

SPECIAL ENGLISH EDITION
SILLY VENTURE 2023
SUMMER EDITION

SILLY VENTURE

SCRYING
FAITHFUL to **ATARI**
ROOTS

CHIP-8 Interpreter
Book review: **Clipped Claws**
Commotron Gamepad
Atari-2600jr-**Replica**-Board
Night Knight for the Atari-8-bit
BASIC 10 **Liner Contest**

Content / Impressum

• Content / Impressum	2
• Editorial	3
• Clipped claws: A book about the Atari Jaguar	4
• Atari 2600jr replica board from Sikor	10
• COMPUTER IN THE COMPUTER: CHIP-8 on the A8	14
• „Learn Multiplatform Assembly Programming“	18
• Commotron Gamepad	20
• TF's tinkering corner - part 04	24
• Preservation with Kryoflux	29
• BASIC-10Liner-Contest	32
• Night Knight on the Atari-8-Bit	36
• The riddles of Montezuma	46
• NINJA - HELP - ICOPTER	50
• Space Invaders Battle	51
• Spieletest: Arcadia	52
• Spieletest: Arcadia Xmas Quest	55
• Cracky - a simple platformer	56
• Pacman Labyrinth	57
• Spieletest: Bubble Shooter	59
• Review: Super Zombie Apocalypse	62

Impressum

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The editor has enjoyed the chiptunes from *Poison* during the work on this issue:

<https://poison6502.bandcamp.com/>

Special thanks to *Grey / MSB (Michal)* for organizing Sillyventure!

Editorial

Welcome to this special issue of ABBUC magazine for Sillyventure Summer 2023*

Ever since I've joined the board of ABBUC a few years ago, I found myself explaining the concept of ABBUC to international members. This is not as easy as it sounds, ABBUC is an „eingetragener Verein“ (or e.V. for short - english „registered organisation“), which is a very German thing that does not exist in the same way in other parts of the world.

When ABBUC e.V. was founded in 1985, the world was different. The average Atari user did not have access to the Internet (and the "web" did not exist), so joining a user group was a common thing. But ABBUC is more than just a user group where like-minded people will meet and exchange information: one purpose of ABBUC is to enable projects that a single person or a small group could not realise.

A modern analogy to ABBUC e.V. is Patreon, where people give money to creators for their work. ABBUC receives membership fees from its members and because of its size is able to produce hardware projects, sponsor software development, organise the annual software and hardware competitions, print new Atari books and much more.

As with Patreon, some content created is free for the Atari community, while other content is exclusive to ABBUC members. Members do not pay directly for the goods they receive. The membership fee

helps to create the new content, and then the magazines, books, music CD-ROMs, stickers, disks, etc. are free to all members.

Unlike Patreon, ABBUC members are creators themselves. Any ABBUC member can ask for support (money, infrastructure, work) to get help with a project. Want to organise a user meeting? ABBUC will give you money to cover some (or all) of the costs (like we do with Sillyventure). You want to print a book but you cannot afford the printing costs - ask ABBUC.

ABBUC is strictly "non-profit", nobody receives money for working on ABBUC projects, the magazine or the board. The services of ABBUC and the magazine are only as good as the participation of the members. If you want to read different content in the magazine - write an article. You don't like the layout of the ABBUC website - join the web-team and change it. ABBUC's slogan is „Der User-Club zum mitmachen“ which (roughly) translates into „The user-club to participate in“.

The world needs more Atari!

This special issue of the ABBUC magazine contains articles from the ABBUC magazines 151/152/153 and shows the wide range of activities within ABBUC. We love to get your feedback, please write to magazine@abbuc.de.

Enough from me for this time, I now have to pack my Atari stuff and head off to Gdańsk for another wonderful Sillyventure Party. See you there (now or next time)!

Carsten Strotmann
Summer 2023

* which is the first of our English magazine issues that got printed, others are available as PDF for members of ABBUC)

CLIPPED CLAWS: A BOOK ABOUT THE ATARI JAGUAR

Book presentation by *Boris Kretzinger*

The worst joystick of all time, the worst games of all time, in general a disparaging image of a console that can be summed up in two quotes: "Where did you learn to fly?" and "Do the maths!". When it comes to the perception of the Atari Jaguar in video game history, these prejudices bring the general opinion down to a common denominator.

But how realistic is the picture painted these days, especially on YouTube and in magazines, of the last console under Sunnyvale's iconic Mount Fuji logo? It's a question I haven't asked myself for a long time. To be honest, I didn't even know the Jaguar existed until Angry Video Game Nerd aka James Rolfe posted an episode about the feline console

predator on YouTube twelve years ago. There were no commercials in Germany in the 90s. If you didn't read Atari magazines or skimmed through the short articles in video game magazines, you might have missed the technically impressive machine.

And perhaps I would never have bothered with the multi-processor behemoth if I hadn't been looking for a little something to distract myself in the winter of 2020, about ten months after the outbreak of the pandemic, and to give myself a treat for Christmas. A new old games console would be fun, I thought. Sure enough, I came across an offer on a well-known online auction site with four colourful letters that interested me: the console with power supply and RGB cable, a re-release of the



Six-Button Pro controller, and Iron Soldier. I thought back and forth for a while about whether I should indulge myself, and then I took the plunge.

So there I was during my Christmas holidays, playing a few rounds of Iron Soldier and thinking to myself that the joypad wasn't that bad - and the game even more so. So I began to wonder what had really gone wrong at Atari. Was the hardware really that bad and were all the games total failures? I did a bit of digging in English forums, read the very short German Wikipedia entry, found a lot of allegations and little

evidence. And what is astonishing from my point of view: Considering that the Jaguar was Atari's last console, there was surprisingly little reliable information available. And so it occurred to me that maybe I could do something about it.

As a project for my spare time. It might be possible to make something out of it. So I wrote down my initial notes and decided to at least contact Jaguar designer John Mathieson and former Vice President Software Business Development Bill Rehbock. If they responded, I thought, that would be a good start. So I wrote to both of them via



LinkedIn, explained what I was trying to do, and actually got replies. I had put myself under a bit of pressure by explaining to them that I was doing research for a book that I wanted to publish for free.

The idea was well received and I didn't see a market for such a book anyway: it would certainly never make any bestseller lists. How many die-hard Jaguar fans could there be? And who wanted to know so much about a console that had played virtually no role in the world of video games? Some of these assumptions turned out to be premature. But the decision to publish the book for free - even if I was the only one interested - was absolutely right. Because it didn't put me under unnecessary pressure to meet a deadline, and I was free to choose the design and number of pages without worrying about printing costs.

Of rumours and black cats

The title Clipped Claws didn't exist yet. As a working title, I had several ideas in mind, from "Who did the Math?" to "Just a Scratch" to "One Last Roar". And while Mathieson and Rehbock answered some questions for me, I delved into old print and online magazines, some of which I had never heard of before: Silicon Times Report, Atari Explorer Online, Maniac, Raze, Electronic Gaming Monthly, Computerworld and many more. I also searched the online archives of US daily newspapers to find stories about the 64-bit console. Within a few months, I had a collection of sources for further work. In my research, I tried to follow the development of the console chronologically: What was announced and when?

What were the rumours at the time, how was Atari's competition positioned, and how was the console and its development generally covered in the press? I also wrote to other former developers, explaining my project and asking them to answer my questions. I interviewed over 100 people about their experiences with or work on the Jaguar, including former dealers and early gamers. By no means all of them, but many of them replied. Like a mosaic, the pieces of the Jaguar story began to fit together. In the process, I discovered that some of the facts that had always been taken for granted could not actually be proven. For example, the persistent rumour that many early games for the Jaguar were actually made for its never-released predecessor, the Panther, and then ported over to the new platform.

But that was not the case with Cybermorph, Trevor McFur or Raiden. Not a word about it from the former developers, and more: By the time development began on these games, the Panther had long since disappeared into Sunnysvale's concept drawer. Instead, I was surprised to find another Panther relic: the Jaguar Joypad. Not only is the design very similar to that of the never-released console - which explains why the controller doesn't really look like the Jaguar.

Also, the descriptions of the Panther Pad from the brief period when the console was touted as Atari's next hardware hit are surprisingly close to the finished product. Finally, John Mathieson stated that the pad was already in place when he joined Atari full time to finish work on the Jaguar. Even Leonard Tramiel replied that al-

though he couldn't remember exactly, the idea wasn't far-fetched. Small research successes like that gave me tremendous motivation to carry on.

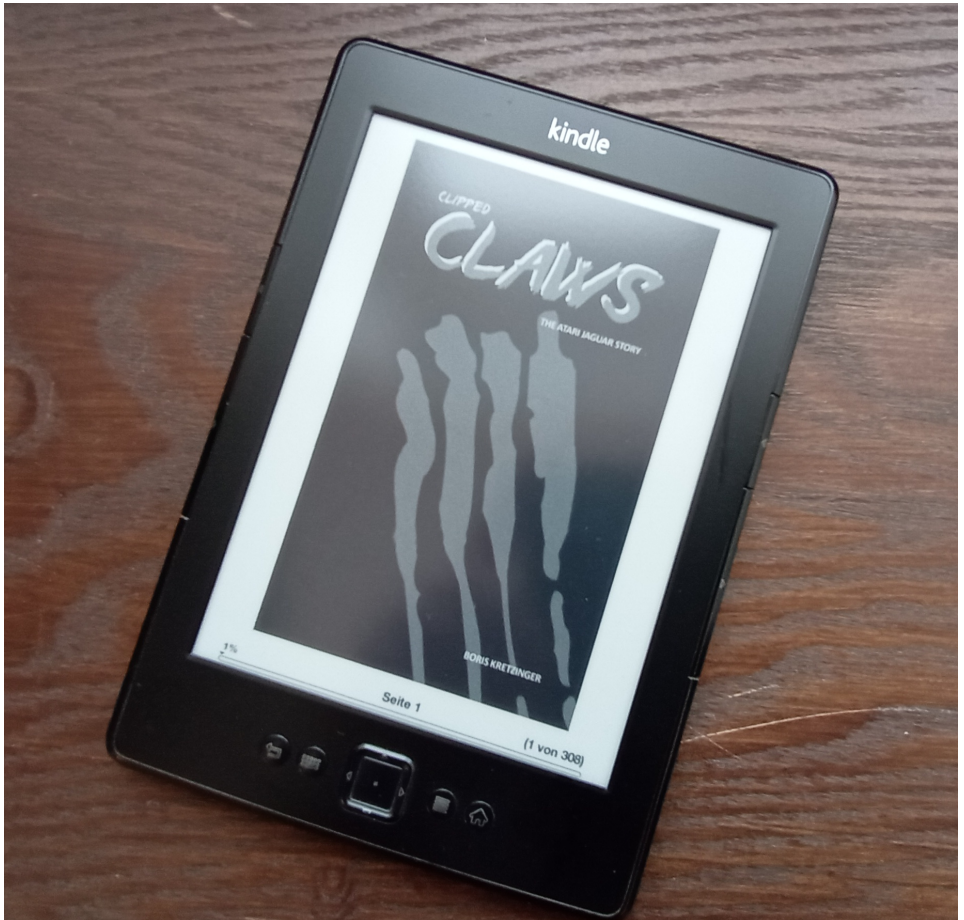
Great conversations with contemporary witnesses

Another important motivator was the conversations and chats with contemporary witnesses. Writing with hardware guru Mathieson, who patiently explained technical issues to me, was a great pleasure. I was equally fascinated by the insights that coders like Marc Rosocha or

Mike Beaton kindly shared with me, or that even former Sega CEO Tom Kalinske took a moment to answer my questions about a former competing product.

The fact that one of the developers of the Sega 32X, Scot Bayless, explained to me how the Jaguar had virtually become the birthplace of Sega's unsuccessful console add-on was as inspiring to me as the vivid descriptions of graphic designer Linnea Wigren, who had worked on Trevor McFur.

The fact that so many people were





willing to talk about their history with the Jaguar - including the AB-BUC, by the way - really pleased me. Without their input the book would have been brittle and bland. Considering that the Jaguar was the ultimate failure and still doesn't have the best of reputations, I was surprised at how open some of the interviewees were with me. After all, who likes to talk about failure?

A beginning has been made

And although a lot of time and work has gone into the book, it is not yet finished. Or rather, I am sure that there are still facets and stories to be added. The book does not claim to be complete and I am still looking for contemporary witnesses who would like to share their experiences with the Jaguar.

Some aspects are simply not covered due to the lack of source material,

such as the CoJag arcade hardware or the Jaguar PC card from Sigma.

Nevertheless, the 300 or so pages give a good overview of the Jaguar's history, from its hopeful beginnings and a short-lived rivalry with the financially far superior 3DO conglomerate, through a long dry spell without any exciting games worth mentioning, to its decline and complete niche existence.

There's still a lot to explore, and I don't feel like I've reached the end of the road with this work. For now, I'm keen to expand on the book. For example, I still have a few interview requests in the pipeline that I would like to include in an expanded edition. Before that, I would like to make some minor linguistic corrections. I will not be expanding the section on the homebrew scene.

I have received some criticism in the

English-speaking community for the brevity of this chapter, there is a lot missing. That's right! I went back and forth for a long time about whether to include it at all. After all, I'm mainly interested in the history of the Jaguar up to its commercial demise. You have to draw the line somewhere. The homebrew scene is a story in itself, and this chapter is intended to encourage readers to look at what else is available for the console, rather than to cover the entire development from 96/97 to the present day, including all the protagonists involved.

Where did you learn to write?

Originally I wanted to publish the book twice, once in German and once in English. But since the vast majority of the sources and contacts quoted write or speak in English anyway, and since the vast majority of Jaguar's target audience is not based in Germany, I decided to publish the book in English only.

This also has an important advantage for my further involvement with

the subject: with future updates I only have one file to work in and update.

I don't rule out publishing the book in German at some point, but only when I feel there's not much more to say. The same goes for a printed version for those who prefer to read in analogue rather than digital format - although Andy from ABBUC has already taken the first step on his own initiative and in a very small edition.

In my opinion, the Jaguar story is far from over. But if you want to wait for it, you have to be patient: Like all hobby projects, this one will take a while to develop. It's worth taking a look at the book now - after all, it costs nothing... except a little time. I hope the reader will enjoy reading it as much as I enjoyed writing it. And I can already reveal that the story of the Jaguar is definitely an interesting ride for Atari friends.

Download the PDF:

<https://archive.org/details/clip-ped-claws/>



ATARI 2600JR REPLICA BOARD FROM SIKOR (in the not so original case)

A report by *Markus Waterott*

Some time ago Sikor released a replica board of the Atari 2600jr. I stumbled across it in the ABBUC forum.

The thread was dormant for some time, the last posts were a few months old.

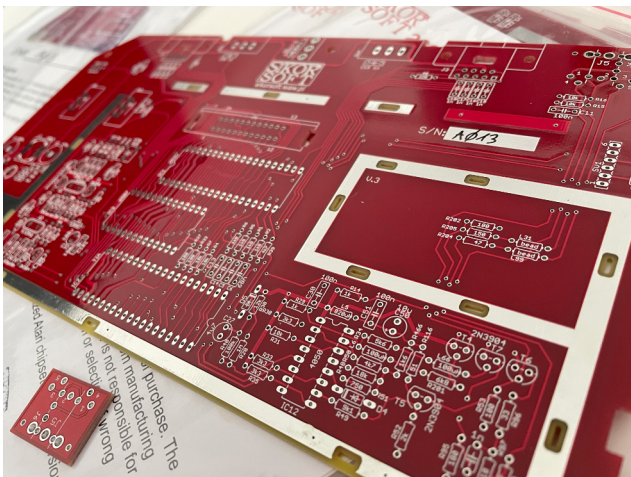
My curiosity was piqued and it wasn't long before I ordered two of the boards.

