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The ULTIMATE Interview Inside

Manic Miner 3D Preview

CODE SHED Guide To Basic Pt I

PLUS
News, Reviews and A Map or Two

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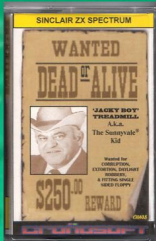
WELCOME

Issue 1? Didn't we already do that?

Well, after 2 years we have decided to re-do the issues for print. If your reading this from the comfort of your bathroom, you either have a PC with you, or the swanky printed mag! We hope you enjoy the posters that will be with each and every printed issue we release.

Other changes have also happened. Instead of the 'as and when' of the previous PDF's, we will be going bi-monthly.

So, onto Issue 1.. And what a first issue! We have a preview of a very new take on Manic Miner, an interview with an ex Ultimate employee and reviews of new Sinclair titles!

In addition to all of this there are reviews, tips, pokes & walkthroughs of the old favourites.

And if that wasn't enough, Britain's top Speccy programmer, Jonathon Cauldwell gives us an insight into creating a new game.

Now, to those of you that were expecting a replacement to ZXF. Sorry, but this is definitely not ZXF. Colin Woodcock has done a fantastic job over the last couple of years, and for us to even attempt to replace his work would just set us up for failure. Since this issue was first released, Colin has decided to take up ZXF again, so now you have two great mags!

So, what are our plans? Well, we will be continuing our scour of the internet looking for classic Speccy related news & remakes.

So, enjoy the mag, and if you have any comments or ideas, please don't hesitate to get in touch. This is a magazine for the Speccy community & we want you to enjoy it as much as possible.

Before I go a special thanks to Martijn van der Heide at WoS for the use of his forums to put this together.

Lee Fogarty

Editor

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CONTACT US

Got something to say? You can contact any member of the ZX Shed team at
contact@zxshed.co.uk

If you'd like to make a submission to the magazine, check out the website!
http://www.zxshed.co.uk

PREVIEW PREVIEW PREVIEW
MANIC MINER 3D
Our Favourite Miner Gets a 21ˢᵗ Century Makeover

central cavern
high-score:00550 score:00400
air

central cavern
high-score:00600 score:00600
air

central cavern
high-score:00550 score:00000
air

Everyone's favourite miner is at it again, well almost. This time he is a full-fledged member of the three-dee class and he sports a jet pac ... and you there, in the back, yes you! Stop booing! I'll have you know that jet pacs are very much "in" right now (but boy, oh boy is Miner Willy going to blush next spring when they are no longer considered Haut

Couture ... hover boards will be all the rage).
This demo version of Manic Miner (aptly named Manic Miner 3D) hails from a team of eager beavers, erm ... I mean a team called "Paradum Games" http://games.paradum.com/ The team has been working on a 3D engine of their own they call Nudge2 and are using it also in other projects they are working on.

According to the World of Spectrum there are 14 remakes of Manic Miner. This 15th remake will be facing a tough crowd as many fans of Miner Willy do not want to see him rough-handled (no miner/minor jokes, please) nor misrepresented (come on, a jet pac?!)

Three-Dimension is the flavour of the new millennium, and the Paradum team seems to have a promising game in store for us. The music has been updated, and spruced up a bit but the sound effects have been kept the same as in the original. Our hero is wearing something which can only be described as a space suit (or just a lava protection suit?) and he has a cartoonish gait. Long gone is the strap-on lantern, instead Willy's helmet has a high power flashlight built in. One other character inhabits this demo level, the wind-up baddie, and he is a scary one.

Everything you grew up with and learned to love (or hate) is included in this demo game: The crumbling walkway, the poisonous

plants, killer heights, annoying conveyor belt and of course the collection-of-the-keys bit. This demo has Miner Willy jump (or rather propel via using his jet pac) from platform to platform within a cavern. His goal is to collect the keys scattered within the cavern, while avoiding the usual baddies and poisonous obstacles. Once he has collected all the keys the gate to the next level opens up. He has only so much air in his suit to finish the level though so be quick about it!

We tested the demo on two different, yet comparable computers here in the ZX Shed, an Athlon 2GHz and a P4 3GHz. It runs without any problems at all on the P4 but was dark, slow and jerky, and eventually crashed on the Athlon. Another issue is that it uses up over 40 megabytes of RAM and close to 50% processor time, so it's obvious that the engine needs some more tweaking. Seeing as this is a demo it's understandable that the game may not be fully compatible with all systems. Let's keep our fingers crossed that they will address these issues before final release

This version promises us a lot and only time will tell if it will be a hit or not with the many fans of the lantern carrying miner. Paradum Games better make Matthew Smith proud ... otherwise he will flash them one of his trademarked deadly, devilish grins.

Skarpo

Lost Treasures

Welcome to the inaugural instalment of 'Lost Treasures', a look at some titles that may have been ignored when originally released for several different reasons, either because they weren't released by a major software house or because they didn't get the exposure they deserved.

The first game I will look at is 5 In A Row which was originally released in 1986 by Hill McGibbon. On first loading the game, you might think that it should have been released back in 82, and you probably would be right - the graphics are rubbish, consisting basically of a grid of 8x8 character squares and a basic looking score panel on the right hand side of the screen. But don't let that fool you, there is an excellent little 'Connect 4' type game lurking underneath.

You first choose the number of players by entering their names, either two or three players can participate. Then you choose the length of the row required to win, either 4, 5 or 6 squares in length.

After that you can select the method of moving around the grid, moving the cursor, moving two markers along the x and y axes, or entering co-ordinates. Then, each player attempts to make a line of the chosen length while blocking his opponent.

Side two of the cassette contains a different version of the game where the players can choose the number of squares they can place and once placed, they then attempt to form a line by moving the squares around.

This adds a further level of strategy to the game and increases the difficulty a fair bit. Despite the fact that this game was written in BASIC and the graphics aren't up to the standard of other games released in 1986, this is an great little strategy / puzzle game that should occupy you for a while after throwing your copy of Jet Set Willy at the wall in frustration because you were repeatedly killed in The Forgotten Abbey yet again.

The WoS archive contains many games that are unknown to most spectrum users, like `The Bewarehouse', a game I haven't come across before myself. It was originally published in 1984 by Positive Image (a software house I've never heard of either).

Basically it's an inferior variation on Hunchback. You move your man through a haunted warehouse, jumping to avoid the barrels (red circles) that roll at breakneck speed along the floor, while boxes (green squares) fall down from the ceiling. You can move your man left and right and you have two different jump controls (normal jump and super jump). The normal jump is used to grab the lower pipe which stretches across the main floor of the warehouse while the super jump allows you to grab the higher-up pipe that only appears at some points. Using the super jump expends more energy and once you reach the other side of the room and climb the ladder, your remaining energy is converted to your score (the more remaining, the more points you gain).

This could be a good little game if it wasn't for the fact that each screen is identical, the only

difference being more boxes (squares) fall from the ceiling in subsequent screens. I got bored after reaching the third level and turned the game off. This one isn't recommended unfortunately. Back to Hunchback for me.

FEUD

Bulldog
Original Price: £1.99
Release Year: 1987

Richard: When I play a game for the first time I like to just leap straight in and not bother with the instructions, so that's exactly what I did with Feud. After around ten minutes of moving around collecting various herbs or whatever and getting lost a different tact was required...

I reached for the instructions!!! Ahh, now I understand, collecting the herbs start making sense and those cooking pots ARE of some use. Very soon I'm mixing spells and chasing Leanoric all over the place.

Once the basic game play has been established there's not a lot else to learn but the game is no worse off for it. There's enough to be doing mixing spells and chasing / running away from Leanoric (depending on your current spell state at the time) and those villagers wandering about are of more use than you first realise. As you go about you business of collecting herbs and mixing spells life is comfortable and relaxing then all of a sudden when you least expect it, tension.
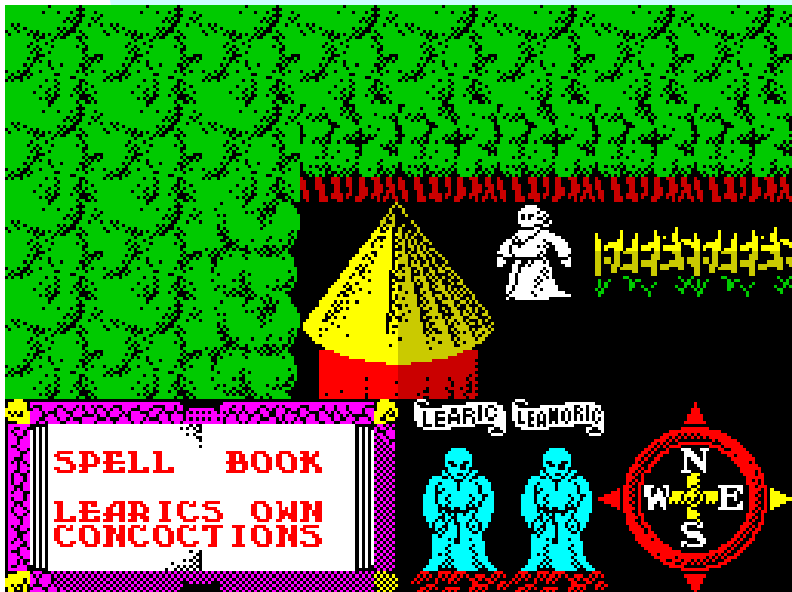
This is what makes the game a cut above others of this genre, you're eased into the game, allowed to become comfortable with the controls and then the real gaming begins. When Leanoric appears the fun really starts and you can start using your hard earned spells on him, it then becomes of strategy and you find you actually need to put some thought into the game, an unexpected but welcome pleasure.
The screen is colourful and uncluttered and the sprites are a good size. Sound is minimal with no in-game music, but this does nothing to detract from the game play I suggest you dig out version of `Green sleeves' and play that in the background.
All in all for a budget game this is exceptional and one you will spend some time occupying rather than glance at as you pass through.

Marks
Playability - 8
Graphics - 8
Sound - 7
Instant appeal - 7
Addictiveness - 8
Overall - 76%

Area 51

Release Year: 2005

Richard: Looking through one of the computer mags this morning I saw a review for Area 51, wow I thought, Jonathan Cauldwell is getting some well deserved press coverage, but no it was for a PS2 game of the same name.

That's not to say that this game doesn't merit a review because it certainly does. It's one of those games where you know exactly what you need to do without any thought whatsoever. A platform game with more than a passing resemblance to Manic Miner this is slightly easier to get through.

Fizzog has to find the components to repair his space scooter and as with these games they are scatter across 16 screens. I'm not going to insult your intelligence by telling you how to play the game because I think we all know how a platform game works by now.

Sufficed to say this is one of the nicer games I've seen for quite a while. Back in the 80's this would have made a very nice budget game and would have been well worth the money. The graphics are clean and the animation pleasant.

The music will grate after a while so the option to shut off the music would have been nice. The unique feature is the random screens, you never know which order you are going to play the game and thus you effectively have millions of games in one depending on which order the screens appear, a neat touch.

Another worthwhile addition to the growing stable of Jonathan Cauldwell games.
Check out the full screen shots later on in this very issue!

Marks
Playability - 8
Graphics - 8
Sound - 6
Instant appeal - 8
Addictiveness - 7
Overall - 74%

Auf Wiedersehen Monty

Gremlin Graphics
Original Price: £7.95
Release Year: 1987

Richard: Auf Wiedersehen Monty continues the tradition of highly playable platform games featuring the unlikely hero of Monty the Mole from Gremlin Graphics.

