



EXCEL



COLOURFUL, NOISY AND FUN - 44 PAGES OF ATARI 8-BIT GOODNESS

THE 12,165-DAY WAIT IS OVER FOR MANIC MINER



MATTHEW SMITH'S
MANIC MINER and
JET SET WILLY

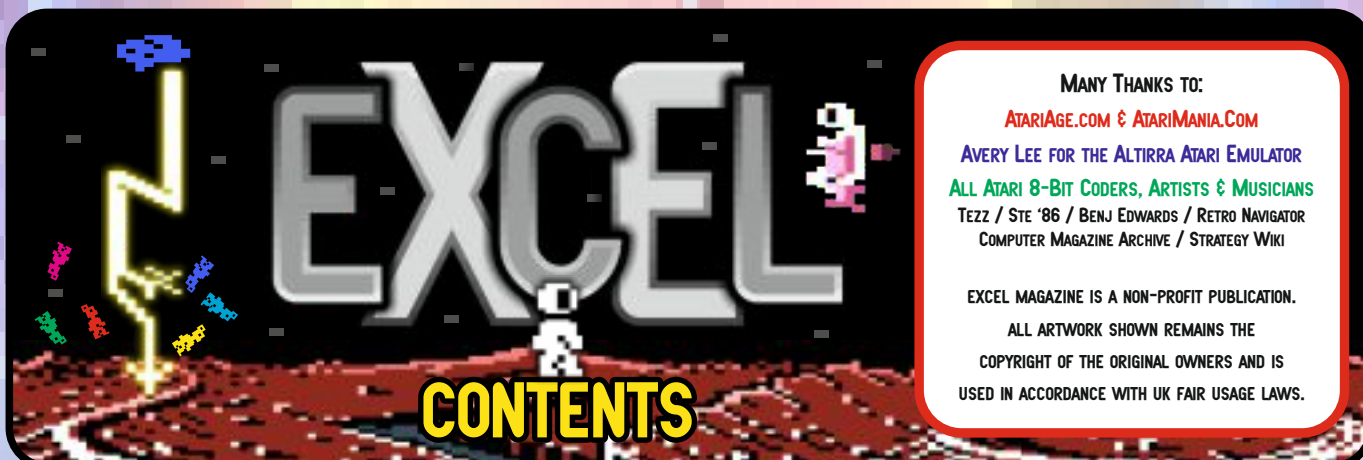
BILL HOGUE'S
MINER 2049er and
BOUNTY BOB
STRIKES BACK

ARCHER MACLEAN'S
DROPZONE and
INTERNATIONAL
KARATE

THE **ULTIMATE** ATARI GAMES

JETBOY LUNAR JETMAN
KNIGHT LORE ALIEN 8
PENTAGRAM NIGHTSHADE

SPECTRUM GAME
CONVERSIONS SPECIAL



MANY THANKS TO:

ATARIAGE.COM & ATARI-MANIA.COM

AVERY LEE FOR THE ALTIRRA ATARI EMULATOR

ALL ATARI 8-BIT CODERS, ARTISTS & MUSICIANS

TEZZ / STE '86 / BENJ EDWARDS / RETRO NAVIGATOR
COMPUTER MAGAZINE ARCHIVE / STRATEGY WIKI

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Once upon a time I produced my own little Atari floppy-disk based magazine called Excel, put together by myself with the help of a couple of friends and sold by mail order through adverts in Page 6 Magazine. I got my first Atari in 1985 - my dad took me to the local Granada TV shop after I turned a particularly bright shade of green upon seeing (and hearing!) my sister's brand new Atari 800XL. By 1991 when I started Excel, I also had a 130XE, two 1050 floppy disk drives and various other bits and bobs such as a 1010 tape deck, XE light gun and a Citizen dot matrix printer. Oh, and a 14" portable colour telly - nobody had monitors back then. In fact, nobody had computers back then - they were called 'micros'!

I had been learning Atari Basic for a while when a good friend of mine decided he wanted to learn 6502 assembly language on his Commodore 128, so I decided to learn it too, since the Atari used the same CPU and we could help each other out. He eventually got an Atari himself (although he remained a die-hard Commodore guy) and assisted me with machine code routines for the game Amnesia for which he also designed the beautiful animated graphics. His first computer was the venerable BBC Micro and I remember him telling me (after he had moved on to the C128) with utter derision that the colour palette "didn't even have a brown!" Another friend who I played football with had a 600XL which was expanded to 64K. He wasn't into programming but did like playing games so he helped write the games reviews.

Like most people in the UK, we were surrounded by armies of Sinclair ZX Spectrum-owning friends and relatives. It didn't have a brown either but that didn't seem to matter to most people - they were cheap and everyone seemed to have one. My very first computer was in fact a Spectrum which I received for Christmas in 1983 after begging my mother for months during the run up to Christmas. I loved it, and spent so much time playing games and learning to program that by the time I finished my exams at school, my mum told me in no uncertain terms that my decidedly average exam results were the result of spending so much time on "that bloody computer". It also bit deeply into the time I would normally spend reading and drawing my own comic books. However, if I hadn't been so drawn to the Spectrum, I would probably never have got my Atari (which I sold to a guy in Newcastle in 1992 when I became entranced with the Amiga...) and maybe would never have later started my own graphics company - www.chameleongraphics.co.uk if you're interested.

Many years later, I stumbled upon the Atari800Win emulator (thanks to Atari Age forums) on the internet, so I downloaded it and started playing old Atari games. I was flabbergasted to find I could download not only thousands of old games and play them on my PC, but my own programs and all the Excel disk magazines as well! What a nostalgia trip. By the time Altirra came out I found myself getting totally hooked on the Atari 8-bit all over again via PC emulation.

Thanks again to the Atari Age forums, I soon found out some of the things people were doing with real Ataris - which seemed outrageous - CPU upgrades, stereo sound, SD card readers, the almost unbelievable VBXE graphics board... I had to have one! So my partner Joann bought me a 130XE on ebay for Christmas last year and I have just got myself an 800XL last month, also from ebay, which will soon be getting a VBXE installed and a stereo sound upgrade. Happy days!

Some of the new games written for the Atari are quite amazing (Crownland, Yoomp, Ridiculous Reality... and so many others) and seeing so many older games finally being converted to the Atari so many years later is wonderful - Space Harrier, Bomb Jack, Yie Ar Kung Fu - and many more games that we would all have loved to have owned for the Atari back in the day.

Although I, or other family members, have owned just about every home computer / games console ever released (Atari 2600, Sinclair ZX-81, Oric-1, Dragon 32, Sinclair ZX Spectrum, Commodore 64, Amstrad CPC, MSX, Atari ST, Amiga 500, Amiga 1200, Apple Mac, Sega Master System, Sega Mega Drive, X-Box, Playstation) - the Atari 8-bit is still my favourite computer. And, thanks to the wonderful world of emulation, we can now all have virtually any retro computer we want, running happily at full speed (or faster...) on our modern PCs. Who in the world could have seen that coming?

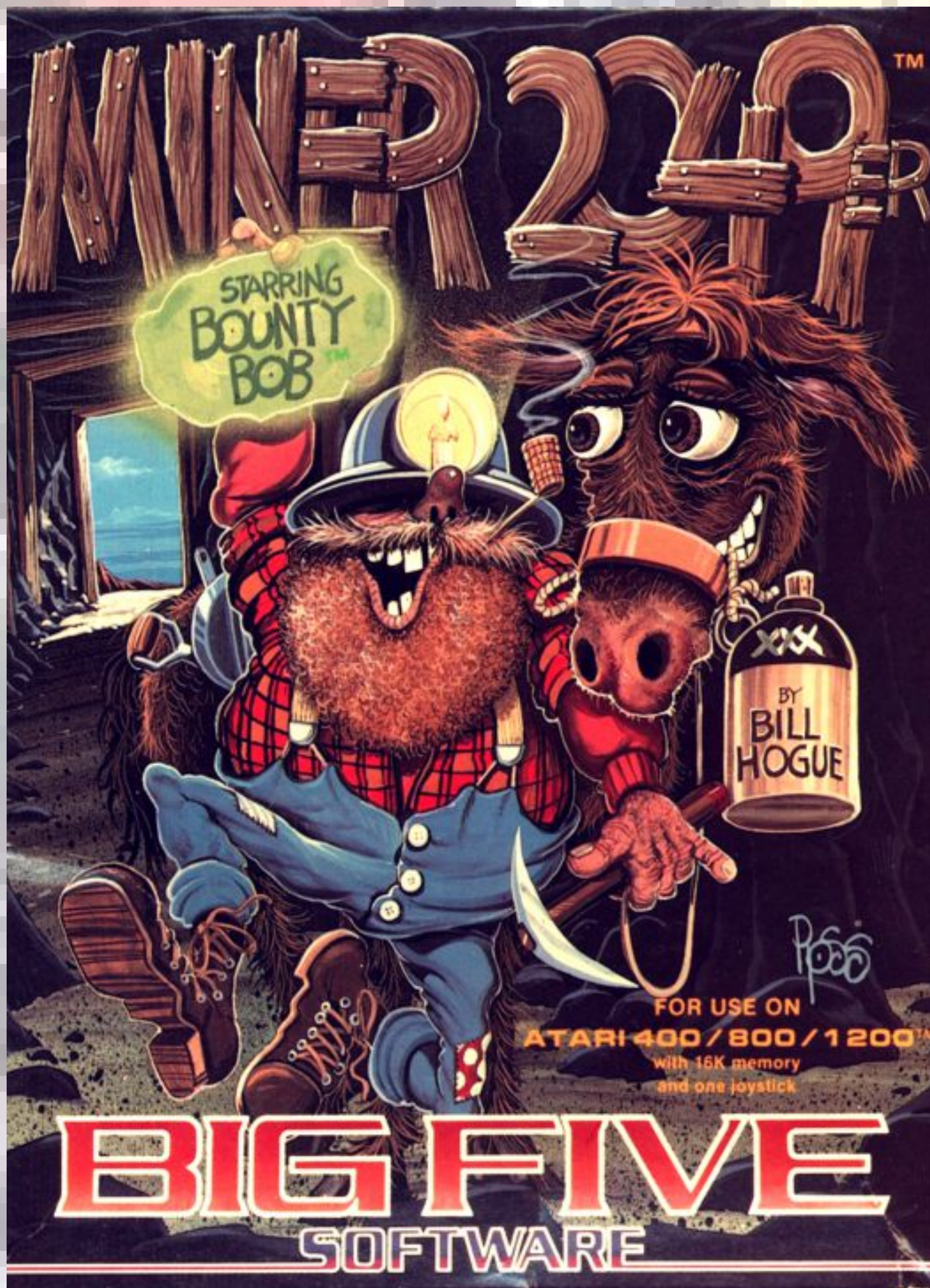
The truth is, the Atari scene is more exciting now in 2016 than it ever was. 'Back in the day' no longer applies. The Atari 8-bits live on, getting more and more interesting with each passing year. I recently watched a YouTube video showing an Atari with a Rapidus accelerator card and VBXE board running a Spectrum emulator at full speed with full colour graphics and sound. Madness! Surely it's only a matter of time before somebody has a C64 emulator running on an Atari 8-bit via the same system. We Atari owners (certainly in the UK) who were once looked down upon as "only having an Atari" while Spectrum, C64 and Amstrad owners gloated above us, are now having our cake and stuffing our fat faces with it. We have honestly never had it so good.

After booting up my old Excel disks and having a good laugh reading through the editorial rants, I started playing around with some of my old programs. I added new features to my ColorFont character editor and Screen Designer programs - although it did take me a little while to understand what the hell the programs were doing. I started designing some graphics for Atari versions of my all time favourite Spectrum games - Sabre Wulf and Atic Atac. I have now got all the background screens designed and am working on the sprites. I have almost decided, at the time of writing, to learn Action! and convert the games using that language, as I was never the best assembly language programmer. And then... I suddenly realised something... I now have the design skills and the printing equipment to do what I always dreamed of doing 'back in the day' - design and print my own full colour Atari magazine. Not for profit - just for the remaining people out there who love the Atari as much as I do and who appreciate what the Atari has always represented to us - fun! I sincerely hope you enjoy reading this magazine as much as I have putting it together. It has been immense fun and I already have the second issue well underway, which will be available from the website on 1 Aug.

I plan to release the magazine bi-monthly on the first of every second month, printed digitally 'on-demand'. There is no shortage of material - we have thirty seven years worth of Atari software and documentation spread all over the internet. As supporting our favourite machine is no longer commercially viable, I am not too worried about copyright issues concerning the re-use of vintage material, but if anyone does complain about 'unauthorised' use of anything, I will remove the offending material. I have done a lot of work 'digitally re-mastering' many of the old scanned items in the magazine and I love writing about Atari stuff, so I really want to make this the best quality magazine ever printed (or at the very least the best looking) for Atari users. There may be some material you are familiar with but it will be presented in a new way. Feel free to contribute - and I do mean free! This issue is obviously very personal as it was completely put together by one person - me - so some other voices joining in with the Atari chorus would be much appreciated.

I've had quite enough of work and stress over the last few years - now it's time to have some fun!

ROBERT



Before we get too excited about Manic Miner (I know, it's not easy), let's have a look at the game that inspired it. Miner 2049er from Big 5 Software was Bill Hogue's first Atari game after writing several games for the TRS-80, including Robot Attack which was the first TRS-80 game to feature digitised speech. This alone is testament to Bill's genius, as the TRS-80 didn't even have a sound chip! He worked out that square wave tones could be produced by outputting data to the cassette port and could produce sound from the tape deck speaker. He also devised an adapter that allowed TRS-80 computers to use Atari joysticks.

As for this game, it is rightly regarded as an all-time classic which won several awards at the time including Electronic Game of the Year 1983 and Creative Computing's Outstanding Software Award for 1984. It also won the SoftSel Hot List Best Seller Award in 1983 as the number one best selling game in the US. Miner 2049er is a fairly simple platform game set in a mutant-infested mine - just walk over the platforms to colour them in and avoid the mutants - touching them means instant death. When you collect the various helpful tools scattered around the mine the mutants turn green and smile for a few seconds and while they are in this delirious state you can capture them! The game has nice graphics on its ten screens, which may not sound like much, but it came on a 16k ROM cartridge and at the time most Atari carts were only 8k. As a comparison, Donkey Kong only had four screens - well, it did in the arcades and on the Atari but all other home versions only had three. The Atari 2600 version of Miner 2049er was released as two separate game cartridges with only three screens in each game. The Atari 8-bit version was also produced on disk and cassette. The sound effects are good too but alas, there was no room for music within the allotted 16k.

The game was converted to other 8-bit systems such as the Apple II, Colecovision, Vic 20 and SpectraVideo but only the C64 version comes close to the slickness of the Atari game. Even the DOS PC version pales in comparison. The Atari 2600 game looks quite good compared to most VCS games of the time but it plays very slow and is clunky in comparison to the A8 version. The reviews were good: ANALOG Computing said: "one of those rare games which looks as if it were designed, not just thrown together", praising its animation and large number of levels, and concluded that it "is a must-play game for the Atari".

If you don't know the cheat:- once the game starts, type in Big 5 Software's old telephone number - 213 782 6861 - followed by holding the Shift key and pressing 1-9 and you will then skip to that level of the game.

8/10



Bill Hogue



Adverts for Miner 2049er for Commodore 64 / Vic 20 and Atari 2600 from Electronic Games magazine, August 1983.





BOUNTY BOB STRIKES BACK!

7

After two abortive attempts to create a sequel to Miner 2049er (the first of which was advertised as Scraper Caper) which are sadly now lost forever, Bill Hogue unleashed Bounty Bob Strikes Back in 1984. Slickness goes off the scale in this game - the intro screen with little birds flying in carrying the letters for the opening credits is superb. If you get a high enough score playing the game, the way you enter your name using bulldozers to push the letters onto a conveyor belt is amazing. The manner in which an incorrectly typed letter is deleted is also worth a mention - a crane hoists the letter away. Incidentally, if your high score entry knocks someone's name off the high score table, the bulldozers return to compact the letters of the name into a block which is then booted off the screen. These features alone are worth playing the game to see. Each new stage also scrolls smoothly onto the screen, unlike the original game.

There are twenty five screens in this game, which is again set in a mutant-infested mine, and I do mean infested; the first screen has sixteen mutants to capture. Some screens have over twenty. Many of the screens are very inventively designed (and excruciatingly difficult to master) with various gadgets which Bounty Bob can use to aid his navigation around the mine such as the elevator and suction tubes. I love the mobile suction tube and the fast food energy bars which enable Bob to whizz around the screen and make superhuman jumps. At times playing this game is almost like watching a cartoon. A nice feature is Bob's ability to jump straight up and then select which direction to go for more precise landings after a leap. Pressing the Option key brings up a Game Adjustment screen which allows you to modify everything from difficulty level to number of starting lives.

I cannot praise Bounty Bob highly enough - it has been ingeniously programmed and once again the Atari version is the best. The Spectrum, Amstrad and BBC versions of the game are not in the same league. Those naughty fellows reviewing the game for the very first issue of the legendary Zzap!64 magazine had to sheepishly admit in their review that they actually played the Atari version as the Commodore 64 game was not ready in time for their deadline. They were assured by distributors US Gold that the C64 game was identical to the Atari original. Almost, but not quite! Little touches like the mutants glowing on the Atari could not be replicated with the C64's limited colour palette. It got a brilliant review and quite rightly so - it's still one of my favourite games of all time.

10/10



Cheat Modes

Collect the flower pot on level 1, Bob's Morning Calisthenics. Then hold 1 and press Start to jump to level 4.

Collect the goblet on level 3, The Suction Tubes. Then hold 4 and press Start to jump to level 15.

Collect the pie and tube one to the left on Level 10, The Gravity Lift. Then hold 5 and press Start to jump to Level 14.

Collect the pie and tube one to the left on Level 16, Advanced Suction Tubes. Then hold 9 and press Start to jump to Level 19.

