Commodore Free

A free to download Magazine dedicated to Commodore computers.

Issue 95

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Editorial

Welcome to another issue! I have been working hard, but sadly in real life again and not in my virtual life. Anyway, in this issue we have some real treats. Lenard R. Roach gives us more of his Commodore growing pains with a special double installation in this issue.

We have a review of the PET game Space Chase with some complex SID music, "SID on the PET"! What's this? Well, you need to read the review to find out more.

We have a review of the truly weird Dubcart (cartridge). This is classed as an interactive music album for the Commodore 64. Plug into your machine and watch the petscii art and truly exotic SID music.

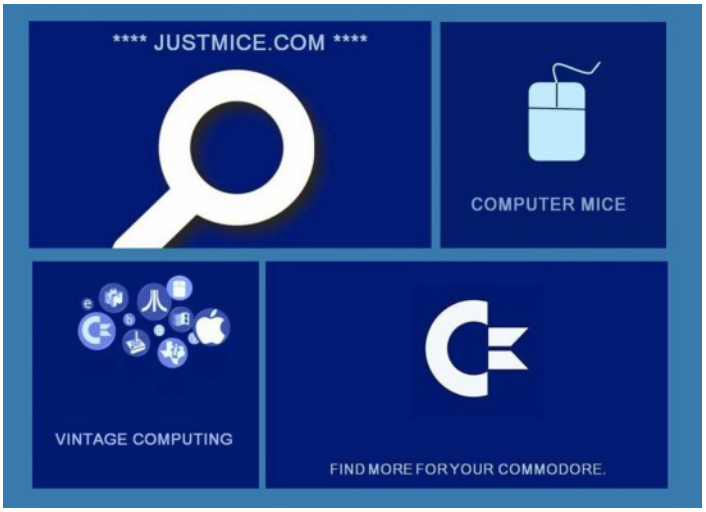
Then we have an interview with Andres Beermann, who is working on an FPGA version of the Commodore SID chip, although it's impossible to make the device 100% compatible with the SID. Andres says it comes out better because of the extra features.

If we throw in the usual news and tasty gossip, then we have another finished magazine for you to read.

I am still looking for staff to help produce the magazine. It's hard editing so much content and writing and collating it at the same time. I would like a programmer to work on the disk version, and of course PET, Amiga, VIC and Commodore 16 machine versions of the disk magazine would be welcome, if any reader could code such beasts. A graphic artist would also be most welcome as my art work is truly dire.

Thanks for reading and I hope to see you again in the next Issue

Best regards,
Nigel (editor)
www.commodorefree.com



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Submissions
Articles are always wanted for the magazine. Contact us for details. We can't pay you for your efforts but you are safe in the knowledge that you have passed on details that will interest other Commodore enthusiasts.

Commodore C64

Back to the Future!

Connect to TV and Play!

- 2 MByte FLASH
- 16 MByte SDRAM
- S-Video out
- Stereo Audio out
- PS-2 keyboard and mouse
- Micro SD card
- 2 Joystick ports

more than 100

C64 games!

C64 Forever

cloanto

Online Order: www.arcaderetrogaming.com

More Information: www.mcc-home.com

ARG

General News

IND:

a project from Commodore mania to preserve all the c64 material published in spain or from spanish countries, - the whole website is in Spanish

http://ind.commodoremania.com

L'Abbaye des Morts to Megadrive/C64

There is a Megadrive version of this Locomalito game. Errazking is making the c64 skin. the whole website is in Spanish

http://retroinvaders.com/commodoremania/foro/index.php/topic,1643.0.html

http://www.commodoremania.com/

Announcing the Pacific Commodore Expo NW

The Commodore Vegas Expo has continued for 12 years with the support of the Fresno Commodore User Group, the Clark County Commodore Computer Club (of Las Vegas), the Southern California Commodore & Amiga Network, and the Portland Commodore User Group. Without the involvement of these clubs, CommVEx would have not gone on to being what it is today -- a successful, yearly Commodore/Amiga event.

Last year I was contacted by Stephen Jones of the Living Computer Museum in Seattle, Washington. He wanted to know if I could do a similar event in Seattle. I replied but heard nothing back. A few weeks ago I visited the Living Computer Museum and talked to Matisse Fletcher, events coordinator for the museum. I talked to her about a two-day, Seattle Commodore/Amiga event in the vein of a CommVEx. She was very open to the idea but wanted more details. I sent her a follow-up e-mail when I returned to California and received her reply shortly thereafter. She has agreed to such an event and has locked in a date for it -- June 10-11, 2017.