In this episode of the series Monty is fleeing across Europe to escape the infamous `Intermole' who chase him from country to country. On his journeys he will run into various accomplices who will assist him as he continues his break for freedom.

This is not your plain run of the mill platform game, this requires quite a bit of thought and planning if you're going to complete it. A map is going to be essential as you are going to need to you're your route across Europe.
Comparisons were made to JSW at the time but I think this was unjust as there were enough differences to justify the Monty series.
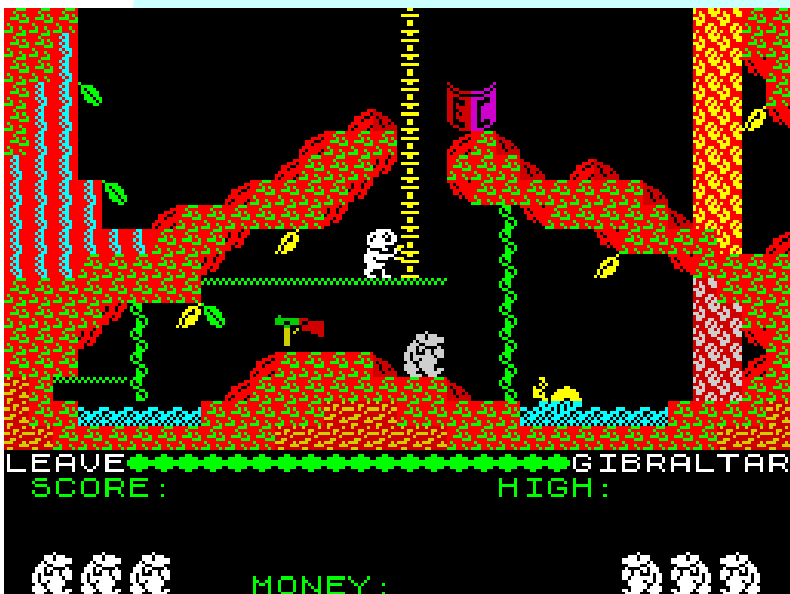
This is a very well thought out and superbly designed game which although retaining the feel and ambience of the first game of the series also manages to showcase just how far Gremlin had come in terms of coding and game design. The use of colour throughout the game is spot on and the graphics whilst not over elaborate are just what is required to enable the player to concentrate on the game play. Some of the animation used in the backgrounds is very clever and the illusions created go a long way to project an atmosphere to the game. Some of the

puzzles are ingenious and this is not a game you are going to complete in a hurry.

Games like this didn't come along often enough and when they did they everyone jumped on the bandwagon, unfortunately very few came up to the very high standard set by Gremlin so this game stands head and shoulders above others of its genre. This really is one of those `must play' games of the era.

Marks
Playability - 9
Graphics - 8
Sound - 7
Instant Appeal - 8
Addictiveness - 9
Overall - 82%

DT's Decathlon

Ocean Software Ltd
Original Price: £6.90
Release Year: 1984

Richard: Damn, I never knew typing could be so painful and I've only played an hour and a half of Daley Thompson's Decathlon. I thought it was because of all the rapid key pounding but having watched my ten year old son storm through all ten events with the comment "This is fun, but a bit easy" I realise it's just my age.
All the decathlon events are included and to be honest are a pretty fair reflection on their real life counterparts.

For those who don't know Daley Thompson was the British Olympic Decathlon champion during the 80's who whopped everyone else in the competition as well as being the ultimate competitor he was also an extremely well loved and popular TV personality.

It's easy to see how this game was so incredibly popular in its day, whilst being very simplistic in game play it is also extremely addictive. This is so easy to get into, you pound the keys (or as you did in the 80's, waggle your joystick) so quickly you forget that a little bit of strategy is required to go the distance, you also need to perfect your timing for some of the field events. I found the high jump quite difficult to master and the discus appears to be more luck than judgement to release it at exactly the right moment.

The graphics are quite impressive, though the main character runs a bit stiff legged (like he's just deposited something brown in his shorts!!) and the sound is at best adequate, though I'm not sure what Vangelis would say about the rendition of `Chariots of Fire' that is used!!

The only let down I can see it that you are ultimately playing against the clock or a qualifying time or distance, so you don't get the adrenalin surge of trying to beat your nearest rival in a one hundred yard dash. A minor quibble though as the rest of the game more than stands up.

SCORE 0013500   QUALIFY 015:50m

				RECORDS	C H R	000 : 00
1st ATTEMPT	000 : 00				C H R	000 : 00
2nd ATTEMPT	000 : 00				C H R	000 : 00
3rd ATTEMPT	000 : 00					

SPEED ▮▮▯▯▯▯▯   33°   002:12m

sharp and you need your wits about you. Game play is very good and it definitely has that `just one more go' factor and I can imagine some people getting very frustrated with some of the later levels.

Graphically the game looks great and superb use is made of colour, though the font is not the best designed and I had trouble reading some of the words. Sound is minimal but none the worse for it. The biggest problem I found was the front end, there is no option to redefine the keys and you have to read virtually the whole of a scrolly message to discover which keys to use (I also spotted a spelling mistake, there's no excuse for that!!!) and that was a real bugger to read thanks again to another badly designed font.

This is a typical Ocean release, a polished professional product (with adverts bearing their name all over the game!) and Daley's name attached to it did the sales figures no harm whatsoever. Now I must go and soak my wrists for a couple of hours before I go back to that high jump, I will master it and I'm certainly not going to let a ten year old boy whoop my butt again.

Marks
Playability - 9
Graphics - 8
Sound - 7
Instant Appeal - 9
Addictiveness - 9
Overall - 84%

Stranded

Cronosoft
Original Price: £2.99
Release Year: 2005

Richard: Cronosoft can't seem to stop themselves from publishing brand new Spectrum games and I might add, of high quality. This one is no different, Stranded on the face of it is a simplistic idea yet the more you play it the more fiendish it gets. With more than a passing resemblance to the old arcade favourite Q*Bert, the object is to complete each screen by passing over each coloured block whilst avoiding plummeting into oblivion.

Sounds easy? Well yes it is to begin with, the first level is a breeze and the second can be completed with minimal practice. Then things start to change, the blocks are no longer square but shaped like very coarse arrows and you find yourself shooting off in completely the wrong direction, it soon becomes apparent that a little thought is required to get through a few more levels and the game begins to get very interesting.

The further you delve into the game the more surprises await you and the learning curve changes very rapidly from gentle to

Front end aside, this is a very good game which will keep you amused for many an hour and if released back in the mid 80's when it was conceived would have made a very good budget game which could quite easily have been nice little earner. After a couple of hours playing Stranded it did make me wonder...
When will Cronosoft release a bad Spectrum game?

Marks
Playability - 8
Graphics - 7
Sound - 6
Instant appeal - 8
Addictiveness - 8
Overall - 74%

The Fantastic Mr. Fruity

Cronosoft
Price: £2.99
Release Year: 2005

Richard: Jonathan Cauldwell has a very bizarre mind, some people have the ability to take two seemingly polar objects and merge them together and make the end product appear like the

most natural thing on earth, Jonathan is one of those people, when you see the opening screen the first thing you think is Pac man and then you spy the fruit machine in the top right hand corner, Ok an interesting if not puzzling beginning, not many people will combine Pac man with a fruit machine. But then most people are not Jonathan Cauldwell (except perhaps Jonathan Cauldwell) and the most prolific writer of Spectrum games at the moment is off and running yet again with another one of his eminently playable games.

I've played this game for about an hour and I'm still not 100% sure what I'm supposed to be doing, as far as I can gather you need to clear the monsters from each screen using a combination of strategy and the random element of the fruit machine.

Unknowingly I found myself getting quite into this game as I tried to lure the monsters into my trap and then hope that the randomness of the fruit machine was being kind to me.

Being a Jonathan Cauldwell (have I mentioned his name before?) game you will already know that the graphics are up to his usual high quality, likewise the animation is smooth and pleasing to the e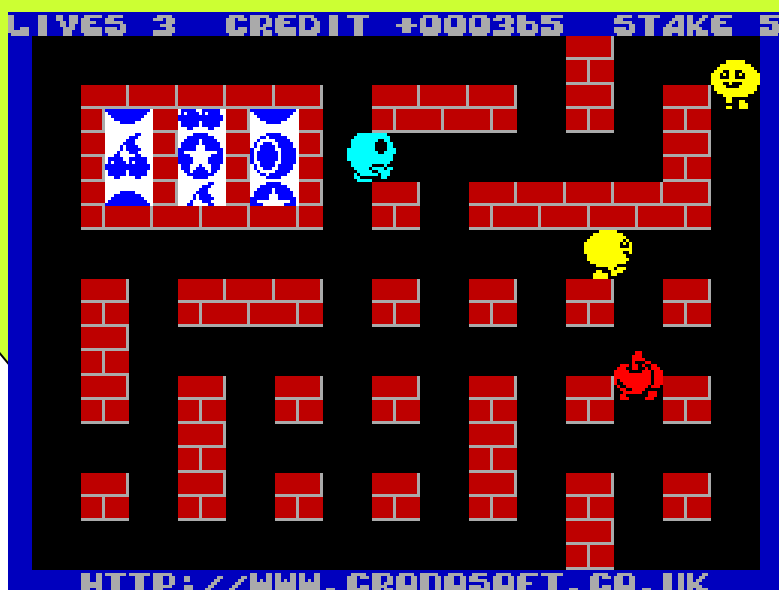ye. The added bonus this time is a superb soundtrack written by Matthew Westcott which really does add to the ambience of the game and is quite simply one of the best pieces of in-game music of I heard for the Spectrum in quite some while.

The one thing which Jonathan's games contain which many other games do not at the moment is polish. Jonathan `finishes' his games, making sure that the end product is a complete package with wonderful little touches like the animation of the characters that all appear to be `waddling' around the screen, the high score table and the ability to turn the music off (though why you would want to is quite beyond me).

A lot of thought goes into the program after the game is completed and for this Jonathan should be congratulated. As usual there is a hidden game for you to find, tanks a lot Jon!!!

Jonathan turns out these games quicker than I can review them, the man appears to be a machine, but who's complaining, and long may it continue.

Marks
Playability - 8
Graphics - 7
Sound - 9
Instant appeal - 7
Addictiveness - 7
Overall - 76%

Rana Rama

Hewson Consultants Ltd
Original Price: £7.95
Release Year: 1987

Ben: In Rana Rama you play a slightly dense sorcerer's apprentice by the name of Mervyn, who has managed to escape a bunch of evil warlocks. But before all this happened he'd been working on a potion to improve his looks. Well, he must have got the ingredient's a bit wrong because POOF – human to frog in 0.1 seconds. And so the object of the game is, exploring each level of a dungeon to find the warlocks and defeat them in ritual magic combat (a logic puzzle where you have to spell out RANARAMA)

It's a maze game like Gauntlet but you can only see the areas of the map you've already explored. This makes things quite tricky because there are dead ends and rooms also have their fair share of nasties. These nasties make up the Warlock's minions, and to start off with you'll be bothered by the Dwarf Warriors but eventually you'll encounter worse things like gargoyles who, according to the instructions (download the PDF, you'll need it) were "created by dark forces and are the epitome of evilllll".

I admit that I found things difficult to start with, but once I'd got into the game and worked out how to use floor glyphs to navigate the dungeon, I found it quite playable.

There are spells to be used and you can build these up in order to tackle the tougher bad guys in the lower levels. But there's a price to pay for magic so you'll need to it strategically. Defeat the warlocks and maybe Mervyn will be able to turn himself back into a human.