Collect the aliens and paint roller on level 2, Utility Holst. Then hold 3 and press Start to go to level 22.

Collect the coffee pot on level 5, Jumping 101. Then hold 8 and press Start to jump to level 18.

Set the code in the option menu 61,800 (This is where Warp Speed on the Altirra emulator really comes in handy!) and then press F+OPTION. Then press the following keys while playing: B - Back to where you were standing last Q - Next level A - Previous level Z - Restart level F - Float - Bounty Bob can move freely and becomes invulnerable. To go to any level type the level number 01-25.



The flyer sent out to registered Miner 2049er customers announcing the return of Bounty Bob.



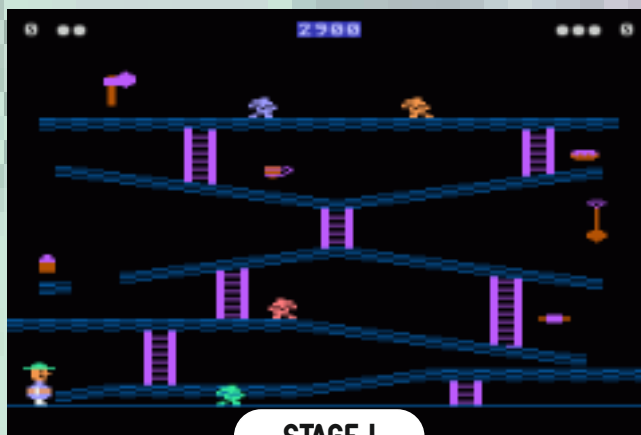
The instruction sheet which accompanied the Bounty Bob Strikes Back game.

Station 1: The Mine Shaft is your introduction to the gameplay. All you have to focus on is avoiding or capturing the mutants and walking along every piece of floor. All of the discarded items can easily be collected for extra points. The quickest approach to completing this stage is to complete each platform from the bottom of the stage to the top. At the top, deviate as much as you need to safely remove the mutants and earn points for them before completing the rest of the stage. Bounty Bob's starting point (the lower left corner) is a dangerous place. The mutant who patrols the floor will walk all the way over to the left and kill Bob if he stays there. This mutant can also kill Bob if he is standing on the left edge of the bottom platform because the mutant can touch Bob's heels. In order to be safe, Bob must at least walk to the first part of the platform that straightens out. To complete the stage, you must jump to the little island on the left side of the screen. To get there, you must jump in advance of the gap. If you jump too late, you will fly over the island and die landing on the platform below. It is best to jump two or three sections of floor ahead of the gap. From the island, you can safely fall to the floor below or jump back to the right.

Station 2: The Slides introduces the slides which you will see again in the later levels. Slides force Bob to fall down in whichever direction the slide goes. But Bob is only forced to fall down the slide if he steps on the centre of the slide. This means Bob can solidify the floor on either side of the slides without actually falling down. Approach the slide from one side and walk along the floor up to the centre and then jump to the other side of the slide and approach from the opposite direction. Bob will not die no matter how far down a slide he falls. With the exception of the island, approach this stage by completing it from the bottom to the top, and fall down the slide at the top to complete the island. The island on this board is only accessible from the long slide on the right side of the stage. A mutant patrols the island, so it is very important to either remove it in advance, or grab an item and make it happy just before you use the slide. Don't forget to touch the sections of the floor that are to the right of the long slide. Jump over the slide to access them. The middle platform of the second level from the floor can be tricky, especially the very left side. You can reach the left side of the platform if you start by placing your feet at the left edge of the slide that drops down to this platform, and jump to the left over the slide that leaves from this platform. You should land on the very edge of the platform.

Station 3: The Teleporters are advanced devices that allow Bob to warp to another section of the stage. He can only use them when they are green. After entering one, push the number on the keyboard or keypad that corresponds to the teleporter you wish to go to. Bob will disappear from the teleporter he entered, and rematerialize on the desired platform. At that point, the teleporters will turn red, and be unavailable for use for a few seconds until they turn green again. One quick strategy is to work your way up the left side of the stage, along the top, and then back down the right side. When you reach the floor again, teleport up to number 3, drop down to the left, and jump over to the number 2 platform to complete the stage. The trickiest mutant to capture or avoid is the one to the left of teleporter 2. If you collect the iron next to teleporter 1, you can run to the platform below that mutant and still have enough time to jump up and capture it before it becomes unhappy again. Alternatively, you can collect the anvil next to teleporter 3 and drop down to the left and capture the mutant.

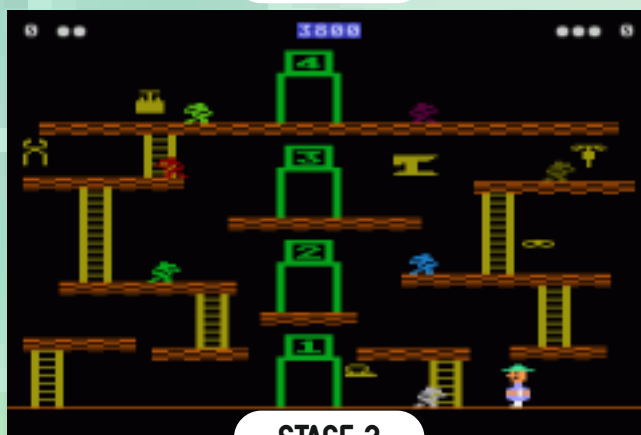
Station 4: The Lillipads tests your ability to successfully guide Bounty Bob from island to island. Understanding the way Bob jumps is critical to your success in this stage. Understanding how far Bob can safely fall will also benefit you here. This stage doesn't present the most difficult jumps in the game, but it will prepare you for what's to come. To quickly progress through this stage, try to complete the right half of the screen (any platform to the right of the flower pot) from the floor to the top, cross the highest platform to the left, and make the long jump to the little platform directly beneath the centre of the large platform that you just crossed. Then safely drop down the right side of the screen, and work your way up the centre. Jump over to the high platform just beneath the platform connected to the ladder, and work your way down to the last two platforms before climbing the ladder to finish the stage. The biggest



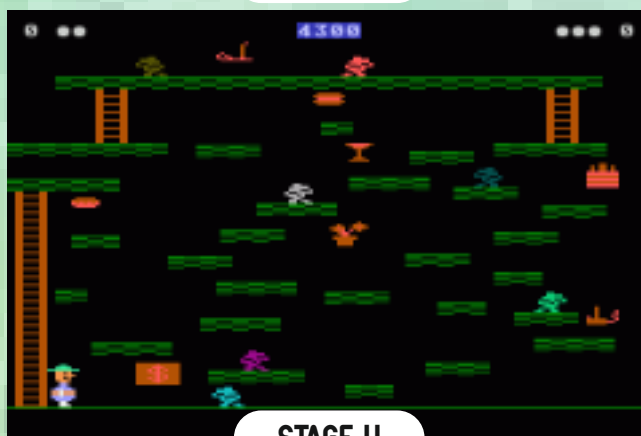
STAGE 1



STAGE 2



STAGE 3



STAGE 4

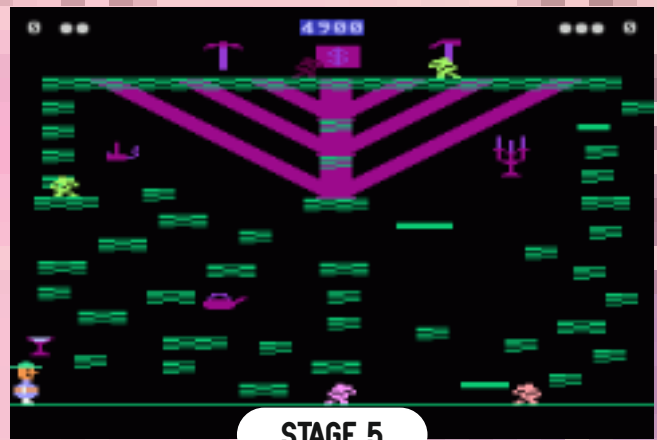
danger, besides the risk of jumping and falling to your death, is the placement of the mutants. From the very start in the lower left corner, you can run, pick up the dollar bill, and capture two happy mutants before even jumping. You have just enough time to jump up three platforms and capture the far right mutant next to the joystick before he

becomes unhappy and kills you. Once you capture that mutant and collect the joystick, you have just enough time to jump all the way up and capture the happy mutant next to the cake. Any hesitation however will cause you to arrive too late and you will be killed if your head touches the mutant while he's unhappy. The little platform positioned between the wine glass and the hamburger is the hardest to reach. You must approach it by jumping from the platform to the left. Walk to the very edge of that platform so that your feet are hanging off the right edge, and jump to the right. You should just make the jump and arrive safely. From there, you can safely fall to the right.

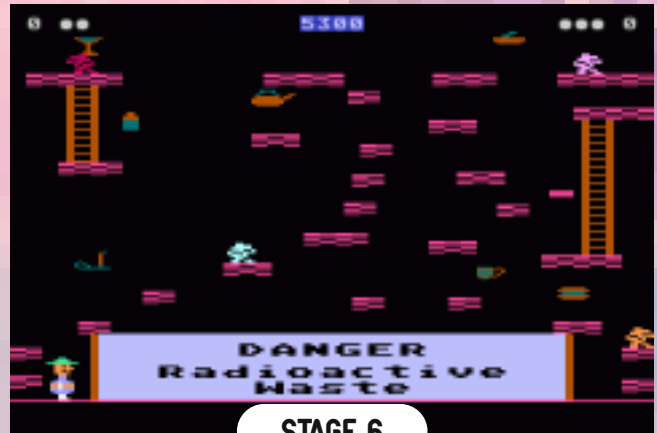
Station 5: Advanced Lillipads is a more complicated version of the previous stage. Many more elements come together in this stage including slides and a new concept: moving platforms. Moving platforms can be jumped on, or fallen on, and ridden back and forth. The collection of slides at the top must be carefully navigated in order to complete the framework on the very top platform. As a general strategy, work your way up the left hand platforms to the mutant by the joystick. Grab the joystick in order to capture the mutant and jump up the column of platforms to the very top. Avoid the unhappy mutants and jump over the slide centres, cross the platform and walk along all of it until you are on the other side. Drop down to the tiny island off the right side, and then jump back to the platform. Fall down any one of the centre three slides to complete those islands. Now you must jump to the moving platform that floats underneath the candle holder. Use it to get to the right side. Complete all of the islands above you, then carefully drop down to the lower platforms. After completing the group of four platforms in the bottom right corner, make your way to the centre column of platforms beneath the slides. According to the instruction manual, Bounty Bob is allergic to certain martini mixes, and the flashing glass above his head at the start point happens to contain such a mix. Do not try to collect it or Bob will lose one life. The mutant that poses the biggest threat is the one to the right of the joystick. He is dangerous because you might hit him with your head from below if you don't time your jumps properly. Getting off the island at the bottom of the slides and over to the moving platform takes a bit of practice. It is best to jump over to the moving platform when it is still on its way over to you. If you jump too late, you will miss it and fall to your death.

Station 6: The Radioactive Waste earns its name from the large vat of waste that sits at the bottom of the screen. Contact with the contents is lethal. This wouldn't be so troublesome if the jumps in the stage weren't so precarious. This stage also features some of the most difficult leaps in the game. From your starting point in the lower left corner, you will jump from island to island to reach the centre of the stage. Clearing the centre and the upper right corner of the stage is a simple matter compared to the remainder. To reach the upper left corner, you will need to board the tiny floating platform and ride it across the stage, jumping for the ledge when you get close enough. Then you must ride the platform to get back. When you are finished with everything else, you can complete the lower right corner, it is safest to drop above the tea cup, to the ledge below. This is a one way trip, so only take it when the rest of the stage is complete. Now you can finish off the remaining islands. Some of the leaps are only possible if you are standing as close to the edge of an island as possible before jumping. This is especially true of the jumps in either direction of the column of three small islands towards the centre of the stage. Getting to the set of framework in the upper left corner can be tricky, but getting off of it is even trickier. It requires that you wait at the very edge of the bottom island until the tiny floating platform gets just close enough for you to fall on to. As mentioned above, in order to get to the lower right islands, you must fall from a platform above. Once you do this, there is no way to get back, so if you missed a section of framework above, you can't complete the stage!

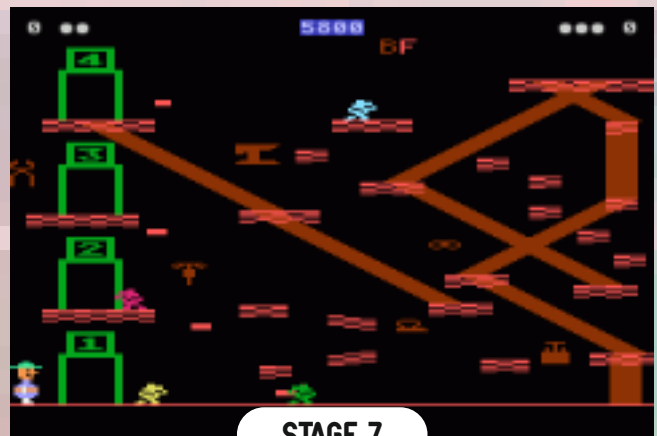
Station 7: The Advanced Teleporters has the most complex layout of islands compared to any other stage. As such, there is no one direct route through the stage, but rather a collection of isolated regions that must be covered independently in any order. This stage will test your ability to rely on rather small sized floating platforms. In order to make many of the jumps from one island to another, you are required to stand on the opposite end of the island before you jump towards the next one. The BF situated at the top of the screen stands for Big Five, the software house responsible for Miner 2049er, and is worth the most points out of any item in the game, 1100. The strategy



STAGE 5



STAGE 6



STAGE 7

proposed here is just one possible route through the stage. Start by teleporting to station 4. Make sure you are on the left side of the teleporter or you may be forced to use the slide. Complete that island and wait for the floating platform to pick you up. Use it to collect the BF, and use it to collect the happy mutant beneath you, and clear that island and the one beneath it. Then get back on board the floating platform and ride it to the right. Clear the large island with the two slides attached to it, and take the left slide down. Once on the floor, use the plunger to clear the mutants down there and teleport to station 2 to clear that mutant as well and finish the framework. Use the floating platform to reach the islands to the right. Jump over the iron and to the platform on the right, and drop down to the one below it to clear the islands before dropping to the floor. Then clear the two lowest platforms. Work your way to the series of islands along the right side of the stage, and back towards the island beneath the Anvil. Clear as much of it as you can and slide back down to the floor. Then teleport to station 3 to clear that framework, and carefully use the floating platform to finish the left side of the platform to the right. The placement of the slides makes some of the islands difficult to clear, particularly the island beneath the anvil. It is possible to clear it sometimes by simply running to the left as you clear the framework, but you won't always get it, so don't rely on this method. Getting to the islands on the right side can also be tricky because of the slides. Jump to the island to the right of the iron and jump up to clear the left side of the island above it. Drop back down and stand on

the right edge of the slide on the lower island. Jump to the right and you will land on the right side of the island above, allowing you to proceed to the islands to the right.

Station 8: The Lift is the giant white contraption in the centre of the stage. You can use it to situate yourself anywhere in the stage that you like, but you must be careful not to put it somewhere that will cause you to be trapped somewhere on the stage with no chance of completing the stage. There are several unique features on this stage like the broken ladder in the upper right corner, the hanging ladder in the centre, and the deadly floating platform hovering above the floor. From the start in the lower right corner, take the time to complete the framework on the starting island, and the section connected by the ladder. You can jump over the slide to complete the small section on the left. Return to the bottom and jump on the lift. Activate it and use it to take you to the small section at the bottom of the slide. Complete it and return to the lift. Now bring it to the hanging ladder and park the lift so that only the very right edge of the lift is touching the ladder. Climb up and carefully complete the framework there as well as the large section above. Work your way down the upper left corner of the stage, and use the left slide to drop down to the framework next to the lift. Avoiding the mutant, clear that section and jump back on the lift. Now take it to the section immediately below. Clear that section, and feel free to drop down the slide as long as everything else is complete, to finish the stage by clearing the ledge below. The only very difficult section on this stage is the very right edge of the framework connected to the hanging ladder. To reach the other side without falling down the slide and getting trapped, stand on the left side of the straight slide and jump to the right, and you should clear the slide and land on the right side of the platform.

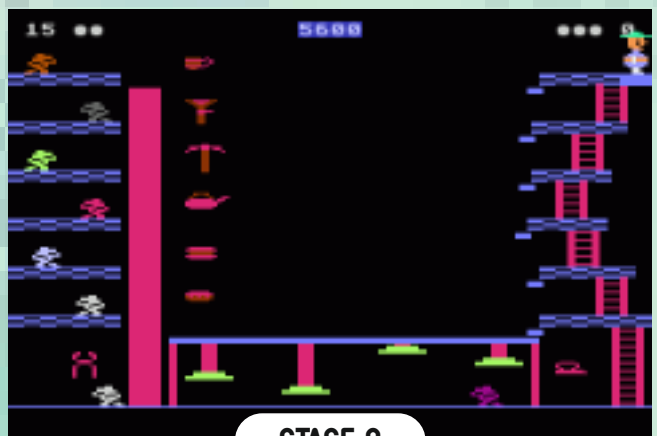
Station 9: The Pulverizers gets its name from the four deadly presses along the bottom of the stage. This stage is more a test of patience and timing than of skill, although plenty skill is required. You will start on the right side of the screen. Each of the floating platforms wait patiently for you to step on them before zooming across the gap to the other side. You must jump to the ledge beyond or you will fall down the slide that gets in your way. When you are done on the left side, you will hop back on the platform and allow the slide to take you to the bottom where you must pass beneath the Pulverizers. Get to know the pattern that they follow, which is randomly generated at the start of the stage and remains constant until the stage is complete. Cross back to the right and repeat until the stage is cleared. Using the above strategy, you can complete each platform of the stage in whatever order you wish. Since you will always run in to an item before you reach the platform, you are relatively safe from angry mutants. But if you happen to grab an item and fall down the slide, be careful on your next approach not to face an angry mutant. It might be better to try the level below and jump up to capture the happy mutant before returning to that level. It is of utmost importance to be ready to jump before the platform reaches the slide, or you will never be able to reach the ledge beyond and complete the stage. While the Pulverizers are deadly, the casing around them is not. You can walk along the top of the casing without fear.