The event will be called the Pacific Commodore Expo NW or PaCommEx for short. It will be like CommVEx, except we cannot have buying/selling/raffling due to the non-profit status of the museum. The museum will charge its own admittance fee, which will be a few dollars per person. We can set-up on Friday, but on the days of the show, we are limited to the hours the museum is open. PaCommEx will
be supported by the Fresno Commodore User Group, the Portland Commodore User Group, the Puget Sound Commodore User Group (of Tacoma), and the Commodore 64 Enthusiasts of Greater Victoria. For more information, go to

http://www.commodore.ca/forum/viewforum.php?f=14

A website for PaCommEx will be coming soon.

Sincerely, Robert Bernardo
organizer - Pacific Commodore Expo NW

Retro Academy - MiST

Francesco Sblendorio has written about MiST. In the review he writes about the hardware, connections, configuration, performance, compatibility, and a gives a field test. This is an English translation by Ignazio Palmisano.

The website has this history about Mist

The website Lotharek builds and sells an FPGA Amiga emulator called MIST (it actually also emulates *Atari ST*, but the development of the Amiga version is the one currently most advanced) which uses **FAT32** formatted SD cards as permanent storage. Intrigued by this project, I decided to buy a MIST and try it out. The cost is close to *200 €* and, after my tests, I think it is worth the money.

http://www.retroacademy.it/2016/06/28/news-eng/mist-y-amiga/2649

Retro Commodore

retro-commodore.eu has many high quality scans available for the Commodore user. The latest additions are: How to connect your VIC (20), COMputer, Learning through LOGO, Simon's BASIC

http://www.retro-commodore.eu/

Reverse Engineering of the 1541
Reverse engineering project about the 1541 The project was to take apart a Commodore 1541 disk drive and document the components.

https://sites.google.com/a/hightechhigh.org/cassies-dp/11th-grade/Engineering/reverse-engineering

The website says:
The Commodore 1541 is a floppy disk drive made for the Commodore 64, an 8-bit home computer released in 1982. It reads data and writes data to a floppy which is a piece of metal coated plastic similar to an audio cassette tape. It used a 5 1/4" floppy and operated on Group Code Recording (A group of five bits of code to represent four bits of data) and contained a MOS 6502 microprocessor which doubles as a disk controller and on-board disk operating system processor.

Taking apart the 1541 was like a blast from the past. Everybody else is taking apart game cubes, and cell phones and here I am taking a Commodore 1541 apart. This thing probably hadn't been touched for 20-30 years. I now know the basic parts on a circuit board and I have definitely seen how the technology has changed. I really enjoyed this project and I think that now I have a greater base of knowledge to draw on throughout the year. - Cassie Olson

FRGCB
FRGCB (Finnish Retro Game Comparison Blog) is a web page about retro games. It compares the games between different computer formats from C64, Amiga, MSX, NES, CPC, DOS, etc. The most recent comparisons are: FRGR #06: Octapolis (English Software, 1987), Test Drive (Accolade, 1987), APB (Atari Games/Tengen, 1987), SWIV (Storm, 1991) and FRGR #05: Space Satellite (Teknopiste, 1985).

http://frgcb.blogspot.co.uk/

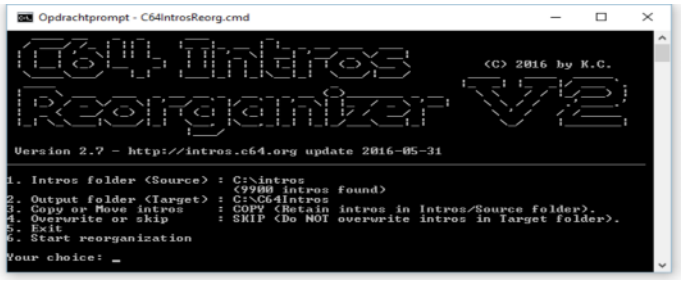
The Games-Coffer
On the "Games Coffer" are games, demos, animations, slideshows, diskette magazines, history, FAQ, emulators, reviews and advert Scans. New additions are: Computer Conflict, Moria, Parodia Adventure, Senseless Violence, Soccer Cards - FA Cup, Mangled Fenders ACE, UChess, Wipe Off, WipeOut!, Yatcy, Demon Wars, TurboRaketti and UFOs.