Rana Rama is a nice game, with easy controls and pretty graphics. Mervyn even makes a nice little croaking sound as he moves. What more could you want?

Marks
Playability - 7
Graphics - 7
Sound - 7
Instant Appeal - 8
Addictiveness - 8
Overall - 74%

The Code Shed Guide to: BASIC – Part I

Hello and welcome to the Code Shed Guide (CSG) to: BASIC! Are there some amongst you who have always wanted to have a go at writing something with BASIC but never got around to it for whatever reasons (like playing Sabrewulf for instance)? Or some of you who have returned to the "scene" to find that you've forgotten all that you knew about the good ol' ZX Basic? Or maybe you are a fresh faced youngster who would like to know what this BASIC thingy is when everyone else is talking about C++ and C#?

If you fit into one of the above categories then you'll like what's coming up, if not, well you best get back to your game then and try improve your high-score!

Right. Are all those sods gone? Good! So are we comfortably sitting with some music in the background and a pint of good beer at hand? Yes? Let's get the ball rolling then!

To keep things interesting and informative I think the best way will be a "hands-on" approach. What we are going to do is to write a game from scratch, learning concepts and techniques as we go, and I'll explain not only *how* to write bits of it but also *why* we are doing it the way we are doing it. And the game I've chosen for this purpose is the rather excellent (and completely crap – *Ed*) game "Dash-it" written by a rather excellent fellow by the name of "Arjun" by some spooky co-incidence. Why? Well apart from the fact that I'm biased towards it for obvious reasons, it is also a short game with a simple design and is relatively easy to implement. It's also included as an example program with BASin so you already have the full source code for reference, if you can't be bothered to type-it all in again – although I would strongly recommend that you do so.

This rather nicely brings me to BASin, which in case you didn't know, is a full featured IDE (Integrated Development Environment) to develop programs for the ZX Spectrum. There is a review of it somewhere in this edition of ZX Shed that lists its features, so I won't describe it further except to say that we'll be using it heavily in the CSG since it makes life so much easier. If you don't know first thing about BASin, don't worry, I'll explain bits of it too as we go along.

The Game

"Dash-it" is a simple game that is a variation on the popular "snake" game. The aim of the game is to eat the dots without crashing into the blue trail that you leave behind. A timer counts down the time on the top left, and once it reaches zero, you are thrown into the next level
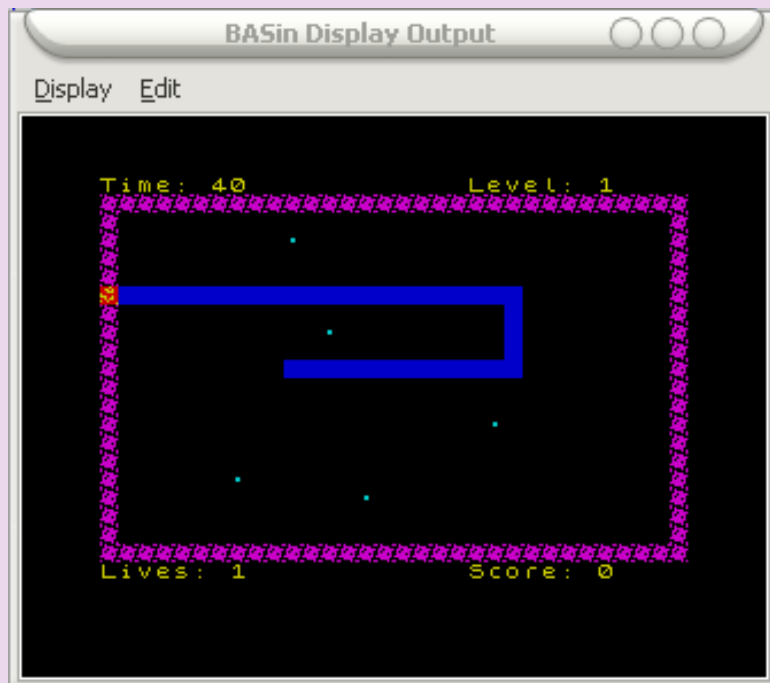
with even more dots to devour! Finally, there is a force-field around the playing area, and crashing into it will cause the player to lose a life.

So that's the game design (if I can call it that!). From the game design we can derive the following essential elements that will make up the game:

1. A player sprite that can be moved around by the player.
2. Dots that the player must collect.
3. A force-field that defines the playing area. Colliding with it causes loss of life.
4. A timer that counts down to zero.
5. A blue trail that the player must leave behind as the sprite moves around. Colliding with it causes loss of life.

With the above simple foundations in place, we can always extend the game if we want to (and we will).

Well that's the core of the game. What other stuff could we want in the game? Hmm… let's see. How about an instructions screen, a way to redefine the keys, and a credits screen (just like in professional game!)? That way, anybody new to the game can read the instructions on how to play the game, change the keys to suit his or her taste, and maybe have a look at the utterly cool people that the author wishes to thank for some reason!

The logical way to go about it would be to code the "features" as separate sections in the game that exist more

or less independently of each other. We can then code the game one section at a time, adding and revising individual sections anytime we want. Typically, one would code the core of the game first then add in the other "features" as separate sections in the game that exist more or less independently of each other. We can then code the game one section at a time, adding and revising individual sections anytime we want. Typically, one would code the core of the game first then add in the other "features" one at a time. However, in our case, since this is a tutorial and since our wanted features are technically easier to implement and understand, we will code them first and then move on to the actual game core.

Sub-routines:

As already mentioned, our features will be individual sections of the game. Think of the game as a house, and the sections as individual rooms. Every room stands independent (more or less) of each other, but together they make up the entire house. Similarly for our sections! Going by that logic, our instructions, credits, key redefinition and the actual game can be divided into individual sections. In programming terminology they can be thought of as *sub-routines*.

For example, in *Dash-it* I have coded the instructions as a sub-routine that exists from line 9000 to 9070. Lines 8300 to 8380 is the credits sub-routine; lines 8400 to 8540 is the key redefinition sub-routine and finally, lines 4000 to 6000 is the actual game. As you can see, what I have done is carve up the program into logical code blocks. Let's examine one such code block to understand this sub-routine business:

```
8300 REM *** Credits ***
8310 CLS
8320 PRINT "Dash it! Was originally written":
PRINT "especially for the CSS Crap      ": PRINT
"Games Competition 2004.": PRINT '"This version
is an updated one ": PRINT "with some bug fixes
and sound!": PRINT "It's still crap though! :)
"
8330 PRINT : PRINT "Developed on the BASin IDE
written by Paul Dunn."
8350 PRINT : PRINT "Hello to all WoS regulars
(and irregulars) and to folks at CSS.Speccy
forever! Amen."
8360 PRINT #0; INK 5;"http://
www.yantragames.com"
8370 PAUSE 0
8380 RETURN
```

BASin Tip: For the code, you can do either of the following in BASin: type it in, or load the existing code from hard disk. To do the latter, simply choose the LOAD option from the File menu option, navigate to EXAMPLES > BAS Files> CSGCC and choose 'Dash-It!". If you go the typing route, make sure you enter the line numbers exactly as you see them here or unpleasant things will happen shortly (like the program not running as it should)!

Hey, there is English in some of the lines of code! There is hope yet eh? A pity you can't write an entire game in BASIC using English statements, but hey, this is good enough. For starters consider line 8300. The REM keyword is short for REMark and is just a placeholder for comments in your program. You can put any piece of drivel after it and the   Spectrum won't care. In fact, as soon as it sees a REM in the program, it goes into "ignore" mode and just moves on the next line of the program. I have used REM to remind myself that this is the "credits" sub-routine.

The next line features our first ever useful command: CLS, which simply CLearS the display screen. If you had specified any ink or paper colours before this, CLS would have cleared the screen to them (we'll see an example of that shortly).

Lines 8320 to 8350 print a number of messages on screen. This is achieved via the PRINT command – a very powerful and versatile way to output to the screen. The syntax is simple: Just put whatever you want to output between the quotation marks ("") following the PRINT command. For example, if you wanted to display "The answer is 42" on the screen you would do:

```
PRINT "The answer is 42"
```

In LINE 8320 you will see that we have multiple PRINT commands in one line, all of them separated by a colon (:) symbol. The colon operator serves to separate statements from each other. You can therefore put multiple statements on one line using a colon, which is what we have done.

One problem you will immediately run into when printing to the screen is that words may split at the end of the line resulting in ugly looking on screen text. This is because the Speccy can display 32 characters on one line, and if you are trying to display more than a 32 character long message, the Speccy will move to the next line to print the next character. There is no fancy word wrapping facility so you'll have to ensure that your words don't break unexpectedly when printing on screen. What you have to do is count the number of characters right after the first quotation mark. When you hit 31 (32 characters range from 0 to 31) you know that the next character will spill to the next line so you may need to add white-spaces to move the entire word to the next line (see the second PRINT statement in line 8320).

BASin Tip: BASin makes formatting text output easy. Instead of counting the characters, just watch the character ruler at the bottom of the window. The ruler automatically indicates the 32nd character mark with a red arrow as you type in the words!

Using the PRINT command all by itself prints a blank line, which is what we have done in line 8330 to split our output into paragraphs. However, I've been a bit cheeky I must admit. If you look at the fourth PRINT statement in line 8320, you will see that right before the first quotation mark, there is an apostrophe (') symbol. This is a shortcut

way of making the PRINT command display a blank line!

For example, this PRINT command will display the words "King" and "Kong" on successive lines:

```
PRINT "King"'"Kong"
```

Note the apostrophe symbol wedged between the end of the first quotation pair and the beginning of the second quotation pair!

Line 8360 is a very interesting one because it uses a BASIC trick to print on the 22nd line of the screen (which is usually reserved for input by BASIC although it's part of the display screen. Normally you can only print from lines 0 to 21.). The trick is to simply put #0 after the PRINT command. Honestly, that's all there is to it! This will simply make BASIC print whatever you want on the 22nd line. Nifty eh?

Okay so there are some more interesting things in line 8360. The first of which is the semi-colon symbol, which serves a very different purpose than a colon in a print statement. Here it serves to separate the data items in the PRINT statement. Examine the following:

```
PRINT "Hello ";"there"
```

This will print "Hello there" on the screen. The semi-colon here merely tells the Speccy to continue printing the word "there" right after the word "Hello". You can have many data items in just one PRINT statement.

If we had wanted to specify a colour for the text we would have used the INK keyword. The way to do is to simply use the INK keyword followed by the number corresponding to the colour we want (range 0 to 7). Cyan is 5 so INK 5 will print the text in cyan colour. The simplest way to print using cyan colour would be:

```
PRINT INK 5; "This text is cyan in colour"
```

Again, we use the semi-colon to split up the information (data item) to the PRINT command – the first being the ink colour and the second being the actual text.

In line 8360 we are trying something complicated: we want to print some text, we want it to be in cyan colour and we want it on line 22, which is why it reads the way it does with multiple semi-colons.

There are other sophisticated things you can do with the PRINT command but we'll examine them later on as we deal with them in the code.

Line 8370 introduces the PAUSE command, which waits for n number of frames. Since the Speccy displays rate is 50 frames per second (or 60 in North America), you can wait for x seconds by using a value that's equal to n times x. For example, if you want to put the Speccy on hold for 4 seconds you will use PAUSE 200, since 4 x 50 = 200. For 10 seconds, the value will be 500 and so on and so forth. However, if you use a value of 0, the Speccy will wait indefinitely till you press a key to move things along. This is ideal for "Press any key to continue" situations as you will no doubt realise. And we us this very fact to our advantage by displaying a screen full of information and then waiting for a key press before continuing.