The design is based on the original 2600jr board, which means you can use this board in all original 2600jr and clone cases.

Most of the layout is the same as the original except for the following changes:

- There is no longer a video modulator, instead the video section has been completely redesigned.
- The video output is now replaced by an AV mini jack output, or alternatively you can use an Atari XL/XE standard (DIN 5) video socket. If you want to use the DIN5 socket, you will have to modify the case slightly, as there is no suitable opening for this socket on the original case.

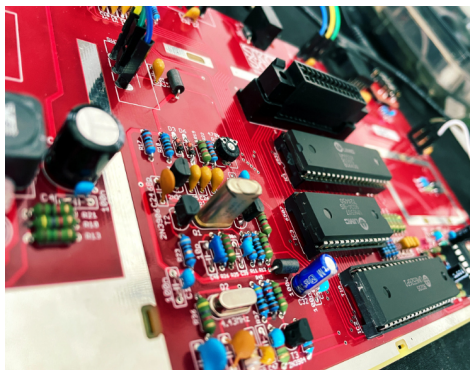
You will receive the actual board and a small additional board which is needed if you want to use a mini jack socket as video output:



There is also a warranty with more information about the circuitry of the board.

In the beginning it was difficult to find the parts, there was no parts list available. With the help of some users outside and inside the ABBUC forum, a list was created, which can now also be found on the SikorSoft site.

Once all the parts were found, the board was built:



While building the board I noticed one or two things:

The joystick ports don't fit 100%, at least if you use the original 2600jr ones, you have to file the left and right guide "nose" a bit thinner on the inside.

If you want to use the original switches, you have to be aware that the holes for the solder pins on the new board are round, but the switches have square pins - they fit somewhere in between, and in some places they do not.

This was not a problem for me as I did not want to use the original switches. I use toggle switches, but they are in a different position, so I had to use cables.

Because the board looks so good, I did not want to hide it in an original case.

My idea was to keep all the splendour visible at all times. So I had two plexi plates made to my specifications at Plexilaser.

This is the first set up, two holes still need to be repositioned:



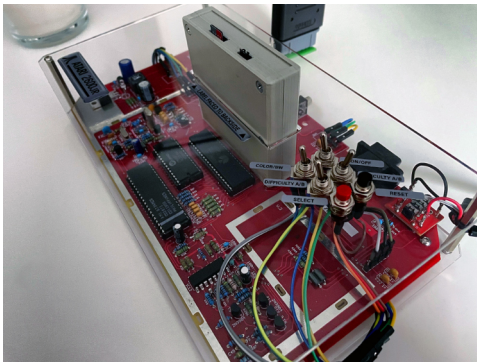
An underside illumination was added straight away (see photo above).

To finish it off, I needed some stickers. Once again, *Retrobadgeman* was a great help:



My first setup was still with the jack plug as the output, but I had slight problems with this in conjunction with my upscaler: Sometimes the picture was just greyscale. I have heard from other users that it works fine.

I ordered two boards and built the second one directly with the DIN5 output, the picture is really great - I never had a better one with the 2600jr (without mod ;)).



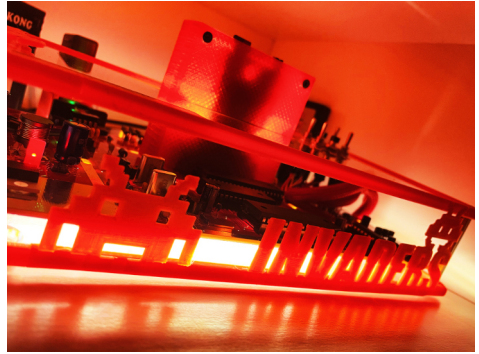
Atari 2600jr - Space Invaders, including illuminated module

At this point I could have finished, but I didn't really like the very plain look.

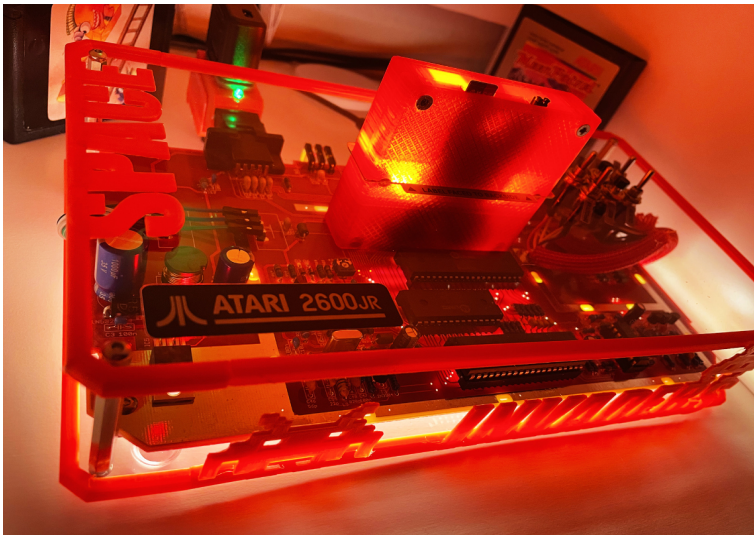
So what to do? I thought about what could be done without hiding too much, then designed and printed two decorative designs for the case, the cables were sleeved.

Of course, there were a few mis-prints before everything was exactly the way I wanted it - but in the end I was almost satisfied.

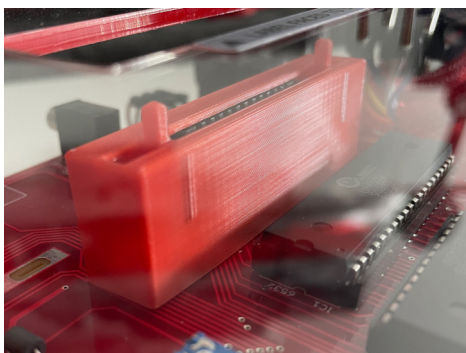
This is how my 2600jr-replica-sisters are looking now...



Atari 2600jr - PacMan



One detail still bothered me: the bare cartridge slot. When designing the boards, I had already taken into account that you can't - at least not without some "force" - insert the modules the wrong way round, but I wanted to en-

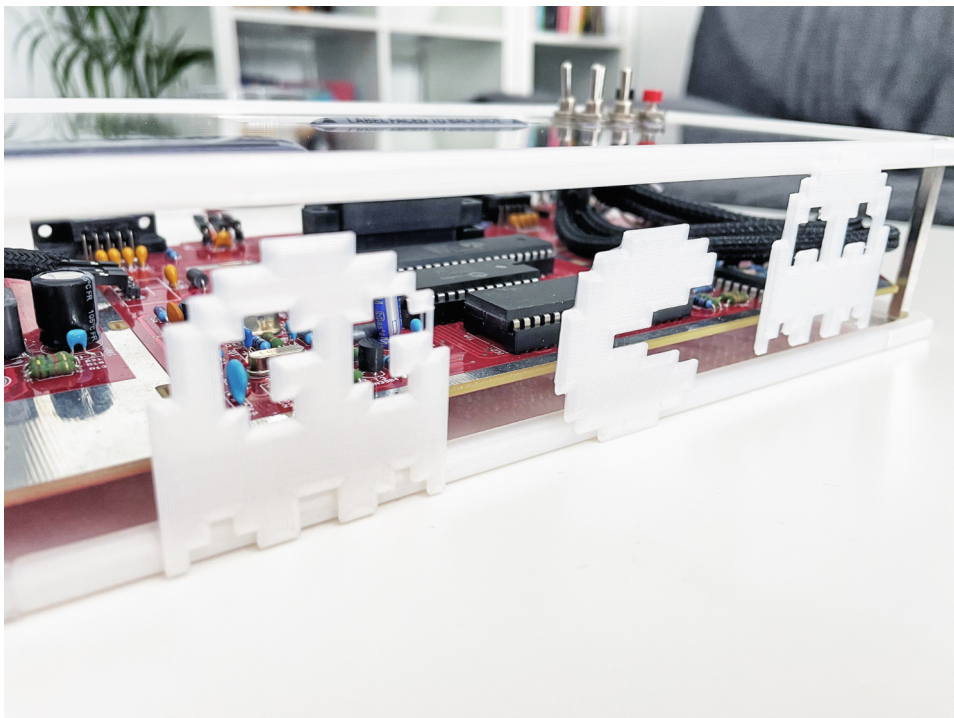


sure this by adding an additional guide to the slot (and to make the slot look a bit nicer):

A lot of effort for a 2600jr system? Maybe, but I like this little device and had a lot of fun building it.

The "Space Invaders" version has now become my main console and gets fired up regularly.

The thread in the ABBUC forum:
<https://abbuc.de/forum/viewtopic.php?p=3037>



COMPUTER IN THE COMPUTER: CHIP-8 ON THE A8

Simple machine language for the COSMAC VIP

Machine language is not the easiest way to create new programs on a computer. This problem was recognised by *Joseph Weisbecker* after he developed the COSMAC VIP (Complementary Symmetry Monolithic Array Computer - Video Interface Processor) computer for RCA (Radio Corporation of America) in 1976. The target market for the COSMAC was hobbyists who wanted to assemble and program the COSMAC themselves.

The COSMAC kit came with 2 KB of RAM, which could be expanded to 4 KB on the motherboard, and 512 bytes of ROM for the operating system. Programs could be loaded via a standard cassette recorder or entered via a hex keyboard.

No common interpreter for BASIC would fit into 4 KB of RAM, as was common for the first home computer systems of the time. (Atari BASIC, for example, is 8 KB.) To simplify the programming of the COSMAC VIP, Joseph Weisbecker implemented a small interpreter for an idealised and simple machine language and called it CHIP-8. This machine language is not directly processed by a CPU, but by a program which reads the machine language commands from memory and executes them.

On the COSMAC this CHIP-8 interpreter uses the lowest 512 bytes, so it is very space efficient. The CHIP-8 machine language is also very memory efficient, each machine language instruction occupies 2 bytes

(16 bits) and already contains all necessary parameters (register and memory addresses etc.). This means that the remaining 3.5 KB of memory can still be used for useful programs. Compared to "real" machine language, CHIP-8 has instructions that perform complex functions, such as outputting characters to the screen or clearing the screen.

The COSMAC VIP was one of the first hobby computers that could be connected to a TV as a display device (after all, RCA was one of the largest TV manufacturers in the USA at the time). The COSMAC's video processor, an RCA CDP 1861, can display 64x128 monochrome pixels. At this resolution, the video processor needs 1024 bytes (1 KB) for the screen memory.

With only 4 KB main memory of the COSMAC, there is not much memory left for the program, so CHIP-8 limits itself to a resolution of 64x32 (monochrome), which uses only 256 bytes of screen memory. These 256 bytes are at the upper end of the 4K memory range for CHIP-8. For sound output, the COSMAC has a speaker that can generate beeps via a 60Hz timer.

Joseph Weisbecker introduced CHIP-8 in *BYTE* magazine in December 1978, and from 1976 to 1979 COSMAC VIP computers were shipped with CHIP-8 including many sample programs and games. But against Apple II, Atari 8bit, Commodore PET and Tandy TRS80 the COSMAC VIP had no chance on the market and disappeared from the scene, and with it CHIP-8.

HP48 and SCHIP

In 1990 there was a range of calculators with a graphical display, the HP48 series. They had the same limited display and memory as the early kit computers of the 70s. In addition, the HP48 series lacked accessible high-level languages such as BASIC for programming. In September 1990, Andreas Gustafsson released a CHIP-8 interpreter for the HP48SX, specifically to facilitate game development on the HP48. CHIP-8 is popular on the HP48 platform and inspires ports of CHIP-8 to other platforms.

In 1991, Erik Bryntse releases SCHIP (Super-CHIP), an extension of the CHIP-8 interpreter for the HP48S and HP48SX calculators. SCHIP increases the screen resolution to 128x64 and adds some new commands to the machine language, e.g. to store data beyond the lifetime of the programs (e.g. for high-score tables).

Today there are many further developments of CHIP-8, there are CHIP-8 computers available as kits or complete machines, CHIP-8 implementations in FPGA, annual programming contests, and modern development environments for CHIP-8 programs (all of which can be found as links on the AtariWiki website at the end of this article).

Similar to BASIC 10 liners or 256B demo contests, programming a CHIP-8 machine is a challenge. It is fascinating how

much fun developers can have with the limited CHIP-8 system. A bonus for developers is that CHIP-8 programs can now run on a wide range of platforms, from 8-bit home computers like the Atari 8-bit or Sinclair Spectrum, to Windows, Linux and MacOS, to mobile devices like mobile phones and tablets.

CHIP-8 on the Atari

In 2006, *Pawel Kalinowski* (aka "pkali" or "pirx" on AtariAge) released a CHIP-8 and SCHIP interpreter for the Atari 8-bit. You can find the CHIP-8 interpreter under the name "CHIP8.COM" on magazine disk 153, together with a collection of CHIP-8 and SCHIP games.

When started, the CHIP-8 Interpreter presents a list of the CHIP-8 programs on the disk. A game can be selected with the cursor keys and started with the RETURN key.

The Escape key terminates the current CHIP-8 program and the menu with the list of CHIP-8 programs on the disk appears.

```
Chip 8 & SuperChip 8 emulator
by pirx@soft.com 2006-01-17 v1.1
select game with cursors
ALLEN  MAZE_S  VBRIX
ANT    MERLIN  VERS
BLINKY MINES  WALL
BLINKY_S MISSILE WIPEOFF
BLITZ  PIPER  WORM3
BREAKOUT PONG
BRIX   PONG2
CBPIC  PUZZLE
CAR    PUZZLE_L
CAVE   RACE
CONNECT4 ROCKET
DRAGON1 SPACEFIG
DRAGON2 SQUARE
FIELD  SQUASH
FILTER SYZYGY
GUESS  TANK
HIDDEN TAPEWORM
IBM    TEST
INVADER5 TETRIS
JOUST23 TICTAC
KALEID UBBOAT
MAZE   UFO
```

In the lower part of the screen the interpreter shows the assignment of the CHIP-8 hex keys to the Atari keyboard. The file CHIP8.CFG can be used to assign the keys and the Atari joystick to the CHIP-8 keys individually for each CHIP-8 program. For the included programs there are already entries in this file, for new programs a new configuration line has to be added. On the AtariWiki page about CHIP-8 (link at the end of the article) there is a collection of CHIP-8 configuration lines for new programs and games.

A comment in the configuration file starts with a slash "/", the rest of the line is ignored.

For each program there is a line in the configuration file that translates the joystick functions of the Atari 8bit to the hex keys of the CHIP-8.

Additionally the speed of the CHIP-8 program can be set to slow down too fast games.

