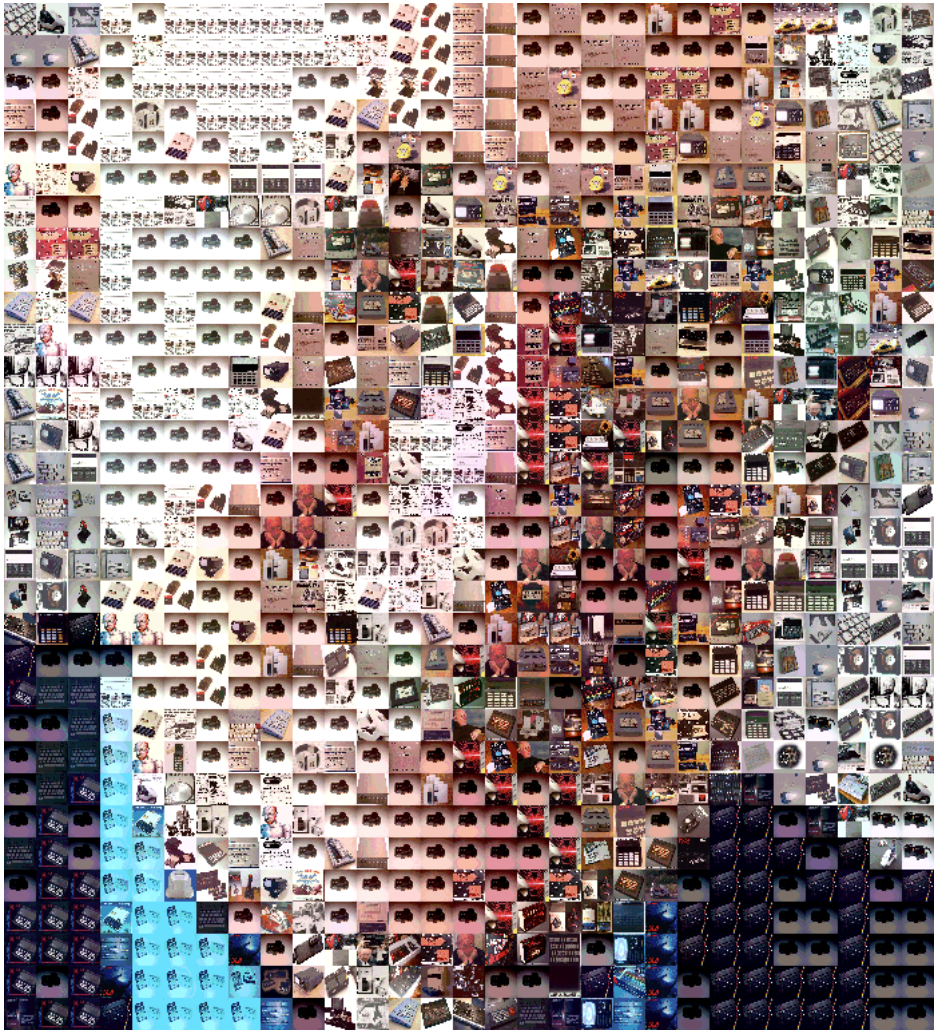
Tel (+44) (0)1726 884344 *Fax* (+44) (0)1726 884345 *Mob* (+44) (0)7775700893

Email wcm@whitecross.org.uk

www.the-white-cross.ndirect.co.uk

ZX F 02

Spectrum computing today



Coming back to Sinclair?

read

Another little read from my collection at www.cwoodcock.co.uk. I'm still waiting for your submissions for this section. The pain can end, you know - all you have to do is sing...

The Genuine User Friendly Interface

(My forthcoming address to the Computer Literacy Association)

Keats said: "I am in that temper that if I were under water I would scarcely kick to come to the top." Of course he was referring to the repartitioning of multi-gigabyte hard drives. *[Pause for laughter to die down]* It might seem incredible, in these breathtaking days of clock speeds faster than a speeding bullet's bad case of Chicken Teaka Leaka and memory sizes so vast the entire works of Jeffrey Archer and his contemporaries could be stored proportionately to a bar of complimentary Palmolive soap stolen by Ceaucescu and hidden "somewhere in his house," that the layman could still be pushed to set his disk caching parameters correctly - yet research continually and repeatedly suggests such a bizarre fact to be true. Colleagues, I share with you your utter astonishment in that 90 per cent of computer users world-wide don't find a General Protection Error message entirely sufficient and informative a notification of their machine's troubled status, yet it goes deeper and still deeper than that. Last week, the Society for the Abolition of Obscure Acronyms - better known to us all as StAbolObAm - published results implying that 80 per cent of users are unable - unable, I tell you - to calculate their ideal SIMMS RAM to Virtual Memory swapfile ratio. We have given them mice, my friends; we have given them WYSIWYG truetype fonts and shortcut thumbnails: we have not yet given enough, it seems.

As some of you might know, my hardware company went under two years ago due to the low sales of my four dimensional multi-phasic soundcard - apparently user configuration of the DMA and IRQ circuit board jumpers to avoid conflict with the ISA requirements of other peripheral expansion devices was asking too much. I was so depressed I ate a balanced diet for two months. Then, a favourite episode of Knight Rider gave me an idea. Could it be possible that the public really did want a system that did everything for them? Don't scoff colleagues - your immediate riposte might well be "What on Microsoft is the point in having a point and click system if you can't point and click at things?" yet I have now heard a mouse described so many times as "that box thing" - regardless, I might add, of its ergonomic design - I am convinced this is the case.

Such a system would naturally require a degree of Artificial Intelligence. AI is, of course, at a far more advanced stage than most people realise. Version 3.129 of Satansoft's Backgammon springs immediately to mind for its clinically proven prejudice against anyone over the age of 34. And need I remind you all that Solitaire will never let you win if you should be doing something else? It is therefore not at all, as many might suppose, that such a system would be technically unfeasible - rather it is just plain silly that anyone should want to create such a thing.