The last line in the code block is a simple RETURN command. This one command though is single-handedly (well almost) responsible for making this code block a sub-routine! You see, a sub-routine can be called from anywhere in the program. That is, it is a re-usable piece of code.

It needs to be written once, and if you need to use it anytime just call the sub-routine whereupon the Speccy will transfer control to the sub-routine, execute it and then return to the point where it was called. You call a sub-routine with a GO SUB command (as we'll see in the next code segment).

```
1 REM Dash it!
2 REM by Arjun Nair 2004
3 REM **********************
5 CLEAR : RANDOMIZE
10 CLS : LET hiscore=0
11 DIM k$(4): LET k$(1) = "p": LET k$(2) =
"o": LET k$(3) = "q": LET k$(4) = "s"
15 GO SUB 6060: REM init graphics
20 GO SUB 8000: REM main menu
30 GO SUB 1000: REM game loop
50 GO TO 20
```

In line 5, we see the first bits of useful code. CLEAR simply wipes out the Spectrum memory and provides you with a clean slate to work on.

> NOTE: Actually that's a simplistic explanation. The CLEAR command actually does a bit more than that. It not only clears all the variables but also clears the display screen, resets the PLOT position and clears the GO SUB stack.

The following statement is a RANDOMIZE keyword, which initialises the random number generator and makes it as random as possible (since computers can't actually generate truly random numbers for various reasons). Sometimes the RANDOMIZE keyword is followed by a number, which is called the seed. Specifying a seed of zero (using RANDOMIZE on its own is equivalent of saying RANDOMIZE 0) makes the Speccy use an internal timer to seed the generator, which makes things very random indeed.

Coming to line 10 we have the CLS keyword that simply clears the screen, and nothing more. If you have specified any foreground and background colours and/or a border colour, the CLS command will clear the screen to them. We'll come to that shortly when we start dabbling in colours.

The next statement is a LET statement that assigns the value zero to a variable called *highscore*. Effectively, a variable is a named placeholder that serves to hold some value. They are of two types – numeric variables and string variables. Numeric variables hold only numeric values (ranging from 0 to 255), while string variables hold alphanumeric data in string format (anything within quotation marks). In our case, *highscore* is simply a numeric variable that initially holds zero.

Things get a bit more involved in the next line. Before I get into the technical explanation, let me explain what I'm trying to do here. What I want is the player to be able to redefine the control keys from within the game if he so chooses. Therefore, I save the information on control keys in a string array (I'll come to arrays shortly), which can be manipulated anytime (which we'll do when we implement the Re-define keys option).

As for arrays, well they are nothing but a collection of similar stuff (or objects as we call them in programming parlance). You can have a collection of months (January, February, et al) or collection of music albums, and they can all be thought of as arrays of months and albums respectively. Like plain variables, an array can be of numeric or string type. In fact, they are called array variables and individual elements of the array behave just like plain variables.

In the code above, we would like to have an array of control keys (an array since they are just a collection of keys). The way to go about is that we first tell the Speccy that we would like to set aside space for so many number of array elements. In our case, we would like to create an array of four control keys (Up, Down, Left & Right). The statement DIM *k$(4)* does precisely this. DIM is short for DIMension (size of array), k$ is the name of the array variable and 4 signifies the number of elements that we want.

Once you have created an array, you can fill it in using the LET statement like we did for *highscore.* The difference here is that we   access individual elements of the array using the syntax k$(1), k$(2)… k$(n) - where n is any element number (an index). You cannot do LET *k$ =*

something. You MUST specify the element within the array that you wish to change by giving an index number. So we have stored the default letters that will correspond to our control keys in k$ from 1 to 4.

Lines 15 to 30 use a bunch of GO SUB's to transfer control to various part of the program. GO SUB is short for GO to SUBroutine. As we saw earlier, a subroutine is a short piece of code within your program that performs a specific function. Once it is finished, the sub routine RETURNS control to the point in the program from which it was called.

In our case, we have separate sub-routines for initialising the graphics for the game, for presenting a menu to the player and finally for running the actual game. As I explained earlier, by using sub routines I have "compartmentalised" the code in my program so that if I later decide to change the way a certain sub routine is implemented (say, if I change how the menu looks) I don't have to worry about how it will affect the whole game. Here, line 15 first transfers control to subroutine that starts from line 6060 that sets up the game graphics.

Once the subroutine is done, it RETURNs to control to the point from where it was called, in our case this is back to line 15. The next statement is the REM statement (which I have used to remind me which subroutine the GO SUB is referring to), so the Speccy ignores it and goes to the next line instead. Similarly for the main menu and for running the game (the game loop).

Finally we have line 50 with a GO TO keyword that transfers control to line 20. This is so that once the game loop is done (the player has finished all his lives) we want to go back to the main menu option screen. The difference between GO TO and GO SUB is that the former simply transfers control to the line specified in the program and doesn't expect any RETURNs to it (we don't want to come back here from the main menu for instance), while the latter is a call to an actual sub-routine.

That's it for this lesson. Save what you have now, and next time we will look at the main sub-routine.

MAD SAGE

LEARIC

SKULLCAP

BURDOCK

BONES

DRAGONSTEETH

RAGWORT

BIND WEED

FOX GLOVE   CHONDRILLA

SNAPDRAGON

THISTLE

FEVERFEW

BALM   SPEEDWELL

MOUSETAIL

Feud; Map created by Pavero, 2002; http://zx-spectrum.wz.cz

TOADFLAX

CUD WEED

DEVILSBIT

CATSEAR

PIPEWORT

KNAP WEED

BOG BEAN

HEMLOCK

LEANORIC

Cheaters Corner

Having problems with some of your favourite games? Well fear not, Lee Fogarty has been through the tipshop archives and re-trieved all sorts of pokes, cheats and walkthroughs for some of the recent ZX Club games. If you'd like to join ZX Club, simply check out various posts in the WoS Forums under the 'Games' section. Of course, some of the ZX Shed team have also been hacking away at some of the recent releases as well.

Welcome everybody, gather around and let me introduce to you the fine art of cheating your way through life. Well, not life in general, just various games. I should point out here that I don't condone cheating, hacking or general butchering of games at all. Oh - no, I finish them all legitimately. Cough. But just in case your fingers have weakened with age, or your crap at games, let us help you on your merry way.

Let's start with the great **Auf Wiedersehen Monty**, the mammoth Gremlin game.

First off, we have some multiface pokes. No, I don't know how to use them either. (Eh?)

Infinite Lives - 41139,0
Harmless Aliens 42160,201
No Crushers - 47715,201
Harmless Water - 37002,0
(Gerard Sweeney in Hack Attack III)

Tickets Not Required To Fly (48k version) - 38896,0
Keith Rundle

Now, for the more nimble fingered amongst you, we have a type in from *YS Smash Tips*. Crushers and aliens made harmless, walk on water and of course a ubiquitous infinite lives Poke.

```
10 CLEAR 32767
20 LET T=0
30 FOR N=40000 TO 40032:
READ A: POKE N, A: LET T=T+A:
NEXT N
40 IF T- 3049 THEN PRINT
"DATA ERROR": STOP
50 POKE 40021, 186
60 POKE 40024, 164
70 POKE 40028, 160
80 POKE 40031, 144
90 LOAD ""CODE
100 RANDOMIZE USR 40000
110 DATA 33,78,156,17,153,
129,1,19,0,237,176,195,0
```

```
120 DATA 128,205,86,5,62,201,
50,99,0,50,176,0,175
130 DATA 50,179,0,50,138,0,201
```

Of course, there is a much easier way to do this, simply load the game with
LOAD "": REM MONTY

Now, start the game normally and pick up the red flag on the first screen. Hey presto, infinite lives & immortality.

But wait, I hear you cry, what about those pesky flight routes? Well, courtesy of *C Heathcote, John Riddoch, Richard Payne in Your Sinclair issue 22,* we have a complete flight plan:-

FROM	TO
Airport, Spain	Paris, France
Paris, France	Antwerp
Antwerp, Belgium	Luxembourg
Luxembourg	Amsterdam
Amsterdam	Airport, Spain
West Berlin, Germany	East Berlin
East Berlin	Yugoslavia
Airport, Yugoslavia	Rome, Italy
Rome, Italy	Olympus, Greece
Olympus, Greece	Bern, Switzerland
Moledavia	Copenhagen

And finally, just in case you really can't be bothered to explore the game yourself, here's the complete solution from *Mark Balham* in *Crash issue 45*:-

From the start go u, u, u, get ticket, u, l, r, d, r, u, r, only get the left cheque, l, d, d, d, r, get football, l, u, r, leave cape, l, u, r, r, u, l, r, r, r, l, u, l, r, u, l, r, get cork, l, u, l, r, r, d, d, r, l, u, u, u, go left through the wall, d, l, r, u, go right through both walls, d, r, r, r, d, r, u, d, l, u, u, l, leave beer, l,

u, d, r, r, ticket, u, l, touch boy, r, d, u, u, u, fly, d, get steering wheel, u, fly, d, d, l, ticket, fly, d, r, r, u, r, r, l, u, u, l, get Mona Lisa, u, r, u, go right through wall, d, r, r, r, get tools, d, touch cable car, d, u, l, l, u, l, ticket, r, fly, r, u, l, r, ticket, d, d, u, fly, u, d, l, l, r, r, d, r, d, r, d, l, fly, l, r, d, d, r, u, r, d, l, l, d, r, d, r, d, r, d, l, ticket, fly, ticket, d, d, r, d, touch lady, r, ticket, d, r, d, l, d, u, r, u, l, d, d, l, touch fence, r, u, u, fly, ticket, fly, d, d, r, r, r, r, d, r, d, r, ticket, fly, get bacon, d, d, d, fly, r, d, u, fly, d, r, d, r, d, r, d, d, l, AND THAT'S IT!

(Remember to collect all the items that are not stated above except tickets.)
Phew! I think that's enough from Monty for the time being. If you can't finish the game with that lot then there must be something wrong with you.

Joystick waggling frenzies are just as much fun now as they were all those years ago. One of the best was **Daley Thompson's Decathlon** from Ocean.
So, here we have for you is a plethora of poke, hints & tips, starting with some previously un-published fixes!
These fix an irritating bug whereby the sprint clock always starts randomly between 0.00 and 2.56 seconds. This can easily lose you over 2,000 points and often cost you a life when qualifying times become more difficult.

Enter these Pokes and a 0.00 second start is guaranteed every time in every track event. The Pokes work for both Day 1 and Day 2.

```
POKE 23734, 175
POKE 23735, 50
POKE 23736, 87
POKE 23737, 171
POKE 23738, 62
POKE 23739, 33
POKE 23740, 50
POKE 23741, 149
POKE 23742, 125
POKE 23743, 195
POKE 23744, 1
POKE 23745, 160
POKE 40958, 195
POKE 40959, 182
POKE 40960, 92
```

You may have noticed the scoring bug in the 1500 metres. If you run 65.54+ seconds faster than the qualification time, the score calculation overflows and cheats you out of 65K points. In the worst case scenario - on the first round, a run of 244.46 actually scores only 4 points instead of the correct 65,540.