http://www.gamescoffer.co.uk/

C64 Intros Reorganizer

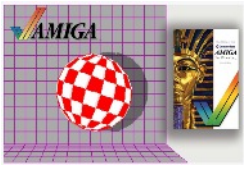
An intro is a little program that preceedes a cracked game. It displays some information about the game, the group who cracked it and usually fellow crackers are greeted. This information is often presented using colourful scrolling text, accompanied with some fancy music. The intros package that can be downloaded from http://intros.c64.org has a few drawbacks.. C64 Intros Reorganizer makes browsing the intros easier, by copying or moving the intro files to a more suitable folder structure. The folder containing the intros is scanned and all recognized intros are copied to a target folder. This target folder can be a new, empty folder, or a folder that already contains a number of reorganized intros that you want to update with some new intros.

https://sites.google.com/site/kc64projects/c64introsreorg



New C64 book launch and new Amiga Kickstarter

A bit late reporting this news BUT ……..
From: On Behalf Of Andrew Fisher
To: Commodore Free
Subject: New C64 book launch and new Amiga Kickstarter



The Centre for Computing History in Cambridge, England hosted the "Pixels" event on 11th June 2016. The C64 panel marked the publication of "The Story of the Commodore 64 in Pixels" by Fusion Retro Books. Representing the C64 were Ben Daglish, Archer Maclean, Darrell Etherington, and Roger Kean and Oliver Frey from Newsfield. The Amiga panel marked the launch of the Kickstarter for "The Story of the Commodore Amiga in Pixels". Representing the Amiga were Archer Maclean, Stoo Camrbidge, Robin Levy, Mevlut Dinc and David Pleasance (former managing director of Commodore UK).

The two panels were filmed and recordings will be available on YouTube in the near future.

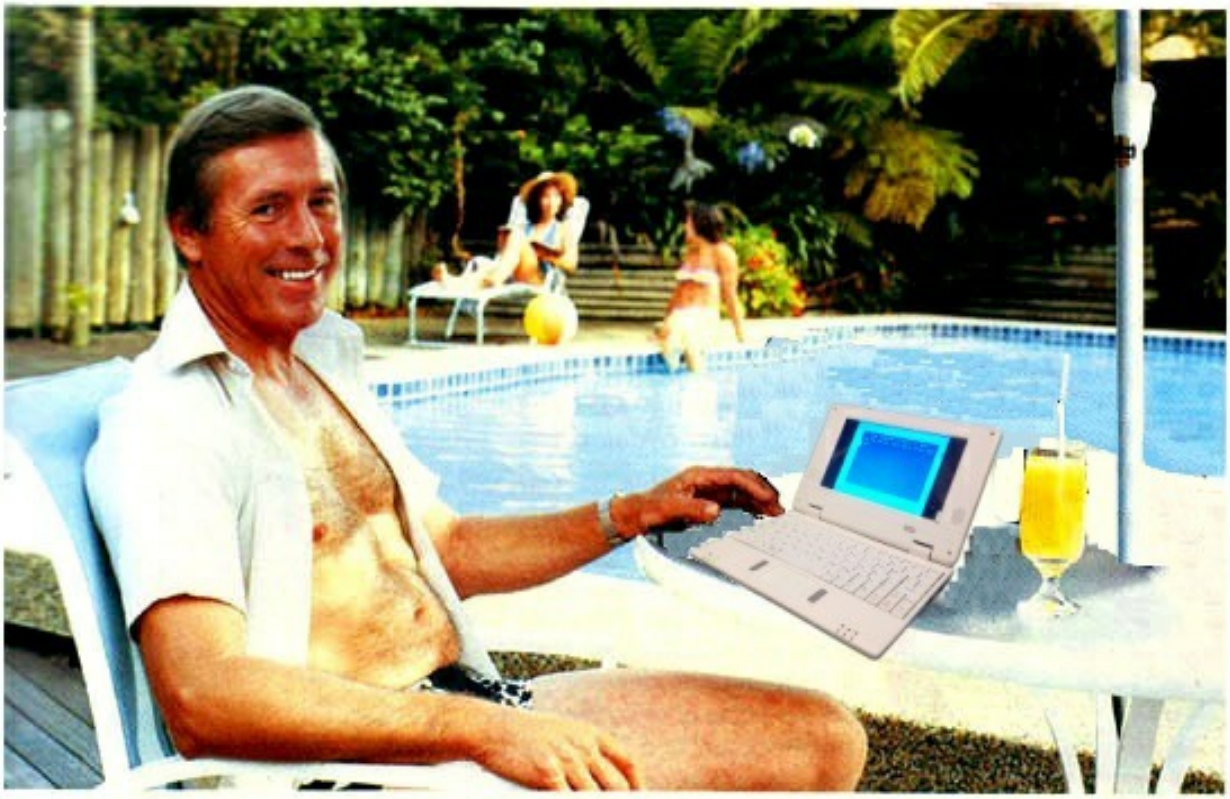
Centre for Computing History - official website
http://www.computinghistory.org.uk/