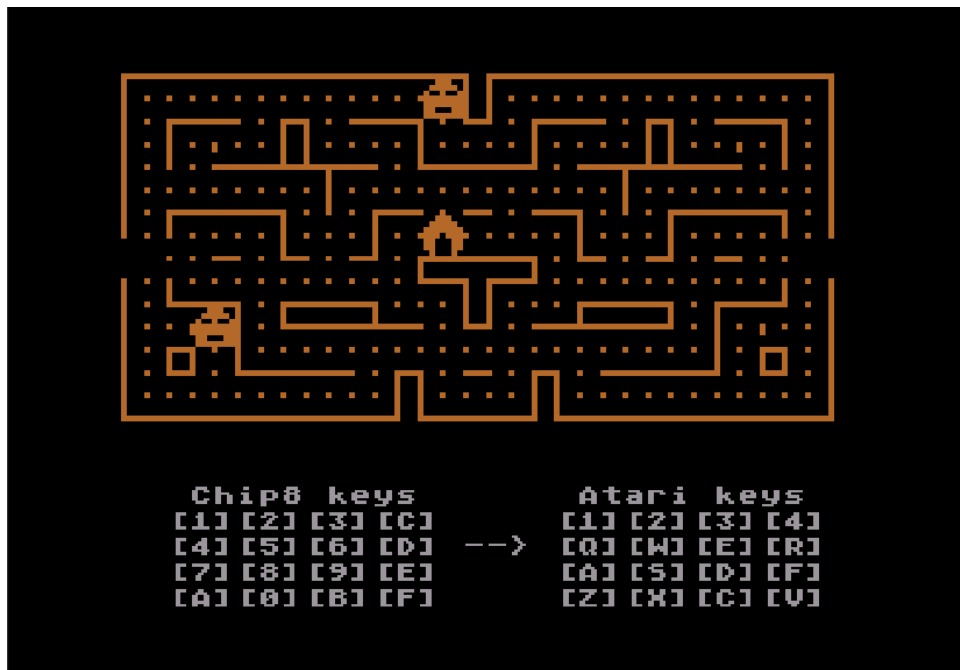
Example of a configuration file entry: Here the following configuration is defined for the program (game) "Alien":

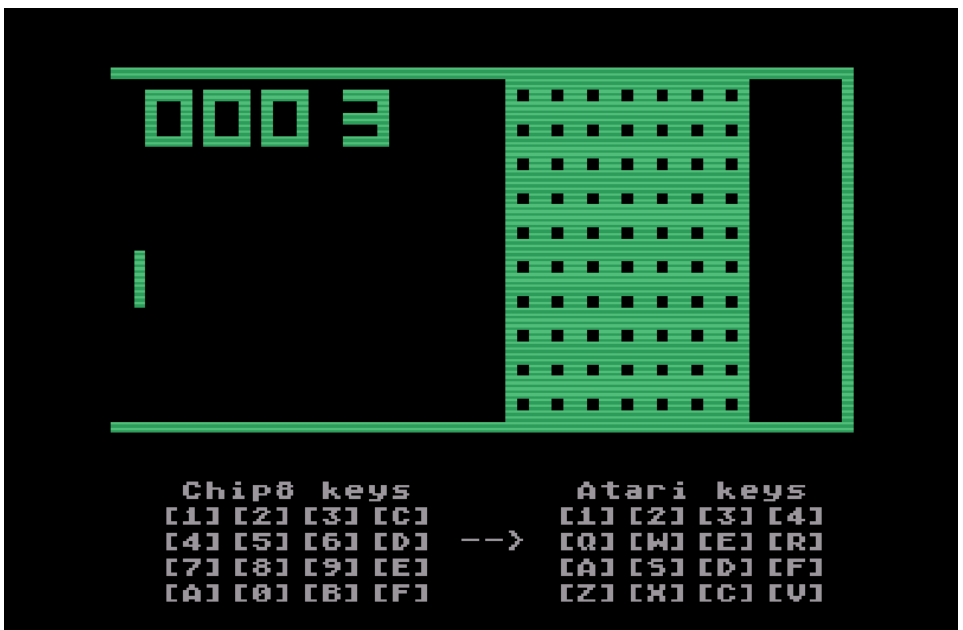
```

/GAMENAME keyUP kDOWN kL kR kF speed
/8chars!! 1char 1char 1c 1c 1c 1char
/
/      U D L R F S
/
ALIEN  1 2 3 C A 3

```

- Joystick up = CHIP-8 button 1
- Joystick down = CHIP-8 button 2
- Joystick left = CHIP-8 button 3
- Joystick right = CHIP-8 button C

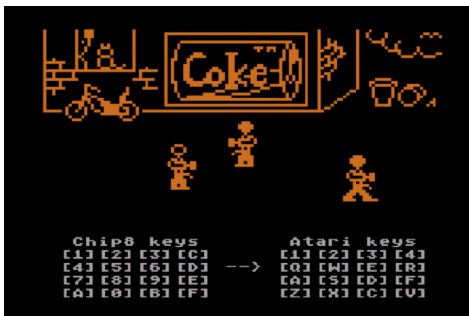




- Joystick fire = CHIP-8 button A
- Speed = 3 (higher value = slower)

If you make speed adjustments to the CHIP-8 programs, you should test them on real Atari hardware. The results of a test in the Atari emulator are not always transferable to real hardware.

The START key of the Atari disables the slowdown of the CHIP-8 programs, so that the programs run at maximum speed (and often much too fast).



Chip-8 Programming

ABBUC magazine 154 contains a programming course for the CHIP-8 system. Maybe there will be new CHIP-8 programs soon, which we can present on future ABBUC magazine discs.

Information on CHIP-8 in the Atari-Wiki:

<https://atariwiki.org/wiki/Wiki.jsp?page=CHIP-8>

Chip-8 and Superchip-8 emulator for Atari 8-bit (also on the ABBUC magazine 153 disc):

<https://github.com/pkali/Chip-8>

Additional ROM files for CHIP-8:

<https://github.com/kripod/chip8-roms>

„Learn Multiplatform Assembly Programming“

A book review

By *Carsten Strotmann*

Machine language gives the programmer ultimate control over the computer. Higher-level languages such as Basic, C, ACTION! or Pascal are easier to use but consume more memory and only sometimes produce the optimal and fastest code.

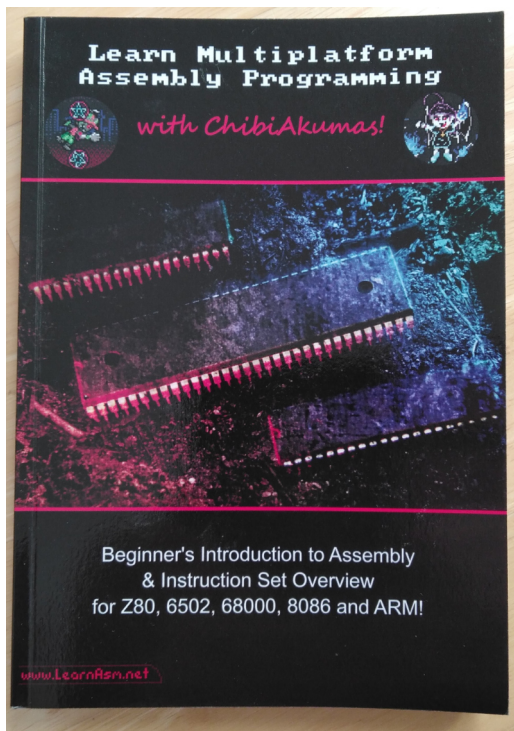
There are many books on assembly language programming, but *Keith 'Akuyou's* books stand out. Book #1 in the 'Learn Multiplatform Assembly Programming' series begins with a CPU-independent introduction to machine language programming (terms, hexadecimal notation, flags, registers, stack). This introduction is followed by a treatment of assembly

language programming on popular CPU architectures built into home computers: Z80 (Amstrad CPC, Sinclair Spectrum and many more), MOS-6502 (Atari 8bit, Apple 2, C64, BBC Micro ...), Motorola 68000 (Atari ST, Commodore Amiga, Sinclair QL, etc.), Intel 8086 (IBM PC compatibles, PC98) and ARM (Acorn Archimedes and almost all smartphones and tablets up to the modern Apple M1/M2).

For each CPU, the registers and processor flags are discussed, and the machine language instructions are listed with a brief explanation, an example of use and the effect on the CPU flags. The book is followed by two or more complete example programs for each CPU for a quick start and instructions for an example using a cross-assembler and emulator for a machine with that CPU type.

Those who own an Antonia or RAPIDUS extension in their Atari will be interested in volume 2 of the series. This book covers the CPU architectures ARM-Thumb (memory-saving ARM sub-architecture), 65816 (the "big" brother of the 6502, which is driving the Antonia and RAPIDUS extensions), 6809 (Dragon 32/64, Tandy Color Computer aka CoCo), PDP-11 (Digital Equipment PDP-11) and, somewhat more modern, RISC-V (free/open CPU Instruction Set Architecture [ISA]).

The books are intended as reference work for Keith's Youtube channel, on which hundreds of tutorial videos on the topic of

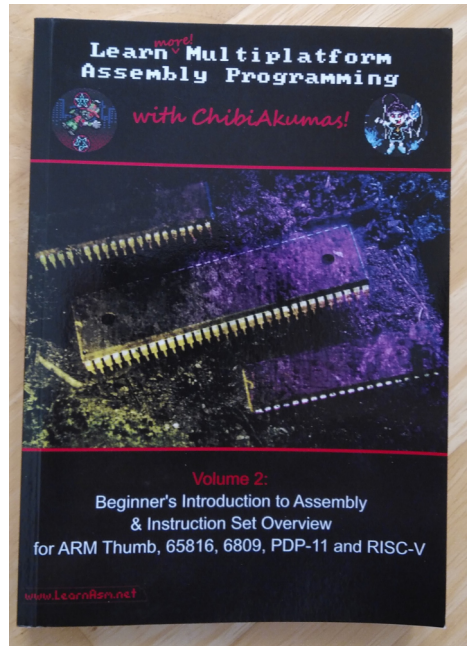


machine language programming on the most diverse home computer platforms can be found. From graphics, sprites, sound, and joystick to IO programming, this YT channel has everything a machine language programmer needs to get started on a new system. If you don't know the channel yet, you should have a look there.

Webseite: <https://learnasm.net>

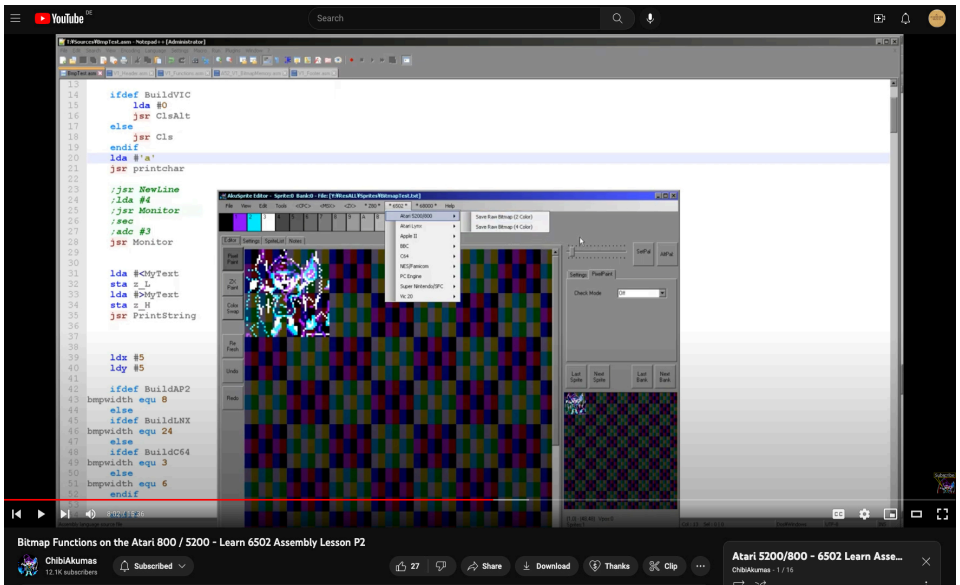
Bücher (Amazon Book-on-Demand):

- Learn Multiplatform Assembly Programming with ChibiAkumas!
<https://www.amazon.com/dp/B08W7DWZB3>
- Learn Multiplatform Assembly Programming with ChibiAkumas: Volume 2 <https://www.amazon.com/Learn-Multiplatform-Assembly-Programming-ChibiAkumas>



Youtube:

- <https://www.youtube.com/@ChibiAkumas>



COMMOTRON GAMEPAD

A report by *Markus Watterott*

Usually, I do such reports in video form, but now you may "join" my premiere of a written report - if it sounds a bit bumpy at one point or another, please forgive me ;)

As soon as a new device for our vintage/retro computers and consoles appears somewhere, I get a tingling in my fingers and feel the desire to buy it.

It was no different with the "Commotron Deluxe Wireless Gamepad Controller Turbo 2000 Super".

I read about it in the ABBUC forum and ordered a gamepad shortly after. You can choose between four different designs: Atari VCS



("wooden look" design), Amiga (based on the well-known Amiga logo), Commodore 64 design (the C64 color gradient, although the design reminds me more of the C16 sign) and Atari 2600jr design.

I chose the Atari 2600jr design.





Features mentioned are:

- up to 6 meters range
- 3 fire buttons
- auto fire at four different speeds
- 6 button mappings
- 9Pin joystick wireless adapter

The gamepad is compatible with Commodore VIC20, C64, C128, Amiga, Atari 400/800/2600/5200/7800/XE/ST and the ZX Spectrum - so the pad covers a decent range of the most popular systems at that time.

The pad is powered by two AAA batteries, which are not included - the wireless adapter does not need any additional power supply.

The pad is delivered in a small box that lists all features:

The box contains the pad, wrapped in a padded bag, the 9pin wireless adapter and a small manual.

The manual shows how to set up the pad, the mappings and the different rapid firing speeds - nothing more, nothing less, perfectly sufficient! We don't want to read stories; we want to play. ;)

Holding the pad in your hands feels expensive: nothing creaks, it feels stable, the halves of the case fit correctly on top of each other, and the buttons have a clear pressure point.

There's no experimentation with the layout of the elements. It's based on the arrangement known from other pads: Dpad on the left, the "Map" and "Auto(fire)" button in the center,

the fire buttons on the right and a separate button for "up"!

This "Up" button is incredibly convenient in some games. You don't have to steer upwards on the Dpad and interrupt another action if necessary; instead, you press the Up button and then execute a jump, for example. Great that Commotron (by the way, a German company!) thought of this nice detail!

Let's put the pad into operation: insert the two batteries into place, plug the wireless adapter into the joystick port, and turn on the computer! On the pad, you press "Auto" to turn it on and to pair it with the adapter; above the pad is a LED that shows the status: if it blinks, the pad is not connected. If it is constantly glowing, the pad is connected to the adapter - on the adapter itself, we also find a LED that behaves accordingly.

That was the whole witchcraft, all very straightforward and quickly done.

Now you can choose the button-mapping that fits your computer/console by holding down the "Map"-button and pressing the Dpad in a corresponding direction. This defines the pre-assignment of the fire buttons: VIC20/C64/C128/Atari 2600/400/800/XE/ZX Spectrum, Amiga/Atari ST, or Atari 7800. But that's only three mappings instead of the six mentioned on the package? That's right because the other three mappings are a modification of the three basic mappings: the button "Fire 1" is then swapped with "Up"; this way, you can also adjust it a bit to your own preferences.

Through the "Map" button and one of the three fire buttons, or the UP button, you can set the autofire speed: 3, 5, 8 and 13 clicks per second (CPS) - you should find the right setting for every game!

Convenient: the settings are kept even if you turn off the computer/console or disconnect the wireless adapter.

I tried the pad on the Atari 800, 2600jr and on the C64 - it works perfectly on these devices, but nothing else was to be expected.