The following Pokes work around this by crediting you with half points, but twice over, so the points calculator never has to deal

with an event score bigger than 65,536. You will see your score update twice but the end result will be the correct points award. By the way, if you watch carefully, you might spot the same thing happening in the 110m hurdles event - apparently that uses the same scoring routine. Again, the final result will be correct.

```
POKE 23746, 237
POKE 23747, 67
POKE 23748, 211
POKE 23749, 92
POKE 23750, 205
POKE 23751, 218
POKE 23752, 130
POKE 23753, 237
POKE 23754, 75
POKE 23755, 211
POKE 23756, 92
POKE 23757, 205
POKE 23758, 218
POKE 23759, 130
POKE 23760, 195
POKE 23761, 45
POKE 23762, 168
POKE 43044, 5
POKE 43050, 195
POKE 43051, 194
POKE 43052, 92
```

(**Day 1**)
This is my final bug fix for Daley Thompson's Decathlon. This one fixes the problem of Long Jump measurement in Day One, whereby with certain speed/angle/takeoff point combinations the computer will mistakenly add 2.56 metres to the jump distance. (Ever jumped 11.76m with 47 degrees? You should have had 9.20m, whether you like it or not.) In later rounds this bug may mean qualifying when the required distance is impossible (the normal, non-cheating maximum being 10.27m), thereby artificially inflating the player's final score. There are still several bugs in this game, such as jumping under the High Jump bar, allowing the track clock to reset to 000.00, landing on the Long Jump takeoff line sometimes yielding a jump of 500+m), or releasing the Discus early. However, in normal competition those bugs do not arise. Any attempts to use them are obvious methods of cheating and are easily spotted in any RZX file. It is hoped that the bug fixes presented here will mean that any genuine attempt at Daley Thompson's Decathlon will yield a substantially fair, by-the-book score. The Long Jump bug fix Pokes (Day One):

```
POKE 23717,58
POKE 23718,74
POKE 23719,131
POKE 23720,254
```

```
POKE 23721,0
POKE 23722,32
POKE 23723,4
POKE 23724,60
POKE 23725,50
POKE 23726,74
POKE 23727,131
POKE 23728,58
POKE 23729,66
POKE 23730,131
POKE 23731,195
POKE 23732,114
POKE 23733,138
POKE 35439,195
POKE 35440,165
POKE 35441,92
```

(*Darren Shacklady AKA Rfout!*)

Onto **Flying Shark**. If you're having trouble blasting seven shades of crap out of the baddies, then look no further...

LEVEL ONE
Don't use smart bombs on the super tanks, as it can easily be destroyed with a few well placed shots. Shoot planes as soon as they come on the screen. One shot puts a tank out of action, but it takes two shots to destroy it. The giant tank takes two smart bombs to destroy it, turrets take ten shots.

LEVEL TWO
The super plane must be blasted before it gets halfway down the screen else it unleashes a barrage of cross fire your only hope of getting past the aircraft carrier is to use smart bombs. One of the far turrets contain a bonus bomb so collect it quickly, tanks come out of the tubes at either side of the bunkers gunboats take two shots to destroy, supers take eight.

LEVEL THREE
Don't use all your smart bombs early on as you will need them later to destroy the turrets at the harbour.

LEVEL FOUR
There are several stationary targets which can be blasted to reveal smart bombs, super tanks emerge from the large building and can be avoided until they disappear into the next large building. The will absorb up to three smart bombs before dying.

The group of seven turrets need four smart bombs there is a smart bomb under the first turret. After the turrets there is a final offensive of ten waves of planes. You won't have any smart bombs left so just fire and pray. Once this final level is completed the game loops back to level two.
(*The Howdon Hackers, Crash issue 52*)

And if that's not enough for you, try these pokes from *Gerard Sweeny*

Infinite Lives - 54462,201
No Enemies - 51631,201
Immunity - 48115,58
Lives = x - 42464,x (x=1-255)
Bombs = x - 42490,x (x=1-255)

Now, before most of us have even seen the game, *Karingal* has already hacked **Stranded**

Passwords:
HELP
BLOB
STAR
EXIT
KILL
SYNC
MEGA
ARCH

And don't forget the poke!
Infinite Lives - POKE 31103,0

And, just to prove it was no fluke, *Karingal* has also poked **The Fantastic Mr. Fruity**

Infinite Lives - 45398,0

Now he's just showing off. He's gone and done **Area 51** as well!

POKE 24091, No. of lives required (up to 255)

Infinite Lives -   POKE 24786,0 :
                      POKE 24787,0

And finally we get to **Stormlord** from Hewson. How's about a tip on Stormlord to help you skip levels? Right, just type 'BRINGONTHEGIRLS, with no spaces. The screen freezes. Type a number from one to four, and you go straight to that level. (*Andrew Monk in Your Sinclair issue 46*)

And for the multiface fans:-

DESCRIPTION	POKE
Infinite Lives	56889,0
Immunity	56877,201
No Fire Pods	33866,0
Infinite Time	58110,0

(*Gerard Sweeney in Hack Attack III*)

Ultimate Interview

By pure coincidence when research began into potential interviews for the magazine, an ex Ultimate employee contacted the Editor. After a bit of chat, an interview was secured. For personal reasons the interviewee prefers to remain nameless...

ZX Shed: How did you become employed by Ultimate?
Mr X: Through work experience, I was very young at the time. I wrote to the company and the rest is history.

ZX Shed: What was your role in the company?
Mr X: Ah, not as high profile as you might think...

ZX Shed: How many people worked for Ultimate at that time?
Mr X: While I was there it was only around 10 / 15 people, you have to remember that 5 The Green, Ashby de la Zouch was only a terraced house.

ZX Shed: Which games did you work on?
Mr X: None sadly, I am not a programmer of any kind.

ZX Shed: Sabre Wulf cost £4.45 more than Ultimate's previous release, Atic Atac. The larger box could not compensate for the huge increase in price. It sold over 350,000 copies regardless, based on the quality of the game. Did you feel the price hike justified?
Mr X: Yes, very much so. Not only did the product come in a bigger box it also came with a glossy instruction leaflet. The packaging was chosen to set the Ultimate Play The Game products aside from that of the competitors and I think it worked... Ultimate games always stood out on a shelf!!
I feel the price hike was justified, compare the Ultimate games with those of others around at the time and then compare the quality of the Ultimate product with that of the others. Ultimate games were well programmed, well packaged, highly tested for bugs and sold slightly higher than the products of others that were far inferior... Incidentally, Sabre Wulf sold considerably more than 350,000 copies... It was closer to 1 million!

ZX Shed: I got the over 350,000 sales figures for Sabre Wulf from the Crash interview.
Mr X: The sales profits from the game showed that it sold far more than that!

ZX Shed: Many Spectrum games were released with little or no testing. The early Ultimate games were obviously the results of intense play testing and were labours of love; what was the atmosphere like at Ultimate?
Mr X: Amazing, very friendly. A product would not be released until all those involved were happy with it. Today there are deadlines which need to be met; this was not the case back then. If the game was not right it was not released... (Although I do seem to remember one of the Ultimate games hitting the shops that was badly bugged... From what I remember the game was withdrawn, the fault put right and then the game re issued.)

ZX Shed: Did the team socialize outside of work?
Mr X: Yes and no, the Ultimate team were basically all family.
ZX Shed: Ultimate never gave any

'You have to remember that 5 The Green, Ashby de la Zouch was only a terraced house.'

interviews until 1988, when they had abandoned the Spectrum market. Their games and adverts had a sense of mystery. Other software developers were 'names' and had their photographs in the game magazines; were you happy to be anonymous?
Mr X: Ultimate never gave what you would class as an interview, Crash magazine managed to speak to both Chris and Tim and all other interviews that made the magazines afterwards were basically re wordings of the originals. All employees were happy about this as far as I know as it was the "air of mystery" that helped to make the company and the games. Quite often there would be no official press release about a game until weeks before its release (or unless you finished a previous game and got the CONGRATULATIONS screen!)

ZX Shed: Ultimate's early Spectrum games were technically superior to most of the games released at the time. They received a Nintendo Entertainment System development kit in the early 80s. Would you say technology was an important factor at Ultimate and ultimately led to them abandoning the home computing market?
Mr X: Very much so, there is only a certain amount of life in any games platform. Once you have reached a certain level it is time to move on to the next platform. Possibly why Rare have moved away from Nintendo and onto the Xbox.

ZX Shed: Can you shed any light on the name change to Rare Ltd?
Mr X: Not really, I had left the company before it became Rare Ltd. I have often wondered why myself as I think Ultimate Play The Game is a far better company name than Rare Ltd is. Incidentally, do you know that Ultimate Play The Game is still a registered trading name with Companies House so the company still exists...

ZX Shed: The transition to writing for the NES led Rare to work on original games (RC Pro-AM, Wizards & Warriors and Cobra Triangle) and licences (Jeopardy!, Marble Madness and WWF Wrestle mania): the creative and the lucrative. They released seventeen games in 1989; how large was the team then?
Mr X: Again, I can't answer as I had left by then.

ZX Shed: Did you ever get to see the infamous Mire Mare, the final game in the (Spectrum) Sabreman saga?
Mr X: Yes I did.... I saw it, I played it and I loved it. It was incomplete at the time but it was finished.

ZX Shed: Assuming it was isometric, did it use Filmation version 1 (Knight Lore and Alien 8), or Filmation version 2 (with scrolling: Nightshade and Gunfright)?
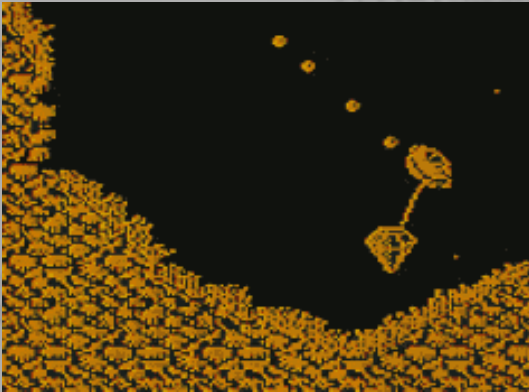

We couldn't find a Mire Mare screenshot.

Mr X: Neither!! - On screen it looked more like Sabre Wulf...

ZX Shed: Were there any other unreleased Spectrum games?
Mr X: Yes, Solar Jetman was another that was being worked on at the time I left the company.

Is this how Solar Jetman would have looked on the Speccy?

ZX Shed: Ultimate were working on a Spectrum version of Solar Jetman? Can you tell us more about this version? Was it near completion when you left Ultimate?
Mr X: I am unsure if it was completed or if it was near completion as I never saw it, it was not the Ultimate team who were writing it. Like some of Ultimate's other titles the conversion to another platform was done by another company. (For example: The Ultimate team wrote and produced the Spectrum version of Underwurlde but the C64 conversion was done by Firebird.)

‘It was a great company to work for; the whole team interacted with each other to produce a quality product.’

ZX Shed: Storm Software were working on a conversion of the NES version to the Spectrum. In the Crash preview, the programmer said it was so large; it would have to be 128K. Was this the case for the Ultimate Spectrum version?
Mr X: I assume so; Storm would have been doing the conversion for Ultimate (or maybe even US Gold at this time.)

ZX Shed: Presumably Storm Software's version was to be Ultimate's Spectrum swansong, completing the Jetman trilogy?
Mr X: Not sure to be honest, I do know that the game would have gone out with the Ultimate Play The Game logo strapped to it and no other. (Same as Imhotep!)

ZX Shed: (Shows Mr X the Crash Preview of Solar Jetman)
Was the original version graphically different?
Mr X: Can't help there as I never saw it in the flesh, only in screen shots. I am led to believe the game was finished.