So it is with mixed emotions that I stand before you all today to introduce the Genuine User Friendly Interface - which, on the advice of StAbolObAm, I have shortened to BOB. BOB is the result of 18 months of love and labour, and these are some of its features: *[OHT 1 - note: remember to use a comical typeface]*

- Full multitasking capability.

- Speech and language recognition and control, incorporating a comprehensive repertoire of colloquialisms, dialects and idioms.

- Mood swings.

- Mancuvian accent.

Bob is programmed to be an assistant, a

ZXF

AUTUMN 2002/Issue 2

Contents

Errata (ZXF01)

Page 22 **- goto** - The entry for ZX32 should have (05/04/00) entered under 'updated'; under 'Save to tape (TZX)' it should read 'Yes'

Page 8 - **new** - The download URL for Metalbrain's SevenuP is incorrect. See this issue's **new** for correct details. Also on this page, the fourth line up from the bottom of the right hand column should read "(listing on page 12)"

If you enjoy ZXF and you want it to continue then consider yourself duty bound to let me know this (mail@cwoodcock.co.uk). All other feedback will be gratefully received also - criticisms (please be kind), improvement suggestions and notifications of any errors you think you've spotted are essential for this sort of project to succeed.

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 above.

Editor: Colin Woodcock

Thanks to: John King, Alex Goryachev and Thomas Eberle.

exp

Project: +3/2A SCART lead

If, like me, you're getting back into real Spectrum hardware again, you'll no doubt be immersed in the joys of re-discovery. A not so joyous finding of mine was just how bad the Spectrum display looks on a colour TV (emulator authors have a long way to go before they capture the sheer dreadfulness of that one thoroughly). But this can be overcome: Alan Cox has designed a SCART lead for the +3/2A RGB/PERITEL socket, which John King has built and written up at www.pcwking.freeserve.co.uk/helpage42.html; John has kindly given me permission to reproduce this information here. Please note, this lead *will not work* for the original Spectrum 128 or the first +2.

Perhaps I should start by saying that the tasks to be undertaken on this page are not for those of you without electrical and soldering skills; for the competent, the following circuit will give a quality picture and mono sound through a television set from a ZX Spectrum +3. This lead should also work wth a +2A but as of yet I have not tested it on one. The lead was designed by Alan Cox and has been built and tested by a number of different people (including myself) on a number of different makes of TV (with almost complete success).

Should you build one of these leads kindly report the results so we may judge the success rate (john@pcwking.freeserve.co.uk).

Parts and tools required

- Scart Plug (also known as an Euro Connector or Peritel Plug).
- 8 pin male DIN in-line plug.
- Five 68 ohm resistors (quarter or half watt)
- 6 feet of six core cable.
- 6 feet of single screened cable (for the sound connections).
- 15 watt Soldering Iron.
- Solder.
- Electrical tape (or cable ties).
- MultiMeter.
- Side cutters, Long nosed pliers and a small screw driver (all of which can be found in any DIY tool box).

Procedure

Alan Cox offers a plain English way to produce the lead and could be preferred to my circuit diagram:

- Connect SCART pins 4, 5, 9, 13, 17 and 18 together and then to RGB pin 2.
- Connect SCART pins 7, 11 and 15 to RGB pins 8, 6 and 7 respectively via 68R resistors.
- Connect SCART pins 2 and 6 together and then to RGB pin 3.
- Connect SCART pin 8 to RGB pin 5.
- Connect SCART pin 16 to RGB pin 1 via a 68R resistor.
- Connect SCART pin 20 to RGB pin 4 via a 68R resistor.

new

Double the fun

> +3e ROM for 16 bit IDE interface

One of the drawbacks of Garry Lancaster's +3e IDE hard disk interface (see last issue for more about this project - featured recently, by the way, in Shaun Bebbington's **Retro Computer Mart** page in **Micro Mart**: nice one Garry) is that half of the disk's capacity is lost in the conversion from 16 to 8 bit; a 1Gb disk will only give you 500 Mb of space on which to store your Spectrum programs, for example (which must be just awful).

In fact, 16 bit IDE interface designs do exist for the Spectrum - a whole range of interfaces designed by Sami Vehmaa and called ZXATASP (see **http://home.sol.se/amiga/**), and now Garry has released a new version of the +3e ROM to be compatible with them. The interfaces themselves look like monsters compared with Garry's simple little device, still winter's coming and something's got to fill those long evenings. For the ROM, visit **www.zxplus3e.plus.com**.

Spanish SPArkle

> New Spectrum archive online

SPA2, the **SPAnish SPectrum Archive** is a new website of "a project aimed at the collection, storage and preservation of every Sinclair Spectrum program ever released in Spain," and it launched on 16 September. The site, sort of the Spanish equivalent of WOS, opened its doors with no less than 500 titles already avilable in TZX and DSK format, and it also aims to collect inlays and instructions. The Spanish contribution to the Spectrum is often underacknowledged - this site, along with the great new **Es.pectrum** emulator (see *Emulator News*) should help broaden the picture. And the site is in English as well as Spanish, so you really have no excuse. Get over to **www.speccy.org/spa2/** right now.

More miner action

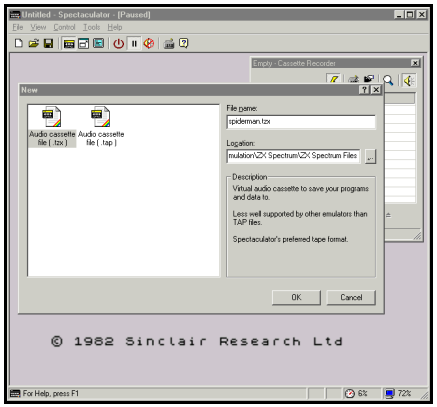
> Willy's continuing adventures

Miner Willy (I played it safe there with that title, didn't I?), the character that has become an icon of the ZX world, is in no danger of loosing his appeal, it would appear. New to the MM scene over the last few months are the JavaScript version of Matthew Smith's 1983 classic and, just recently, a new spectrum version featuring themes from the **comp.sys.sinclair** folklore.