Station 10: The Cannon is your final test in your search for Yukon Yohan. In this section of the mine is a giant cannon, and you are the cannon ball. You must start out by grabbing a certain amount of TNT. There are three levels of platforms and it requires 10 pounds of TNT per level you wish to reach. Each stick of dynamite is 10 pounds, so if you wish to reach the second platform, you will need two sticks of dynamite. Once you have the right amount, you must climb up the ladder, and jump in to the cannon. Once you are inside, you can position the cannon anywhere left and right along the cannon track. You must time your flight up to the platforms so that you don't end up hitting an angry mutant on the way up. TNT gives you the ability to turn the mutants happy for a brief period of time, but it's not enough to reliably reach the mutants before they turn angry again. Once you reach a platform, do your best to complete it and avoid angry mutants before riding the slide back down to the floor. Even when you slide, you must still time your drop appropriately so that an angry mutant won't cross your path as you slide down, unable to do anything to avoid it. Be very careful about picking up too much TNT. If you

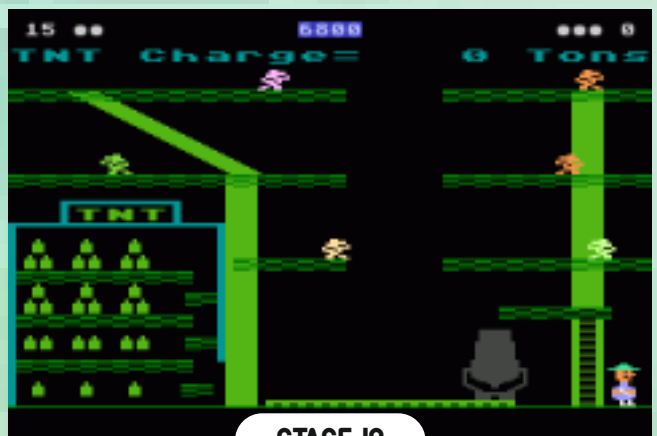
grab more than 30 pounds of TNT, you will overshoot out of the cannon and lose one life no matter where you land. A warning sign will appear if you pick up too much TNT, and if you do, there is nothing you can do to undo the mistake. Remember to watch out for the placement of the angry mutants both on the way up from the cannon and on the way down along the slide.



STAGE 8



STAGE 9



STAGE 10



The very rare and collectible handheld Miner 2049er game released by Tiger Toys.



Bill Hogue and some of his awards won by Miner 2049er.



Manic Miner is possibly the most famous computer game to ever come out of the UK. Launched from nowhere for the fledgling Sinclair ZX Spectrum on August 1st, 1983, the game was programmed by Matthew Smith on a TRS-80 machine, an early computer (1977) sold by Tandy Radio Shack which used the same CPU (Zilog z80) as the Spectrum. The game rocketed to the top of the charts and inspired countless clones on all the popular home computers of the time. The irony for Atari owners was that although the game was officially converted to every other computer under the sun except the Atari, Matthew Smith himself admitted that the game was inspired by the classic Atari game Miner 2049er by Bill Hogue. So all those so-called Manic Miner clones are in reality Miner 2049er clones. There have also been unofficial versions released over the years for just about every other machine on Earth - Apple Mac, Atari ST, Neo Geo, Playstation, Nintendo 64, DOS & Windows versions for the PC and even the Spectrum's forerunner - the Sinclair ZX81!

The Atari version has had a long history. 6502 Coder extraordinaire Tezz posted the final version on the Atari Age forums on Friday 29th April, 2016. Tezz himself explains the history of the Atari conversion in his post:

"I started writing Manic Miner for the Atari back in 2010 completely from scratch. Although there were just a few things to finish off and tidy up, ultimately I wasn't happy that it was entirely there and it became something that I pushed back for another day. I wanted to make sure that I did the original game justice as several of the other platforms that had conversions released in the day were written in their own way by the developer and were lacking.

When I returned to the project at the beginning of the year I decided the best course of action was to start over. Having spoken with Mariusz about his z80 work after working on Saboteur together I'd improved my z80 knowledge and began translating Matthew's original z80 code line by line to 6502. After the necessary changes for the A8 and some rewriting and optimising I then had the original game in glorious monochrome running faster than the Spectrum. This would have been acceptable for a quick and dirty conversion although some game features such as the Solar Power Generator wouldn't be possible with the game in it's original form on the A8. It wasn't my intention either to create a simple port. The Atari 8-bit is capable and worthy of spending the time to develop the game fully in the way I wrote my original conversion.

The next preliminary step for me was to re-write the entire game in clean 6502 procedures reworking everything to use a standard Atari bitmap layout rather than a simulated Spectrum layout. These procedures were then rewritten and reworked into the methods used in my conversion which is character based so, after effectively writing Manic Miner four times for the Atari I've made absolutely sure to reproduce the game 100% - bugs and all.

The interrupts for all twenty caverns were hand written and carefully thought out, being designed over several months in 2010. I used sprite copies and mid scan changes where necessary. It was labour intensive manually timing them all and dealing with solutions to minimize the bad lines but thanks to the accuracy of Altirra I was able to work my way through them over time. When I came back to working on the game again I hadn't intended to mess with these but I could see with fresh eyes that several could be written more efficiently and could actually be improved also. I ended up rewriting many of the trickier ones and reworked most of the others to various degrees. I completely





restarted the Final Barrier (which I was never happy with) and after some thought and planning I decided to create a combination of bitmap and character layout, partly inverted, partly not inverted, and wrote special procedures for that cavern. I'm glad that I took the additional time to redo all the caverns. I was reluctant at first with the work involved but it's solved everything I wasn't happy with.

Miker's music is of course included again and the speed is modified for NTSC machines. Thanks to Poison and Solaris for taking the time to give their views play testing the game. Thanks also to Phaeron for Altirra and for testing some of the interrupts on the real hardware for me. I have the game delayed to run at roughly 140% speed on PAL systems compared to the original which feels good to me. I deliberated over whether to delay the game down to the Spectrum speed, which feels like slow motion now going back to it after play testing for a while. My thinking was that the PC remake of Manic Miner was also a little faster and everyone spoke positively about that version still retaining its authenticity. Solaris has played the game through to completion and said he felt the game play speed was good too. It's probably best to get some further feedback from everyone regarding the playing speed

As the play testers were both using PAL machines I've now added the modified delays for NTSC machines. I will need to spend a little more time making some further changes to the NTSC delays to deal with the music when it's turned off so I'll post a final revision soon with that but either way I wanted to make sure to release the game now rather than delay it any further so it's available for everybody that's been waiting for it to appear."

So, there, literally, we have it. The question is, how does it play? And the answer is, absolutely brilliantly! The game is as perfect as it could possibly be. Considering that hi-res mode on the Atari is officially only possible in two shades of one colour, this is a work of genius. The use of colour is amazing and the animations are silky smooth. The in-game music is of course 'In the Hall of the Mountain King' from Edvard Grieg's music to Henrik Ibsen's play Peer Gynt. The music that plays during the title screen is The Blue Danube. Both tunes are superb on the Atari - in fact, they are better even than on the Amiga version.

Speaking of other versions, the Amstrad game was okay but its music could strip paint from your walls. The C64 version is graphically faithful to the original but even the music on that version is no better than the Spectrum's. The Oric version was poor and the BBC game was a four colour effort. The Dragon version made up slightly for being in black and white by adding two extra rooms at the end of the game. The C16 game is quite good but eerily silent and for some reason the Alien Kong Beast was replaced by an angry lavatory. The Vic 20 didn't get a conversion but instead got a totally different game called The Perils of Willy which required 16K of extra RAM and had thirty three screens. The MSX port is perhaps the most similar to the original. The Atari version may well be the best version of Manic Miner available - it is every bit as good as the Spectrum original but with better use of colours and much better music.

So here we are, thirty three years after it's launch, we can at long last play Manic Miner on the Atari, and I can happily, although slightly grudgingly, admit that it was probably worth the wait. An awesome achievement!

10/10



JET SET WILLY

I still remember popping into the local computer shop one day in 1987 and finding an Atari double-cassette by Tynesoft called Four Great Games Volume 2. It was only £3.99 and... Jet Set Willy was on it! I wasn't even aware that the game existed for the Atari but I had fond memories of playing it on my Spectrum a few years earlier.

I was pretty excited by the time I got home and put the tape into the Atari cassette recorder. I probably made a cup of tea or three during the time it took to load up the game... Things started well when the game finished loading and the music by Rob Hubbard started blasting out - wow! - this was going to be great! The game, however, turned out to be actually pretty poor. In fact, of the four games on the tapes, none of them turned out to be particularly good, never mind great. Killer Cycles was complete rubbish. Mousetrap by Brian Jobling and Space Hawk by Ian Copeland were half-decent games and a few years later these programmers would write Zybox and Draconus for Zeppelin Games (also from Tyneside) whose games actually did turn out to be great.

This version of Jet Set Willy is quite different from the original, as you can see in the comparison screenshots below. The graphics are quite blocky in the medium resolution mode used, use of colour is average and the animation is a bit jerky, especially Miner Willy himself. I would give it a lot less than six out of ten if it wasn't for the absolutely brilliant music, which I believe is the only original tune Rob Hubbard ever wrote for the Atari.

Fortunately for us, Krzysztof Dudek (XXL) later decided to port the game properly. Unfortunately for us, it was twenty years later...

6/10



JET SET WILLY 2007

Twenty years later and the Atari 8-bit computers were as dead as the Daleks, but some hardcore Atari coders were still beaver away on their homebrews which almost anybody could play on their PC using an emulator. I used Atari800Win at the time and I downloaded Jet Set Willy 2007 with rather high expectations as I was very impressed with the author's (XXL) previous game, Flowers Mania. But still, it surely couldn't really be worse than the previous effort?

Wow!!! This version plays exactly like the 1984 Spectrum original. The graphics are ported directly from the Spectrum so they are in high resolution mode, which on the Atari means two shades of one colour. The sixty one screens all use different shades of colour although hardware sprites are used to add colour to the small collectable objects. The animation is smooth and the game is very addictive.

Like Jet Set Willy on the Spectrum, pixel perfect jumping skills are required to make any headway into the game. You are given a generous eight lives when starting a new game but they can get used up pretty quickly as many of the screens are fiendishly difficult to negotiate. The screens are all exactly replicated from the Spectrum too, unlike the earlier Tynesoft effort. Look at the Nightmare Room below - there are seven baddies on the screen. This screen in the Tynesoft version only has four baddies. And Miner Willy didn't change into the weird flapping hedgehog thing in this room in the first Atari version but he does here, as in the Spectrum original.

This is an absolutely top notch port by XXL and the icing on the cake is that the awesome soundtrack by Rob Hubbard is retained in this new version, making it a superb all round package. And more than that - it's free!

10/10



JET SET WILLY VBXE

The third version of this game is the 2007 version with added support for the Video Board XE, which allows additional graphic overlays to be mapped onto the standard Atari graphics, which means you get the highest resolution graphics mode available in glorious full colour. Perhaps even more amazing is that despite all the screens using an overlaid VBXE colour memory map, the game uses 39k of memory which is the same size as the original game file!

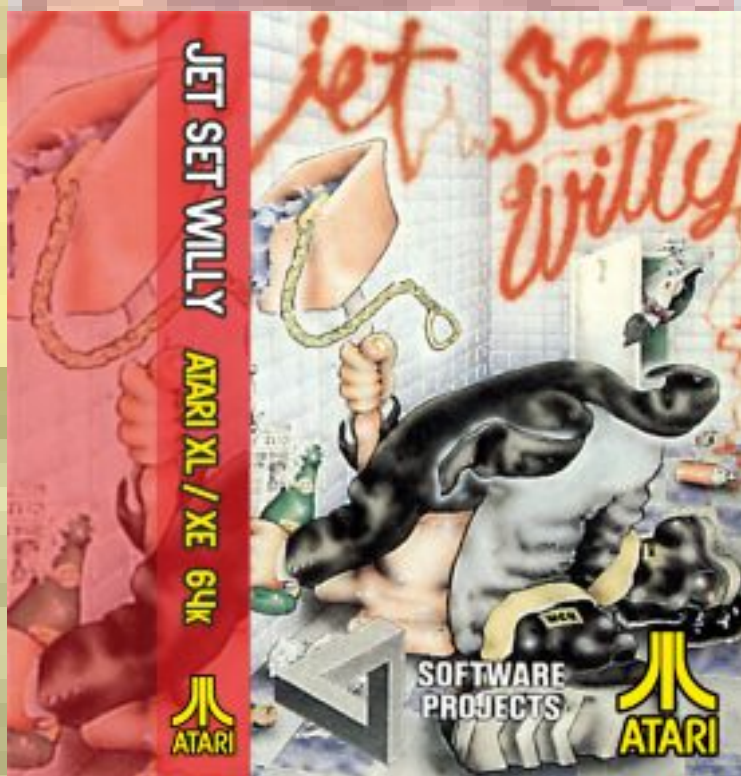
There aren't many people using actual Atari computer hardware these days, and only a small proportion of those have a VBXE installed, but anyone can play the game on their PC using the Altirra emulator, which now supports VBXE. It's well worth playing - a perfect port of a classic game. It would be tremendous if the non-VBXE version could be souped up at some point to use multicoloured graphics similar to Manic Miner, but seriously, we're being spoiled rotten as it is.

Trivia: although the rather poor game The Perils of Willy for the Vic 20 is almost unknown and wasn't converted to any other platforms, there was in fact a sequel to Jet Set Willy which started life on the Amstrad CPC. Many new rooms were added to the original game as the target machine had considerably more memory (64k) than the 48k Spectrum. It was then ported back to the Spectrum and released as Jet Set Willy 2: The Final Frontier. Miner Willy blasts off into space in a rocket in this game and explores many screens wearing a space suit & helmet, which you might notice he tried out again for the front cover of this mag. It still fits him too! This game was converted to the C64, C16, BBC Micro, Acorn Electron and the MSX - but inevitably, not the Atari. Well, not yet anyway - but there's always the future...

10/10



Do you secretly yearn for those nostalgic days when a 64k Atari game on tape took about twenty minutes to load? Or maybe you have more sense and would just like to have these famous and quite brilliant games in lovely cassette boxes taking pride of place on your retro games shelf? Make some groovy Atari cassettes using some old cassette boxes and the fabulous covers below. Of course, you won't want to cut up your beautiful Excel magazine, so make colour photocopies of this page and use those. If you would like to see more new cassette covers for other Atari games in future issues, just email me and let me know. All suggestions are very welcome.



Jetboy is a clone of Jetpac, the first ever game from Ultimate Play The Game (Tim and Chris Stamper), whose Spectrum game titles are legendary. It is also the first game I ever played on any home computer (unless you count the Atari 2600) which a friend brought round to show off after school one night. I was absolutely mesmerised and the rest is history.

Released in 1983 as the first of four 16k Spectrum games before Ultimate moved on to 48k only titles, it sold three hundred thousand copies to an installed user base of approximately one million Spectrum owners. It won the Game of the Year title at the Golden Joystick Awards that year. It was released for the BBC Micro in 1984 using the horrible BBC teletext palette - surprisingly, the Vic 20 version is actually better. The Spectrum original is far superior to both and is one of the very rare games to be released in cartridge form for the Spectrum. This is the first game featuring Jetman, who must rebuild his rocket in order to explore different planets, whilst simultaneously defending himself from aliens. Jetpac has more recently been included in other Rare games such as an unlockable in Donkey Kong 64 and part of a compilation in Rare Replay. The game spawned two sequels and a 2007 remake, Jetpac Refuelled for the Xbox Live Arcade service.



SPECTRUM



ATARI

The Spectrum game is legendary but what is XXL's Atari version like? Well, it's presented in hi-res monochrome mode again, like Jet Set Willy from the same programmer, with little bits of colour and background graphics added using chunky hardware sprites. The colour clashing attributes of the Spectrum original are gone but it does look just a little dull in comparison. It still looks good though, and it plays fast and furious, as it should. The soundtrack by Miker is quite superb. The Spectrum original never had any music at all; however, there is something else the Spectrum version never had...

Jetboy was very well received when XXL presented it to the world in 2007 (a good year for him!) but a few reviewers were slightly upset at one slight alteration to the gameplay. You may notice from the screenshot comparison below that the Atari version has added Gun and Air gauges to the game. This puts a time limit on each level as you have to complete it before you run out of air. In the original you could fly around all day blasting aliens to death without a care in the world. Unlimited air and ammo for you laser is apparently okay in Spectrum Jetpac-land but in Atari Jetboy-world, our hero has to replenish his oxygen supply between levels and if he runs out of ammo, he has to build his rocket while avoiding the aliens as he can no longer shoot them. Okay, maybe it's more realistic but this is a shoot 'em up, so it damages the playability somewhat if you can't shoot.

The trouble is that the extra ammo appears very sporadically throughout the game. As Jason from the www.oldschool-gaming.com website noted: "The falling objects are released randomly, one at a time and the game will occasionally go for a while without sending down anything to collect so topping the guns up from that would be bad enough if there was some kind of weighting to the random numbers to throw ammo into play when it was needed... but there isn't. Instead, the player can sometimes be deluged by power-up after power-up when they don't really need them and, at other times when the gauge is red-lined or even worse when the damned thing conks out altogether, the game refuses to send any more juice in! I've actually played right the way through two concurrent levels without firing on a couple of occasions because no ammo was forthcoming, something that makes the game a lot more difficult for those parts."

Perhaps the last word should go to his Old School Gaming colleague, Andy, with this heartfelt poem - to the tune of 'American Pie' by Archer MacLean... sorry, Don McLean...