I was more into Sabreman to be honest; I really wanted Mire Mare to be released. I think that maybe one day someone will release a snap of Solar Jetman but I don't think Mire Mare will ever see the light of day.

ZX Shed: Have you any information about the sell of the brand name to US Gold?
Mr X: Not really, I had left by the takeover. I don't think that the brand name was part of the deal as Ultimate Play The Game is still a registered trade name owned by the Stampers (well, it was the last time I checked and that was a couple of years ago!) I know that if you phone Rare Ltd and say something along the lines of "Good morning, is this Ultimate Play The Game" the answer you get (or used to get) was "Yes it is"

ZX Shed: What was it like working for Ultimate?
Mr X: It was a great company to work for; the whole team interacted with each other to produce a quality product.

ZX Shed: How do you rate the games industry today compared with 20 years ago?
Mr X: I personally think that the games of today are missing something, playability. Today the graphics and sounds are far better than they were back then but the addictive playability seems to be missing.

ZX Shed: What do you think about emulation?
Mr X: I personally like emulation; it gives me the chance to play some of the classics that I used to play. Having said that I wish that the likes of Ultimate would do and Alien 8, Sabre Wulf or Knight Lore on a PC or X-Box format, how good would they be!!

ZX Shed: Do you have a personal Ultimate favourite?
Mr X: Oh yes, without doubt, SABRE WULF!

1. Sabre Wulf
2. Alien 8
3. Knight Lore
4. Gunfright
5. Pentagram

I can play and play Sabre Wulf, what a great game...

ZX Shed: What did you think of Sabreman's last outing on the GBA? Was it a fitting tribute?
Mr X: Again, I have only seen screen shots - never actually played it. I have heard mixed views on this, many people who don't remember the original have said it was really good while those who remember the original have said it was not as good. I have heard rumour that Rare were planning to release Knight Lore, Alien 8 and Underwurlde on the GBA. (However, I did hear this before they moved over to the X-Box so I don't know if this will ever happen.)

ZX Shed: Any regrets?
Mr X: No not really, I don't ever think I would have made a programmer. I always intended to do what I do for a living.

SCREENSHOTS

Wow! Have we got some exclusives for you! We have the full showing of Area 51 screens as well as sneak previews of Stranded & The Fantastic Mr. Fruity. What more can you ask for?

Fantastic Mr. Fruity
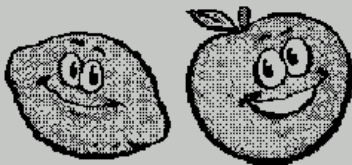
Nice front page!
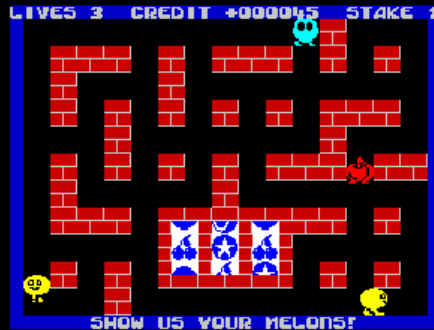
Only 3 lives? They won't last long!
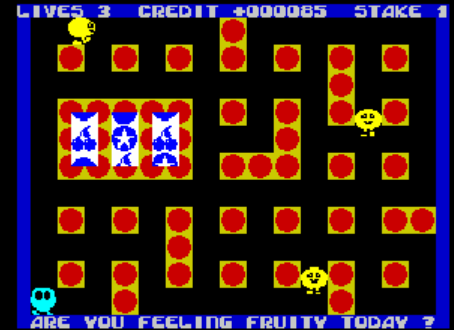
Just what the hell is Mr. Fruity? Looks like a deformed Horace!

A hidden game!!

Stranded

Cool loading screen

Starts off nice & easy...

Quickly gets more difficult...
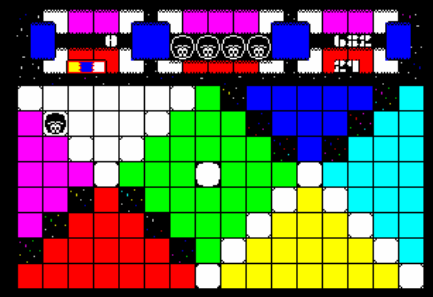
By this point your brain has melted.
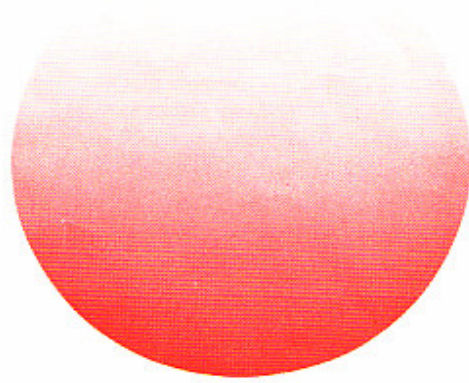
Science of Cambridge

Mk.14
Standard
Micro Computer Kit

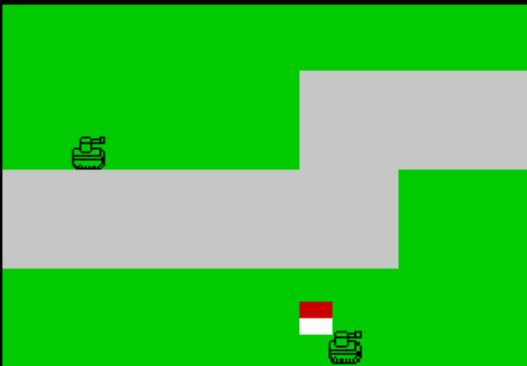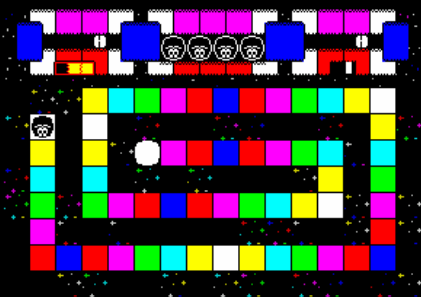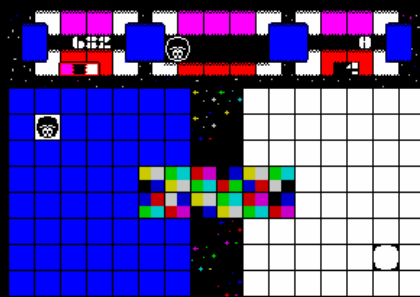The MK14 is a kit of parts assembled by the user to form a minimum cost computer. It comprises in miniature the essential elements common to all computer systems.

provided are a printed circuit board and a comprehensive handbook describing construction, operation and use. Since the unit is primarily a computer it is
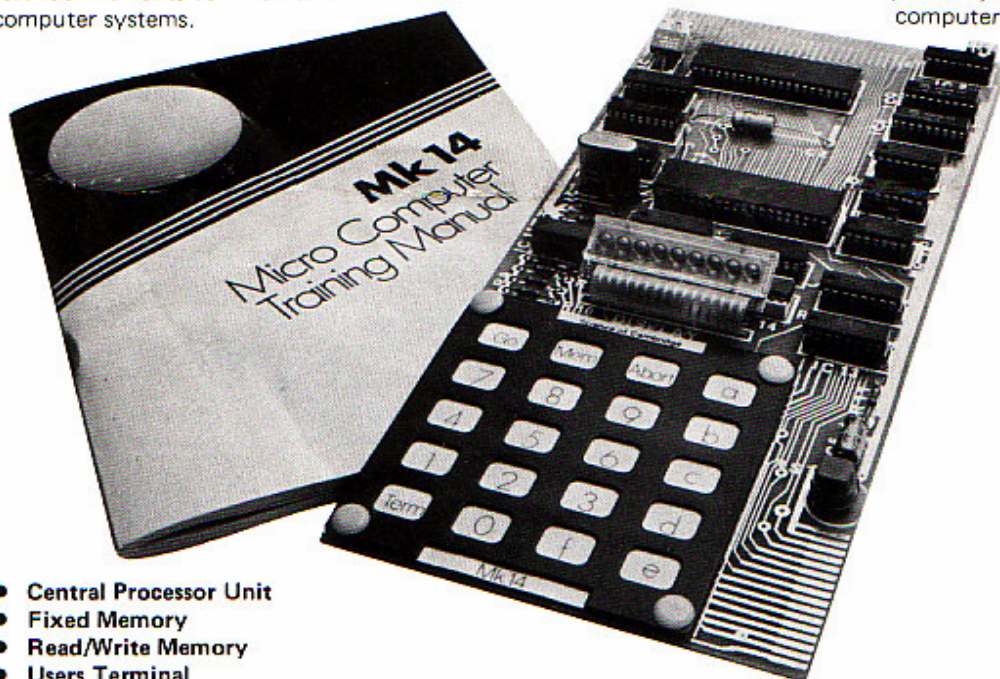
- **Central Processor Unit**
- **Fixed Memory**
- **Read/Write Memory**
- **Users Terminal**
- **External Input/Output**

Communication with, and programming the machine, takes place through a simple keyboard and display. The most fundamental language — machine code condensed into hexadecimal notation is utilised. Thus the system can be used as an educational tool, or for the purposes of the professional who has a need for a computer on the desk or bench top.

All the integrated circuits and components required are included in the kit. Also

designed not exclusively for the electronics expert, but for anyone wishing to experiment practically with the essence of digital computation.

Elementary competence in soldering and printed circuit assembly is needed, but carefulness and a methodical approach are the main requirements.

Central Processor Unit

The C.P.U. is a national Semiconductor SC/MP microprocessor. It is suited to an ultra simple configuration because although it functions without additional circuits it has a general purpose architecture allowing system expansion.

Instruction types also conform with the general purpose computer area, while special instructions and architectural features such as delay timer and built in serial and parallel input and output are particularly convenient in a compact unit.

Fixed Memory and User Terminal

512 words of permanent memory contain a monitor programme which provides the user with instant control following switch on. By entering commands and data via the keyboard and observing internal status and programme results on the display, complete control and supervision is achieved.

Any part of memory or input/output port can be examined and written into. All C.P.U. programmer registers ie. Accumulator. Extension, Status, Programme Counter and three Memory Pointers are overseen in the same way. Execution of a users programme can be started from any chosen location and break-points (stops) may be inserted allowing the user to analyse the progress of his programme.

The keyboard and display possess a dual function — the users programme is able to utilise them for its own purposes.

Read/Write Memory

256 words of write-able memory are included in the basic package. Keyboard commands allow loading or examination of computer instructions and data in the same sequence as the C.P.U. itself uses. Thus this part of memory is where the user enters, and experiments with, his own programmes. Note: some twenty words in this area are devoted to the monitor function.

Provision exists on the printed circuit for extending memory by two blocks of 256 words and 128 words respectively (see input/output description).

External Input/Output

In order to satisfy the need for responding to external commands and information, and for controlling external circuits, a number of logic inputs and outputs are incorporated with expansion capability. The basic unit possesses an interrupt or data input, a data input, three signal outputs, a serial input and one serial output.

Provision is made on the printed circuit board for the optional addition of 16 lines of input/output. Each line is individually selected by the users programme to function as an input or an output. (This is part of the same device providing 128 words of additional memory.)

Training Manual

The manual consists of five main sections.
1 Construction and Checkout
2 Functional Hardware Description
3 Elements of Programming
4 Exercises in Operating and Programming
5 Library of application programme.