I played some shooters, Space Invaders, Moon Patrol, and Arkanoid - after a few hours of playing, I would say: this pad is absolutely worth considering. The feel of the buttons and the Dpad is good. Of course, you have to be a friend of controlling via Dpad. Otherwise, you will have little fun with such a pad.

I could always control it precisely and never had the feeling that my actions were not executed correctly. Only in Moon Patrol on the Atari 800 did I feel that the control commands were accepted with a delay when the continuous fire was activated (13 CPS) - I didn't notice this in any other game.

Even after playing, I still perceive the pad to be of high quality. Despite the angular design, it sits well in the hands, and I never had an uncomfortable feeling holding it.

What I miss a bit is a clear feedback which mode you have selected, or whether the selection was accepted at all. Not that I ever had the feeling that something was wrong, but I like it when the device confirms my se-



lection in some way.

I can't say much about the 6m range. My room isn't big enough to test that out. What I could tell, though: my Atari 2600jr is in a compartment of a K*I*I*x shelf. My control commands were delayed depending on how I was sitting and how I held the pad. Seems like the wireless adapter doesn't like to be used too hidden. Now that's not a deal breaker, just something to be aware of.

Will I continue to use the pad in the future, or will it just join my collection of controllers/joysticks? I will definitely continue to use it in the future, maybe not for every game... but that's one of my habits: depending on the game, I also like to use a different joystick, a different controller.

Who would benefit from the pad?

Everyone who wants a gamepad that clearly follows the classic design also wants to enjoy the benefits of a gaming session without a cable. The pad is also a good and cheaper alternative to the 8bitdo-Bluetooth-Adapters with which you can use an Xbox/PS4/PS5/.../-Controller - with the combination you get clearly above the price of the Commotron-Gamepad (unless you already have it at home).

So much from my side to the "Commotron Deluxe Wireless Gamepad Controller Turbo 2000 Super" - I hope that I could help you a little bit with your consideration to buy the controller. I usually close with: I hope to hear from you, to read, that you leave a like or a hint about what I could look at next time... that's going to be tricky here, so: have fun gaming, we'll (maybe) read each other again.

TF's tinkering corner - part 04

By *Jürgen van Radecke*

Hello!

This time we will focus on one topic only: The desoldering of ICs and all other components with more than 2 or 3 pins. From various forums and, of course, emails from Atari owners who send me their defective devices or devices that need to be upgraded, I know that the topic "desoldering" is a scary one for many of them.

First of all: Of course, the general recommendation always applies: If you have difficulties identifying the right side of the soldering iron, you should leave the (de-) soldering to those with practice and experience. We don't mean this in a derogatory way, but those who already have extreme difficulties with soldering should instead leave this discipline to the professional to protect their equipment.

For all others, I hope to take away the fear of desoldering and encourage them to try it on their own. Of course, you shouldn't use a valuable Atari 1450XLD for such experiments. Still, often enough, you can find a lot of devices in your own collection where it's safer to desolder the non-socketed chips to make tests easier or to add extensions.

Preparation

First, a few tools which I consider absolutely necessary. Whoever goes cheap here and doesn't follow these recommendations (or equivalent tools), please cry quietly in the basement if it goes completely wrong...

Recommended tools - all items mentioned can easily be found via Google:

- Desoldering wire with 2mm width, e.g. Felder 27162000 or EDSYN SW 021/2,0
- Hand desoldering pump, e.g. EDSYN Soldapult DS 017
- Glass fiber pencil/glass fiber eraser, e.g. DONAU GP1
- Fine electronic wire cutter, e.g. Knipex 78 31 125
- Isopropyl alcohol (100%, technical grade (much cheaper!))
- Soft toothbrushes

If you have enough money, you can, of course, buy a desoldering station. But again, if you buy cheap, you buy twice. Don't buy cheap devices from China. According to my personal recommendation, you have to spend more than 250 Euro for a usable desoldering station (or combination, soldering and desoldering). I would strongly advise against devices under 100 Euros. Either they are useless (too weak performance), or they clog all five vias, and you are forced to clean them.

Another problem is the spare parts supply for cheap NoName products. If the vendor takes the model/series out of their catalogue, the search for new desoldering tips, cannulas, glass tubes, filter wads etc., can become an adventure. But it doesn't have to be an 1800 Euro Weller !!

Before I start, one more remark. You can argue wonderfully about the subject of desoldering (as well as soldering itself). Therefore, I do not claim to be the brightest bulb in the box, but I express here things from nearly 40 years of practice without pressure to make it for daily living. Some professionals may turn up their noses or have other ideas: Feedback is always welcome.

Let's go!

Let's start with the easy part... you are sure that the component is defective, no longer needed anyway or can be easily and cheaply repurchased, for example, DRAM chips from Micron. These chips are notorious for problems; if an Atari does not work correctly or does not start at all because of memory errors, there are very good chances that one or more Micron DRAMs are involved. These can be recognized by the product designation MT4164 or MT6264. Some also have "USA" clearly printed on them. With these DRAMs or other clearly defective components, it simply makes more sense without much experience to use the electronics string cutter mentioned above, cut through all the pins on the sides of the chip and then remove the stubs of the pins with tweezers in one hand and the soldering iron in the other. Then use the desoldering pump to remove the solder from the vias.

Recommended handling of the hand soldering pump for vias: Press the soldering iron in the center of the pad (through-hole), wait until the solder has melted, apply the desoldering pump "armed" (spring tensioned) with the other hand and then trigger - the solder will be

sucked in. Avoid a common mistake: The desoldering pump must be placed vertically, i.e. at a 90-degree angle to the board! The vacuum or suction effect should build up through the hole to pull the liquid solder out. If the tip of the desoldering pump is not placed precisely perpendicular, a large part of the air is sucked in at the sides, and it does... nothing. Or little.

Speaking of soldering irons, I've seen boards so messed up with a 300-watt DIY soldering iron and 7 mm tip that even yours truly couldn't (or wouldn't...) save these motherboards. So, a soldering iron brand, "Dad's gutter sucker" is great for just that but has nothing to do with computer electronics. For the actions mentioned here, I personally recommend a soldering tip in chisel form with max. (!) 2mm width.

In general: Don't be stingy with the temperature! When desoldering, always give a little more steam to the boiler. As a general rule, you should operate the soldering iron at 350-370 degrees Celsius for desoldering. For a wider tip, a little less. An unregulated, simple soldering iron will not be fun to desolder in the long run and will probably also cause damage, especially with large (ground) surfaces.

Important: If it does not work immediately - keep calm. First, check whether the desoldering pump is clean and can suck in properly. You must also open it regularly, remove tin residues and ensure the suction duct is free. You should also take a look at the pads. Some have a significantly larger contact surface, i.e. there is more copper on the pad - often hidden by solder mask, but eas-

ily recognizable. Such surfaces, mostly ground surfaces, must be heated a little longer. Adding some solder before desoldering such a pad can also be advantageous, to heat it further and then suck off the whole pile with the desoldering pump. Here you have to practice a bit the change of tools (i.e. solder vs. desoldering pump).

When desoldering chips, which you want to have desoldered as intact as possible, I would never add more solder when desoldering with the desoldering station. This leads to faster clogging of the desoldering tip and exhaust channels. Many manufacturers include a 1mm desoldering tip (the inner "suction tube" diameter). For our applications on old Ataris etc., with somewhat rough, old board technology and a lot of space between the pins, you should reach for the 1.2 or 1.3mm desoldering tip, if available. It facilitates the whole process immensely!

Desoldering by hand is different here. I would always add some fresh solder. At this point, an important hint: use leaded solder if possible! All our old computers and consoles are 100% soldered with leaded solder, and it can cause problems if lead-free solder is mixed with leaded solder. Significant differences exist in the alloys, which are available in high numbers with lead-free solder. Unfortunately, I can't give a recommendation here because I generally don't use lead-free solder for repairing old hardware. Only new boards are processed by me with lead-free solder. My experiences in the retro area with lead-free solder were not so good...

If there is a lot of dirt around the

pins, you should first take a soft toothbrush or similar, dip it in isopropyl alcohol and brush the pin rows to be desoldered. The alcohol will dissolve any residues of the flux and corresponding residues. Let it dry like that; it won't take long. If there is a lot of flux residue, repeat the procedure. After re-tinning the pads, heat one at a time and vacuum with the desoldering pump.

One of the most important tips - whether by machine or by hand: Don't rush! If it does not work at first, go to the next pin. Finally, do a visual check, and if necessary, fill the pins that are not entirely free with solder and vacuum again. It is perfectly okay to heat the pin for 2-3 seconds. No chip will die from that. More problematic is to try too many times in a row without allowing the pad, pin and chip to cool down. Doing so leads primarily to a torn pad. Defective chips by overheating are rarely the case with those old things. I have fetched innumerable chips with the heat gun from boards, which served 99.9% afterwards perfectly their service.

Again: Large (ground) areas need a little more time and, in very tough cases, also more temperature (partly in the audio or video area or when desoldering jacks of any kind).

Removing the chip from the board

This part is actually where the desoldering accidents happen. And mostly due to sheer impatience. Yes, there are also definite differences in the qualities of PCBs, so the general perception is that XE motherboards are much worse than XL motherboards. This difference is only true to a certain extent. There are indeed XE

boards where the traces are less well bonded to the carrier (FR4) and, therefore, more likely to detach. But here applies: If you proceed calmly, do not rush, and above all: do not use force (!), you can get almost any chip out of an XE motherboard without any problems and without causing damage to the pads or traces.

After you have removed the solder from all pins, you have to do a visual inspection. Put a light source behind the board and look through it. Each of the holes through which a pin passes must be clearly free, and light must be able to pass through.

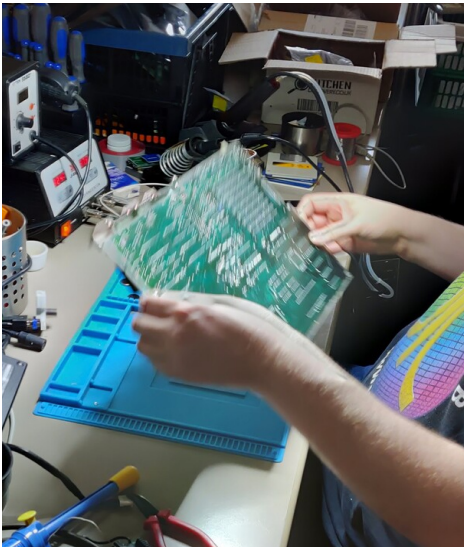
It may be wiggled!

My "best practice" is now to hold the chip firmly with both thumbs and forefingers and to press upwards (left) and downwards (right) in opposite directions. When doing this, only make vertical movements and of course alternate. This procedure is straightforward with 40-pin chips. With 24 or 28 pins, you need some

patience. With smaller and narrower chips, I would bravely grab the center with combination/electric pliers and make equally forceful movements up left and down right and then alternate. This may cause the pins to be squeezed and distorted, but this is easy to fix after the fact and better than risking damage to the chip housing.

If the chip has been properly desoldered, you can feel it is easy to get it off. Now you can take a flat, wide screwdriver and carefully lift the chip a little on the left and right sides. At first, only half a millimeter! Pay attention to the pins - if one of them bends at the shoulder of the pin, it is still firmly soldered - stop, desolder again and see if the pin moves freely. If necessary, you can also check this beforehand with tweezers or similar from the underside of the board. Or you can check from the component side if each pin can be moved within the vias (the "hole"). If so, you can continue to move the chip up alternately left and right by gently levering with the flat, wide screwdriver. If you have a "chip puller" (a pair of pliers for removing chips from sockets), you only need to lever until the grippers of the pliers fit under the chips. However, you have more feeling if you do it manually with a screwdriver. I have had better experiences with it - you notice a possibly still stuck pin much sooner than with the chip puller and reduce the danger of a torn-off pad.

If the pad still sticks to the pin while lifting the chip, you can carefully remove the pad with the soldering iron from the pin. Of course, heat the pin well before. Now continue the desoldering/removal; the pad comes after that!



When the chip is removed, check all pads and tracks. If one or two pads have come loose when levering out the chip but are still attached to the traces, it is usually sufficient to carefully bring them back to the position above the through-hole plating. It is then recommended to solder in a socket instead of new chips without sockets. Here I advise using precision sockets, especially if the pads and traces are damaged.

Insert the new socket, hold it in place and solder two pins per row to prevent the socket from falling out. Of course, use good pads/vias for this. Suppose there is a torn-off pad on the upper side (component side). In that case, it is a good idea to try to put the thin pin of the socket (therefore, precision socket!) through the detached pad with the ring inside - this ensures electrical contact and in most cases, the pad and the circuit path are held in place so that no further gluing etc. is necessary.

Now solder the socket and check for short circuits to neighboring pins, especially where the pad may have been torn off from the PCB carrier. Test not only with the pins on the same row to the left and to the right, but also with 3-4 pins in the "perimeter" of the formerly defective pad on the opposite row - because very often traces are routed between two pin rows.

End.

So, a lot of text. It doesn't make much sense to include many small pictures here, so I didn't include any for the magazine colleagues. But... "I prepared something", freely after Mr. Pütz - and put some pictures and a small video on my web page. Then also, the above-mentioned "wobble" at the chip will be more evident.

Link: <https://www.van-radecke.de/abbuc/152/entl.html>

Good luck,, Jürgen (tfhh)



Preservation with Kryoflux

Easy Modification of the Teac drive to read the backside of disks

By Fred Meijer

For a couple of years I have been trying to help various preservation projects like A8preservation and Atari-wiki. Because of my large collection of original Atari software, I am able to help those projects with some hard to find titles.

I started the easy way, digitizing cassette tapes and converting them to cas-files. I call preserving tapes "easy" because you do not need a lot of knowledge and equipment to do this. Lots of people buy expensive cassette decks and audio converters, but a simple and cheap USB cassette player, which connects to a PC or Mac, will do the job fine. You only need some audio recording software to create Wav-files and the free program Audacity can handle this perfectly. To convert the Wav-files to Cas-files another free program called A8cas can be used.

More information about archiving tapes with Audacity and A8cas can be found on Atarinside:
<https://www.atarinside.com/blog/index.php/tutorials/tutorial-how-to-dump-an-old-atari-cassettetape-to-a-cas-or-wav-file/>

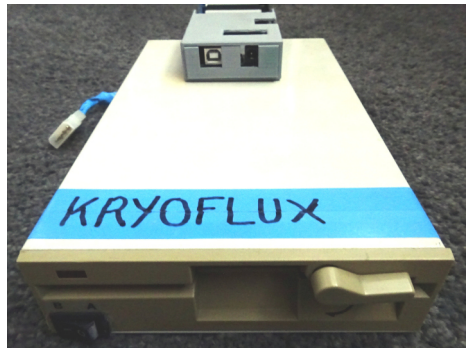
Preserving disks is something different. When you want to preserve a disk including all disk protection options on a PC, you will need an interface/usb disk controller and a specific 5.25 inch disk-drive. Various interfaces are available like Kryoflux, Catweasel and Supercard Pro.

I chose Kryoflux, because most Atari preservation projects are already using it. So this would give me the benefit that I could get help from the people working for those projects (thanks *Farb* and *DjayBee!*). Kryoflux is not specifically made for preserving Atari disks, it can preserve almost any retro computer format including 3.5 and 8 inch disks.

Buying the Kryoflux interface was not cheap, the cheapest version is available for € 105. Luckily I bought one before Brexit, so I did not have to pay import duties and VAT.