*A long, long time ago...
I can still remember
How that gameplay used to make me smile.
And I knew if I had a chance
To play again it would en-trance
And, maybe, I'd be happy for a while.*

*But this download it made me shiver
With every play it would deliver.
A feeling quite blase;
I didn't want one more play.*

*I must confess I cried and cried
Without *that* laser by my side,
And something left me cold inside
The day the blasting died.*

*Oh, why, why, these developer guys,
They spend ages porting games but,
The results makes you sigh.
With those good old blasts now drainin' power away
This change is dire I feel I must now convey
I'll not return for one more re-play.*

7/10



Lunar Jetman is the sequel to Jetpac, published by Ultimate for the Spectrum in 1983 and the BBC Micro in 1984. The game is the second instalment of the Jetman series and one of the few games released to support the Currah Microspeech peripheral for the Spectrum. In the game, Jetman has to destroy alien bases whilst defending himself, along with Earth, from a hostile alien race.

Lunar Jetman was Ultimate Play The Game's first game for 48k Spectrums only. As with Jetpac, the game was written by Chris Stamper with graphics by Tim Stamper. The game was followed by a third instalment, Solar Jetman: Hunt for the Golden Warpship, released for the Nintendo Entertainment System in 1990. It was later included in Rare's 2015 Xbox One retrospective compilation, Rare Replay, alongside Jetpac and several other examples of the best Ultimate games.

Similarly to its predecessor, Jetman can move around slowly on foot, or use his jetpack to zoom around the moon faster. However, unlike in the first game (except the Atari version), his jetpack has limited fuel and must be topped up regularly by entering his moon buggy, which can be used for safety from the aliens. However, the moon rover can only negotiate smooth terrain, and Jetman has to use bridging kits from the moon rover to fill in the craters on the moon's surface. Jetman can collect bombs which can be carried on the rover, one at a time. These have to be used to destroy the alien bases when they are encountered. There is also a cannon which can be mounted onto the back of the moon rover and teleporters can be used for instantaneous transport to another location on the moon.

Jetman's job is to locate and destroy a series of alien bases on the surface of the moon. Each new base appears after the destruction of the previous one. To accomplish this, Jetman must take the bomb to the base using the moon buggy, lift it, fly over the base and drop the it on the alien base. After several bases have been destroyed in succession, new and more dangerous aliens appear. Each base must be destroyed within a strict time limit or the aliens will launch missiles from the base - one heading for Earth and the other for Jetman's moon buggy. If this happens, Jetman has a limited time to intercept and destroy the missiles while they are still in flight.



The original Spectrum game was widely praised, Home Computing Weekly called it "disgustingly addictive" and ZX Computing, holding back somewhat, called it "the greatest computer game of all time!" It sounds pretty good!

The Atari version was written by Fandal in 2014 and although not as colourful as the Spectrum original, is just as fast and smooth, unlike the jerky BBC version, which has a similar lack of colour but at least looks far nicer graphically than the BBC version of Jetpac.

The animation of Jetman and the various aliens are very nicely done, especially when Jetman collides with an alien and literally goes tumbling head over heels onto the lunar surface. The game is very addictive but is not easy, and is obviously a lot more involved than the original Jetpac, with all the various items to manoeuvre around.



SPECTRUM



ATARI

This is a very slick production, presented beautifully with a superb rendition of the Spectrum title page, another excellent soundtrack, this time courtesy of Irgendwer, and all the superb graphics and animation of the original.

This was another triumph on the Spectrum for Ultimate Play The Game and yet another triumph in the Atari's ever-increasing, high quality collection of classic Spectrum game ports.

9/10





So this is what happens when you get bitten by a Sabre Wulf - you are cursed to transform into a werewolf every night, returning to human form only at sunrise. In this game, our hero Sabreman finds himself in a spooky castle which he must explore to find fourteen objects which then have to be deposited into the wizard Melkhior's cauldron in order to cure his curse. An onscreen timer shows the sun scrolling across the status area and disappearing as Sabreman transforms into the werewolf. The moon then scrolls across and when it disappears, he returns to human form. The castle comprises 128 rooms, created in the revolutionary isometric 3D system coined Filmation, which Sabreman must navigate whilst avoiding spikes and enemies which kill him on contact. Your four lives can be ended rather easily as the game is pretty difficult. Stone blocks serve as platforms for the player to jump between; some fall under the player's weight, some move on their own, and some are moved by ghosts. Sabreman jumps higher when in werewolf form, which helps solve specific puzzles. You have to move blocks to reach distant objects, which are then used as platforms to reach areas with yet more puzzles. At the end of the game, you receive a final score based on the time taken and the amount of the quest completed.

Knight Lore was released for the Spectrum in 1984 and spawned a plethora of isometric 3D games. The game was developed and published by Ultimate Play The Game and written by company founders Chris and Tim Stamper. Ultimate released Knight Lore third in the Sabreman series although the program was completed first. Ultimate delayed Knight Lore's release, fearing that sales of their upcoming Sabre Wulf game would be affected by being a technically inferior game if they released Knight Lore first. They were also canny enough to know that other companies would be flocking to copy their new techniques, so they prepared their next Filmation game (Alien 8) before releasing both Sabre Wulf and Knight Lore.

Ultimate released the original Sabreman trilogy in quick succession in 1984 for the Spectrum - Sabre Wulf, Underworld and Knight Lore, which came last in November. Ports followed for the BBC Micro, Amstrad and MSX, all of which were very good. The Amstrad port had the same high resolution graphics but in four colours. The BBC version used only one colour plus black for the graphics and the MSX version was totally identical to the Spectrum. A conversion was also released for Nintendo's Famicom Disk System (NES), which was very colourful but totally lacking the atmosphere of the other versions. The Amstrad game suffered slightly from this as well, and the dire sound quality didn't help.

Knight Lore is rightly regarded as something of a milestone in British gaming history and is often included in lists of the very best Spectrum games. It was named Game of the Year in 1984 by the Golden Joystick Awards. Ultimate didn't release any of their games for the Atari but even the C64 didn't get a conversion of this one, although several other games were published (but not written) by Ultimate for the C64 only. Knight Lore remains one of my favourite games ever to this very day. I remember the buzz at school with all my Speccy friends talking about the amazing 3D graphics. I actually played the hell out of this game and completed it several times as I was determined to be the world record holder at completing the game in the fewest number of days. I must have really liked it - I thought it was so good that it was one of the very few games I still played on my Spectrum even after I got my Atari.

The 3D effect is of course very primitive by today's standards but at the time was jaw-droppingly amazing. The animations are great - especially when Sabreman undergoes his bizarre transformations. The days and nights pass quickly in this Atari version; in fact the entire game plays faster than the Spectrum original. The graphics are in highest resolution mode so are once again monochromatic but identical to the Spectrum. XXL has done an amazing job porting the game from the BBC 6502 code (assisted by Tebe & Eru) and after the slight controversy over Jetpac has thoroughly redeemed himself. Emkay provides the excellent hi-res multi-coloured title page. Unlike the original, this version allows you to play the game with or without the nice atmospheric music by String.

All in all, this is an outstanding port of a seminal game and I have no choice but to award it 10/10. Twice!





On a dying planet in a distant galaxy, the last of the guardians stored all of their libraries, records, and knowledge on a single starship together with cryogenically preserved members of their race. A single robot, Alien 8, is tasked with keeping the occupants of the vessel alive for the duration of its journey. The ship is launched towards a new solar system and Alien 8 performs his task for thousands of years during the journey. However, as the ship nears its destination, it is attacked and boarded by hostile aliens. The cryogenic life support systems are damaged during the attack and Alien 8 must restore them to operational status by searching the ship to locate a set of circuits which are shaped like cubes, pyramids, domes and cylinders. The main objective of the game is to collect these circuits and return them to their respective locations before the starship reaches its destination.

There are a total of 129 interlocking rooms which together form the shape of the vast starship. The rooms contain various objects such as moveable platforms and static hazards such as spikes and hostile aliens plus marauding robots including clockwork mice and weird creatures that appear to be half mouse and half Dalek. As well as executing pixel perfect, well-timed jumps, Alien 8 is also able to use various props to block enemies or defend himself. Remote controlled drones can be found in some rooms which can be directed by Alien 8 into inaccessible or dangerous areas using a controlling device in the same room. There is a timer (in light years) counting down the distance to the ship's arrival at its destination. If it counts down to zero before you complete your mission, the cryogenically frozen crew are doomed. Doomed, I tell you!

As with its predecessor, Ultimate's first game of 1985 is presented as an isometric game using the same 3D Filamation engine as Knight Lore, causing some critics to dub it 'Knight Lore in space.' Despite this, the game was generally well received. Although it has the same number of screens as Knight Lore, the puzzles in Alien 8 are trickier to deal with so the game is a bit more difficult to play.

Although I was a massive fan of Knight Lore, Alien 8 didn't grab me in the same way when it came out, despite its sci-fi trappings and I didn't get around to playing it much. That doesn't mean that it's not good - maybe just that the novelty of the 3D look introduced by Knight Lore had worn off a little... and I had moved on to the Atari by this time.



Official conversions duly appeared for the BBC Micro, MSX and the Amstrad version again had prettier visuals - exactly the same graphics as the Spectrum except in four colours but unlike Knight Lore the garish Amstrad colour palette suited this game slightly better.

Although Alien 8 originated on the Spectrum, the Atari version was ported directly from the BBC game as it uses the same processor (although the BBC runs a bit faster) and the graphics are stored in a very similar manner, but although the BBC only had 32k of Ram the Atari version, even with 64k of Ram, suffers from a bit of slowdown if there are a lot of graphics moving onscreen. This was a criticism of many of the Filamation games on the Spectrum.

The Atari conversion was by Fandal in 2013, who also ported Luner Jetman. He has programmed Alien 8 to use pre-shifted graphics data for the animations to speed things up considerably if you have extra memory in your Atari. 128k of Ram, or even more, is supported and it's nice to see programmers providing for those with expanded memory. Of course, if you play it on an emulator on your PC you can turn on as much extra memory as you like or just ramp up the emulation speed if your PC has a bit of grunt. It is highly recommended to do so as the game does drag a bit if you have only 64k of Ram. So, another cracking game from Ultimate and the Spectrum hits the Atari. Excellent!

9/10



In this next Ultimate game, the player assumes the role of a knight who enters the plague-infested village of Nightshade to vanquish four demons - the Monk, the Skeleton, the Ghost and the Grim Reaper. The villagers have been transformed into vampires and other such nasty creatures. Contact with these monsters infects the knight and repeated contact will eventually lead to the character's death. The knight can take three hits from an enemy before the fourth hit loses him one of his lives.

Each of the four demons is vulnerable to a particular object which must be collected by the player: a Bible (naturally), a crucifix (of course), a hammer and an egg timer. Eh? To complete the game, the four items have to be collected and the demons tracked down and destroyed. To defend yourself against the monsters, the player can arm himself with antibodies. An antibody looks very like a mace. These can be found in various houses around the village, and will slowly be drained once they have been used. Extra lives can be collected and so can a pair of boots which enable your character to run faster.

Nightshade represented the next development in isometric 3D games, with this game engine being known as Filmation II. The previous two games from Ultimate used static single screens for the rooms but this is the first one that scrolls around as your character explores the world about him, which makes it a little trickier to map. This was the first of Ultimate's 3D games to use more than monochrome graphics for the playing area, which is pretty vast. The 'locked room' puzzle aspect of Knight Lore and Alien 8 was abandoned in Nightshade - your character can wander around for ages exploring but achieving very little. The objects required to defeat the four demons and complete the game can take a long time to find.

Nightshade was first released for the Spectrum in 1985, a year in which Ultimate released a record eight games (four for the Spectrum and four which were written for the C64 only). The Amstrad and BBC versions arrived later the same year and the MSX port was brought out in 1986, apparently only in Japan. Some reviewers were getting a little tired of the similarity between the recent Ultimate offerings and Nightshade was not deemed to be as addictive a game as the previous two, although many thought that Ultimate still led the pack with their programming innovations.



The graphics for the buildings are nicely detailed and the character sprites are very well drawn and animated, as we have come to expect from Ultimate. Having ported Jetpac and Knight Lore, this is XXL's third Ultimate game port, which sports a lovely hi-res monochrome (with colour sprite overlays) title page (shown above) by Irgendwer and yet another terrific piece of music from Miker. So many new Atari games seem to have music by Miker. Does this man ever get any sleep?

Nightshade may not be as instantly playable as the previous Ultimate isometric games, but is yet another successful Spectrum game and another very polished and welcome addition to the ever-growing Atari 8-bit machine's library of classic 1980s UK games.

9/10



Pentagram features the return of Sabreman in this 1986 follow-up to Knight Lore, unrecognisable in his cloak and now cured of lycanthropy. In this adventure he must search through a forest to locate four dilapidated obelisks and use the water from magic wells to restore them. Once this is done the titular Pentagram will appear and five magic runes must then be located and placed on the Pentagram which then becomes his own. Sounds easy. Ha! The game is a bit more complicated than Knight Lore and Alien 8 but the basic gameplay is familiar with the various in-game objects often forming obstacles or puzzles.

The main differences in this final Sabreman game are his newfound ability to shoot enemies (with a magic fireball spell) and the way the enemies can regenerate themselves after being killed. As in Knight Lore, Sabreman can move objects around by pushing them or now, by launching a fireball spell at them. The directional control system of the previous games has also changed as the joystick fire button is now required to shoot magic spells, so you have to pull down on the joystick to jump, which is a bit odd.

The enemy creatures include ghosts and lice which are harmless but tend to get in the way, hovering around Sabreman to basically annoy him, hamper his movements and push him off platforms. The witches and zombies are lethal to touch but at least they can be destroyed, unlike the spiders which are indestructible. When an enemy is destroyed, a replacement will eventually materialise and drop in from the top of the screen.

Although an MSX port was made directly from the Spectrum, the Amstrad and BBC Micro were ignored with this one. Falling sales? Pentagram is a worthy follow up to the other Filamation titles and was the last of the line. Some reviewers of the Spectrum original gave Ultimate a hard time over the perceived lack of originality on display in this game. Sinclair User magazine went so far as to call it "lazy". I personally preferred the return to the 'single room with a puzzle to solve' type of game to meandering around the scrolling village in Nightshade. The Atari program this time was written by Mariusz with a short and sweet tune by none other than Miker. José Pereira provided the nice loading screen logo.

Before this game was even released it was announced that Tim and Chris Stamper had sold the Ultimate catalogue and name to U.S. Gold who would continue to release games under the Ultimate label. A final Sabreman game, Mire Mare, was trailed in earlier Sabreman games and magazines but was never released.

In 1988 Rare Ltd. bought back the rights sold to U.S. Gold. This was another company set up by the Stampers, who then started developing games for the Nintendo Entertainment System. This led to Nintendo buying a stake in the company, and their later successes included classic Super Nintendo and Nintendo 64 releases like Donkey Kong Country and Goldeneye 007. In 2002 Rare was bought by Microsoft for \$377 million, a record fee for a video game developer and currently they work on games for the Xbox One. Tim and Chris Stamper left Rare in 2006, ending their 24-year career as home video game pioneers.

9/10

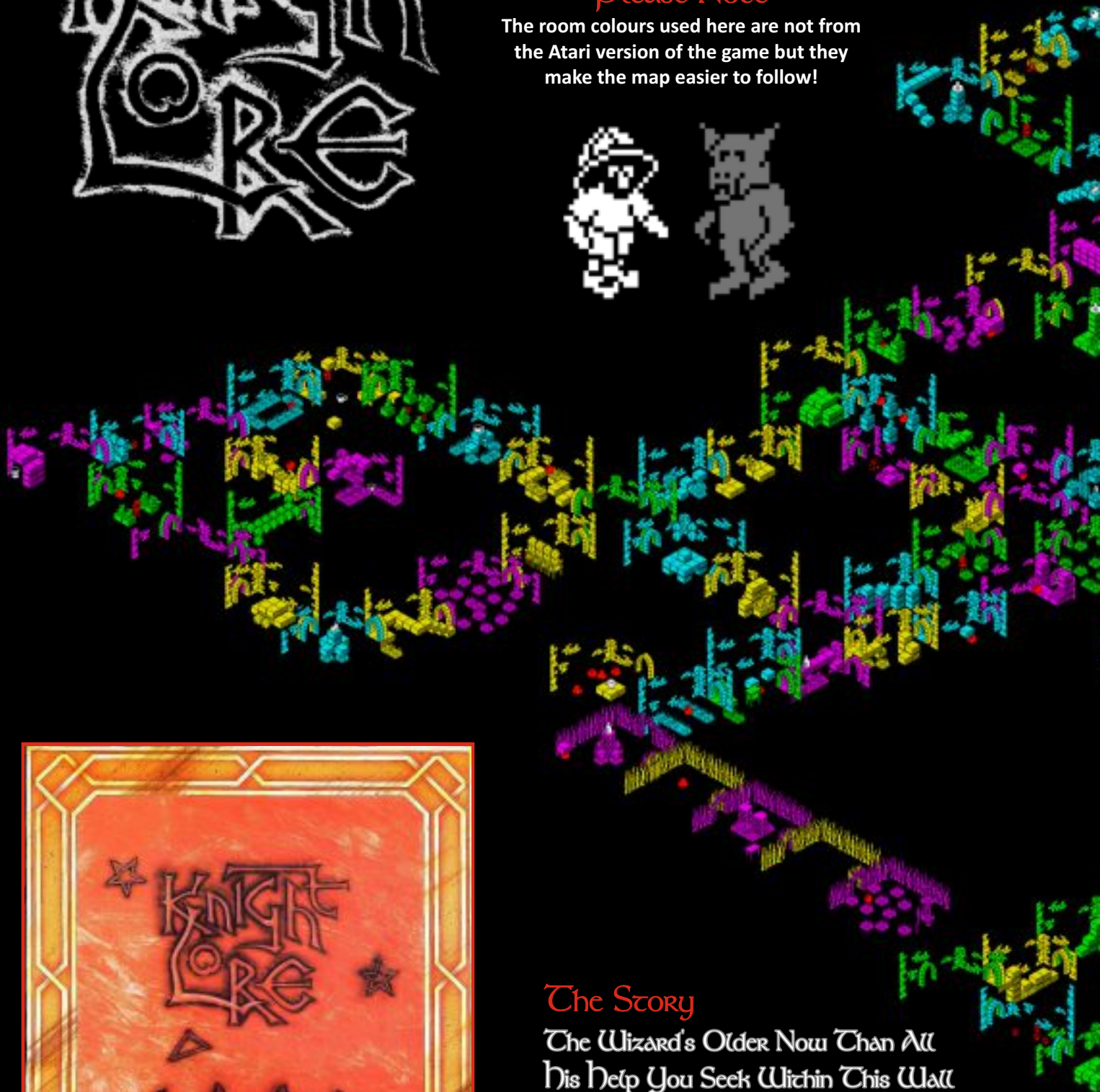
In 2004, Rare revived Ultimate's Sabreman franchise with the release of Sabre Wulf for the Game Boy Advance.