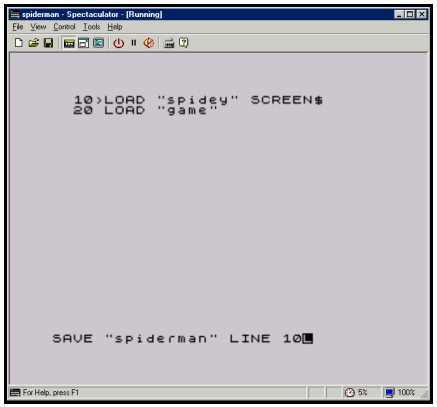
The first of these really is quite a sight to behold, four levels of the original game in pure JavaScript (no, not Java - Java*Script*), coded by **Carl Woffenden** and to be found online at **www.bigredswitch.co.uk/games/manic/**. Although this version has no sound, the graphics have been taken straight from the original (minus the colour clash). I really didn't realise you could do stuff like this in JavaScript; as one CSSer put it, this is "the single most best use of JavaScript I think I've ever seen."

Manic Miner CSS, on the other hand, is a new spectrum version of the game, put together by N Fishwick (**Fishy Fish** in CSS) using **Andrew Broad**'s *Manic Miner Screen Editor* and featuring such levels as *the Chuntey Generator, Scribbler's Fridge* and *** *L@@K, W@W, R@RE!* *** Described by Stuart Campbell already as "the best MM 'sequel' I've seen," you can download the game from **www.fishyfish.net/manic/**

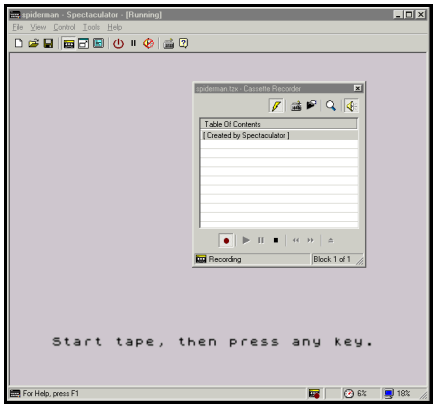
Andrew Broad himself is something of a Miner Willy guru, having released a number of MM sequels over the last five years, including *Manic Miner 4* and *Manic Miner: The Hobbit.* His amazing site at **www.cs.man.ac.uk/%7Ebroada/spectrum/willy/** contains a wealth of MM information, but will be closing soon as he is due to leave university (where it's hosted). So get over there whilst you still can (and hit Save).



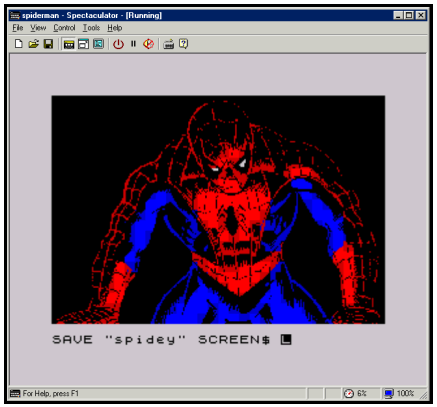
9 - Spectaculator. First of all - before we go anywhere near our snapshot - we need to start a new, blank tape on which to save it. File > New brings up the box above. Select TZX format, give your tape a name and select a folder to store it in. Your tape is now inserted into the virtual cassette recorder.



10 - Spectaculator (cont). Next we need to write a short BASIC loader for the loading screen we are about to create and - of course - the actual game itself (you did remember to write a game, didn't you?). A simple loader is shown above. You'll notice that the SAVE command entered has "LINE 10" added - this is so the loader runs automatically when it has loaded. Type the command as shown...



11 - Spectaculator (cont). ...and hit Enter. *But don't "press any key" yet!* First you must click on the red record button on the Cassette Recorder to get the tape going. *Now* you can click back on the main emulator window and press a key to start recording.



12 - Spectaculator (cont). With the loader saved to tape, we can now load in our snapshot file and save this onto the tape too. Enter the command to SAVE as above - remembering to use the filename you identified for the loading screen in the BASIC loader - and repeat the process with the record button described in (11).

Emulator news

OVERVIEW: New directions in Spectrum emulation

A busy few months it's been indeed, with two brand new emulators hitting the scene and updates implemented in many of the existing titles, a few of which we haven't heard of in a good while. All of this, by itself, is blimmin' marvelous stuff, but the planned enhancements to SPIN are especially exciting. TZX management seems to be one of the most significant areas of emulator development over the last 12 months and the current direction being taken is giving us increasing amounts of control over our virtual little cassettes. And quite right too. The tape recorder might have been physically external to the early Spectrums, but so integral was its being to to the use of the computer, it was to all extents and purposes a fully fledged part of it; it too needs to be emulated right alongside the Spectrum itself, and emulators such as **Spectaculator** are doing a particularly good job of this at the moment.

With both **Klive** and the new beta release of **Spectaculator** featuring both the Currah Micro Speech and the Cheetah SpecDrum on their list of emulated features, a new corner seems to have been turned in peripheral hardware. Previously the remit only of the the likes of **RealSpectrum** and Gerton Lunter's **Z80**, peripheral devices have been studiously avoided by many of the 'mainstream' emulators until now. But with the emulation of the main machine and all its variants now generally about as close to perfect as it's possible to get, some new directions are needed for authors if they are to keep on improving their babies and outdoing their competitors (let's be honest here - it's *because* there are so many Spectrum emulators that their quality is so outstanding). The implications of all of this are quite exciting.