Besides the interface a compatible 5.25 inch disk-drive is needed. Sadly only a small number of drives are reported to work correctly in combination with Kryoflux. It can be quite hard to find a second hand compatible drive, but luckily a Teac FD-55GFR drive was mounted in a third party external Atari ST disk-drive I had lying around.

With Kryoflux and the Teac drive I was able to preserve a lot of Atari disks, though one problem still existed: reading the backside of the disk was not possible. The Teac drive is a



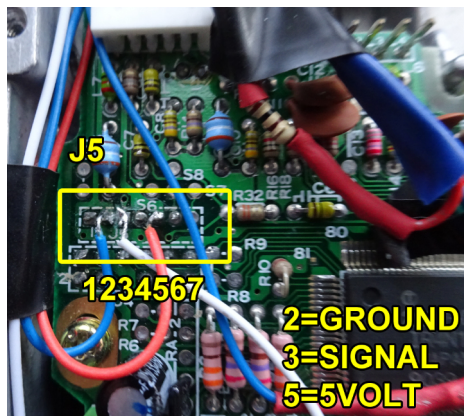
PC compatible drive with two read/write heads, one for the front side and one for the backside. And that is a problem, as flipping the disk would result render it unreadable.

Why? Because the index hole of the disk is used for timing and to recognize if a disk is inserted. So when the disk is flipped the index hole is not in the right place. Maybe some of you will think that this problem sounds familiar and yes it is. It is the same problem the Atari XF551 has, as that drive also uses a double headed PC compatible 5.25 inch disk drive.

There is a solution to preserve the backside of disks with Kryoflux. This solution is provided by the company who designed the Kryoflux, but it is a very difficult one and needs physical modifications to the drive mechanism. The advantage of their modification is that the disk does not have to be flipped, both sides of the disk are read in one go.

I watched some videos on Youtube explaining these modifications, but I quickly decided that my skills to do these modifications were not good enough.

So back to the XF551 drive. This was

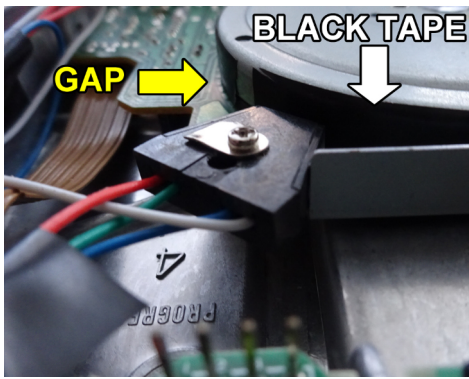


my first Atari 8-bit disk-drive and this drive had the same problem. Back in the day I solved that problem by buying the "XF551 Indexloch abfrage" by EDV in Germany. This simple modification placed a PCB with a sensor next to the flywheel of the drive. The side of the flywheel had to be painted black, except for one small spot of a few millimeters. As the flywheel spins at the same speed as the disk itself, the sensor spots the unpainted part and sends a pulse. So this modification simulates the index hole.

When I remembered doing this modification on my XF551, I was curious to know if someone else has thought of using the same trick for the Teac drive in combination with Kryoflux. A quick Google search revealed that our Commodore 64 friends of the *Verein zum Erhalt klassischer Computer e.V.* had the same idea many years ago and have successfully modified the Teac drive.

After reading about what they actually did, I decided to give it a go. To do this, only a few components are needed: an OPTEK OPB743 optical sensor, a resistor of 100 Ohms, some small wires, black insulation tape and a switch.

First you have to stick the black insulation tape to the side of the flywheel and make sure you leave a gap of approximately 5 millimeters. Solder the ground wire of the sensor to pin J5-2 and solder the resistor and the switch to the 5v wire. This 5v wire must be soldered to pin J5-5. The last wire that has to be soldered is the pulse wire and this one must be soldered to pin J5-3. Now the sensor must be attached to the PCB near the fly-wheel.



ate the existing index hole sensor, so when the front side of the disk is inserted the modification must be turned off with the switch. Otherwise the drive will receive two pulses and will not work correctly. When you flip the disk the modification must be active as the existing index hole sensor will not send pulses.

The original instructions state that the sensor can be attached to an existing hole of the PCB, but that did not work for me. My tip is to insert the backside of a disk, let the drive spin and move the sensor by hand slowly. When the drive receives the correct pulses stick the sensor to that place on the PCB. It is advised to do this in a partly darkened room, so the sensor does not respond to ambient light.

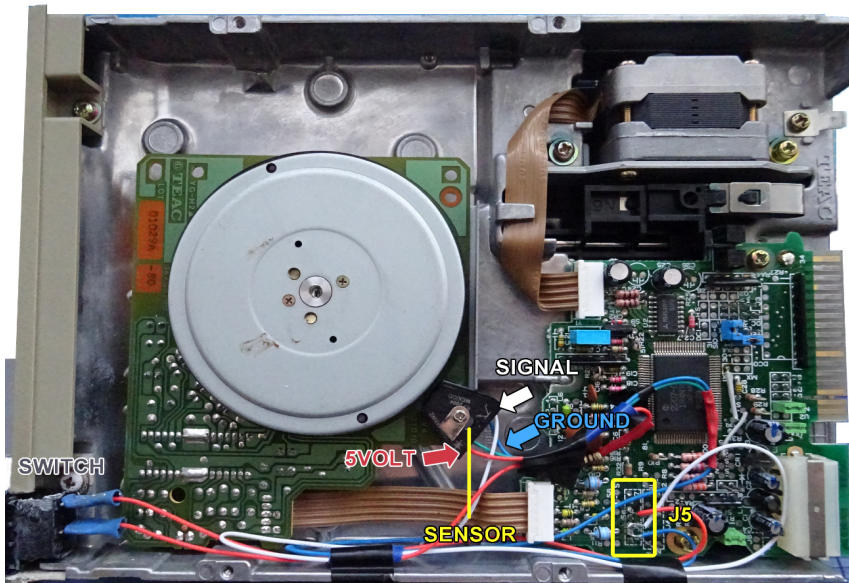
Please be aware that this modification is not officially approved by Kryoflux. The preservation purists will not use this kind of modification, but as most Atari disk-drives do not use index hole pulses for reading or writing to a disk, I personally think this modification will preserve Atari 8-bit disks correctly.

This modification does not deactiv-

Modifying the Teac drive with these instructions is at your own risk.

More information about this modification and similar modifications can be found at:

http://cowlark.com/fluxengine/doc/Index_sensor_mod_FDD_1.1.pdf



BASIC-10Liner-Contest

Games for Atari in this year's BASIC-10Liner contest

by *Stefan Höltgen*

This spring was the twelfth anniversary of the BASIC-10Liner contest, which was conceived and mainly supervised by ABBU colleague Gunnar Kanold. It all started with a competition for short BASIC programs for Atari's 8-bit systems. Over the years more and more platforms have been added, so that the submissions now range from the popular 8-bit systems from Commodore, Amstrad, MSX and Sinclair to the more exotic ones from Radio Shack, Enterprise, Videoton, Mattel and others.

Atari programs, however, are still represented - and in considerable numbers. Below are five games submitted for this platform. There were, of course, submissions in other software genres, but these will not be considered here.

The programs are tested on an Atari 800 XL with FujiNet extension and Konix Speedking joystick or Atari CX-30 paddles (for "Coordinator"). Since the games as such are the focus, but their development state (10 lines of BASIC) is at least as exciting, this is also covered in the tests.

Run, Mario, run!

We remember that the Super Mario Bros. clone, released in 2019 as a homebrew for the Commodore 64, aroused the wrath of Nintendo's legal department after only four

days, so much so that some portals preferred to remove the download from their sites so that the Japanese company could continue to be the only one to "capitalise" on this one of its three original ideas. So maybe



when we play "Jumpman" by Eric Carr, as a footnote, that kind of "suspense" will also come up: How long do you think it will be before Nintendo says something? The fast-paced gameplay shouldn't leave much time for such thoughts, though: The plumber character we control, in the style of the mobile game "Canabalt", chases around a landscape made up of graphic elements from the "Mario" game. We can make him jump from platform to platform by simply pressing the fire button. Meanwhile, the side-scrolling speeds up and the familiar Mario theme plays in the background. You can only hear it in its entirety if you keep your character in the game long enough... which I haven't managed to do yet, given the difficult and sometimes impossible acrobatics.

"Jumpman" was developed by Eric Carr in FastBASIC 3.6 and entered in the EXTREM-256 category. Carr programmed the game for an NTSC system. Since this colour system (and the line voltage) is known to run at 60 instead of 50 Hertz, playing the game in PAL is 17% slower. This would provide some relief in Jumpman... if there wasn't also an adapted PAL version for users in old Europe. But even in this version, the game's enjoyment suffers considerably from the difficulty level. Nevertheless, the adaptation of the 12x12 pixel tiles from the original game graphics, the super-fluid scrolling (this is interpreted BASIC!) and, of course, the courage to mess with Nintendo are particularly impressive in 'Jumpman'.

Beetle Parade

"Beetles" is a car racing game in the style of the arcade game Speed Race (Midway 1974). You drive a VW Beetle in overhead view (hence the title of the game) through a parade of other cars (also Beetles) that you must not ram. A clock counts down 10 seconds, during which you have to overtake 20 cars. Each collision slows down your own car, costing you precious time, and each car you overtake adds a point to your score. If you manage to pass all 20 cars within 10 seconds, the time you saved will be added to your score several times and the countdown will start again. You can speed up or slow down your own car. With each successfully completed lap, the difficulty increases by narrowing the road limits. This not only makes the traffic even heavier, but also increases the risk of hitting the crash barriers. If other cars get too close, you can honk your horn by pressing

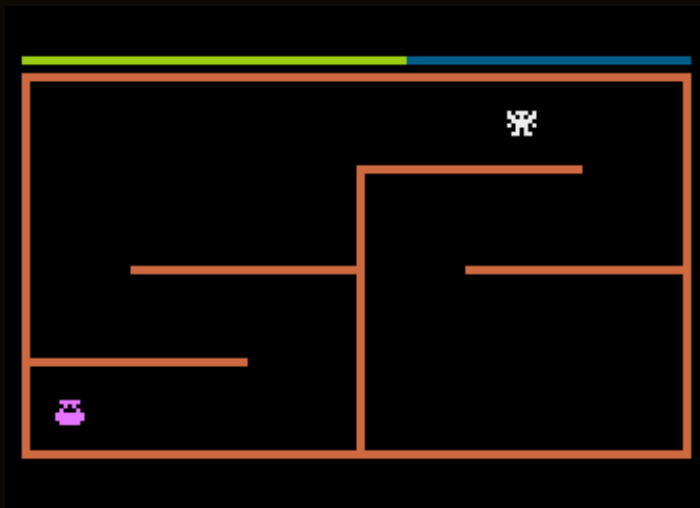
the fire button... but will that get them the respect they deserve? And honking too much doesn't seem to be entirely harmless either ...

"Beetles by Victor Parada is an incredibly addictive single-player game that can quickly become a high-score competition at parties. The player-missile graphics, which bring three different coloured enemy beetles onto the screen in addition to your own white beetle, the engine sound and the ticking noise when you successfully overtake are absolutely professional. Parada developed the game in FastBASIC 4.6 (with the help of some assembler-like commands) and entered it in the PUR-120 category, where it promptly won first prize.



Paddling through the lava

"Help the little elf find the eleven potions needed to freeze the lava and escape alive. - A good story was an important marketing aspect, especially for the minimalist line-art games of the 1970s, to enrich the crude aesthetic with the player's imagination. (Think of "Adventure" for the VCS!) In "Coordinator" we are dealing with equally crude graphics. You control an elf who must escape from round after round of increasingly complex line-graphic mazes to reach a jar. The game is



played against time (represented by the changing colour bar at the top of the screen and the annoying ticking) and against the controls. You use the paddles (on the original Atari) to move the character horizontally with one paddle and vertically with the other. However, the character's reaction speed is slower than that of the paddle inputs. This rather fiddly control is a little reminiscent of Etch-a-Sketch, except that here you have to avoid touching the edge of the screen or the lava flows at all costs. From level to level, the maze's structure gets more and more complicated, and the time you have to reach the glass gets shorter and shorter.

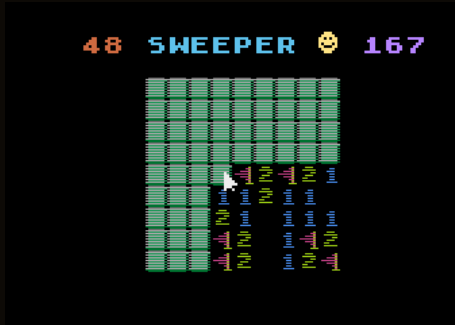
"Coordinator" is programmed in Atari BASIC and was submitted in the PUR-80 category. This would make the code easy to read even for less experienced BASIC programmers - if the author had included it as a text file with his submission. As it is, the program listing can only be viewed on the Atari screen or in an emulator. Speaking of which: If you play Coordinator in an emulator, you

can use the joystick instead of the paddles. In this case, however, the joystick directions are not the ones in which the character moves, which makes the game quite funny in a way.

Window cleaning with dynamite

How much precious work time was wasted playing 'Mine Sweeper' that came with the Windows OS? Well, with "Sweeper", programmed in FastBASIC by Victor Parada, you can now do the same on the Atari. (Although of course there are already several versions of "Mine Sweeper" for this platform). With three levels of difficulty - Easy, Cool and Hard - and three different sized minefields on the screen, you have to carefully click your way forward with the joystick to uncover as many fields as possible that are free of mines, or (by holding down the joystick) mark them with a white or red flag..... The dangerous proximity of an explosive device is indicated by the familiar 1-2-3 numbers. Parada's game puts a "mouse pointer" on the screen, which you move across the

game grid with the joystick and click on a square with the fire button. The graphics alone, along with the colour scheme, are reminiscent of the Windows version.



An interesting fact is the author's background story on the game's creation. The ideas for the graphic realisation came from various projects from earlier times, in which he experimented with the redefinition of fonts. "Compared to the other games in the competition, Sweeper is a rather quiet game. Even the sound is emphatically quiet - until you accidentally click on a minefield.



In space nobody hears you whistle

The last game reviewed here is by Eric Carr. In Star Runner you steer a small spaceship through waves of asteroid swarms. You can move left or right to avoid the different sized (and coloured) boulders; you can also shoot the smaller ones. Holding down the fire button will get you through the first few waves of the vertical scroller in relative comfort, until the density of rocks becomes so great that shooting alone won't get you anywhere. As with Parada's Beetles, the game becomes almost addictive in the long run: you want to know how far you can get. The great animation of the P/Ms, the



scrolling starfield and especially the sound effects make this game a little gem. The fact that Carr managed to implement an interrupt-controlled two-part background music into the BASIC game is a real masterstroke, which could probably only be realised with the assembler-like abilities of FastBASIC (version 4.6). In the category EXTREM-256 the author competes with "Star Runner", at best with himself.

Night Knight on the Atari-8-Bit

A report by *Lars Langhans*

How it all started...

After Pacmen-Evolution I wanted to write another game.

In March 2022, while browsing the AtariAge forum about Prince of Persia, I came across the side comment of user Level42, who said that there was a new jump 'n' run called Night Knight on the MSX computer, which would also fit well on the 8-bit Atari (A8).

[Then I watched Marco Lazzeri's full gameplay version on Youtube (<http://youtu.be/CpI48qqvEI>), once and then again. Thanks to him.