Please Note

The room colours used here are not from the Atari version of the game but they make the map easier to follow!



The Story

The Wizard's Older Now Than All
His Help You Seek Within This Wall
For Forty Days Your Quest May Last
Locate The Potion, Make It Fast
This Hideous Spell Upon Your Soul
To Lose Its Hold Must Be Your Goal
Beware, The Traps From Here Begin
The Cauldron Tells What Must Go In
To Break The Curse And Make The Spell
To Save Yourself And Make You Well.

At the start each game, the items at locations A through H are assigned a different item. However, once you know where one item can be found, you can use the following table to determine the location of the rest. The numbers 1 through 8 are the different combinations of item locations. Of the eight item locations, only seven are items. The eighth location will have an extra life. So for example, if you happen to locate a grail at an A location, you will always be able to collect an extra life at a B location.

Cauldron Requests

The cauldron always requests items in the same order. However, the starting point within the order is always random. For example, the first item that the cauldron requests may be a bottle. After the bottle, it may request a crystal ball, or a diamond. If the second request is a crystal ball, the third request will be the grail.

Key

Each letter is the location of a particular item. Which item is determined randomly.

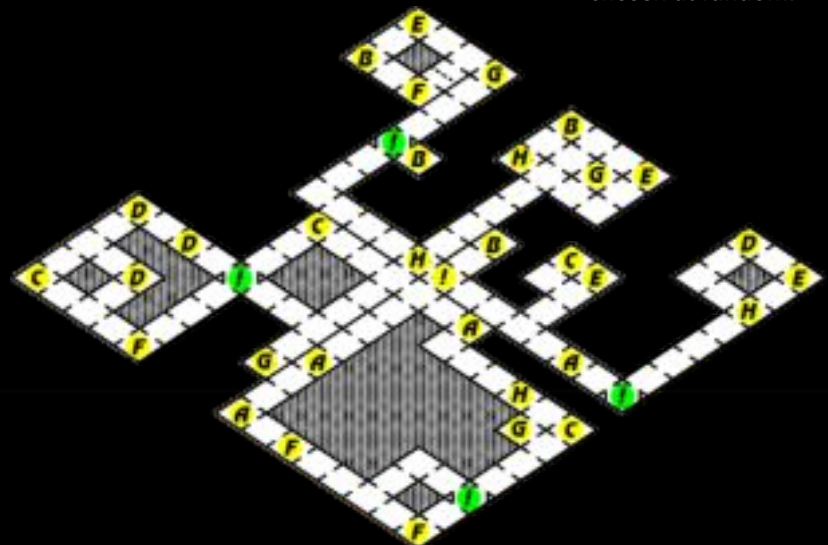
See the item distribution list below.

The yellow "!" is the location of the wizard Melkhior and his magic cauldron, where you must take the requested items.

Do not enter this room as the werewolf.

The green "!"s are each a possible starting point, chosen at random.

Item	1	2	3	4	5	6	7	8
A								
B								
C								
D								
E								
F								
G								
H								



HARDWARE REVIEW

SQUARING UP

ATARI 800 (USA)
VS.
BBC Model B (GB)

In the first of a random series, BIG K breaks out the Wooden Spoons and issues them to two different contributors — who do their level best to make bad blood between owners of equivalent — but competing — microcomputers.

WEIGH-IN RESULTS

Atari 800		BBC Model B
48K	Memory	32K
6502	CPU	6502
no	expandable?	yes
yes	hi-res graphics?	yes
11	No. of Modes	7
255,16 max	colours	8
proprietary	peripherals	anybody's
1.8 mhz	clock speed	2.0 mhz
yes (predefined text window)	mix text/graphics?	yes (user-definable)
via TV, 4 voices, 3 other parameters, 5 octaves	sound	internal; composite 4-voice parameters using ENVELOPE and SOUND strmts.
£200+	Typical price:	£399

IT'S NO BOOB TO BUY BEEB

says software designer **BERNARD TURNER**, opening strongly with a fact-filling pitch for Acorn's ever-expanding Wonder Widget in the slim buff case.

THE BBC 'B' micro has now been with us since December 1981. In that short time Acorn's best shot (so far) has created a tremendous reputation as the personal micro. Why is this so?

To begin with, the Beeb 'B' is part of a system — designed from the outset by Acorn with this major advantage in mind. It therefore benefits from some enormous pros and pluses, primarily apparent in the 'future compatibility' concept embodied in *The Tube* — a device to allow two different and separate microprocessors to communicate at very high speeds.

In fact, Acorn plans to release, in all, three different microprocessors: a) another

6502; b) a Z80, and c) the new National Semiconductor 16032 chip.

Acorn's choice of chips (say it fast) has — to my mind — been wise. Very wise. Why?

1) Compatibility with Acorn's existing (6502) software. 2) adoption of the 8-bit

industry standard with the use of Z80 cp/m; 3) most importantly, a very powerful (arguably the best) 16-plus-bit chip in the form of the 16032 — which I feel is one chip we'll all be hearing a lot more of.

Akin to *The Tube*, is a very

important piece of software called the Machine Operating System (MOS). The MOS's purpose is to look after the hardware — practical thinking on Acorn's part when they devised it, as they have therefore implemented 'Big Machine' philosophies in a micro. The direct benefits are super easy access to hardware through documented MO/S subroutines, and — not to be sniffed at — near-zero redundancy when the machine is upgraded. This also allows languages and utilities to be run with (relative) ease.

Then there's BBC BASIC — probably the best on any micro today. (Not only is it good — it's fast. Check the benchmarks!) Also ace — the built-in Assembler, and, of course, the support from suppliers such as Acornsoft, A&F, Bug-byte and Program Power (to name but a few). If you're looking for good stuff you don't have to look far and when you dig into your pocket, it generally isn't so deep as with some other suppliers, targeted on another well-known machine whose name begins with an 'A' — oh, all right — Atari.

Yes, the BBC 'B' has some

pretty nifty specs. Most people have an interest in graphics, right? Right. In the case of the Beeb they have every reason to be. You have eight graphics modes, from resolution 640x256 (80 characters x 30) using 20K of memory (Mode 0), to the 80 x 75 (40 characters x 25) using 1K of RAM in Teletext Mode (7). Colour is dependent on screen mode (2 to 8). In Mode 2 you get eight (*not* 16 as claimed—the extra eight are merely flashing opposites of the first set.)

Sound? Excellent with speech synthesis now available. Tape backup? Any ordinary domestic tape recorder will do (I think). This goes for all other peripherals, too — a real and rare bonus (get out of that, Atari, — and you, too, Commodore!)

Then there's the programmable function keys. To use them is to love them. 'Nuff said.

'OK,' you say. 'Where's the catch?' To be honest there is a deficiency: — to wit, its notorious lack of usable RAM. This can be overcome in a number of ways (buy a second processor, get paged RAM, or use the paged ROM facility). When Acorn bring out the successor to the BBC 'B' I hope they remember this, though.

So, to wind up: the Acorn/BBC 'B' model is great. It's the best. It's highly expandable and has been planned from the start as the keystone or master component of a whole system. What more could anyone ask?

Well, since you mention it...

THE DREADNOUGHT FROM SILICON VALLEY

TONY TYLER puts the case for the rough, tough, powerful, versatile and heavily underrated ATARI 800.

IT'S SQUAT and ugly and faintly bulbous — just concave enough to ensure that the manual keeps sliding off into your Tizer. It's gritty to the touch, and sprayed the colour of a dog-tired US Marine who's spent the last three nights in a wet foxhole. It's as American as a '55 Pontiac but

not half so glamorous. The disc drive looks like a Baby Belling cooker — and makes as much noise as a clapped-out fridge in summer. It's unexpandable, and its annoying, in-house-only interface design means that you have zero choice in major peripherals. When launched four or so years ago it was an advanced design; but now, frankly, it's looking pretty long in the tooth.

Then why do I love it so?

You always have a special place in your heart for your first... micro (what did you think I was going to say?) — and me, I'm no exception. The Atari 800 was my first micro; and while I freely acknowledge that there's 'better' hardware around, when I first laid claw — 18 months ago — on the packing polystyrene, this was not so obviously the case. Who competed? The BBC? Maybe — but it was, and still is, a lot dearer. The Commodore 64 was not then in UK shops, and the only other competitor, the Apple II, was (and still is) a pricier package by far.

Now that the Atari 800 has come sharply down in price — so much so that you can often strike your own bargain — I suggest that it's a better bargain than ever before.

OK. First, casing and key-

board. This baby looks muscle-bound and is. Oaf that I am, I once left it switched on for nearly three days. The 800 shrugged this off as of no account. Yes, the pins in the i/o terminals are a trifle on the frail side, perhaps (untold story here), but unless you're crazed with impatience (as I was) it oughtn't to be a problem.

Solid Colours

The peripherals work. So what if you need a separate (but identical) transformer for most of them? Who cares if it won't expand? With the obese but tough and versatile 800 you've got 37½ Big Ks (officially 48) to play with in freely available RAM (more if you disable the o/s), and eleven (count 'em) text/graphics modes. You've a palette of rich, solid, unflickery colours to dip into — the full 8-bit (255) string, in fact — and in some modes you can put 16 of these on the screen at any one time. Best resolution is only marginally less high than the Beeb's Mode 1. You can have text in all modes except the last three, either wholly or in a predefined window below the graphics area. The four-voice SOUND is excellent, and less cumbersome to program than

Acorn's. And the ROM/disc drive/cassette versatility is of exceptional value seeing that Atari's range of plug-in software is unparalleled in the micro world (so what if the second slot is as redundant as a sixth toe? It isn't doing any harm, is it?).

I hope Atari International will forgive me if I say that despite these qualities the 800 has never really caught on here — to use the suit-and-tie-ism, its 'user base' is distinctly on the undernourished side. (Not so in the US.) One early reason was the gannet-like greed of the starting price

— in the region of £500 for the micro alone, plus a particularly dreary, dense, hard-to-read and maths-obsessed BASIC manual. It tended, therefore, to fall between the Spectrum/ Vic end of the clientele and those loaded types who plumped straight off for Apple.

Less "Classy"

Like Apple, it was American. Not that there was, or is, any, er, nationalism involved; Sinclair just offered the best deal around, that was all (as

he still does). No, the initial lack of relative interest in the 800 was — irony coming up — the very quality and range of compatible ROM games software. This, plus the equally conspicuous lack of 'serious' applications, gave it a name as an excellent 'games machine' — the best — but a rather less 'classy' micro (overall) than the Beeb.

You can have ordinary text in Mode 0, larger, wider text in 1, still larger in 2. In 3, 4, 5, 6, 7 and 8 you can have four lines of Mode 0 text in a window at the bottom. Colour palettes are allotted sensibly, with two shades of one (of 255) in 0, three in 1 and 2, four in three (lo-res graphics mode), three in the (higher-res) 4, four in 5 (medium-res), two in 6, four in 7 (hi-res), two in the highest-resolution mode — 8 — and multiple choice of shade and colours in 9, 10 and 11 (medium-hi).

You can plug in up to four joysticks, paddles or other devices at once. A new, added bonus is the vast amount of gourmet sticks and controllers now available for the Atari/Commodore/Coleco-compatible sockets, most of them US-made. This enhances Atari's now-permanent image as makers of the best pure-game computer hard-

ware around.

All in all, the 800 is a proven, reliable, immensely strong, versatile machine with excellent graphics facilities and one of the easiest BASICs around. Its drawbacks — no PROCs, no lower-case commands, horrific circle and ellipse routines, a slow and memory-consuming fill (the unwieldy XIO statement), and the slowish clock speed — officially 1.8 mhz — are all livable with. While its range of advantages easily outweighs them.

Tarted Up

The 800 has now been 'superseded' — at least, such is the common opinion. Yet Atari's own new range — the 600XL and 800XL specifically — are little more than 400 and 800 guts tarted up with new cases and a HELP key. The bulbous original may be phasing 'out', but the innards — in their day, the most advanced available — live on. That's how advanced it was in the first place. These days it's a bargain as well.

Oh, and one last word. Absolutely none of the above applies to the 16K, flat-keyboard 400, which was, is and always will be — a Heap.





ON-LINE

News
EXTRA

Midsummer is never a very good time for computer companies, but this July was disastrous for two state-of-the-art operations — America's Atari and Britain's Imagine Software. Deeply in trouble, short of money and beset by the fruits of several bum decisions, both operations all but closed down in their present form six weeks ago. What went wrong, what are the lessons for others, and can anything be salvaged from the wreckage? TONY TYLER assesses . . .

AFTER
THE

REQUIEM AT SUNNYVALE

Six weeks ago an American businessman named Jack Tramiel put 185 million dollars on the table under the noses of Mr Warner and his Brothers and a few minutes later was walking out of there with a company called Atari metaphorically under his arm. Tramiel had also guaranteed to pick up Atari's debts — valued at three times the cash price-tag. All the same it was a chickenfeed purchase. By selling off the lion's share of Atari, Warners had put a stop to a miserable five years of steady losses and marketplace disappointment. What went wrong?

The answers must be, in no particular order: terrible management decisions, the existence of CBS-Coleco and the existence of Commodore International.

Atari is the company who, more than any other — certainly in the United States — began it all. It has been losing money almost ever since, certainly since founder Nolan Bushnell sold off his Sunnyvale operation to Warner and the Brothers more than five years ago for a multi-million sum. Despite an excellent early hardware design lead, high manufacturing standards, and a second-to-none reputation as a games concern — not to mention a peerless coin-op division that has always been a pioneer (and indeed which Warners have hung on to) — the com-

pany's men-in-charge then became confused over and over again. The way in which the US market at first shaped up nicely for the switch from games machines to computers, then changed its mind — then partly changed it back again and got interested in proper computers after all — led Atari's

management to make a series of ghastly wrong decisions, blunders that unfortunately cost the company money and credibility at a time when the lead due to the Bushnell years was evaporating rapidly.

In hardware, the company had got off to a good

second leg (the VCS being its first) with the 400/800 series, 6502 machines ahead of their time in many ways, with sprites, 256 colours, RAM up to 48K and already-available disc drives and other peripherals. Plus a vast, quality library of software in ROM form (not all of them were VCS upgrades). This range established a good user base in the USA; and as it was considerably better than anything up to Apple II status, dominated the lower-price market. Commodore's elderly PET and low-RAM VIC-20 paled alongside the Atari models. At the same time the company were committed to produce full-time for the seemingly everlasting VCS.

The ball was first fumbled 15 months ago, when Apple upgraded the II to the IIe, Commodore introduced the "Vic-64", and at the same time it was becoming clear that Atari would soon have to choose between the videogame and computer camps. There is little doubt that there were voices in the company raised at this time arguing for an all-out computer strategy. Unfortunately there still were (and are) all those VCS owners out there. The company decided to continue pursuing both at the same time. It must have seemed a sane enough strategy then; though in retrospect it seems clear that it served only to over-expand the company and spread its resources still more thinly, at a time when research projects were already promising to take Atari further and further into more exciting and expensive areas than low-

ATARI
STUFF: a move
along the right
lines, but it came
too late.



AFTER THE CRASH...

grade domestic computer manufacture. AtariTel — a grandiose networking plan — was hatched (and lingers yet). Widgets like AtariLab, and the usual controller additions — trackball, graphics pad, and so on — proceeded more or less to plan. All these had to take up a share of the overall company resource. And Atari's prices made punters grumble.

The next wave of hardware (Spring, 1983) was dis-



THE 2600 VCS. It made Atari...

astrous: the 5200 game system in tandem with the 1200XL computer. The 5200 was a re-boxed 400 computer with a widely-disliked joystick (it was never on sale in the UK), distinguished also for near-total incompatibility between it and the 2600VCS, for whose owners' sake the whole project had been laid on in the first place.

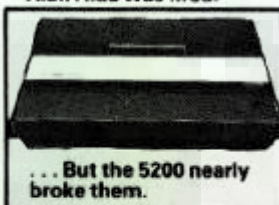
The 1200XL was a computer, another machine featuring 100% incompatibility with any other Atari product. In retrospect it emerges as an early prototype for the XL range and should never have been marketed at all. The 1200XL was ditched shortly after launch but the 5200 turkeys on. Now, of course, it has been joined by yet another game system, the PRO 7800, compatible (at least) with the VCS. So that mistake has, at last, and much too late, been put right. And Atari finally has a product with which to make one last, despairing counterattack against Coleco.

It was when Atari was first reeling away from the initial Coleco thrust into its traditional turf that one began to hear odd stories filtering out of Ca. concerning Atari's desperate plight re: unsold VCS ROMs. As legend unkindly had it, the bulk of these were copies of those very Lucas/Spielberg movies — *Raiders of the Lost Ark* and *E.T.*, particularly, as it happens, *E.T.* — for which Atari had allegedly paid such enormous sums. As Parker have also discovered, good films as spin-offs are lousy compared to good arcade rights (though if these should also be based on films then

you have a different story). *Raiders* was actually a thoughtful game which made much use of the VCS's capabilities; its trouble was it was too difficult. So it, and *E.T.*, simply sat on shelves up and down America until storekeepers refused to take any more Atari cartridges unless the company helped them unload the deadbeats. Eventually 450,000 *E.T.*'s were assembled, driven out to the New Mexico desert in a convoy of twenty-tonners, and then buried — with the aid excavators and earth-movers — in a gigantic hole in the ground not far from White Sands nuclear testing site; all under the silvery light of a Western moon. It's a nice story, anyway.