Mathematical
Multiply
Divide
Square Root
Greatest Common Divisor

Electronic
Pulse Delay
Digital Alarm Clock
Random Noise
System
Single Step
Decimal to Hex
Relocator
Serial data input
Serial data output
Games
Moon Landing
Duck Shoot
Mastermind
Silver Dollar Game
Music
Function Generator
Music Box
Organ
Miscellaneous
Message
Self-Replicating Program
Reaction Timer
Peripherals
Tape interface kit with software and instructions. A low cost interface to any cassette recorder.

Prom programmer for DM 74LS 571 directly driven from the MK14 and needing only an extra twelve volt supply this allows the user to programme fusible link proms with his own operating system which can replace the existing monitor. Revised Monitor programme in 2 x DM 74LS 571 — a condensed version of the existing operating system but including sub-routines for tape interface — load and dump, single step and offset calculation and having single keystroke data entry. (This can only be supplied as an extra as the manual refers to the standard monitor.)

5V stabiliser
512 bytes prom
256 bytes ram (extra)
4MHZ Crystal
8 digit 7 segment display
Edge connection for 16 1/0 ports, 8 data bus, flags and sense lines and supply
128 bytes ram 1/0 (extra)
256 bytes ram
SCMP CPU
Keyboard/display drive & interface
20 key low profile keyboard
Reset switch
Edge connection for extra keys or external keyboard
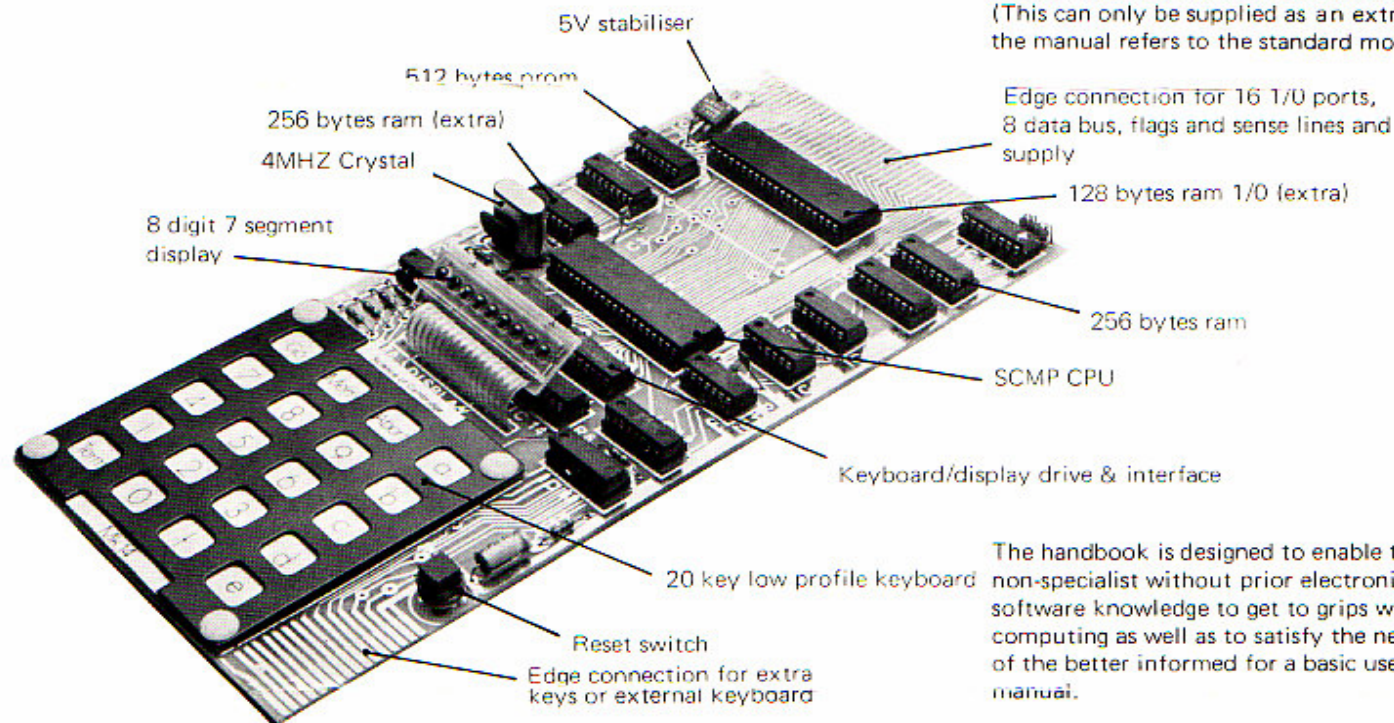
The handbook is designed to enable the non-specialist without prior electronic or software knowledge to get to grips with computing as well as to satisfy the need of the better informed for a basic user manual.

Science of Cambridge Ltd.

PROGRAMMERS DIARY

Ever wondered what goes through the mind of Britain's top Speccy programmer? How much time, effort & beer are required to churn out classic after classic? Well, wonder no more. We managed to persuade Jonathan Cauldwell to spend some time documenting the progress of his next big hit.

07.05.2005

Saturday, and I feel pretty good as last night was the first for a fortnight where I didn't have a drink. After a couple of hours of ethnic cleansing in Civilisation 3 I decide to have another look at More Tea, Vicar? Javier sent the level four layouts some weeks ago and it's high time I started working out how to incorporate it into the rest of the game. It's been two and a half years now since the project started, but the existing source code is very well commented which always makes a game easy to pick up again after a break.

10.05.2005

Blimey, I posted a message on a Spanish retro gaming forum regarding Area 51 and its delivered loads of hits to my site today. Maybe my Spanish isn't as bad as I thought; it's certainly done the trick. I sometimes wonder how many non-English speaking retro gamers are missing out on a lot of Spectrum developments, though to be fair I probably miss out on a lot of Spanish, Portuguese and Eastern European stuff.

11.05.2005

I'd forgotten how much hard work went into Vicar. It isn't just a case of incorporating Javier's level data, because control codes need to be inserted everywhere or the game won't know which bits of the window to scroll or where the attack waves begin and end. Inserting these codes is a matter of trial and error, mostly the latter.

12.05.2005

Bizarrely, the directors of the company for which I work dragged its games developers down the pub for an afternoon last year to discuss future strategy. Numerous horrible expressions were bandied around such as "blue sky thinking", "pushing the envelope", and "thinking outside the box". The terminology is claptrap of course, but the sentiments were noble enough and got me thinking. Since then I started to move my Spectrum games off on a tangent, starting with Higgledy Piggledy; with a good twenty or so games under my belt there's little point in covering ground I've

been over before, and many of my early games were lacking in originality.

13.05.2005

Some of this afternoon is spent sketching out new game ideas on the backs of old envelopes, but it's a frustrating hour or two as nothing concrete emerges. Some new avenues open up, but none seem to lead anywhere exciting at the moment, there's just something missing. At the end of the day that's not particularly important, a good idea might not come all in one go and if all else fails it might be a case of developing on the fly and seeing what happens. You know, I might give that a go tomorrow.

15.05.2005

Ideas are not forthcoming, so I start work on a new game regardless. Half an hour fiddling around with Metalbrain's excellent Spectrum graphics utility SevenUp produces an animated blob on legs which then becomes a lemon, and another couple of hours later I have an engine which allows the player to manipulate the character around a single-screen maze. Why? Well, why not? Actually I'm not happy with the result; the character isn't particularly likeable so I'll probably use it as an enemy sprite. At least it's not turning into another platform game which is a relief. Then Izzy rings up, it looks like I'm off down the pub tonight.

16.05.2005

This game is taking on a fruity theme, as I've drawn an apple on legs. Where's this game going? I've decided to put a fruit machine in the corner of the screen, the spinning reels ought to have potential as a "random" element which is beyond the player's control. But what is their function going to be? I need some beer to work that one out...

19.05.2005

There's a company close to where I live which develops games for consoles. They twice offered me a job a few years ago, but rejected my CV the last time I applied. Quite out of the blue I received a rejection letter from them in the post today, without even having applied for a job. Either their HR department is

seriously disorganised, or someone somewhere is not entirely compos mentis. It's funny, but I'm about to change jobs anyway. It's goodbye to developing games for a well-known fruit machine manufacturer, as next month I'll be developing games for another well-known fruit machine manufacturer. There'll be a great deal less travelling involved too.

20.05.2005

After a four day break I've decided that the player will need to "capture" fruit wandering around the maze by placing a box on the screen, then spinning the reels. The symbols on the win line will then determine exactly what fruit will be trapped, and also award bonuses. For example, three of a kind might give the player a time bonus, a jackpot symbol might award points and three jackpot symbols an extra life. It hasn't been worked out in detail yet, but it's a start. On the coding front I manage to spend a few hours in the afternoon getting the reels to spin. By half past ten I've also got enemy lemons, apples and melons wandering around the screen.

21.05.2005

The box now explodes, sending jackpot symbols in all directions to hit the fruit, or the player if he's unlucky enough to get in the way. It's emerging to become a cross between a fruit machine simulator and Bomberman if you can picture such a thing. Some collision detection is added too.

22.05.2005

Spent a few more hours on the game this afternoon. Collision detection is finished, and the symbols on the win lines are now checked when the box explodes. Fruit will only be despatched if there is a matching symbol on the win line so there's an element of luck involved, and by changing the reel layouts for each stage I can tailor the chances of the right symbol appearing to kill the fruit wandering around on that level. It's difficult enough already, the fruit is constantly on the move, changing direction, and being very tricky to hit. I've also had a go at drawing a new central character but unfortunately it looks awful. Back to the drawing board, literally.

26.05.2005
There's a new central character now, but it's still not right. He has a name though; it's The Fantastic Mister Fruity.

27.05.2005
Okay, so the player stakes part of his score - his "credit" - every time the reels spin, and three of a kind now adds to his tally. It's possible to achieve a negative score now, and though the scoring routines aren't as elegant as they might be they're much better than they could have been. Maybe I'll allow the player to change the stake - and the scoring system - during the game, in the same way that fruit machines do in certain parts of the world.

28.05.2005
Added a little message routine which flashes wins and other stuff on the bottom line of the screen, so I need to come up with a few fruit-based jokes if I can. The stake change key is in, but it needs to affect the difficulty level somehow if it's to have any meaning. Finally managed to draw some recognisable cherries to wander round the maze, bringing the total number of fruits to 4.

30.05.2005
Later levels have "spawn points", where an extra fruit can appear from a multicoloured whirl just when the player thought he was getting to grips with things. It's really a way of adding more nasties to a level without having them all wandering around from the very start. The screen doesn't need cluttering up much more. The credit system is far too generous, and needs work. It's becoming apparent that the method of scoring will be very important. If I can get this right then careless players could end up with negative scores, in the same way that fruit machines can leave a player out of pocket at the end of a session. The only other Spectrum game I have seen where negative scores can be achieved is the Abbex classic, Escape from Krakatoa.

31.05.2005
Very little is done today as my machine refuses to boot properly. After more than an hour of messing around with the settings I finally get the ZX32 Spectrum emulator running again, but by now it's getting late and I want to watch the England football match on the telly.

01.06.2005
Sixteen levels have now been designed, and the high score table is now in. The game probably needs at least 32 levels, and I'm toying with the idea of introducing different symbols for the reels later on, such as wild jackpot symbols. Drawing a joker symbol in 15x15 pixels isn't easy though.

03.06.2005
Mister Fruity is looking and feeling good, the front end is complete although the high-score swear filter isn't working for some reason. Simple sound effects are in now, AY stuff for the reel stops and bleeper noises for everything else. It would be nice to have music playing on the menu screen, but without a working sound card composing some could be tricky. I'll mail Matthew Westcott and see if he has any old tunes he could spare.