User TIX wants to make it for the Atari 7800, but in my opinion an A7800 is not the same as an A8. They have the same 6502 Sally CPU, but the MARIA graphics chip is much more powerful. On the other hand, an A7800 only has 4 KB of RAM.

I contacted the author of Night Knight, Juan J. Martinez, because I wanted to avoid rights issues. He



[The MSX version by Juan J. Martinez <https://www.usebox.net/jjm/night-knight/>]

gave me his approval for the game and asked me to stay as close to the original as possible when using the graphics, characters and story. He

would also like to be credited as the original author.

So the challenge would be to create a game with 80 levels, lots of sprites - at least far more than the Atari normally has - and a very nice melody playing in the background, along with the normal sounds. My requirements are: It should fit into the 62 KB RAM of a normal A8 and be written in my high level language.

Challenge accepted!

I want to implement the game for the Atari 8-bit, without VBXE. No byte should have to be loaded afterwards. Thanks to Corona I had nothing else to do, so I started in April 2022, shortly before Easter, with some tests and a first implementation. The few enemies in the first levels only move horizontally, so a few displaylist interrupts are enough.

Since Thomas aka 8bitjunkie hasn't released his game editor yet, I had to use my simple editor on the Atari, which has some limitations, but thanks to the multi-block copy & paste support, the first levels were assembled very quickly. The editor can place multiple (I think well over 100) up to 4x4 byte blocks arbitrarily.

For this game, I've used my self-written Algol/Action-like language again.

The player's character, I call him Dude, officially he is called Sir Bernard, should be at least two-coloured, the other creatures use only one colour. This makes the task a bit easier.

The tasks

- 80 levels of 40x22 bytes each
- only 62 KB RAM (2 KB are used by the custom chips, there is no way to go below that)
- more than four sprites
- lots of character data
- lifts
- Sounds and background music

After about a week, a first demo was ready. Animated skeletons walking bluntly from left to right and the guy who could walk around at will. OK, I thought, the rest can't be that difficult, so I continued. As the levels progressed, I noticed that the enemies were also moving vertically or even diagonally across the screen, so I needed something to better manage the four players on the Atari.

Shanti77/tebe programmed something for this, which I adapted for single sprites. Instead of always using two players, which can be three-coloured, I use single-coloured players, so that up to four sprites can be displayed side by side without flickering. How I did this in detail I have already shown in an article in the forum. Using the multi-sprite routines is now so simple that only four bytes need to be adjusted to say where what should be displayed and how; position (X, Y), colour and the sprite data. The sprite data is read and displayed indirectly from a table.

The sprite code requires a DLI in every eighth row of the screen. It

works great, it can easily display 8-16 sprites, and it only flickers when more than four sprites appear in a row. In addition, the multiplexer routine takes care of everything necessary for the display.

Tip: On old cathode ray tube TVs the flickering is not so noticeable, just because of the interlace. However, as CRT televisions are no longer so common, the Altirra emulator can easily be used to recreate the effect of the old tubes. Go to Configure System -> Outputs -> Video and switch on frame blending. The flickering is almost gone.

Next challenge: creating the 80 levels

I had written a small editor for Pacmen to create fonts and 40x22 text-pixel playfields. With this editor I was able to create the playfields quite fast, but unfortunately the unpacked playfield data takes about 68 KB. So I used Pacmen's packing program. But it was still not possible to pack all 80 playfields into memory. A small feature update was programmed for the packer, which always takes two bytes and combines them into one byte. The resulting new bytes (pointers to two bytes) were stored in a simple table, and there were only 34 KB of playfield data plus this small table to pack. Then I modified the packer to apply the Huffman algorithm once for all the game data instead of for each level. There you go, the 80 levels fit into about 9.5 KB of RAM. The Huffman algorithm needs a fairly large table to recover the data, and it saves more to have this Huffman table only once instead of 80 much smaller tables. 9.5 KB is ideal for memory from \$D800 to just

before \$FFFA. I also used this new packer in Pacmen, and the 299 sectors that Pacmen took up became only 278 sectors on an SD disc. Admittedly, it still doesn't fit the 80 playfields compressed into memory. I use three different overlays for the screen borders and backgrounds. Unpack the overlay for each level, unpack the playfield, put them together and you have a finished playfield. The data for the objects and creatures is also stored in the playfield.

The levels

There are always ten levels of a certain theme. After that, the appearance changes. Only the font had to be changed. The font in the middle, which is shown from time to time when the level is started or finished, is Graphics 0. On the left and right you see PMG-Graphics to make the picture look more coherent.

64 KB RAM

The Atari's 64 KB should be fully used. But 2 KB are only the custom chips, the RAM underneath is not accessible without additional hardware; so only 62 KB.

To use as much memory as possible, a "Loading..." is displayed right at the beginning, the few bytes are in the stack starting at \$129 and the display list is in the printer buffer starting at \$3C0. So you can load a program from \$2000 to \$BDFF from Atari-DOS without any problems. The last half kilobyte from \$BE00 is used for the font when the OS is turned off. Why only \$129 in the stack? This makes the game Hias-OS compatible. The first thing to load is

the data that should be in RAM under the OS. These are the compressed playfields, the fonts and other graphics, and the short routine to unpack the compressed playfield data.

The main program is loaded from memory address \$2000 once the data has been copied under the operating system.

Since the DOS is no longer needed, the player/rocket graphics can also be placed directly in the DOS, starting at memory location \$1300 (PmBase=\$1000). The screen for the playfields is also in the DOS memory area, starting at location \$1C00. To avoid a horrible crash after a reset because the DOS has been overwritten, simply set COLDST to != 0 and press the RESET button to cause a cold start. You could also make the game reset-safe, but I

think that's unfair to the old hardware.

Several new optimisations were implemented in the compiler, otherwise the 62 KB of the Atari 8-bit would not have been enough. One or two bugs in the compiler were discovered and fixed.

The start screen

This is where you end up after loading or by pressing ESCAPE in the game.

The Night Knight title is twice as wide and twice as high compared to the original, so it is a bit fat, but there are no colourful high-res modes in the Atari, so only Graphics 15 or like here Graphics 7 remains.

With SELECT you can enter a password; use the joystick and fire,



The C64-Port by Aris <https://aris-soft.itch.io/night-knight>

have a keyboard, you can also enter the password using the letters and confirm with ENTER.

The OPTION key can be used to adjust the volume of the background music in 25% increments, in case someone is annoyed by the background music.

Press START or the FIRE button to start the game.

The game

In each level, all the floor tiles have to be coloured at least once, simply by letting the Dude run over them. Only then will the key appear somewhere. Once you have collected the key, you can enter the next level through the open door. There are 80 levels altogether. Running over a floor tile scores 10 points. There is a time limit of about 60 seconds to complete a level. After that you lose one life and start again from the beginning. If the Dude touches a creature, he loses a life, but the time is not reset. So you have to hurry. If you have coloured all the floor tiles, collected the key and left the level through the door before time runs out, you will receive 10 points for every second you have left.

Once you have completed all 80 levels, you will receive 100 points for each level completed. This is only good for the high score.

The game can be paused at any time by pressing the space bar, a password will appear. This has to be written down the old-fashioned way. The password can be entered by pressing SELECT in the start menu. If it is correct, you will be returned to

that level. The game can be aborted by pressing the ESCAPE key, which will take you back to the menu as usual.

Objects

There are different objects that can appear anywhere on the screen. Each object has a different function.

- The hourglass resets the time to 60 seconds, which can be very useful when time is short.
- The little clock stops all enemies and time for about five seconds, but be careful, you are not immune to the enemies.
- The shield protects the Dude from being hit once and then gives him immunity for a few seconds.
- The key opens the door, but it will not appear until all the floor tiles have been recoloured.
- A gem gives an extra 500 points.

These objects are always 2x2 characters from the character set. They are normally displayed in white. Only if an object is on the same level as the door will it be displayed in brown, sorry about that. All objects will only be visible for about ten seconds before disappearing. Only the key will remain until you pick it up.

Creatures

The different creatures move around the board in different ways. A touch always results in the loss of a player's life.

- the undead skeletons just run back and forth on the floor
- the Dark Knight falls down at the edges of levels and jumps up again at some point, so be careful when you are above him
- The Archer also runs around on the floor, but shoots arrows when the Dude is at his level and the Archer is looking in his direction.
- The Werewolf will walk back and forth, but depending on his mood, will sometimes jump very quickly to the Dude's level.
- The Wizard walks around, and from time to time he manipulates the coloured areas so that the Dude has to walk over them again; once the Key is collected, this doesn't happen anymore.
- Ghosts will float through the area and will not be stopped by walls, only floor tiles.

- Dracula walks around, but likes to turn into a bat and fly around the room.
- the cat runs back and forth, but likes to teleport across floors; it also falls down on edges

Making all this work was quite tricky. The positions where the creatures and objects appear are stored in the playfield data.

Since the 8-bit Atari has no hires sprites, the creatures are wider than in the original. Some levels had to be adjusted in this respect to keep them playable.

AtariAge user TIX provided some narrower figures that he plans to use for the A7800 port. I want to see if I can make an extra version with these figures.

Sprites

I had dedicated a separate article to sprites, so here is just this: Sprites can be placed anywhere on the screen. Even more than four side by



side are possible. It is only when more than four sprites are displayed side by side that they start to flicker. Otherwise the sprites will not flicker. The first sprite is a bit of a special case, it doesn't flicker at all. The Dude uses it for the light colour. The algorithm will arbitrarily cycle through the other sprites if more than four are to be displayed side by side. This made collision detection a bit more complicated. It uses the built-in hardware to detect collisions, but you don't know which sprite it was. But a small loop helps to detect the collision. So don't be surprised if a touch doesn't result in immediate death.

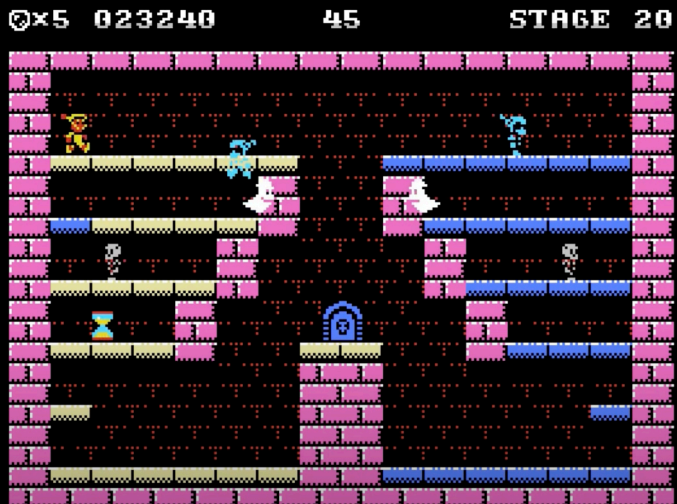
Character data

Each character in the game is about 16 lines high, occupying 16 bytes. The movement animations consist of only three different frames, while the animation itself has four frames. One frame is duplicated. All the images exist for running left and right. There is also a list where the animation itself is stored, this also takes ~13 bytes per direction. So it takes about $6 * 16 + 2 * 13$ bytes per figure. Additionally, each figure has to be stored in the @all_sprite_data_table[] array so that the multiplexer can find it later. The multiplexer only needs to know which figure to draw, where to draw it and what colour to use.

```
byte array @skl_to_left_1[16] = [
%.....,
%..1111.,
%.1111.1.,
%..1.111.,
%..1.111.,
%.1.111.,
%.111....,
%....1.,
%....11.,
%.11.1.,
%..1.....,
%....1.,
%..1....1,
%....11.1,
%111....1,
%.....,
1
```

Example of what a character looks like in source code, the compiler also understands binary encoding, the dots are for the 0; one advantage of writing something like this yourself is that there are features that no one else has.

There are Skeleton, Archer, Arrows, Dark Knight, Werewolf, Wizard, Ghosts, Dracula, Bat, Cat,



Wandelanimation and the Dude, which counts double because it has two colours.

There are about 104 objects in the multiplexer array, plus 20 animation lists. All in all, the character data takes up just over two kilobytes.

The changing animation, the blossoming circle, was created with the mini-animation tool Piskel; thanks again for the great tool.

Elevator

The elevator is used to bridge larger gaps that the Dude can't just jump over. The elevator is twelve pixels wide, but consists of either four bytes side by side if it moves horizontally, or six bytes if it moves vertically. It is a character-set graphic and is always reset accordingly, depending on the elevator's current position. The ugly jerking of the C64 version should be avoided. In the original, the lifts are almost always brown, but since the Atari doesn't have a colour map like the C64, where each 8x8 cell can be filled with any colour, only white was possible. In some levels the lifts are also brown.

Music

The RMT is too thick and the code too opaque for my liking, so I had already taken the envelope player from Peter Finzel's Hexenküche for Pacmen and did a bit of work on it. Currently it is a mixture of the old BASIC program Musiccreator by Johannes Plenio and Peter Finzel's envelope player. It plays bars, each bar consists of up to four shapes and each shape can hold up to 16 notes. In terms of time, one shape

corresponds to one full note, two half notes, four quarter notes, up to 16 sixteenth notes, but always exactly one full note. The Atari 8-bit also has different distortions. 0, 2, 4, 8 for different noises, 10 for clear tones and 12 for different basses. 6 and 14 are doubles. For high hat sounds, distortion 8 is a good choice. Some of these distortions have corresponding notes stored for the AUDF values. This allows you to program the music more like notes are being played.

```
?shape_31_17
```

```
.byte HUELL,$21 ; normal  
.byte F3,Q  
.byte C3,Q  
.byte E3,Q  
.byte C3,Q  
.byte ENDE
```

Extract of a form. F3 is the note F in octave 3, the Q(quarter) is its length, depending on the speed set. The player is responsible for the correct translation into AUDF values. The AUDC value comes from the envelope. Unfortunately, you have to make sure that the distortion matches the note, otherwise you won't hear anything.

There is a note length for each note; full, half, quarter, eighth and sixteenth are available. In addition, a shape cannot be overfilled. So three quarter notes are ok, but five quarter notes are not, then the player gets confused. Any envelope can be placed before any note, but an envelope should be placed before the first note to be played. Envelopes allow you to adjust the distortion and volume of a note every 1/50th of a second. It can also be used to change the pitch of a note, for example to emulate

vibrations. I used this to create the music for Night Knight. It almost always uses only three of the four voices of the Atari. One voice is used for the sounds. This music player only needs the addresses 203-211 in the zero page. Otherwise, the pure player takes up ~1.2 KB, the note tables the same amount and the pure shapes/envelopes/bars together ~2.6 KB. So I end up with just under 5 KB for the music and all the other sounds.

Thanks to user *pps* I have a detection routine for the stereo pokey. So if the Atari has a stereo pokey installed, it will use it. The player has been reworked to play stereo sound. This makes the sound on stereo systems even richer. Because the bass is distorted using Distortion 12 (4-bit polycounter), it sounds very interesting in stereo, because the

bass is always slightly different.

If you are not used to having music playing in the background on your Atari all the time, you can turn it down or off completely in the Start menu.

PAL or NTSC

I want PAL *and* NTSC!

On the A8, the two TV standards produce slightly different colours. If the upper nibble is not 0, add \$10 to the PAL colour to make it look similar on NTSC. Thanks to Janko aka Kveldulfur and *pps* for the tip.