Coupled with news of disasters real and embroidered came the news that the company had bombed out on the Dow Jones for the second year running. The computer switch seemed to be happening after all, just when Atari has lost its edge, and now Commodore, with its 64 model, was making the running. Legal gripes with Texas Instruments and the software houses Activision and Imagic — the first of a whole series of energy-sapping legal battles — distracted the company. At this time the XL models were only just appearing. AtariTel was getting nowhere, other widgets were more or less on time — but overall Atari wasn't getting enough of the new action to do more than slow down its rate of obvious decline. Staff were cut. Whole departments went, budgets were cut to the bone. Most of the manufacture was shifted to Taiwan and South Korea.

Alan Alda was fired.



... But the 5200 nearly broke them.

With hindsight it seems that the company was more or less on course and conceiving the right ideas until the need for a 400/800/VCS general upgrade became obvious. Then the company wasted a whole critical year floundering about with the 1200XL and the doomed 5200, while wasting its diminishing strength trying



The 800XL: a good machine and a good range — but again, it didn't make up for lost ground.

to maintain a presence everywhere else on the computer front. In fact, they are still a year behind — a year they don't have.

Inevitably this year's Dow Jones has been as bad as any in the past three years; and for some months before Tramiel the company had been rumoured to be up for sale.

Similarly the company are unlikely to abandon, after all this time, the 20 million VCS owners. (This of course is a partial argument for the 7800 as well.) Therefore they must keep some software development. This seems to mean a computer software division as well, so those jobs are probably safe too. This in turn supports the idea of continuing the hardware... and so it goes on.

One area that must be taken care of is serious applications software. Atari machines have been relatively ill-served in the past in this area, and the computers have suffered in the marketplace as a result. The 64 is no better than the Atari as a games machine, and as a small business micro it only shows up well because of its software. Atari has never had this quality of business support, nor sought it, alas.

Above all the company has got to think international (AtariSoft is a good move) with all its heart — and this means bringing its prices heavily down across the board if it is to compete with Tramiel's old company, now emerging as the machine for the first-time buyer. Atari have already all but lost the videogame war with Coleco. Now, to survive at all, they must fight back, either there, or against Commodore in the computer market.

U.S. ATARI MAGAZINES

Atari have magazine support in Britain, only not from American magazines. Two more Atarimagins in our overall sample are *Antic*, which subdescribes itself as *The Atari Resource* (resourceful of them); and *Atari Connection* (perhaps the most uninspiring name of the whole bunch). Both are pricey at three bucks, actually well-presented and balanced, and aimed clearly at the novice (or relative novice, computer user. You expect, and get, quite long and easy programs, both games and utilities, in *Atari Basic* — but articles on, say, 6502, Assembler or Adventure Parsing would be wildly over the top of their mission profile. Both magazines also feature general articles, often of a 'speculative' and 'thoughtful' nature (i.e. padding).

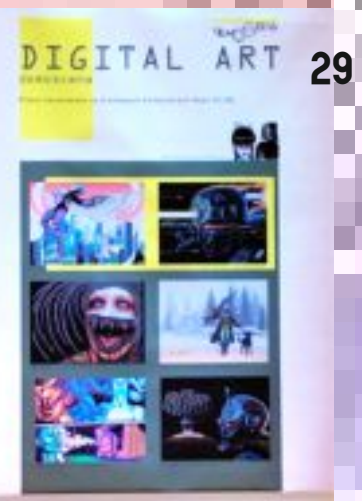
As always it is all in four colours and on good, thick paper with a decent bit of a gloss to it. *Antic* is 100 pages, *Atari Connection* a little smaller at 80.

The single most irritating thing about all of these magazines (and there are many others we haven't even mentioned) is that as far as they and their huge readerships are concerned the words Spectrum or Acorn, Ultimate, Minter and Smith, don't mean a thing. In Britain the videogame machine was relatively slow to arrive — Sinclair's ZX80 was hard on its heels. As a result dedicated videogames never took massive root here, as they did in the States — they never had time to. Would-be computer types skipped that stage altogether and went straight into small, cheap micros, cassettes and started programming right away. It is doubtful if a purely videogame magazine could even have survived in Britain.

American computer game magazines are all intensely respectable, and for an American market, well-designed. And yet in Britain no equivalent readership is said to exist. There must be something significant in this, if I could only work out what it is.

From March 22nd - April 24th in 2014, the Museum of Technology in Warsaw, Poland featured a History of Demo Scene display as part of an exhibition of digital art which included images created on the Atari XL/XE and Atari ST, together with Commodore 64, Amiga and ZX Spectrum art. Some of the excellent Atari images which were featured in the exhibition are shown here in all their glory. As well as the digital images, there were machines set up running demos and attached to peripherals ranging from a synthesiser equipped C64 to an Atari 130XE with SIDE2 cartridge. There were also displays showing the internal workings of the machines, manuals, magazines, books, software packages and demoscene party tickets and badges. It's refreshing to see pixel art being given some recognition!





Dropzone is a fast and furious bi-directional, horizontally scrolling shoot 'em up in the style of the Williams arcade hit game Defender. It was designed and written by Archer MacLean, his first commercial video game. It was released for the Atari 400/800 and Commodore 64, then later ported to the Nintendo Entertainment System, Game Boy, Game Gear and Game Boy Color. Dropzone borrows many elements from the arcade game Defender, including the same font style, aliens and title screen depictions.

Archer MacLean purchased an Atari 800 as soon as they were officially launched in the UK in 1981 and started writing what would eventually evolve into Dropzone. MacLean explained: *"I decided to try and produce a game which at least equalled the quality, speed and gameplay of the arcade games of the time. So I took inspiration from Scramble, Defender, Stargate, Galaxian and many others and went for it. It took me about six months to come up with something looking so good it could be an arcade cabinet, and I started showing it around at various computer shows. It was a great feeling to see big crowds build up, blocking the aisles. It wasn't long before pioneering publishers/sharks were making offers to publish it. In those days, publishers and contracts were mutually exclusive terms, but I did strike up a contractual deal with one of the big UK publishers."*

The name Dropzone wasn't applied to my effort until it was nearly all wrapped up and ready for duplication. It was very colourful, ran at a constant 50Hz, had masses of graphics flying around everywhere, lots of explosions, and stacks of tiny animated touches that I didn't expect anyone to notice. But it was a huge hit over here in 1984-5 and deemed well ahead of its time. It was number one for months and remained available for five or six years.

The trouble was, the publisher had told me it was no longer in production about eighteen months after releasing it and stopped paying royalties. But they didn't know that I travelled a lot and saw it for sale all over Europe and in Australia, and I used to buy copies of my game, get receipts for them and often take photos on site too. And my contract with them prevented them selling it outside of Europe. Then in 1987 or 1988 I saw a double page ad for it in a US magazine and bought a copy to run on a US machine. It didn't look or play too good because it was tuned for a European machine, and it looked real bad, almost embarrassing.

On returning to the UK I sought legal advice on the subject. After four years of "we've done nothing wrong" type defenses from the publisher and masses of leg-work by myself, I got them to settle out of court for copyright infringement. Once I had recovered the royalties rightfully due to me, I bought my first Ferrari."

The game was released for the Atari by US Gold in 1984 and was swiftly converted to the Commodore 64 by MacLean himself: *"The Commodore 64 Dropzone is about 46k long and consists of 15,000 lines of sparsely commented code with around 350 subroutines and around 3000 labels. Those who can reach Megastar status on the 64 should have had enough practice to attempt an Atari supervised Dropzone mission. The Atari, being the Porsche of home computers, is capable of running Dropzone two and a half times faster than the C64 and can handle any amount of blobs on screen, even when you release a Strata Bomb. It is visually, sonically etc, identical and about 12K shorter. However, the Commodore 64 is still a respectable BMW 316."*

Dropzone is one of those games that just oozes class. Right from the start it always impresses me when I load it up. The introductory presentation screen is beautiful with excellent use of colour and smooth animation. The firepower is tremendous and the animated explosions when you destroy an alien are superb. When you lose a life your spaceman disintegrates into many tiny pieces, accompanied by a thunderous explosive sound effect. There is no music in Dropzone but the sound effects of the guns firing, explosions going off and the various alien whistles are all excellent. The smooth scrolling landscape is well-drawn, your spaceman and the colourful enemy aliens are all very smoothly animated and even the classic Atari colour bar graphics for the high-score entry screen are dazzling.

When it was first released in 1984 there wasn't a shoot 'em up for any computer as fast, furious and addictive as Dropzone. The game is very difficult, but it has that "just one more go" factor. The alien hordes attack mercilessly and relentlessly. If you drop your guard (or if you're just plain rubbish) all your men will be annihilated in a matter of seconds. A great feeling of satisfaction is achieved when a level is completed and your little spaceman gives a thumbs up wave. At its heart, Dropzone is a pretty blatant clone of the arcade game Defender which on the Atari was quite good, perhaps the best of the home computer versions, but Dropzone not only blows all the home computer versions of Defender completely out of the water but is so good that it is on a par with the actual original Defender arcade machine itself, which for a little 8-bit computer is quite a feat. A magnificent game!



DROPZONE

31

WRITTEN BY ARCHER MACLEAN

(C) 1984 U.S. GOLD PRODUCED BY ARENA GRAPHICS

DROPZONE ADVERSARIES

MAN

★ ?

ANDROID

✱ ?

SPORE

✧ 750

PLANTER

☼ 150

BLUNDER STORM

☁ 250

TRAILER

L 250

NEMESITE

☼ 250

NMEYE

☼ 100

ANTI MATTER

☼ 150



ORIGINAL UK CASSETTE



US FLOPPY DISK DISTRIBUTED BY MICRODAFT



BUDGET RE-RELEASE UK CASSETTE





System 3 Software's 1986 game International Karate remains one of the best games ever produced for the Atari. The game was written by Archer McLean, who also provided us with the classic shoot 'em up Dropzone, before defecting to the C64 and then the Atari ST and Amiga, but his two Atari games are still among the classiest programs ever to appear on our favourite machine.

International Karate is brilliantly presented. There is a choice of one or two players, a demo mode, four different speeds of play and seven different backdrops (disk version only) drawn in very colourful hi-res graphics. The fighters are well defined and incredibly well animated. There are several nice touches as well, i.e. a clubbed fighter often has stars circling his head, or if the computer judges you to have made a particularly impressive move, the fighter wipes his hand with a little flourish on his karate suit.

The music composed by Rob Hubbard is one of the best pieces of music ever to be played by a Pokey chip. It really is superb. The bone-crunching sound effects are also worthy of a mention, mainly because they are in fact much better than those in the Atari ST version, as is the music. If you leave the music playing for a while, it gets even better as it goes on. It's an absolutely fantastic piece which is rightly regarded as one of the best tunes ever heard on the Atari.

The computer opponent is difficult to beat (but not impossible) and provides a worthwhile challenge, but the game is most fun in two player mode. There are sixteen moves available, which are achieved by combinations of moving the joystick and pressing the fire button. Mastering the moves is a lot less difficult than you would think. In two player mode, the losing fighter gets put out of the contest and the winner continues fighting against increasingly crafty computer controlled opponents. In between rounds of chop socky (which are thirty seconds long) there are bonus points to be had by dodging shurikens, spears and daggers, and splitting large piles of slates in half by the application of the ancient martial art of the Glasgow Kiss. Ouch!

This is truly a masterclass in Atari programming, with superb graphics, amazing animation, brilliant music, ace sound effects, plus incredible playability and it is very, very addictive. Every Atari owner should have this game in their collection. It is better than Chop Suey, Karateka and Ninja put together. It is software of this calibre that proves just what can be achieved on the Atari 8-bit when an expert programmer does his best work - the game has got to be seen (and heard) to be believed. It was later distributed in the US by Epyx under the title World Karate Championship.



In 2014, an enhanced edition of the game was created by Polish coder Pavros which includes the London backdrop graphics from the C64 version of the game (see the screenshot on the left) which was missing from the original Atari game due to memory restrictions. There are a whole host of other new enhancements including support for Atari's with extra memory and glorious stereo sound. A full listing of the move controls and key functions is printed below.

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INTERNATIONAL KARATE ENHANCED EDITION
2014

KEYBOARD CONTROLS

START = ONE PLAYER TOURNAMENT
SELECT = TWO PLAYER TOURNAMENT
OPTION-START = ONE PLAYER ONE-ON-ONE
OPTION-SELECT = TWO PLAYER ONE-ON-ONE
SHIFT-START = WEAPON DODGING WHITE
SHIFT-SELECT = WEAPON DODGING RED

SPACE = PAUSE
N.1..4 = GAME SPEED FAST .. SLOW
L.O..9/1 = SET ONE-ON-ONE LIMIT
M = NEXT LOCATION
B.1..8 = SELECT LOCATION
F/CTRL-F = LOCATION FREEZE ON/OFF
T/CTRL-T = SOUNDTRACK ON/OFF
S/CTRL-S = SOUND EFFECTS ON/OFF
M/CTRL-M = MONO, MIXED, STEREO/DEFAULT
R = SHOW RANKING

L.O SETS UNLIMITED ONE-ON-ONE.
L.1 SETS LIMIT TO 10.
L.1 INCREASINGLY LIMIT BY ONE.

USE SPACE OR ARROW KEYS TO SWITCH PAGES
PRESS HELP TO EXIT
  
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INTERNATIONAL KARATE ENHANCED EDITION
2014

JOYSTICK CONTROL

1. JUMP
2. FRONT LUNGE PUNCH
3. WALK FORWARD
4. GUEST KICK
5. FOOT SWEEP
6. CROUCH PUNCH
7. WALK BACKWARDS
8. BACK LUNGE PUNCH

JOYSTICK WITH BUTTON PRESSED

1. FLYING KICK
2. FRONT SOMERSAULT
3. FRONT KICK
4. FRONT SIDE KICK
5. BACK CROUCH PUNCH
6. BACK SIDE KICK
7. ROUNDHOUSE
8. BACK SOMERSAULT