04.06.2005
Excellent, Matthew's up for it so I've sent him a copy of the game and am waiting to see what he thinks. Simon Ullyatt seemed to like the game, so I may offer the finished item to Cronosoft when it's finished, especially if there's a chance he'll want to launch the game at the forthcoming CGEUK event in August, which would be fantastic. More symbols have been added to the reels to give more variety, and a total of twenty-five levels have now been designed, so only another seven to go and that aspect will be finished.

09.06.2005
Still another five screens to design, but at least the hidden game is patched in now and seems to be behaving itself. It seems a little too easy to amass a negative score so the awards need adjusting just a bit, then there's just the 128K music to go in. The new reel feature symbols are ZX logos, and three of these automatically skip to the next level. The final couple of levels don't contain enough fruit symbols to despatch the enemies wandering around the maze, so the player just has to keep dodging the nasties and spinning the reels until the feature comes in - and that can take a few minutes to happen.

10.06.2005
At last the levels are completed; I've even managed to knock up a loading screen for the game this afternoon. The swear filter is fixed, and the cheat mode is also working. Once Matt. gets back with some music the whole thing will be ready for Simon, and I can get onto a few other things. I've been approached to write a Robotron style game for the Spectrum as a minigame within a new PC game, plus there are a few bits and pieces that need doing for Retro-Soft. Spectrum-wise it's getting pretty busy here at Cauldwell House.

11.06.2005
When its speed you're after - and let's face it, it usually is on a Spectrum - one of the things a programmer can do is "unroll" some of the loops in his game. In a scrolling routine this means writing out hundreds of consecutive sequences consisting of no more than two instructions, which wastes a lot of space but is incredibly fast. With only a few bits and pieces to tidy up and memory to spare, I have now decided to unroll the sprite routine to make it more efficient. On the plus side it's a bit faster than it was, although it does have the drawback of not working any longer. A job well done.

12.06.2005
Five minutes are all that it takes to fix the sprite routine, but now another bug has emerged which means the reels don't always spin properly. Perhaps there's a routine somewhere which depends on the sprite routine returning a certain value in one of the registers? It's a complete mystery.

13.06.2005
Sad to say, but today turned out to be the last day with my current employer, and I shall miss the place if not the travelling. The new job starts in a couple of weeks which should give plenty of time to catch up with a few things. Apart from planting two apple trees the back garden hasn't been touched since I moved in several years ago and every so often some enormous eight-legged beast escapes from the undergrowth and breaks into the house. Something must be done, I'm not keen on spiders at the best of times, and the enormous size of some of these hideous arachnids mean the poor old Dyson vacuum cleaner is struggling to cope.
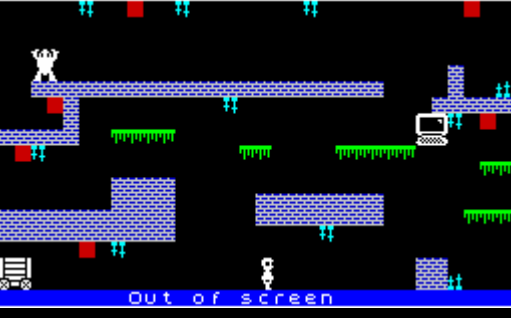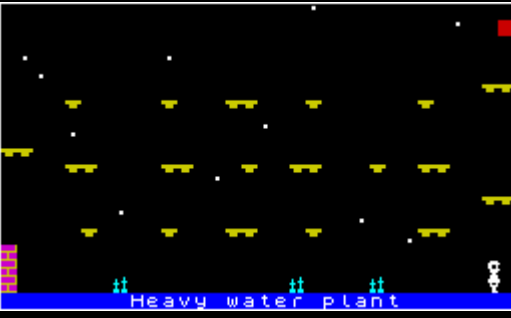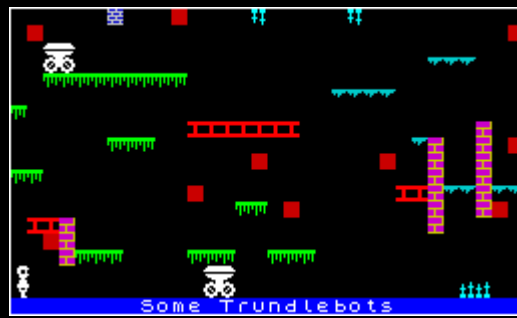
16.06.2005
Just waiting for the music now, and then I can put this one to bed. There's a new high-score entry routine now which is a touch more in keeping with the theme and I've spent a little time typing up some deranged back story but there really isn't anything else left to do.

18.06.2005
Matt's back with a cracking soundtrack, so we're off again. Not wanting to remove the 48K effects completely, I've decided the game will default to playing music during the game, but with an option on the menu to hear the 48K effects instead, if desired. It's not long before this is built in, and at 18:53 the source code is compiled for the last time. Within minutes the .TAP is ready, and I can relax. The Fantastic Mister Fruity is finished at last, the question now is: how will it be received?

Area 51 Revealed!

A Mir formality

Some Trundlebots

Spy satellites

Invalid colour

Statement lost

Tape loading error

Heavy water plant

End of file

Out of memory

Out of screen

Faked moonlanding

Membrane theory

Invalid argument

Rocket test range

The Purga-tree

Hubble trouble

A couple of facts:-

1.   In order to save some memory, some of the screen
      names are pulled directly from system messages.
2.   The screens in the game are random. They are
      shown here so that the first letter from each screen
      spells 'ass is the o of mirth'. We have too much
      time on our hands in the shed!

A Jupiter Ace? What the hell is that? And why is it making an appearance here in a ZX Spectrum Magazine? For those who don't know the Ace is a very rare computer. This was only produced for a short time back in 1983. It looks like a ZX81 and that's because it was designed by two people who worked for Sinclair Research Steven Vickers and Richard Altwasser. The machine is unusual in that it has FORTH as it language in ROM.

With only 3k of RAM and no colour the Ace would find it hard to compete with other machines. But it had FORTH, faster than BASIC more compact and as a result a few users became fans. But over the years it had all most been forgotten about only to be see on eBay, and making quite a high price for collectors. The Ace was featured in a few magazines and a small about of software was written for the machine. Additional peripherals we produced such as RAM packs and a proper keyboard from Memotech.
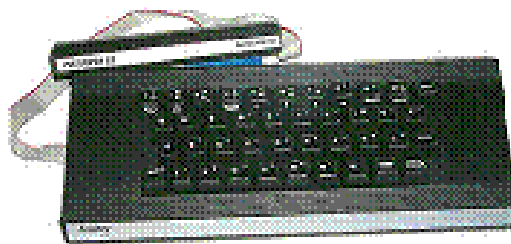
The Ace is a simple machine, based around the Z80 CPU, you can even build on from off the shelf parts as no custom chips or ULA was ever used.

Forth however, is a totally different language from any thing the home micro user had ever seen, and never really caught the imagination of the "bedroom programmers" as the Spectrum did. Information on the Ace is scattered around the net so I started a project to collect and present all the information and many new items as an online archive. See www.jupiter-ace.co.uk
The resource site now has the Aces rare manual as a PDF file

also a number of other magazine listings taken from such mags as Your Computer which covered

the Ace in its day. An increasing number of software titles are now coming online as wave files.

Also scans of software reviews, maybe you have an old tape in your collection or
could help in tracking down the "sound board" or the "colour board".

Emulators are also on the site for the Sam Coupe and MS-Dos, with details of how to run an ms-dos program on windows xp. More emulators and items will be added over the next few weeks as items and old Ace user come out of the woodwork! SPT.
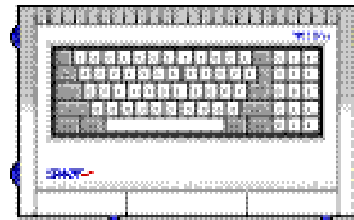
Hello! And welcome to the Sam Page. So what is happening on the Sam scene at the moment? Well, Sam's archive site for the UK has come to a complete stop. Samcoupe.org has disappeared form the net after a promising start. The idea for this was Gavin Smith's, but with no contact from him I cannot tell you why it's stopped. You can still get manuals and documents preserved as PDF files from the Pro-dos site.
www.samcoupe-pro-dos.co.uk
The next manual to be turned into a PDF will be GM-BASE available at the end of August.

New, hardware on the way from Colin Piggott, at Quazar. Well, what does the Mayhem Accelerator do, to put it simply it accelerates the Sam! As you know the Sam runs at 6MHz clock speed, or when the screen is on it is effectively 4.8MHz due to the contention on the memory when the ASIC has to read the screen data. The prototype Mayhem Accelerator is currently running at 12MHz, with uncontended memory reading, making the Sam run at approximately 260% speed! And this is only the prototype - there is still some extra circuitry to add to control the timing further, and once finished I will be aiming for the final piece of hardware to be running at 20-24MHz! The first piece of software, and a very

good example, is Fractal Explorer. At normal speed it takes the Sam 21.4 seconds to generate an image of a Mandelbrot fractal, and with the Mayhem Accelerator it takes just 8.4 seconds. I also had a special version of the Pac-Man emulator from Simon Owen, which with the Mayhem is able to do the full screen redraw in just one frame instead of every four frames - you could say this version is the first piece of software specifically written for the Mayhem Accelerator!
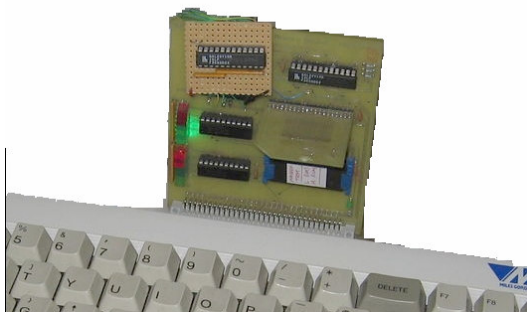
Another game I loaded up, was Booty, this is a game written with SCADs.

Normally the game runs along at a modest speed, updating the screen approximately every 3 frames (every 3 / 50ths of a second). With the Mayhem plugged in the game is speeded up to updating every frame. Also, games running under Spectrum emulation fly along as the extra slowdown generated by the ASIC in MODE 1 no longer applies when the Mayhem is used. If you need to know more see
www.samcoupe.com/
preview.htm

New Sam software Blaze!

Is a Jupiter Ace emulator for the Sam written by Edwin Blink, you can find a disk image on the Jupiter Ace Resource site,
www.jupiter-ace/blaze.html

O.K, it's just a bit of fun seeing this rare Z80 based computer running on the Sam. The Jupiter Ace was designed to run in a language called FORTH. The Ace was the brainchild of two ex-Sinclair Research employees, Steven Vickers and Richard Altwasser. More information about the Ace can be found on the resource site. Blaze emulates the Ace very well, full speed, sound, load snapshots of Ace software and is still being worked on by Edwin I hope to give more details next time along with how to OCR text on your Sam and we replace a Sam's Keyboard with Quazar's PC keyboard replacement kit.
SPT

Legends May Sleep But They Never Die!

Often Copied
~ Forever Imitated ~
Never Equalled

World Of Spectrum

Accept No Substitute

HTTP://WWW.WorldOfSpectrum.org

Next ISSUE

We've got Waffle with the SPIN team,
We Have A Looksy At A Platform Game
Designer, Previews of Numb Cars 2
And Jump Around
PLUS YSRNRY 1985!

YEAHTHATSRIGHT!