ES.PECTRUM

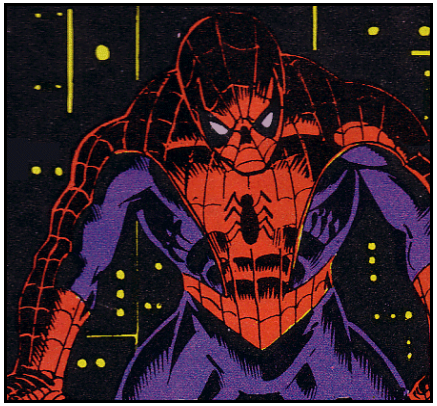
Es.pectrum is a new Spectrum emulator by Javier Chocano, released recently in beta. The emulator supports a wide range of machines, from the original 48k to the +3. Previously only supporting tape based machines, the latest version as I write (0.6b2) has been updated to include .DSK support; in testing, a few disk images seemed to work fine, however Operation Wolf crashed fairly quickly and when I tried to format a new disk I was told it was write protected... emulate your way out of that one if you can.

Where Es.pectrum breaks the mould is in its support for foreign models, including the entire range of Spanish Spectrums (there's even a Spanish +3e), a French +2 and Pentagon/Scorpion support. This gives us UK users access to new Spectrum perspectives, including the original 1985 128k Spanish operating system - a kind of 48/128 hybrid (no tokeniser, but also no menus) - which was developed, of course, into the UK 128 system for a (desperate and futile) launch by Sinclair in the following year.

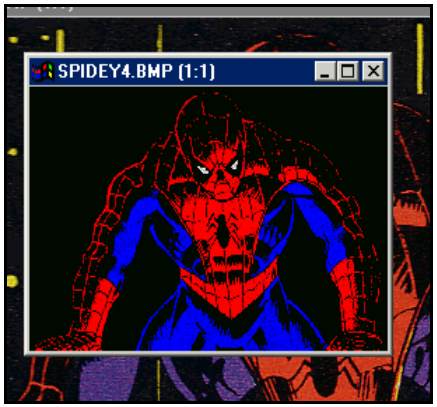
Es.pectrum also supports the Magnum Lightgun bundled with +3s and +2As - is, I believe, the first emulator to do so - giving you mouse controlled access to the handful of games that supported this device (not quite the same as a real gun in your hand, but if you've ever handled the Magnum you'll know you're not missing much). Get it from **www.espectrum.tk**.

KLIVE

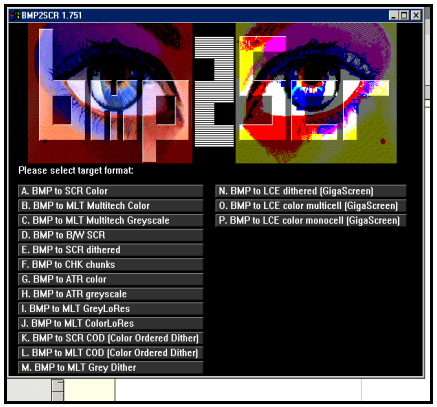
Another new emulator: **Klive** by Steve Snake has taken us all by surprise. Coming quite out of the blue, this is a fully



1 - Choose your image. I'm using this picture of Spider-man which I scanned from an old comic cover. The number and layout of the colours makes this an ideal picture for conversion.



2 - Prepare your image. To make the image simpler for conversion, I've got rid of the yellow bits in the background and reduced the number of colours to 16. I've cropped the image and resized to 256 x 176 pixels. Now it's ready for conversion to SCR format.



3 - BMP2SCR. This PC utility allows us to convert our image into a variety of Spectrum related formats, but we must be careful here to choose an SCR format. I'm using option A - 'BMP to SCR color'

4 - BMP2SCR (cont). In the top left corner is our original bitmap; below it is our new SCR. Notice how the program has used bright to give our hero some dramatic highlighting: other options from the main menu (see last box) would not have given this. We could leave it here, but there's a little bit of colour clash that could be improved. Save the file...

Emulator news

vbSpec, the Spectrum emulator by Chris Cowley written entirely in Visual Basic (don't ask why, just accept it, ok?) has been updated to version 1.50 and now supports fully .TZX files, including a little cassette tape interface. Chris credits Mark Woodmass (co-author of SPIN) for his help in this work. Download it from **http://freestuff.grok.co.uk/vbspec/**.

SPECTACULATOR

A massive update for Jonathan Needle's lovely **Spectaculator**; not only has 128 support been added at last (128+ and original +2 only), version 3.0 beta also features the Currah Micro Speech and the Cheetah SpecDrum (now where did he get that idea from...?). Although this is a beta realease, it runs like a thoroughbred on my machine; the main reason for the beta suffix, in fact, is that Jonathan has yet to update his excellent help system to include all these new features - and since he's just become a daddy it's unlikely he's going to find the time for this in the immediate future. Ain't that the truth.

This is the second update to Spectaculator since the last emulator roundup in ZXF 01, version 2.5 (released in July) having added in Romantic Robot's Multiface 1 to the emulation; accordingly, version 3.0 now supports the Multiface 128 also. You can download this fantastic emulator - still the best for creating your own .TZX files, as far as I'm concerned - from **www.spectaculator.com**. And here's a tip for Jonathan - when all else fails, the vacuum cleaner oftens puts babies to sleep; welcome to the bizarre, but beautiful world of parenthood.

REALSPECTRUM

The one we've all been waiting for (and then kind of forgotten about, amidst all this activity) now has a name. Described by **Ramsoft** staff as "another revolution in Spectrum emulation," **RealX**, the "next-generation RealSpectrum optimized for DirectX" is (still) on its way. In the meantime we have a new update to the classic RealSpectrum to keep us occupied while we wait. Version 0.96.16 (beta 13), otherwise known as "Katun," adds in support for the Rotronics Wafadrive (a looped tape storage device not unlike the Sinclair Microdrive) and thus we have yet another file format: the format specs for .WDR files are promised at the website. Katun also adds in support for the Magnum lightgun via the PC mouse.