USE SPACE OR ARROW KEYS TO SWITCH PAGES
PRESS HELP TO EXIT
  
```



THE FIRST EVER GLIMPSE OF INTERNATIONAL KARATE - PREVIEWED
IN COMPUTER & VIDEO GAMES MAGAZINE ISSUE 54, APRIL 1986

INTERNATIONAL KARATE



- Machine: Atari
- Supplier: System 3
- Price: £5.50

Question: How many karate and martial arts games are now battling it out in the marketplace? Answer: A lot. So many that we've given up counting.

Now comes the Atari version of International Karate. And, although we were supplied with an unfinished copy for preview, it knocks all the other Atari rivals for six.

The fighting figures and their movements are very similar to The Way of the Exploding Fist. But there are one or two refinements. Deliver a good punch or kick and your opponent sees stars — circling his head!

There's also a nice touch if you leave the fighters facing each

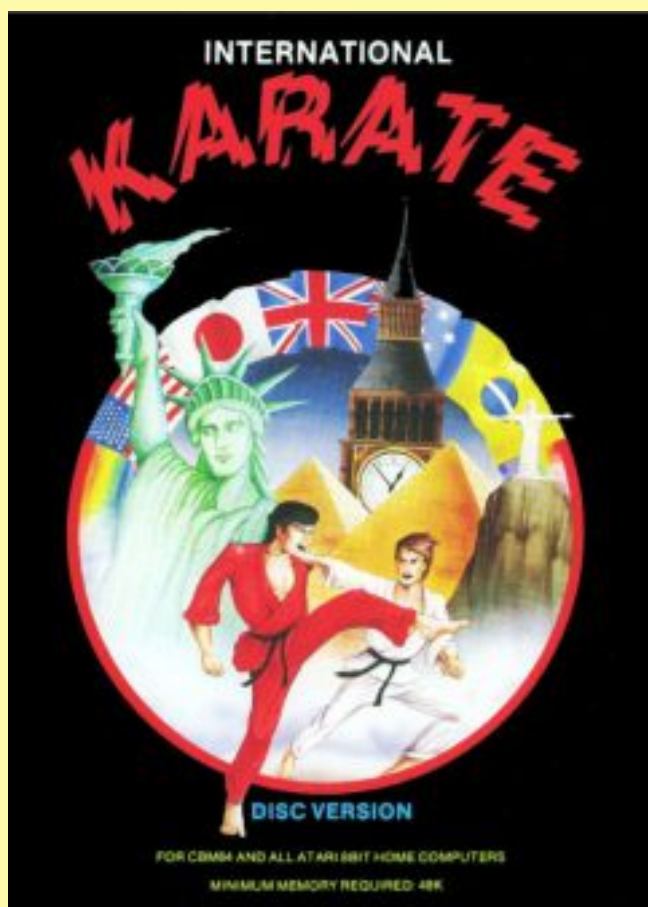
other for too long without making a move. They take it in turns to look out from the screen at you and their mouths move in some silent urging for some action.

The backdrops to the bouts are splendid, especially the snow-capped mountain scene. This version lacks sound effects and music so we'll have to reserve judgement.

System 3 has also allowed a sneak preview of the Commodore 64 version of International Karate. That looks very impressive as well. But whether it will still well consider the massive headstart Farhas had, time will only tell.

- Graphics 9
- Sound N/A
- Value 9
- Playability 9

International Karate+ was the 1987 sequel which was a big hit on the Commodore 64, Atari ST and Amiga, all written by the original programmer Archer McLean. An unofficial conversion of IK+ was much later in development for the Atari 8-bit, again by Pavros from Poland, and the project was looking very, very good indeed. This version is still unfinished but it looks and sounds almost identical to the Commodore 64 version. Unfortunately, it does tend to crash a bit, but it is worth loading up just to hear the music which is just as good (maybe even better) than the original game music. Sadly, development has stalled for a while on this conversion project as the last build was version 0284 in November 2010. Oh, and in this game, the Glasgow Kiss now seems to be a legitimate Karate move!



Key Functions:

Background screen:

- N Toggles night/day mode. Replaces changing sky and water colour schemes which are in the Commodore 64 version.
- R Changes ripples (sun reflections) colour scheme. Slightly different then in C64 version.
- W Changes wave behaviour (4 possible algorithms). Exactly as in C64 version.
- Q Turns spiders animation on. Off by default. After pressing Q the next animal is always a spider.
- E Sets short time period between background animals. Default time period is longer. This is not available in the C64 version.

Sound:

- S Toggles sound effects on/off.
- T Toggles the soundtrack on/off.
- V Toggles high/low volume of sound track.
- B (temporary) Fires ball sound.
- G (temporary) Fires gong sound.
- F (temporary) Increases gong's frequency.

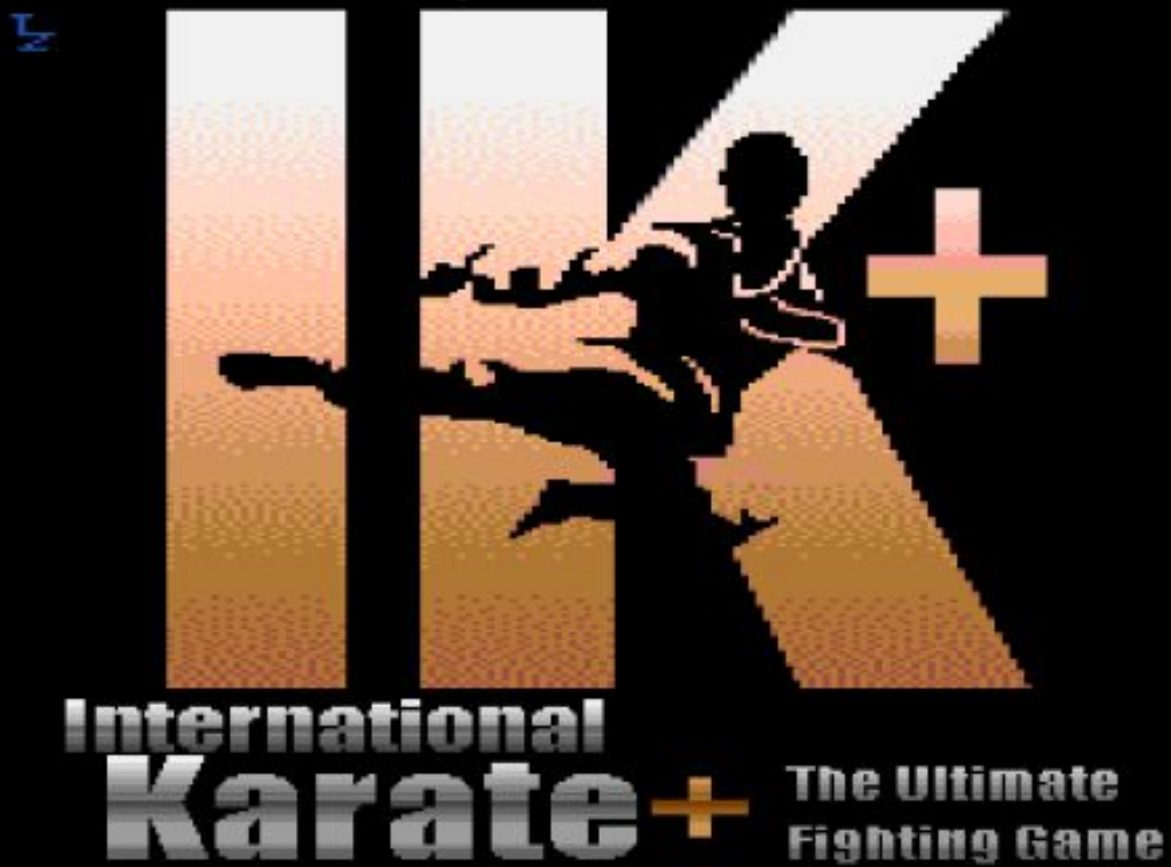
Other:

- D Drops the players' trousers.
- Space Pause. There is no way out of this state yet...!

If a key is pressed together with Control then the default values are toggled on and off. Press START to continue fighting when the game stops. Continuation is possible up to 20,000 points. In NTSC mode, the fighter animation is slightly slower but turning the music off helps with this problem a little.



IK+ BY TEZZ



LUNAR JETMAN BY STE '86 / TEZZ



This comprises two interviews given by Mr Bushnell in 2007 and 2011 and first appeared on Benj Edwards' website www.vintagecomputing.com.

Benj Edwards:

I'd like to start out first just talking a little bit about early video games. In your estimation, what was the absolute first video game ever created?

Nolan Bushnell:

I think it was Willy Higinbotham's Tennis for Two, I think that's about 1958-59.

BE: Do you know how the term "video game" came about?

NB: I think it was started at the first trade show that Computer Space was at. And I think it was coined by a reporter, and that was in the fall of 1971, when we showed it in Chicago. The reporter, writing for one of the trade magazines, coined the term "video game."

BE: So it was around 1971, you think?

NB: Yeah. To be exact, it was November, 1971.

BE: Do you have any idea what reporter it was that might have coined the term?

NB: No, but I know the magazine. I think it was the magazine called Vending Times.

BE: How much influence did Steve Russell's Space War have on you in creating your first video games?

NB: I'd call it pivotal. It was Steve Russell's Space War that really opened my eyes to the potential and I've often credited him as being the true really exciting visionary on the video game side.

BE: Your Computer Space was a version of Space War, right?

NB: That's correct, yes. My objective was to create something that was commercial, because I loved the game and played it every chance I could get. I didn't get as many chances as I wanted. [laughter]

BE: Was Computer Space a raster-based game, or did it use a vector display?

NB: It was raster.

BE: So you used an ordinary television set that you took apart and interfaced with?

NB: That's correct.

BE: I've heard a lot about your former neighbour Joe Keenan and Kee Games, and I am wondering why we haven't heard more from him in the history side. What's he up to these days, do you know? Is he still in good health?

NB: Yeah, Joe is kind of retired. He owns a Chuck E. Cheese in San Jose, California, and I think he's doing some sailboat racing and having relatively a good time.

BE: What effect do you think video games have had on the development of personal computers?

NB: I think they were very, very significant. I think that - and this will sound very strange - but up until the video games, people didn't really think of being able to control a video image. It's kind of like training wheels. There are a lot of processes that go along in starting up the video game, playing the video game, closing it down, scoring, various things. There are



processes that are very similar to what you have to do to run a personal computer. And some of the technology that we had to connect a television set and a video game were actually used in the Apple II. I think there was a lot of "standing on the shoulders," so to speak. The graphics on the video games has always led the technology of the PC, and so virtually all the graphics steps forward were derived because of the game business and its intersection with the PC.

BE: Do you think video games or business applications were more important in the adoption of personal computers among the general population?

NB: There were really two parallel paths that happened. The very, very early stage was almost all game-driven or hobbyist-driven, and that probably started in '77-'78 and lasted pretty much through 'til IBM introduced the PC. And I don't know what the ratios were, but let's say that the video games had a 100% market share until the PC. Yeah, you could do word processing and a few things like that - you know, VisiCalc on the Apple. But I really think then, because it was IBM, it seemed OK to put [a personal computer] into business. And then the business usage really exploded at that point. I would say, within a few years, business uses had exceeded the game uses. And then I think you have to wait until about the early '90s, with the "multimedia PC," as it was called then, to say that all of a sudden the game usages of the PC became very important. And that happened throughout the '90s. Probably, one of the pivots at that point was Doom, because that was just a monster game in the PC world.

BE: How much involvement did you have in the Atari 400/800 computers at Atari?

NB: I had quite a bit in the early phases of it and very little in the marketing. And later, it was on the drawing boards - it was architected and designed while I was there - but it really didn't hit the market heavily until after I had left.

BE: Did you ever use an Atari 800 and like it?

NB: Yeah, I did. It was, in a lot of ways, a significantly superior machine to the Apple II; it had sprites. It was

definitely a better game machine. One of the problems was that Atari was so big at the time and we had such a strong relationship with Sears that they wanted FCC Type 1 approval, and that was very hard to get. So we had this big cast [metal] thing and only serial ports, and that was all to hit the FCC regulations that turned out to have no teeth at all. And so all the other PC companies, including Apple, were not Type 1 compliant, which gave them the ability to put in a good parallel bus and made the Apple II much more extensible. It was one of those things where you thought you were doing the right thing. [laughter]

BE: I guess with the Apple II they didn't build in an RF modulator, so they didn't have to comply with that.

NB: No, it wasn't that. It was the actual radiation that came from the circuit board itself. And if you ever tried to look at a television set next to an Apple II, there was an awful lot of junk coming out of all of the PCs at the time. The processors were going fast enough that each of the little traces on the board would actually radiate.

BE: Since we mentioned the Apple II, I'd like to talk a little bit about Apple's brief intersection with Atari. What were your first impressions of Steve Jobs when you met him?

NB: Brilliant, curious, aggressive.

BE: What was his job exactly, at Atari?

NB: He worked in the engineering department working on games; you know, basic circuit design.

BE: Have you talked to him recently?

NB: Oh yeah. We maintain a relationship.

BE: Do you think he looks back favourably on his period at Atari there?

NB: Oh, I think so.

BE: What did you think of Steve Wozniak, back in the day, when you first met him?

NB: Well, Steve was also very brilliant — very quiet. I didn't really get to know Steve as a personality, even though I was around him, until several years later. Interesting guy. But he was very quiet at Atari.

BE: He told me that you guys still see each other every once in a while.

NB: Oh yeah.

BE: Do you ever regret not taking up the Apple guys on doing their computer at Atari?

NB: Well, it wasn't ever really offered to us. I was very happy for them to succeed. I gave them permission to use some of our circuits and various things. I knew that we were going to try to do something in the PC some day, but we were just selling as many video games as we could build, and so it didn't make a lot of sense for us to distract ourselves at that point in time.

BE: It seems like you might have a bit of a grudge against Ralph Baer. How did that originate?

NB: Well, the issue really is that, if you listen to Ralph, he invented all this wonderful technology and then, one day, I sort of fell off a turnip truck, bounced twice, came in and saw the Odyssey and started a video game empire, from ending up in the Mountain View showroom. When in reality, if you really look at the time lines, I started designing video games in the middle '60s while I was a college student, and I have a signed and witnessed lab book to prove it, and that I'd already been in the market selling product for a year

and a half before the Magnavox showing. I saw the Magnavox project. I signed my name. There was no skulduggery, or serendipity, or under-the-counter view on the thing. I saw it, and I thought that it was a relatively crappy product. [laughter] I didn't feel like it was going to do anything. I do acknowledge that it probably reminded me of some of the designs that I'd done before. So, when I had my new engineer, I assigned him to fix that game: to make a ping-pong game that was in fact fun, which we did. When you say I improved a game in which a ball goes back and forth, which for Ralph to claim the invention of that, he has to go back to Willy Higinbotham. Well, who did I... was Pong inspired by William Higinbotham or Odyssey? Ralph likes to claim that he invented Pong, which he didn't. He invented Odyssey, which was a marketing failure. Pong happened to be successful, and so he wants to claim that. I just think it's wrong.

BE: I definitely don't consider him the inventor of Pong — obviously, it's a different game. But personally, I think [Baer] feels a little bad because you were influenced by his ping-pong game, and you've never given him credit for that influence.

NB: I have [given him credit] in various things. I've said that I saw the game and it reminded me, but he knows full well that I had a similar game designed in my lab book. In the patent lawsuit, I presented my lab book in evidence. He also likes to make a lot of talk about the fact that Atari licensed his patents. We got a paid-up license for less than 0.6% of our sales. I mean, it was \$100,000 a year for five years. He thinks it was seven [years], but I think it was five, but I don't remember exactly. But it was \$100,000. That was less than it cost us to — in those days, it cost about a quarter of a million to \$300,000 to fight a lawsuit, a patent thing. And so, to get a paid-up license for less than my attorney's fees, that was just a good business decision. Anyway, that's why I sound like I'm a little irritated by it. He also patented a couple of things that we invented. Ask him who invented Simon, who invented the light gun? (Note: History shows that Baer and Harrison unquestionably invented the video light gun.)

BE: I was going to ask you about the Touch Me thing. Were you upset about that when he turned it into Simon?

NB: I wasn't upset. I was more upset at myself for not seeing the consumer opportunity. We did it as a coin-operated game, and I didn't see it. And so hats off to him. But I don't think he should claim authorship of it. [laughter] The original game of Touch Me came from a small prototype that came from an engineering skull session with Grass Valley. And it was put together by Steve Mayer.

BE: Baer told me that you and he were invited to play a game of Pong at a classic gaming expo, but you never showed up. Is that true? And why not?

NB: I basically... That particular classic game expo, I was in China. It had nothing to do with... There have been a lot of opportunities to be on the same panel discussion, and if I'm going to be there, Ralph doesn't show up. It's kind of one of those funny things. So I think it's disingenuous for him to say that I'm the no-show. But anyway. I'll show you a test. I am willing to have a conference call, that will be recorded, with Ralph any time he wants to. So, isn't that a test? Because nobody can say they can't show up for a conference call.

BE: That's an interesting idea. Somehow I wish that you guys could get together and talk and at least be civil or friendly towards each other.

NB: The real problem with the whole thing is that it's a

tempest in a teapot. The reality is that Ralph did some things, and he should get credit for those. And I did some things and I should get credit for them. And that's good enough, you know? Fundamentally, you can't alter history. We did what we did. We accomplished what we accomplished. And it's just no big deal. You just don't want to overreach. That's the only problem (Note: Shortly after this interview took place, I approached Baer about the aforementioned conference call Bushnell proposed, but Baer wanted nothing to do with it. He told me to stop playing "matchmaker" (in a friendly way), so I've left the issue alone ever since. Although they may never see eye-to-eye, I respect both men and their essential contributions to video game history.)

BE: I have this issue about what is a video game and what isn't a video game. When I look back through how we commonly classify history, there are computer games and video games, and people tend to segregate them. What do you think about combining them together? For example, you said you wrote computer games on a PDP-1 that were essentially video games, because they used a visual display. What's the fundamental difference between the two — or is there one?

NB: I don't think there is one. I think a game on a screen... I mean, 'cause if you want to get technical, you can say, "What's the difference between raster scan and vector graphics?" You know, Tempest was a vector graphics game, Lunar Lander was a vector graphics game. But they were clearly all video games, and we just basically learned how to do certain kinds of technologies cheap enough to commercialize them. So I think it's an arbitrary distinction that doesn't really matter in the whole scope of things.

BE: So you could just call them all "electronic games."

NB: No, I think you have to have a "video" in there. Because...

BE: It has a cathode ray tube of some kind?

NB: Right. Even then, all of a sudden, the distinction goes away because of LCD TVs these days.

BE: That just makes it more complicated.

NB: So I think that the idea that there's an image that can move and is run by some kind of an electronic construct. That's really the definition.

BE: Would you consider an electronic checkers game that had an image, say, from the 1960s — if you had made it on a visual screen — to be a video game?

NB: Oh yeah. Remember, we had a Chess cartridge for the 2600.

BE: But what if it were text? What about text-based games for mainframes? Is there a line there, where they're not video games because they're not graphical, necessarily?

NB: That's an interesting question. That's probably a meaningful distinction. 'Cause clearly, you could use that on a paper output just as effectively.

BE: Yeah, that's true. You're absolutely right about that — paper. That's where it got started too. They were using paper teletypes.

NB: Oh yeah. Text adventure games were in the old days of when we were doing 300 baud modems and time-sharing. [laughs]

BE: [chuckles] The good old days.

NB: [chuckles] Well... not so good.

BE: I'd like to talk about video games in the present and

the future. How do you feel about the Japanese essentially dominating the video game market from the late '80s until now?

NB: Well, I think that they did some really, really cool, fun games. I think Zelda was a very good game. I think some of the things that Nintendo did with Donkey Kong and that — you know, there was a certain lack of technical innovation after I left Atari, and it was picked up by the Japanese. And so, in some ways, would it have been different if I hadn't sold Atari? I think so. But maybe not. I would have made some different mistakes than Atari did in the '80s. One of the big things that happened is that the United States market was really trashed in 1983 because of some bad business decisions that Atari made. And so the door was left wide open for the Japanese to come in. The American video game business... you know, it wasn't homicide.

BE: So Japan just filled in a gap where it needed to be filled.

NB: And they filled it. Once it was filled, they had presence and they dominated it up until right now, when Microsoft came back in. But it cost [Microsoft], some people say, five to six billion dollars to get where they are right now. So you needed some deep pockets to dislodge them. And I kind of think the 360 is winning this round in a pretty healthy way over Sony. But Nintendo with its Wii project is making some headway. So everything swings back and forth. The fun thing about business is that it's never static.

BE: That brings us to uWink in a way. Nintendo, these days with their Wii, seems to share your philosophy about making games that are fun for everybody to play, like a social experience. What do you think about the Wii and Nintendo's tactics? And could you compare and contrast that with your uWink philosophy?

NB: Well, I think that for a home game, the Wii, and the controller, and the strategy is brilliant. It has, in fact, created a whole bunch of video game players that previously were not, my wife being one of them. We have been known to bowl and play golf after dinner — something that she would never have done before. It's kind of fun to have the whole family or dinner guests to sit around and bowl after dinner. We are doing the same thing [with uWink]. We are having people that have never played a video game ever playing games in our place. We have people that have not played a video game for thirty years playing games in our place. So I feel like uWink shares the Nintendo philosophy that gaming can be bigger than the 15 million 18 year-olds or 12-28 year-olds. And we are accomplishing that. And as we roll out our restaurants, we think that we'll get a lot of people playing games and having fun that would never have done so otherwise.

BE: I'd like to ask you one last question. What do you think history gets wrong about you the most?

NB: I think the difference between what my perceptions of me and what the world's perception is — I think they think of me as sort of this creative guy, who has this light bulb go off, and all of a sudden, I go out and do these things. My perception is that I'm a guy who really does a lot of homework surrounding any project that I do. And they may be very innovative, but they are all vetted very, very carefully, both economically and technologically. And I don't think people understand how much hard work innovation is. That it's not just getting an idea. You really have to cross your T's and dot your I's long before you ever start on the project. I don't think people perceive that about me. I work hard. [laughter]