YouTube channel
https://www.youtube.com/channel/UCnw4p95EOWghQNP4vOv8VHw

Fusion Retro Books - catalogue of current products
https://www.fusionretrobooks.com/collections/all

The Story of the Commodore Amiga in Pixels on Kickstarter
https://www.kickstarter.com/projects/47744432/the-story-of-the-commodore-amiga-in-pixels

In 36 hours the Kickstarter has reached 100% funding (£25,000) - the stretch goals include a remix CD and the preview issue of a new retro magazine (Retro Now). Perks include signed books, canvas prints of classic Amiga games and much more. Publication will be in April 2017.



Who's keeping up with Commodore?

C64p

SD2IEC

C= commodore COMPUTER

Keeping up with you.

www.thefuturewas8bit.co.uk

Not just a place to buy SD2IEC's or a C64p

The future really was 8 bit!

Amiga News

AMIcast Issue 013

AMIcast is an English and Polish podcast about the Amiga range of computers. In this episode: interview with Daniel Müßener / Daytona, known from Wings Battelfield, Tower 57 and Wings Remastered.

http://www.amigapodcast.com/

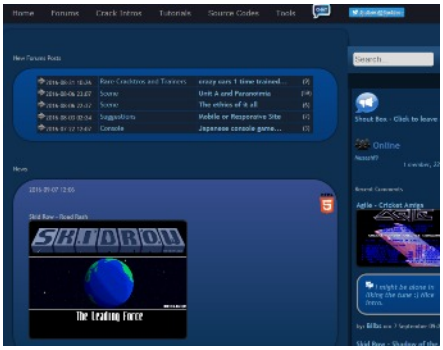
Amigos

Amigos has added some new articles, recent updates include: Trivai Night, Amigo Scour, Mouse Trap, James Pond, Flood, Gurus meditating, The Great Giana Sisters, Buggy Boy, Pac-Mania, Rambo III, Boat and Flack talk Retro Gaming, Flashback, 8 piracy killers that weren't, Street Fighter II, A bundle of dreams and Mortal Kombat II

http://www.amigospodcast.com/

Flashtro Amiga

Flashtro.com shows various crack intro's but with your browser. There are original intros from the Amiga, Atari-ST, Dreamcast, PC, Playstation. These have been converted to various formats mainly Flash and HTML5 . The most recent flashtro's are: Flashtro - Ghosts 'n' Goblins, Ackerlight - Audio Master II, Ackerlight - Action Service, Thrust - Ottifanten, Anthrox - Fire and Ice, Paradox - Vroom, Wizzcat - California Games II, M.A.D - Chrono, Ministry - KGB, Alpha Flight - KGB, Razor 1911 - Medieval Warriors, Paranoimia - Another Crack and Razor 1911 - Classic - Betrayal.



http://www.flashtro.com/

Boingsworld Issue 77

A new episode of BoingsWorld (the German language) podcast is now available, with the following articles: Amiga Meeting Bad Bramstedt, AmigaTec Birthday, Mediator PCI 3 Volt version, Startpage for Amigafans, Commodora Amiga in pixels, Wings and Daniel Müßener.

http://boingsworld.de/

Boings World

Der Podcast "roundabout" AMIGA

AISS 4.21 available

The Amiga Image Storage System (AISS) offers a photo-illustrative icon style for toolbar images - it approaches the realism of photography but uses the features of illustrations to convey a lot of information in a small image. AISS is an environment to store, access and maintain this toolbar images. For more information about AISS please have a look at the documentation.

The new release features more than 8,700 images in the AmigaOS 4 icon design and for compatibility reasons all pictures and animations of the previous releases.

WEBSITE
http://www.masonicons.info/6.html

OS4DEPT
http://os4depot.net/index.php?function=showfile&file=graphics/aiss/aiss.lha

ZX-Live - Amiga

Dmitriy Zhivilov released a new version of the ZX-Spectrum 48/128k and Pentagon 128k emulator for the Amiga.