The game recognises if it is connected to PAL or NTSC and adjusts accordingly. One second has 60 frames, the music is adjusted, an eighth note now uses eight frames





instead of seven.

A little tip: NTSC gives you more time because the Dude runs a little faster. It also makes the game look smoother. It's even more fun.

Can it be smaller?

The current version of the game, which is only partially packed, has 437 sectors. Thanks to CharlieChaplin for his helpful support with the SuperPacker with Exomizer the size could be reduced to 289 sectors. Thanks also to the developers of the packer.

Thanks to all

If you have read this far, you will have noticed that this has actually become a community project. I programmed it, but thanks to everyone who helped with tips, ideas

and published sources to bring the project to completion.

Let's get started

Now we have to wait until the Software Contest 2023 is over, but then... get your joystick out and go! But be careful! It's not that easy.

Lars in 2023

(Screenshots in this article from the MSX and C64 versions of Night Knight. Knight Night for the Atari 8bit takes part in the ABBUC 2023 software competition and will be available to ABBUC members with magazine disk 154 in September 2023. The game will be available to the general public in October 2023)

The riddles of Montezuma

In "Zdendazuma," Zdeněk Zubr sends Panama Joe once again into the Aztec pyramid.

Stefan Höltgen

"Montezuma's Revenge" is not only one of the most unpopular travel diseases, but also one of the most popular platformer games of the 80s, which was released in 1983 for several 8-bit home computers and game consoles. The title has been remembered fondly over the decades to the point that it has even remained marketable, as evidenced by an official (and unofficial) adaptations for the PC (first in 1997 as a 3D first-person adventure) and, on its 30th anniversary, re-released by its creator Robert Jaeger as a modern and retro variant for mobile devices. To coincide with the 40th birthday of Panama Joe (as the

game's little hero is called), Jaeger has released a crowd-funded variant for the Nintendo NES. At the same time, "Zdendazuma", a homebrew sequel for Atari's eight-bitter by Czech scener Zdeněk Zubr (published, among others, in the disk magazine FLOP No. 66 and on the last ABBUC magazine disk), is also released.

Zubr's game is called "Zdendazuma", a reminder of the title-giving Aztec king Montezuma II (on whom Cortéz cut his teeth in the 16th century and because of whom his conquistadores shit their pants) as well as of the first name of the programmer. And the memory of Jaeger's game is also evoked: numerous graphic elements of the level design and some sounds are taken directly from the original by Zubr. In his game, however, each



screen is a level of its own and accordingly presents the player with more or less tricky puzzles and daredevil joystick stunts. A clear difference to the original is already

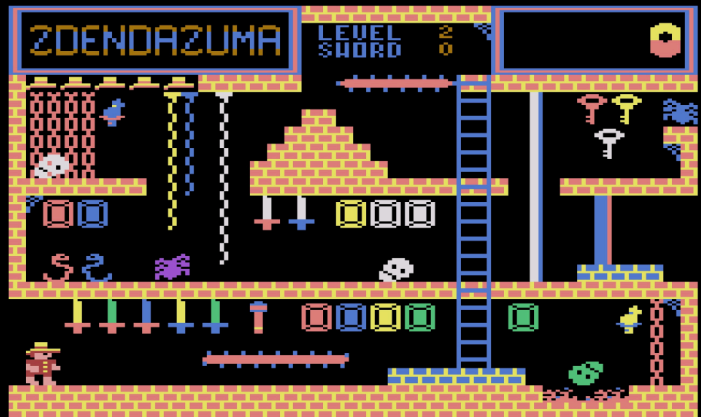


apparent in the first and second levels. There is much more to collect (especially swords and treasures), and not only gadgets but also enemies and levels are more colorful than in the original.

On the other hand, what you miss right at the beginning are Panama Joe's footstep sounds, which are quite helpful in the original for adjusting jumps and contribute to the game's atmosphere. Other things are also missing or changed: If you lose a life, there is no death animation, but rather the "La Cucaracha" sound, which is actually known for successfully collecting gadgets. Together with the missing

animation, this easily leads to losing track of the remaining number of lives - which is perhaps even intentional since you sometimes have to commit "tactical suicide" to get essential things like torches or keys.

Keys were already crucial in the original to get to all important (and worthwhile) areas of the Aztec pyramid. Here you can find them at times in unreachable places (which makes them a kind of level ornament) or only after collecting certain torches; these then don't illuminate the level but reveal the view of hidden things (which, by the way, you also can't collect before you see them). The swords needed to fight the enemies (skulls, spiders) appear in numerous colors - but fortunately, they have no meaning (unlike the colored keys, which always belong to a door of the same color). With the swords, you can defeat the enemies and overcome the vertical, chain-like, deadly barriers. The number of



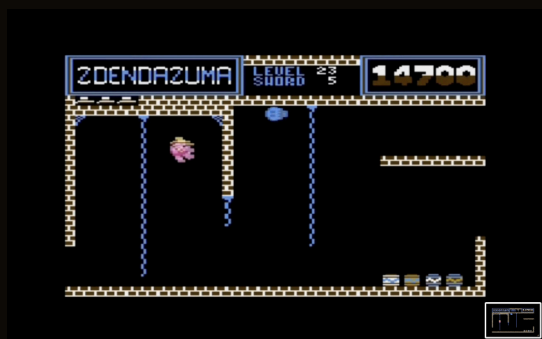
swords you have collected is displayed at the top of the screen. If you have more than nine, ">9" is displayed there. Unfortunately, you don't know how many and which keys you already own. The space where the title "Zdendazuma" is permanently displayed could certainly have been better used for



this.

Unfortunately, "Zdendazuma" also (still) contains some bugs and fun-robbing problems: If you leave a room by touching the edge of the screen and then re-enter it, not only

are all previously uncollected gadgets and treasures gone, but sometimes even previously opened doors are locked again - which is especially problematic if you have already used up the only key you had for the respective door. Then only a restart of the game helps (which, by the way, is unfortunately not possible by reset, but only by



reloading). Also, the fact that you don't really notice whether you've just lost a sword or a life to overcome a deadly obstacle quickly leads to a surprising "Game Over" if





These difficulties led to the reviewer only playing the game up to level 6 and getting an overview of the following rooms with the help of a YouTube "Let'sPlay" video. However, this video shows what other beautiful level designs and puzzles Zdeněk Zubr has come up with for his players. As a big fan of the original, I'll stay tuned and try to get further. I would still be happy to see a bug-fixed version of the game that offers more gameplay comfort and more familiar

you don't constantly keep an eye on the upper edge of the screen. It also doesn't help much that falls from great heights (unlike in the original) no longer lead to death in "Zdendazuma". If you die once by falling into a fire pit, you reappear either in the same or the previous level, which also seems to be a bug rather than a feature.

elements (in terms of sound and graphics). And while we're on the subject of wishes: How about a level editor? Given the puzzle structure of the "Zdendazuma" levels, you quickly develop your own ideas for tricky situations to send Panama Joe into. After all, Zdeněk Zubr has been among the most active sceners for Atari for more than ten years. Maybe he will pick up the game again ...



NINJA - HELP - ICOPTER

A mini review by *Floppydoc*

The game starts with a rather colourful splash screen.

The task of the helicopter pilot is to rescue some ninjas running on a street.

I only played level 1 very briefly.

The controls feel good.

There are sound effects for the flying helicopter and the shots.



The difficulty lies in the fact that as you fly forward at different heights, obstacles will appear and you will have to shoot them down.

To rescue a ninja, you must land on the street. Once the ninja is centred under the helicopter, it will crawl inside.

The helicopter and the ninja are monochrome and the task doesn't sound very exciting.

My rating after the first short impression:

My Score:

Total:	6,0
Graphics:	7,0
Sound:	5,0
Gameplay:	6,0

Floppydoc

Space Invaders Battle



A game review by *Tigerduck*

Well, good old Space Invaders. Nothing to write home about? It's that and more!

I don't need to say much about the classic itself. This is a fun duel game where, after six short rounds, the player who has shot down the most 'invaders' wins.

You score one point for each hit. Ten points are awarded for the UFO that crosses the top of the screen. Each round, the "critical horizon" starts a little lower. If it reaches the bottom of the screen before all the enemies have been shot down, the game ends prematurely.

The graphics are nice and colourful and I also like the theme song.

Unfortunately, the typical "marching sound" of the Invaders is missing.

Conclusion:

This is an ideal game for when you feel a little "shooty" in between. Especially if you have someone who is hungry too.

Our Score:

Total:	6,0
Graphics:	7,0
Sound:	6,3
Gameplay:	5,5



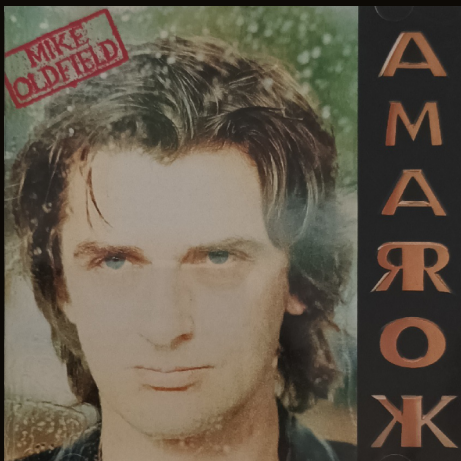
A game review by *Yellow_Man*

Arcadia, an action-puzzle game, similar to Luxor or Zuma, is now finally available for the Atari XL/XE. According to the programmer, the version 1.2 tested here should be the final version. I tested the version on an ATR image, and also on a real floppy disk with real hardware. Version 1.0 of Arcadia took third place in the 2022 Software Contest.



It was programmed by *Amarok*. Amarak? That rings my tubular bells ;-)

Amarok is the title of an album by Mike Oldfield, the artist with his famous Tubular Bells, (Part



I, II and III). Great music, which I also like to listen to very loudly. But now back to the Atari.

So, boot the disk ... after a short loading time, a small graphic in the form of a compact cassette appears on the screen. Shortly after that, you



see a very colorful image of Arcadia and you hear great music. The music is from the Mike Oldfield album Amarak, converted to the POKEY. From the title screen, the joystick can now be used to select some functions. Let's start at the bottom, before we start the game.

At the bottom is "Exit Game". If this is confirmed with the fire button, the game is ended, the current highscores are saved and you exit to DOS. With "Help" at the penultimate position, an overview is displayed in the title screen which explains how the game is played. This was also in

the game presentation for the SWC in the ABBUC magazine 150. I will briefly go into it. At the second position the "Hall of Fame" is selectable. The highscores are saved. And in first position, finally, "Start Game".



After "Start Game" has been confirmed with the fire button, a selection of difficulty levels appears: "Easy", "Normal", "Hard" and "Insane". "Normal" should be enough for now, and off you go. The playing field appears on which a dotted track is displayed. At the end of this track is a temple. And at the start of the track a snake appears with many different colored marbles. This snake now moves incessantly along the line towards the temple. If a snake reaches the temple, you lose a screen life and start the level all over again. We have to prevent the snake from reaching the temple. At the bottom of the screen is our

character, in the form of a kind of bat, consisting of two wings. This bat can be moved left and right with the joystick. There are two marbles on the wings, one at the top and one at the bottom. If you press the fire button, you shoot the upper marble. If you move the joystick down or up, the two marbles on the bat are swapped. Now how do you stop the snake? It consists of different colored marbles. We must shoot the corresponding colored marbles with our player in such a way that marbles of the same color in the snake are hit. At least three marbles of the same color must be formed in



the marble snake, so that this group then disappears. Now this gap in the snake is closed. If a group of three or more marbles of the same color is formed again, i.e. a combination (combo), these also disappear. If you have

decimated a snake so far that only the end of the snake remains, it disappears and the snake is defeated.

The different difficulty levels determine how many snakes appear - even simultaneously - and how fast they move. At the top of the screen is a status bar with various indicators. On the left, the level and the turn are displayed. A level consists of several turns. If there is 1-3, this is level 1 in the third turn. If all marble snakes are defeated, a turn is finished. A new turn with a new dotted path begins. To the right of the level display, our screen lives are shown. And again to the right of it, it shows how many hearts you have collected. You get hearts in the form of bonus items or when you remove a snake segment with five marbles of the same color. Every ten hearts you get a bonus life. To the right of the heart counter is a so-called combo bar. Whenever a combination of several removed marbles of the same color is triggered, this bar rises. When this is filled, no more new snakes appear. Finally, on the far right is the scoreboard.

Once you have completed three combos, various extras appear. You should then quickly shoot these extras with a marble. There are various power-ups that slow down, pause or make the snake move backwards, or extras that color marbles of one color, remove all marbles of one color, destroy a vertical group of marbles with the lightning extra and some more power-ups.

After every third turn, a bonus round is played. Here you should quickly shoot all the marbles of the

snakes. Here all marbles disappear, but if segments of the same color are destroyed, you get a heart. In the bonus round you cannot lose any lives. After the bonus round you continue with a higher level.

When the game is finished, you can enter the "Hall of Fame" with a good highscore. The highscores are saved on the floppy disk or the ATR, but only if you select "Exit Game". Caution, if you load only the COM file (SIDE, AVG and so on), the saving does not work.

Arcadia supports the Joy2B+ mode, respectively the Snack Classic mode. The second fire button is used to change the marbles on the wing bat. The space button or the third fire button in Joy2B+ mode pauses the game if you need to quickly walk the dog.

Conclusion: A great, addictive, action-packed shooting puzzle game. The graphics are well done. The sound fits the game. The music is great, but gets a bit annoying after a while. However, with the action, you don't pay attention to it anymore.

Note: On a fresh ATR (DOS, DUP and AUTORUN.SYS (Arcadia)), when you exit the game ("Exit Game"), a file "HS.DAT" is created. I tested this on real 1050 and SIO2USB(RAF).

My score:

Total:	8,6
Graphics:	8
Sound:	8
Gameplay:	9

Yellow_Man



A game test by *Yellow_Man*

During Advent last year, the programmer programmed a Christmas Arcadia version. This version is completely identical to the normal version 1.2 in terms of rules and gameplay. The difference is in the Christmas design of the backgrounds and many graphics that the game contains.

Also the music has a Christmas style. What is new is that there are many different pieces of music that change after each round. The best high scores are saved here as well.

The Xmas Quest version contains many new rounds in the form of other dotted paths on which the marble snake moves. The target of the snake here are apartment



buildings, which are infested by the Grinch when the snake reaches a house.



Conclusion:

So actually everything as in version 1.2, except for new music, which is not so annoying, because it changes after each round.

Arcadia Xmas-Quest runs with 64 KB, with XL-OS and QMeg-OS 4.04.