Beta 13 has also been compiled to run under Windows: **RS32** is a seperate download but essentially the same old RealSpec running in a window, and allows WinXP users the access to the emulator that was denied to them by the DOS version. Head over to **www.ramsoft.bbk.org/realspec.html** for more information on it all.

X128

A considerable number of spechums (I'm sorry, I hate that word; this is the first and last time I'll use it) around the world have remained faithfull to this DOS emlator, despite all of the bewildering changes going on (not all of us are lucky enough to have high speed Pentiums, after all); now their loyalty has been rewarded. Version 0.94 of James McKay's creation comes with bug fixes and better support for a number of file formats, including TR-DOS. There are also a host of new "half-finished" features, such as ZX81 emulation, Interface 1/microdrive support and "an experimental attempt at

time). Snapshot files were great at the time - a convenient way of loading a favourite game quickly - but as emulators developed and the pangs of nostalgia for the good old days grew, something more authentic was required; also snapshots were no good for multi-load games (where each level in a game had to be loaded seperately from tape). These days, therefore, the prefered format for distributing Spectrum software in is the virtual cassette format; snapshot files are mainly used for saving your progress (although an innovative use for snapshot files has been implemented at **www.thespian.demon.co.uk/congrat/index.htm,** otherwise known as '**The Congratulations Archive**,' where you can download snapshots of games at their point of completion to find out what happens at the end). The two snapshot formats are **.SNA** and **.Z80**; both are supported by the vast majority of emulators (and both support also 48k and 128k snapshots).

So that brings us to the +3 disk drive. In the same way that .TZX is a 'virtual cassette,' .DSK is a 'virtual disk' or 'disk image' of a +3 three inch disk. For emulators which support this format (most 128k emulators do for loading from disks; not all do for saving to them) you simply select a disk image via the emulator's menu system and this then 'inserts' the virtual disk into your emulated +3's disk drive - from this point on you access the disk using the usual +3 commands (the manual is online at **www.madhippy.com/8-bit/sinclair/zxspec3man/index.html**).

So where do I get these files from?

That part is simple. The Spectrum community are blessed by the work of a certain **Martijn van der Heide**; his site - **World of Spectrum** (**www.worldofspectrum.org/**) - contains the biggest archive of Spectrum files on the planet. If you can't get hold of the title you're after amongst the thousands there, it's either 'missing in action' (MIA files are listed at WOS; if you find you have one of these you know where to send it now!) or it's distribution has been deniedby the original copyright owner. Martijn has been working tirelessly over the last few years to contact every last game author to establish whether it's ok to distribute their work for free via his site; a small number have told him it's not (eg Ultimate, Code Masters) - these titles are listed, then, but not availible for download. But there's still more than enough to choose from, and you can also download many of the original game inlay cards (as graphics files), plus emulators, PC utilities and an enormous amount of Spectrum documentation. Be appreciative, be very appreciative; Martijn gets nothing for his troubles other than our unending admiration.

That should get you going! Next issue we'l take a look at Spectrum game remakes, the modern Spectrum demo scene and the vast range of PC utilities that exist to enhance your Spectrum experience still more. We've only just started!

Emulators...TZX

As written above, **Spectaculator** and **RealSpectrum** both allow you to create your own .TZX files. **SPIN** has also added this capability to it's (ever) increasing list of features recently (see **new**), although - in my opinion - not in as intuitive a way as Spectaculator (which is why I use that emulator in the following loading screens article).

I've also just learned that - contrary to the information I presented in last issue's **goto** section - **ZX32** also allows you to save .TZX files. To do this you must first type in and execute your save command on the emulated Spectrum (ie, SAVE "proggy", then Enter twice) *and then* select Save As from the ZX menu, following which you can choose either .TZX or .TAP from the "Save as type" box - ordinarily these two options don't appear. Thanks to **Lee Prince** for that information, via **comp.sys.sinclair.**

1k Minigame compo finishes

With the submission deadline reached on the 1k Minigame competition at **www.ffd2.com/minigame/**, voting is currently in progress to decide upon the winner. The contest, open to most (if not all) emulated 8-bit platforms and which required games submitted to be no more than 1024 bytes in total, featured no less than 10 Spectrum entries, ranging from *Spectris* (wonder what that one's about) by Paolo Ferrari**s** to *Dotathon* by Russell Marks. Voting closes 7 October.

New Outlet

Outlet, the disk based Spectrum magazine produced by **Chezron Software**, is now available again from their new site at **www.fidcal.com/Outlet/**. Chezron - now renamed *Fidcal*, won't be producing any new issues, but their entire back catalogue of some 450 issues can be bought from, at £2.00 a disk for 1 to 5 disks (more than that and you get a discount). The disks are in Plus D format (which *RealSpectrum* can read).

Congraturations returns

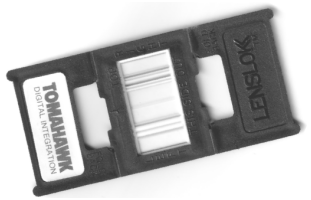
The site which aims to "provide you to the ending sequences to the games you thought you'd never see, mainly because you were crap at them" (Scribbler) is back after a year of absence. **The Congraturations Archive** is at **www.congraturations.co.uk.**

HiSoft BASIC online

Cameron Hayne, author of **HiSoft BASIC**, "simultaneously the fastest integer compiler and the fastest floating-point compiler available for the Spectrum," has made available the manual for this superb utility at **http://hayne.net/Spectrum/HiSoftBASIC/**. The manual is availible both as a web page and as a MS Word document. If nothing else, you can now compile your Crap Game entry into "100% machine code," which - as we will all recall - made a game good by default.