BE: Nolan Bushnell, father of Atari, thank you very much!

Przemyslaw Krawczyk from Poland runs a tank trailer repair workshop - Burg Slask in Radzionków. In his spare time one of his main hobbies is upgrading and repairing vintage computers. He is known on the internet from his website Lotharek's Lair (www.lotharek.pl), where he sells all kinds of hardware upgrades for Atari, Commodore and Spectrum computers. He also has an ebay shop which is where I ordered my SIO2SD.

The SIO2SD is basically an SD card reader which plugs into the SIO port of your Atari, instantly giving you what is in effect a massive hard drive for your Atari. Mine came supplied with an 8Gb SD card, totally packed with Atari games, disk magazines, graphics demos and some animation files. You can plug the SD card into your PC card reader and copy newly downloaded Atari files onto it. It's an amazing idea which works extremely well - you can insert the SD card into the SIO2SD reader and load the games into your real Atari or plug the SD card into your PC and use the same games on your Altirra emulator.

8Gb of storage... let's put that into perspective. A standard Atari single density floppy disk holds about 90k. An 8Gb card holds 8,388,608k - the equivalent of 92,000 such disks or 64,000 enhanced density (130k) disks. This amount of storage space should last pretty much forever as the card supplied contains almost 17,000 files in 5,000 folders and uses less than 1Gb. My partner doesn't seem to comprehend how amazing that is! But then, she loves facebook and I really can't comprehend why. Hey ho!

Apart from the SD card slot, the neat little case containing the device has five buttons (K1, K2, K3, Enter and Shift), two LEDs and a small LCD screen with two lines of 16 characters. The LCD screen displays the current 'virtual' Atari disk drive and the name of the selected disk. Once a drive has been chosen, the folders and files can be cycled through using the K buttons and the Shift key. Pressing Enter stores the file which is analogous to inserting the actual floppy disk into a real Atari disk drive. The system works well once you get the hang of it. Loading files is very quick although you can tweak the configuration to make it even faster.

There is also an on-screen menu so you can boot from the device and load files using the Atari keyboard. The device also saves in its configuration file which disk is mounted in which virtual drive even when switched off, so you can boot from your favourite disks easily without searching through all those folders and files every time you switch it on.



THE VERY SMART SIO2SD FROM LOTHAREK

The SIO2SD comes in a choice of black or light grey (which I chose to match my 130XE) and seems to be quite a robust little box. I can't really find fault with it at all - it does exactly what it says on the tin. You can order them on ebay for £69.99 plus delivery from Poland, which is about an extra £12. It only took seven days to come, which was a pleasant surprise. Whether you love your Atari or if you use both a real Atari and an Atari emulator, you'll love this!

Device abilities:

- Works with SD / MMC (FAT12, FAT16 and FAT32 file systems)
- Handles ATR (Read and Writable), XFD (Read Only) and COM/XEX (Read Only) file types
- 16 x 2 character LCD display
- Handles SIO with turbo (Speed index from 1 to 16. The default is 6 which is 69Kb/s - older version 1.x models have a speed index of 10, which is 51Kb/s.
- Supports all disk densities - 128 byte and 256 byte sectors, including 16Mb disks
- Handles drives D1 to D8 (Versions up to 1.2 only had 4)
- Can be configured using your Atari, i.e. loading configuration tool directly from MCU flash memory, with no SD card inserted.
- Firmware 3.1 RC2
- SD card must be formatted using your PC.
- In the root directory create an ATARI folder. In this folder you can place folders and files. This is the start folder for SIO2SD. It's a good idea to use multiple folders with up to about 100 files in each rather than one big folder with many, many files.
- On the first use of a newly formatted card, SIO2SD will create an SIO2SD.CFG file in the root directory, where the configuration will be stored (files to disks mapping)
- If the ATARI directory is not present on the card, the SIO2SD will not recognize the card.

Control Buttons:

- K1: Next Atari drive (D1,D2 etc)
- K2: Next file/folder
- K3: Parent Directory (Like DOS "CD .." command)
- K4: Go to folder/map file to current Atari drive
- SHIFT + K2: Firmware upgrade
- SHIFT + K4: Turn off current Atari drive ("eject disk")

The photos here show some the custom mods from various adventurous Atari owners around the world - my favourite is the one fitted inside the 800XL computer - what a superb piece of work!



SIO2SD MOUNTED IN AN XC12 TAPE DECK



SiO2SD EXPERTLY FITTED INTO AN 800XL COMPUTER



SiO2SD IN A CUSTOM CASE TO MATCH XL MODELS



SiO2SD FITTED INTO AN XM301 MODEM CASE



SiO2SD FITTED INTO A 1064 MEMORY EXPANSION CASE

Colorfont first appeared on the first issue of the old Excel disk magazine in March 1991 - I dropped the 'u' to fit the filename into eight letters as required by the Atari DOS. Anyway, around Christmas last year (2015) I was reading a fascinating blog by a chap called Rasmus from Denmark. He outlined the story of how he converted Sabre Wulf (the old Spectrum classic from Ultimate) to the Texas Instruments TI99/4A (snappy name for a computer, eh?) and I was suddenly gripped by a strange compulsion to do the same job for the Atari 8-bit.

I started drawing some graphics using a superb graphics tool called CharPad which is a Windows character editor for designing Commodore 64 character sets and game maps. This enabled me to draw graphics with ease using big chunky 2:1 pixels but with my PC drawing tablet. However, when I tried to get my saved files into the Atari emulator, it kept *almost* working. I didn't have the technical know-how to fix this, so I decided to try and use my own Atari character editor from back in the day...

This brought frustrations of its own. My little program lacked a few features that no decent character editor should be without. There was no way to flip the graphic either across the X or Y axis and most importantly, no facility to scroll the graphics vertically or horizontally through the block being worked upon. This is vital - when you are nearly finished drawing a graphic and suddenly find that you need an extra pixel at the bottom but you've run out of pixels, that's pretty frustrating. Ideally, you would scroll the entire graphic up one pixel, but without this feature you basically have to start drawing the graphic all over again...

I thought I would try and add in these new features and then use Colorfont to design the Sabre Wulf character set. It should be easy enough, I told myself - I wrote the program in the first place! It would also be rather amusing to give myself a little experience of programming again and I really wanted to use my own editor and not somebody else's. However, I did try a few other Atari character editors but I didn't really like any of them.

I loaded up the Colorfont program I had written almost twenty five years previously and quickly found that I could hardly make head nor tail of it. It was mostly

written in Atari Basic with a few machine language routines for the heavy lifting. One of the many brilliant features of the Altirra emulator is the ability to cut and paste text between the emulated Atari and your PC, so I soon had the full program listing in front of me in Notepad on my PC screen which I then printed out and had a good bedtime read. Surprisingly, the program was shorter than I imagined. I soon got the gist of what the Basic code was doing and started tinkering with it to make my much needed improvements.

Doing this "work" is what really got me back into the world of Atari - I enjoyed it tremendously. I started going to bed very late every night - not allowing myself the luxury of sleep until I ironed out the bugs I had introduced during the re-writing process. It was around then that my partner had a slight suspicion that I was kind of obsessed with my new hobby and bought me an actual Atari 130XE as a Christmas present. So I now have a real Atari again!

The program was finished shortly thereafter and I posted it on the Atari Age forum in case anyone else might be interested in using it. The screen grabs at the bottom of the page show the two versions with the new one having those all-important missing functions at last. Success!

New additions to the program:

- Pressing X or Y will flip the image in the current block vertically or horizontally. It's not instant as it's done in Basic but it's fast enough. To my delight, it's much faster when running in Altirra Basic, but then the whole program runs much faster - to the extent that it makes the actual task of drawing a little bit tricky.
- You can now scroll the current block image up, down, left or right using the cursor keys. Again, in Basic it's not super fast but perfectly adequate. And again, it's about twice as fast in Altirra Basic.

Changes to the original program:

- Color 1 is now the Background Color instead of 4. I did this to keep it consistent with the accompanying Screen Designer program. Pressing keys 1-4 selects one of the four drawing colors and pressing key 5 toggles between the fourth and the fifth color which is shown in the full character set at the bottom of the screen.



1991 VERSION



2016 VERSION

- The original program only saved the character set but not the color registers so every time you loaded a character set you had to manually change the colors. I was going to save a separate palette file with each font but I thought that would be wasteful as there are only five color registers used and you don't want two separate files created just to store a 1k font. My solution was to store the colour information in one of the characters. You might notice that the top of the first character in the set after the space is a weird random blob - that's the colour palette information. The first five lines in the character each hold the value of one of the colors used in the current set. The characters are designed on a 2x2 block and there are 128 characters in a set, so there are 32 of these blocks. These are numbered from 1-31. Block 0 is shown but is not editable as it contains the space character (which you don't usually want to edit anyway, for obvious reasons...) plus the colour palette and two more solid color characters. The old version had three - one for each color register, but I had to use one character to store the palette. An extra solid color character for the missing register can easily be stored in another block somewhere if you really need it. Of course, all this means that you can't alter the first four characters in any character set you open to edit, but again, if you really need to do this, there are other editors available which will open the font and let you edit the entire set.

So at last I was able to start drawing my character set for Sabre Wulf which I have printed a screen grab of below. I had already drawn some of the characters on CharPad with the luxury of using my PC drawing tablet so I finished the job that way and then just copied them manually into Colorfont with Altirra and CharPad running side-by-side on my screen. I am now so used to my Cintiq drawing screen that I found it was quicker drawing them up in CharPad and then copying the graphics than trying to draw them from scratch on the emulator using a joystick or the keyboard. Having said that, I then started doing a character set for another Spectrum classic - Atic Atac, but this time drawn entirely in Colorfont, which by then I had got very used to using again whilst copying out the Sabre Wulf graphics. The Colorfont program is available to download (with the Sabre Wulf font) from the website in ATR format.

Another good use I found for this program was for drawing sprites, or player-missile graphics as Atari used to call them. Since the blocks in Colorfont are 2x2

characters they are perfect for Atari sprites - 8 pixels wide, although a bit limited in height at only sixteen pixels, as actual Atari sprites can be any height. The animation facility is handy for testing sprite animation - in fact, in the default character set that comes with Colorfont, there is an animated character from my old Amnesia game stored in blocks 26-31. It works so well that I am thinking about writing a new sprite editor using the Colorfont program as a starting point.

Key Commands:

- D** **Disk Menu** - Load or Save fonts or get a directory of the current disk
- M** **Mode change** - toggles between Antic Modes 4 and 5 - the multicolour character modes.
- E** **Edit Block** - selects a block from 1-31 to edit. Move joystick up or down to cycle through the blocks. The fire button selects the block to edit.
- C** **Copy Block** - copiers graphics data from one block to another. Use joystick to cycle through the blocks and press fire button to select a block.
- A** **Animate blocks** - display a continuous loop of blocks. Use joystick and fire button to select start and end blocks and select animation speed.
- P** **Palette edit** - change the colour of any of the five color registers. Move the joystick up or down to select color 1-5 and move the joystick left or right to cycle through the Atari colour palette. (8 shades / 16 colours)
- W** **Wipe Block** - clears the current block.
- X** Flip current block image vertically.
- Y** Flip current block image horizontally.
- Cursors** Scroll the graphics data in the current block up, down, left or right a pixel at a time.
- 1-4** Selects the Color register to be used for drawing. 1 = background color.
- 5** **5th color** on or off - toggles between Color 4 & 5.



The original version of Colorfont Screen Designer was on Excel disk magazine issue #12, published in April 1992. As with Colorfont, I have rewritten parts of the program to make it slightly friendlier and faster but I thought it needed relatively minor tweaks. Again, the program is written in Atari Basic with some additional machine code routines to do the hard work (i.e. bits that would be very slow in Basic), such as drawing the screens when you cycle through them. The program runs pretty well but if you run it using the Altirra emulator with Altirra Basic instead of Atari Basic it gets quite a little speed boost.

The purpose of this program, as the name suggests, is to use the fonts created in Colorfont to build game screens. With this program you create tiles which are composed of four 2x2 character cells, so a tile is 4x4 characters. You can then use the tiles to build screens for your game really quickly and easily. Each game screen is 40 characters wide by 20 characters high, so 50 tiles (10 across x 5 down) are needed to draw a complete screen. You can store up to 64 screens in this way. Since each screen is saved as a series of only 50 tile numbers, this is a great way to compress the data needed to store the screens. A machine language routine is provided to blit the tiles extremely quickly onto the screen using the data stored in the tiles.

When you save your data as a Map file you are saving a contiguous file which contains the font itself (1k), the data for the 64 tiles which use 16 bytes each (1k) and the 50 bytes of data for the tile map for each screen (just over 3k) so 64 screens only takes up about 5k of memory.

The game I am working on, Sabre Wulf, has 256 screens, but many of them share the same layout so there are only 47 unique screen designs in the game. Maybe that's why it's so easy to get lost in that damn jungle...

The main differences between this version of Colorfont and the original version are as follows:

- The Boxes are now called Tiles.
- You can now cycle through the tiles with the cursor keys whether in Edit Tile or Edit Screen mode. This works extremely well on the Altirra emulator as when you assign the joystick to the PC's arrow keys you can use them together with Alt to toggle between Atari cursor key control and joystick control.
- There are 64 tiles. You can edit tiles 1-63. Tile 0 is not editable as it is used as an eraser to place blank tiles onto the screen maps.
- When editing a tile you can now place one character into the tile or a block of four at a time. This makes sense as the characters are designed in Colorfont in blocks of four. It makes building tiles much quicker.
- The Space Bar can be used as an eraser to quickly plot a blank character in the current tile being edited which saves you going back to the character set to get the blank space character every time you need it.

When you load the program it looks like Screenshot 1 below - blank and boring. Screenshot 2 shows how



the screen looks once you have loaded a lovely font you may have created in Colorfont. Pressing D takes you to the Disk Menu screen where you can load a font, load or save a full game Map (Font, Tiles and Screen data) and get a disk directory.

You begin in Edit Tile mode which is where you build up your tiles from the on screen character set. Once you choose the character you want with the joystick, pressing fire takes you inside the pink tile border where you can plot the currently selected character. Pressing 'B' here will plot a block of four characters, i.e. the character you selected plus the one next to it and the two underneath.

You can move your cursor freely around the tile with the joystick and on to the top of the pink tile border itself - pressing the fire button here takes your cursor back to the character set to choose another character from your font.

You can press the 5 key to toggle on the fifth playfield color (replacing color 4) which lets you add more colors to your tiles. In addition, you can alter any of the 5 color registers in the same way as Colorfont - press C to Change Colors and cycle through the 5 registers by moving the joystick up and down and cycle through the color palette by moving left or right. Bear in mind that changing colors or turning the 5th color on or off only works when the cursor is on the character set - these functions don't work while the cursor is inside the pink tile border!

Once you have built up some tiles, you can start designing screens. Pressing E toggles between Edit Tile and Edit Screen. When you enter Edit Screen mode, a crosshair cursor will appear (see screenshot 3) which allows you to plot the current tile onto the current screen number. You can cycle through the tiles with the cursor keys and create game screens in mere seconds.

Screenshot 4 shows the how the character set looks with the fifth colour turned on. In this example this results in all the brown pixels in the font that use Color 4 (register 710) changing to blue which is Color 5 (register 711). Color 1 is background register 712. Color 2 is 708 and Color 3 is 709.

Screenshot 5 shows the current tile (no.3 - the left half of the pond graphic) being plotted onto the middle of the screen. You would then use 'cursor up' to select tile 4 and plot the right half of the pond alongside it - easy!



The program only lets you design your screens using the 5 playfield color registers. This actual finished game will use Display List Interrupts to change some color registers part way down the screen to give extra colour such as the purple mountains shown in the screenshot below. Check out the back page of the magazine to see how the final game will look when DLIs are added to the playfield graphics, plus hardware sprites for Sabreman, the magic Orchids and all the enemy creatures.

Key Commands:

The letters for the commands available have their first letters inversed in the menu to show they are available in the mode currently being used.

- E** **Edit Tile / Edit Screen** - toggles between these.
- C** **Colour Change** - only works in Edit Tile mode when the cursor is on the character set itself when the cursor is on the character set itself and not inside the Tile border..
- 5** **5th Colour** - toggles on and off and only works in Edit Tile mode when the cursor is on the character set itself and not inside the Tile border.
- D** **Disk Menu** - for loading and saving Maps, loading Fonts or checking your disk directory. Only available in Edit Tile mode when the cursor is on the character set itself and not inside the Tile border. Note that loading a font while you have a Map being edited will result in the color registers being reset to those stored in the newly loaded font.
- W** **Wipe Tile** - clears the currently selected tile. Only works in Edit Tile mode.
- W** **Wipe Screen** - clears the current screen in Edit Screen Mode.
- Space** This plots a blank character in the current tile when your cursor is inside the Tile border.
- B** **Block** - plots a block of four characters in the current tile when your cursor is inside the Tile border.
- + / -** These keys cycle through the stored screens. This only works in Edit Screen mode.

Fire up Colorfont Character Editor and the Colorfont Screen Designer, get doodling... and have fun!



thy path is long



so tread with care

ORIGINAL GAME © 1984



beware the wolf



and pass his lair



COMING SOON FOR ATARI XL/XE