My score

Total:	8,6
Graphics:	8
Sound:	8
Gameplay:	9

Yellow_Man

Cracky - a simple platformer

Cracky - Game review by *Dietrich*

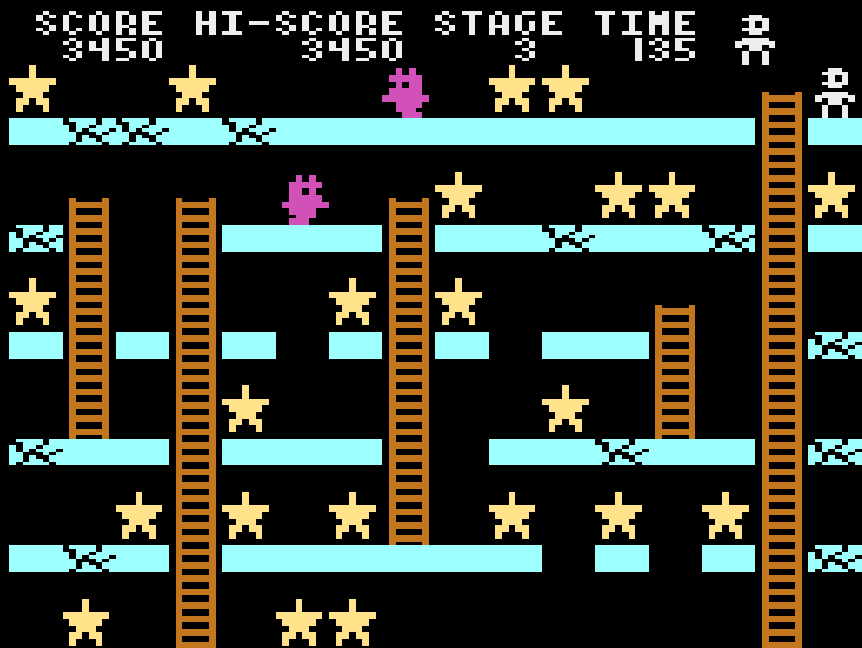
Cracky is another game from Japan's *Inufuto*, available on many 8-bit systems (see review in issue 149, page 42). This time we have a platform game with ladders and fragile stones that gradually crumble as you walk over them.

The aim is simply to collect all the stars to move on to the next level. As usual, collisions with the monsters and running out of time will cost you a life, of which we have three. Unlike *Inufuto*'s other games, the game information is displayed at the top instead of on the right.

The game is quite simple and plays like the other games, so it gets the same rating from me, only in gameplay I subtract 1 because it's only 1 game instead of 10.

Our Score:

Total:	4,4
Graphics:	4,5
Sound:	3,8
Gameplay:	4,5



Pacman Labyrinth

Gamereview by *Dietrich*

Pacman Labyrinth is another Pacman variant. The cover image shows what it's all about: you have to guide Pacman through nine labyrinthine rooms connected by a 3x3 grid. Pressing START on the title screen for a moment (!) brings up a brief explanation of the game (points and special effects A and S). Press START again to start the game:



We start with our Pacman in room 5, which is exactly in the middle of the 3x3 grid and therefore has an exit to the neighbouring rooms on all sides. As usual, we see four ghosts, called aliens in the game, which we must not touch or we will lose one of our three lives. The objective, of course, is to collect the small and large dots in the maze, which give you one and four points respectively.

At first the aliens walk around aimlessly, but if you use Pacman on one of the two A (= Attack) buttons in the room, they will come towards you for

a while. So you should only do this when there are no aliens around. Then there is an S (= Stop) at the bottom left, which stops the aliens for a short time when you walk over it. During this time you can also kill them with Pacman, for which you get 50 points each. So it's best to use the S only when there are at least two aliens nearby, which we can then eliminate. Then we just have to avoid the other two aliens, which should be no problem.

As the game is quite fast, there are other aids: You can jump into the middle of the room by pressing a button, and the four flashing walls are teleporters, two of which are connected. And as a special effect, there is an extra life in the form of a stationary Pacman to collect at the top right.

We can leave each room via the yellow exits in the middle of the sides and go to a neighbouring room. If we enter a room we have already been in, the four aliens will return, but the special effects and



points will not. So it's best to collect as many points as possible before leaving a room. And of course, remember where you've been, so you don't have to go through several rooms unnecessarily. All rooms have the same special effects (2x attack, 1x stop, 1 extra life).



Graphics & sound: The graphics are quite good and Pacman and the aliens move smoothly. Only Pacman looks funny when he runs up and down. The music is the song from Jet Set Willy, which goes well with the rather hectic game, but can also be turned off with the „M“ key. There are also

score displayed on the final screen. So at the end of the game you don't know how many points you've actually scored. And once you have cleared all nine rooms, the game is over. There are no difficulty levels. Finally, the game has a few bugs -

sometimes Pacman goes into the wrong room when running back and forth through an exit, or you start the game with a score of 1024 or more instead of 0. At 60KB, it is also quite large for an Atari game. All in all, Pacman Labyrinth is a nice Pacman game with a few bugs.

The final screen - where is the score?



some nice sound effects for collecting points and special effects.

Conclusion: A fast Pacman game that is not as difficult as it looks at first sight. You can manage quite well with the help of the special effects and tools. And if you know how to outwit the aliens, it's even quite easy. Strangely, there is no

Our score	
Total:	6,4
Graphics:	6,0
Sound:	6,5
Gameplay:	6,5

BUBBLE SHOOTER

A game review by *Tigerduck*

When I choose a game to review, I usually play all games briefly and then pick the one that makes me the most curious (unless one of my colleagues was faster and snatched the game away from me).

With Bubble Shooter, I was immediately fascinated by the title screen. Nice and colorful with cute cartoon characters. Let's see if this is just a "dazzler" or if the game can keep up with it.

The (Polish) manual even gives a little "background story".

"According to legend, the Papa Dragon got lost in the meaning of existence (or got lost in a brewery pub). So his children, who loved him, set out to find him. Colors appeared on their way, the world of bubbles. They had to find their way through the bubbles. The journey

through the four seasons will take many years... you will discover it for yourself."

OK, the actual gameplay is quite simple and nothing new either. The upper part of the screen is full of bubbles in seven different colors. The goal is to clear away all the bubbles. To do this, you shoot another bubble from below at the bubbles above. (Watch out for the cute animation). If you hit a bubble of the same color and at least three bubbles are connected, they disappear.



The bubbles hang from a kind of ceiling. When you destroy the connection to the ceiling via other



bubbles, all bubbles that no longer have a connection are destroyed as well. This way you can make strategically large areas disappear at once. The empty bubble (far right) will be destroyed in any case when another bubble hits it, you can "shoot through" it.

In addition to the actual game area on the right, there is another area on the left that documents progress by means of a walking route. Apparently the year has 15 months, because every 15 levels the season changes. This is also nicely represented graphically and the music changes. At the bottom left we see the number of bubbles that we still have available for solving the level. If we don't succeed in the given number of attempts, the little dragon cries.

To prevent us from crying as well, there is an "easy game mode" in addition to the "hard game mode". (Joystick up/down, change with fire button). This makes the game very easy. In "hard mode" only the launch angle is displayed, while in "easy" the spot where our bubble will hit is displayed. The number of available bubbles is not limited. The next bubble to be shot can be exchanged for the bubble in the "magazine" by moving the joystick up or down, if this color is currently more favorable to use.

"Hard" is actually the "normal" game mode, because "easy" is really no challenge. But if you get stuck in a level, you can switch to "easy" by pressing "ESC" and confirming "Y" and pressing "ESC" again in the menu. After that you can start again in the same level. The game saves the progress on disk. Because as

already described in the introduction, "it takes many years...". To play through the game in one piece is only possible with a lot of time. Already completed levels within a "Season" can be chosen freely.

To add some variety to the game, there are special bubbles with special functions.



1. question mark: turns into another bubble when hit
2. vampire bat: eats the first bubble and bursts on the second one
3. stone: cannot be destroyed except by removing other bubbles
4. dragon foot: changes the other bubbles to the color of the burst bubble
5. bomb: blows bubbles around it
6. ivy: creates another ivy bubble when hit
7. lightning: destroys all bubbles in a horizontal row



There are also bubbles that bring extra points.

From left to right: 1000, 1500, 2000, 2500 points.

Generally speaking, there are more points for "hard" than for "easy" for

the simple bubbles. If several rows are destroyed in sequence, this increases the score even more.

By the way, you can enter the points in the "Hi Score Cafe" and compete with other players. Whether this makes sense in this game, however, I may doubt. There is a QR code for this, which can be displayed under "Help". To enter your score in the "Hi Score Cafe", however, you have to be registered and log in with your password.

The game checks the memory configuration before starting and then loads the appropriate version. Minimum is a PAL Atari with 64 KB and optimal 256 KB memory, then there is no reloading during the game and there are improved graphics.

Conclusion:

A game that you can play in the

"easy" game level to "relax" on the one hand, or as "hard" if you are looking for a challenge. The graphics are very nicely designed, and there are several familiar tunes to the game that round things out. I have not yet found out how long it takes to master the complete game due to lack of time. After one year, i.e. 60 levels, it was over for me. However, the save function allows me to jump back in at any time and finish it. For me, the game has clearly fulfilled the expectations raised by the title image!

My score:

Total:	8,0
Graphics:	9
Sound:	7
Gameplay:	8

tigerduck



Review: Super Zombie Apocalypse

Reviewed by *Erhard Pütz*

Hello Atarians,

Sadly I had only a few days left to review this game and for the first time ever I even I did not take the time to test the game with a real Atari.

As you can read in the headline, I chose the game "Super Zombie Apocalypse Simulator" and I was hoping that the game had a close resemblance to other zombie games, like there are many of these days. I am thinking about the Roblox games for example.

The game does bear a resemblance to the zombie games as the zombies are just as much running towards you as they are in other games of this genre.

The player has to run away from the zombies all the time, but sadly he is NOT able to run diagonally unlike the zombies and even worse, pushing the joystick diagonally will stop the player from running at all. To be honest I am not quite sure if the zombies can actually move diagonally or if it just looks that way. They always move one step at a time, similar to the player, but of course these Atari-controlled zombies can change their direction faster than a player with

a joystick could do this.

This game was obviously written in Turbo-BASIC.

First I am going to talk about the playfield of this game.

A brown stone wall surrounds the playfield area. On top the title is displayed and you can see a score running backwards, a zone indicator and erm.... "BEST:0". I do not know what it means.

At the beginning of the game the playfield contains a lot of yellow boxes (probably crates) with the number "1" printed on them.

These boxes must be stacked on top of each other, but always in pairs. When you stack them yellow "1" becomes yellow "2", then blue "0", blue "1", blue "2", red "1" and finally red "2".

Ending with red "2" is a guess, because I did not manage to push the last two boxes on top of each other in the short time I had to play this game. The SCORE always



reached zero before I could finish the level.

So you are fighting against the fact that you (or at least I) are always tempted to run diagonally, against the short amount of time and against not getting into the clutches of the zombies. There are eight of them by the way, if I have not lost count.

You can protect yourself on by putting yourself between a box and the zombies coming towards you, because they cannot pass the box. But this protects you only to the ones that are moving in a straight line (horizontal or vertical).

So you can push the crates in such a way that a wall is created as an obstacle to the zombies, but I do not expect that doing this will really give you an advantage as this will cost you a lot of the time...

And watch out! If two crates are placed next to each other diagonally and you hide behind them, a zombie might still be able to move through them!

Well, what can I say about this game? It is definitely a bit exciting, after all you want to manage to push the last two crates into each other at least once. Maybe there are some tricks I did not find during this short test and I do not know what to expect after the completion of "ZONE 1".

The graphics serve are functional. The player and zombies contain at least three-colors, although these characters are probably not Player Missile graphics.

No game music is present, but there

are some sound effects. Because I always ran out of time I hated the game a little bit, but the game can probably be controlled easier with a real joystick on a real Atari.

I think this game could get much more exciting when some features are added. for example I would like to see a day-night cycle and that zombies only appear in waves at certain times. Or that you can build a base surrounded by protective walls (by mining raw materials for example) and the possibility to get better weapons (by drops from the mobs or something similar?).

I think something like this would be feasible on our Atari, though not by the author of this review, who has exactly zero idea about writing games.

I have two tips for this game: crates that were pushed against the wall by mistake can be moved away from the wall again by running against the crate in the direction of the wall. And the player is able to move faster than the zombies, but the zombies always take the shortcut. That was obvious, wasn't it?

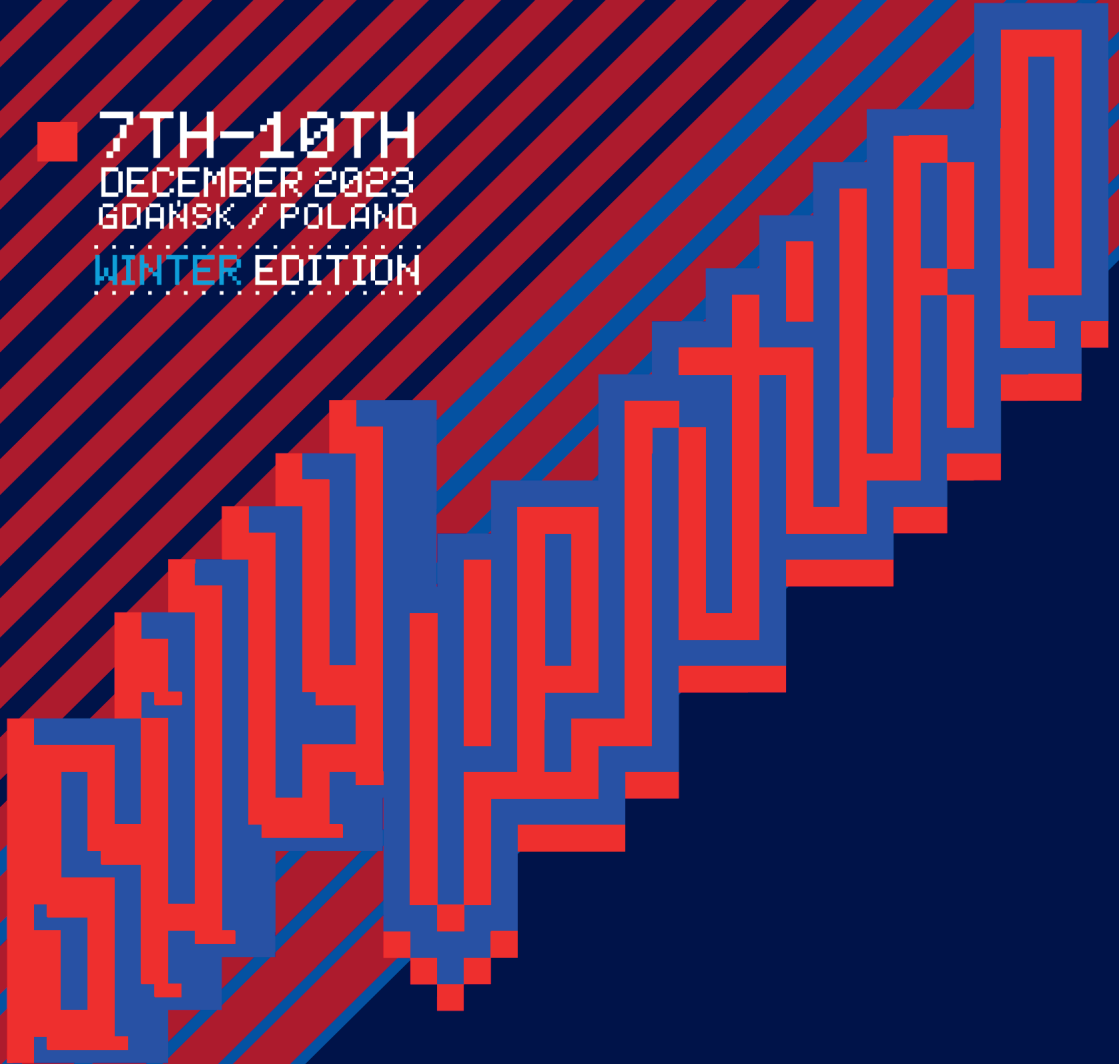
I can definitely recommend the game if you want to get frustrated or not.

My score:

Total:	4,0
Graphics:	3
Sound:	5
Gameplay:	4

floppydoc

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