LENSLOK emulated

LENSLOK, everybody's favourite most-hated security device, has received the emulation once-over by **Simon Owen**. **LensKey v1.0** is a tiny (11k) program that acts just like a LENSLOK was supposed to, decoding the seemingly random mess of blocks on the screen into an entry code; the main



difference between LensKey and the plastic original, of course, is that LensKey actually works.

LensKey currently supports *ACE, Art Studio, Elite, Jewels of Darkness, Price of Magik, Tomahawk and TT Racer*, and can be downloaded from **http://homepage.ntlworld.com/simon.owen/lenskey/**

SevenuP in beta

Apologies to **Metalbrain** for linking to an out-of-date file in last issue's news. **SevenuP**, his rather smashing PC Spectrum graphics editor (in both Windows and Linux versions) has now reached version 0.61b. Since the version reported on in ZXF 02 (0.4a), documentation has been added to the download and there is new support for masking. SevenuP is now distributed under GNU General Public License (GPL) and therefore the source code can also be obtained from Metal's website. Which is **www.speccy.org/metalbrain/**.

I like this editor very much; it's a little on the slow side, however, so you'll need a fast

so), but you'd be wrong to assume they're all pretty much of a muchness. Spectrum emulators vary. They vary chiefly in the following areas:

1) The operating system they run on. RealSpectrum, for example, currently runs only in DOS (a Windows build has just been released), as does X128. There are also, of course, emulators for other computers (Macintosh, Acorn, Amiga, Playstation, etc) and other PC platforms (eg **Fuse** for Unix); I am qualified to comment on none of these (sorry).

2) The models of Spectrum emulated. Nearly all emulators emulate the whole range of Spectrums (ie, 48k, 128k, +2, +3 and +2A), although **Spectaculator** currently only supports the original 48k Spectrum, the first 128 and the +2 (not the +2A or the +3). Some emulators also emulate some of the eastern european clones (eg, **RealSpectrum** emulates the **Didaktik Kompact**, the **Pentagon** and the **Scorpion**) and a couple (**RealSpectrum, SPIN**) emulate Garry Lancaster's **+3e** (reported on last issue).

3) Spectrum peripheral hardware supported. Most emulators will emulate a joystick, but generally that was far as hardware emulation went in most emulators until recently, when first **Klive** and then **Spectaculator** added in support for the Currah Micro Speech and the Cheetah SpecDrum. **RealSpectrum**, however, emulates a vast range of add-on storage hardware, from the ZX Interface 1 and microdrives to the popular Plus D interface (you can actually put a Plus D formatted 3.5" floppy into your PC's floppy drive and read/write to it in the normal way from your emulated Spectrum).

4) Tape support. Whilst nearly all emulators that I know of support the .TZX virtual cassette file format, they vary currently so far as *saving* to a .TZX file is concerned. All can save to a snapshot file, of course, but if you're authoring your own programs rather than simply saving your place in a game then .TZX is a more 'authentic' way of saving your work and also allows the luxury of loading screens and multi-loader games (more on TZX later). **Spectaculator** and **RealSpectrum** will both allow you to save to tape.

5) User-friendliness. Generally speaking, all Spectrum emulators are extremely competant pieces of programming. There is, I feel, an unspoken assumption that the end users of these programs will be fairly computer and spectrum literate, however, and in my mind the emulator that best stands as an exception to this is Jonathan Needle's **Spectaculator**, which has a well thought out layout and help system.

.TZX? Snapshot file? Wot?

Time to explain all those file formats. The Spectrum, of course, saved primarily to cassette tape. The +3 had a built in 3" disk drive, which was the default saving/loading media when a disk was inserted; there were also various add on disk drive interfaces over the years that allowed you to use standard 5.25" and 3.5" drives with earlier Spectrums (eg, the MGT Plus D interface) and actual storage devices such as Sinclair's own microdrive. In the main, however, Spectrum emulators deal with only tape and the +3 drive (the main exception to this is **RealSpectrum**, which emulates many of these devices).

Let's take cassette tape first. Now here's the problem: a Spectrum program stored on tape rarely consisted of a single *file*. Your average early Spectrum game, for example, would usually consist of *at least three files:* the BASIC loader would come first, followed by the loading screen and followed next by the main program code. The first of these - the BASIC loader - would be announced by something like "Program: Asteroids" (or whatever the game was called) in the top left corner of the screen (as programmers got more clever they worked out how to get rid of the 'program' bit and just display the game's name). The purpose of this small program is to prepare the machine for the files to follow; you see, when you type LOAD "" (or select Tape Loader from a 128 menu) the Spectrum

Maziacs PC

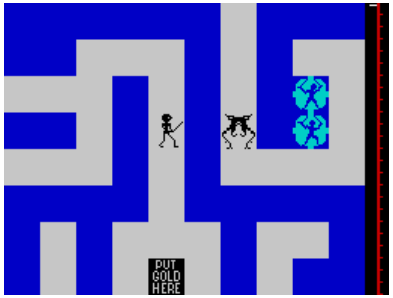
Programming: Andrew Canham (aka PeeJay)
Graphics: Andrew Canham & Ric Lumb
Download it from: www.peejays.remakes.org/

Here's a bit of trivia for you: did you know that Don Priestley, the original author of Maziacs, went on to write such Spectrum classics as Popeye and Trap Door? Don became known his his skill in manipulating large and colourful sprites - but not through Maziacs he didn't. Incidentaly, this game had to be loaded with LOAD "" CODE.

Maziacs was one of those ridiculously simple, yet ridiculously addictive Spectrum games that you just had to play over and over. The premise is this: you are in a (very) big maze; you have to find the treasure; you have to bring the treaure back to your starting point. On the way you will encounter maziacs - nasty monsters there to protect the treasure from thieving swines like yourself, swords with which to kill aforementioned maziacs (rather careless of the maze designers to leave them just lying around like that), food to keep your energy up (I mean, what were they thinking?) and dead bodies which - when touched (shudder) - obligingly show you the route to the treasure for a few seconds (by highlighting it in yellow). Killing a maziac uses up one sword. Fighting a maziac without a sword will almost certainly increment the number of dead bodies in the maze by one (but you might just get lucky). And that's about it.

PeeJay's remake - coded in Blitz Basic - stays faithful to all of this (although there is a second version of the game - Maziacs PJ - which is accessible from the game's main menu). The differences are of course in graphics and sound. Maziacs PC assumes a slightly oriental flavour: the little stick man you used to guide around the maze is now some sort of cuddly toy/3rd dan blackbelt hybrid, and oriental strumming and whistling noises accompany you on your travels as you search for the treasure. If the new graphics aren't to your liking, Kindly PeeJay has also included a '1983 graphics' mode so you can enjoy the original all over again. You can also change the graphics quite extensively by using one of the extra tilesets included in the download or - if you're feeling brave - by designing your own.

The speed with which Peejay developed this remake was quite astonishing - particularly when you bear in mind this is the first coding he's done in ten years apparently. I wasn't quite sure what to expect when I loaded up his efforts for the first time, but I can happily say that I was very pleasantly surprised indeed. So this all bodes rather well for future PeeJay releases.

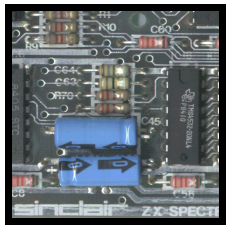


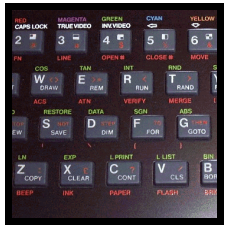
The Spectrum original and the remake.

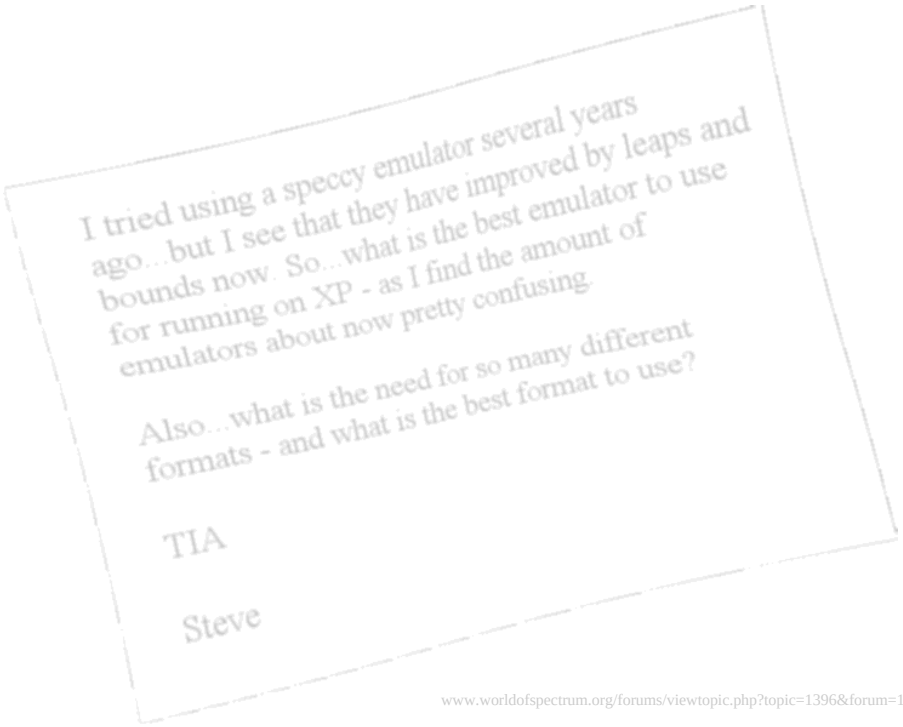
VERDICT	
Graphics	7
Sound	7
Playability	7
Addictiveness	8
Overall	**7**

Back to the Spectrum

Part One. So you're back. And the Spectrum has moved on. And you're confused. This issue we take a look at getting you back to the point at which you left: playing games on your ZX Spectrum - virtually speaking, that is...







I'm a Speccy fan from Buenos Aires, Argentina, and I was reading your Speccy "virtual magazine" ZXF... it's excellent!

It's very well written, it has an excellent design and -the most important- it's very interesting to read.

I can't wait to read the second issue of the mag, I hope you continue your excellent job.

Keep up the good work!

Hernán

Just had read the first issue and found it quite amazing. That's great than Spectrum Magazines Publishing is alive again, and not only in Rusiia but worldwide (there're at least 3 paperprint Speccy magazines in Russia). Good luck !!!

Denis

Well done Colin ... this is a TOP job!

The format's easy on the eye, it's well written and it's packed with enthusiasm. It's also much more up-to-date than I would have expected, with its articles on SPIN and the very recent Exploding Fist and Sabre Wulf remakes. Roll on issue 2, I say!

Ed

Gordon Blimey O'Crikey Lawks O'Bennett! That's blimmin' excellent, matey! When the others said it was very professional, I thought they were just being kind. But they weren't.[1] I just hope you can keep it up. (Arf! Yoinks! F'narr! -Ed.)

[1] Well, they *were* being kind but they, erm... weren't being, um, "kind". Or something.

Duncan

WHERE IS ZXF BEING READ?

Many thanks to all of you who completed the feedback form on the download page. Whilst most readers are from the UK and Spain, **ZXF** has been read in other locations all across the globe! In total I received responses from 21 different countries. See for yourself:

Country	Number of responses	Rating (out of ten)
Australia	2	9.5
Belgium	2	8.0
Brazil	1	10.0
Denmark	4	8.3
Germany	4	6.0
Greece	2	10.0
Holland	2	9.5
Ireland	3	9.0
Italy	2	9.0
Lithuania	1	0.0
New Zealand	1	10.0
Russia	3	8.3
Serbia	1	9.0
Singapore	1	10.0
Slovakia	1	8.0
South Africa	1	10.0
Spain	14	8.1
Sweden	1	10.0
Thailand	1	10.0
UK	24	8.9
USA	4	9.8
TOTAL:	*75*	*8.6*

Don't forget to fill out the feedback form for this issue if you download and read it - which, erm, I guess you are...

players, program languages and a lot of utilities were created by different programmers. Sixteen new programs were created for Sprinter computer during this year alone. All of them are freeware. But today we know about the first commercial project of an arcade game for Sprinter.

Am I right in thinking there is a Sprinter emulator for PCs already? How accurate is the emulator - does it emulate correctly all Sprinter configurations?

The emulator of the Sprinter computer has the name *Sprint* (and is by *Shaos*: **www.shaos.ru**). The emulator is free software under the terms of the GNU General Public License. It is not finished yet: today it is a very simple emulator, supporting Sprinter Configuration only. It features emulation of the BIOS and Estex functions (but not all functions). The emulation of changing version of firmware is not supported.

So, today's emulator is a shell for executing some Estex applications. It can show off the graphics features of the Sprinter; it can help programmers to create simple Sprinter programs on the text screen: it can be useful, yes, but it can't replace a real Sprinter computer. We are in contact with the author of the emulator and he has complete information about the Sprinter computer for his work.

So what exactly does the Sprinter cost - and what do you get for this?

The cost of the Sprinter computer is $170 USD. The computer in a standard set includes the Sprinter's mainboard, AT case, AT keyboard, MS mouse, 3.5" FDD, video cable, software and manuals.

The Sprinter's mainboard, *Sp2000*, can be purchased separately at a cost of $115 USD. This package contains the Sp2000 mainboard with 4Mb RAM and 256Kb videoRAM; FDD and HDD ribbon cables; video cable; software and manuals.

Is it easy to fit a standard hard disk to the Sprinter? Are there any models which are incompatible? What about CD ROM drives?

The Sprinter can use any IDE hard disk up to a capacity of 42Gb. But a HDD with more than 2Gb needs to partition on 2Gb. FAT16 specification requires it. Also IDE CD-ROM can be set.

Today Sprinter can use any two IDE devices simultaneously.

Who are the people behind the development of the Sprinter?

The Sprinter Team are: Ivan Mak (Senior Hardware Engineer) author of most ideas of Sprinter architecture, Denis Parinov (Senior Software Engineer) author of the operating system *Estex* and Alex Goryachev (Sprinter Project Manager).

When did the project to design and build the Sprinter start and what experiences/inspiration brought about the idea?

The Sprinter Project started in 1996. The ZX Spectrum computer was still very popular in Russia in that year. The original idea of the Sprinter Project was the creation of a new Spectrum clone which could use modern periphery: hard disk, AT keyboard, MS mouse, 3.5" floppy disk drive; also to add a new graphic mode with 16 colors for each pixel. But during the work, the Sprinter developed yet more powerful features. So today we have a second model of the Sprinter computer, Sprinter 2000 (with Sp2000 mainboard). But the Sprinter is a Spectrum compatible computer still.

Peters Plus: **www.petersplus.com**

FAQ: **www.petersplus.com/sprinter/faq.htm**

Sprint: **http://robots.ural.net/nedopc/sprinter/**

the conotations of the word 'kitchen,' for example, and compare them with the conotations of 'cuisine'). The current dominance of the PC in British classrooms can only result in the perpetuation of the Wintel myth that theirs is the only and the best way of doing things.

And the Sprinter is a very clever computer, its PLD allowing a dynamic architecture that controls a number of different configurations - as you can read for yourself below.

What is the Sprinter?

The Sprinter is a modern 8 bit multiform computer with Z84C15 CPU by Zilog Inc. The computer is *multiform* because it can change its architecture and hardware features during work.

For this feature the Altera PLD (Programmable Logic Device) is used. The PLD contains information about the Sprinter's hardware features; this information can be changed by loading a new variant of the architecture from an external file at any time. It might be a new variant of graphics screen, a new allocation of memory or several new ports for extended features of the computer. Therefore the Sprinter can have several variants of hardware (*hardware configurations*) for each user program if needs be. For example, the Sprinter has *Spectrum Configuration* to allow it to use Spectrum software. Other configurations give the user access to all the graphic and sound features of the Sprinter computer.

Can you explain a bit more about the different configurations? What abilities/features do the different configurations of the Sprinter offer?

Today's model of Sprinter computer (Sprinter 2000) has several configurations. Let's begin with the Spectrum Configuration - the most popular today.

Why the lengthy preamble? I have a fear that the Sprinter will all too easily be written off by readers as a machine with nothing to offer. No it's not a PC, but that doesn't mean it has no place. It's cheap, it's creative and it's an alternative.

Anyway, I've been having a little chat with Alex Goryachev of the Sprinter Team over the last few weeks. Here's what he's had to say.

This configuration allows the usage of the software of several Spectrum clones: ZX Spectrum +2, Pentagon 128/512 and ZS Scorpion 256. The Sprinter CPU (Z84C15) is fully compatible with the Z80 (the Spectrum's CPU), therefore Spectrum Configuration has compatible modes for all these Spectrum clones. Each mode has the usual Spectrum menu, Basic, AY, Kempston mouse, Tape, TR-DOS, original INT and ULA.

On first inspection you will not find many differences between using the Spectrum mode on the Sprinter and using a real Spectrum clone, but Spectrum Configuration on the Sprinter has new features:

1 Fast change model of Spectrum clones. You can select a clone in the special menu.

2 Usage of several RAM-disks. Six RAM Disks can be set to any TR-DOS drives.

3 Saving/loading images of TR-DOS disks (TRD files).

4 Change frequency of CPU (3,5MHz/21 MHz). Some Spectrum programs work better if they work quickly.

5 Changing some features of any Spectrum modes. You can create special mode for each Spectrum program.