You will Need:

CPU: 68020 or better;
Chipset: OCS/AGA;
RAM: ~8Mb of free fastRAM at least;
OS: AmigaOS 3.x;

Features:

+ Full emulation of ZX-Spectrum 48/128k and Pentagon 128k (all Z80 instructions, include undocumented; all Z80 flags; all Z80 registers, include MemPTR; interrupts; ROM write protection; command timings and all ports: keyboard, kempston joystick, border, sound & port #FF).
+ Support kempston mouse.
+ 1818VG93 (TR-DOS controller) emulation.
+ Partial support of .TZX file format.
+ Partial AY chip emulation (all AY registers and digital sound only).
+ Support hard AY.
+ The following formats supported:

Supporting

.TZX (Tape images, not complete) .TAP
.TAP & .BLK (Tape images) .TRD
.TRD (TR-DOS disks images) .ZLS
.SCL (TR-DOS compact images) .SCR (6912)
.$ (TR-DOS HoBeta files)
.Z80 (all versions)
.SLT (not complete)
.SNA (48k & 128k)(.MIRAGE)
.SNP
.SNX (Specci extended snapshot)
.ZX (KGB snapshot 49486 bytes)
.SP (Spanish snapshot)
.ACH (Archimedes snapshot)
.PRG (SpecEm snapshot)
.SEM (SpecEmu(German) snapshot)
.SIT (Sinclair snapshot)
.FRZ (CBSpeccy snapshot)
.ZLS (ZX-Live Snapshot 48/128k)
.SCR (6144 & 6912)
.POK (files created by SGD)

+ Emulation of ZX keyboard by amiga joystick. (JKeys option)
+ Emulation of kempston joystick by amiga keyboard. (KeysJ option)
+ Auto LOAD "" feature.
+ Command line support.
+ Emulate 128k pages WITHOUT MMU!
+ Working 99.9% of ZX-Spectrum software.

http://aminet.net/package/misc/emu/ZXLive

Public Release of MorphOS Software Development Kit 3.10

The MorphOS development team announce the immediate availability of the MorphOS Software Development Kit (SDK) 3.10. The new SDK sports a bugfixed GCC5 compiler, updated ixemul and SSL libraries as well as improvements in its documentation and include files The new software development kit is available for download from here

http://morphos-team.net/downloads

Enhancer Software Retail Box Available

A-EON announcement

A-EON Technology Ltd is pleased to announce that the new **Enhancer Software** retail boxed CD for OS4 is now available from selected retailers worldwide. The Enhancer Software is a collection of utilities, commodities, classes, datatypes and libraries with the aim of enhancing the AmigaOS experience. It is the result of about nine months worth of hard work by the AmigaDeveloper.com Team. The package contains new developments of ClipViewer, Exchanger, MultiEdit, MultiViewer 2, TuneNet, X-Dock, AmiDVD, SmartFileSystem, PartitionWizard, Ringhio Notifications and much more!

The Enhancer Software contains the debut pre-release version of **Warp3D Nova** and there will be free updates for Enhancer Software users as Nova gets updated over the coming months.The Enhancer Software is available in two editions: Standard and Plus. Every retail box has a serial key code which can be entered into the AMIStore website for customers to download free future updates.

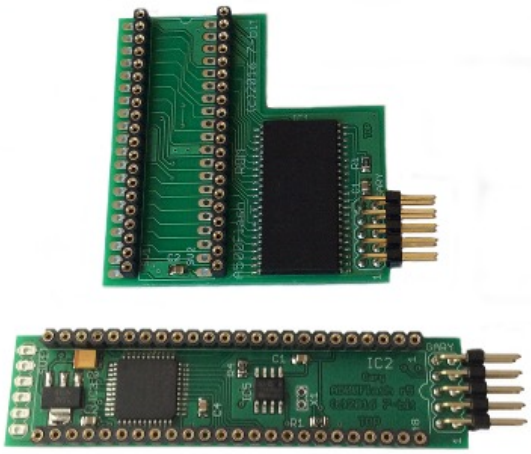
http://www.a-eon.com/

AmigaKit.com Product News

***Kickstart Switchers*:**
A500Flash Kickstart Switcher 1M for Amiga 500, 500+ and 2000. This comes with 1MB of built-in Flash memory and can be used with 1MB and Extended ROMs. Switching between available Kickstart images by holding down CTRL+A+A keys for about 3 seconds.

***USB Keyboard Adapters*:**
Sum USB Keyboard Adapter for the Amiga 1200
Sum USB Keyboard Adapter for the Amiga 600
Sum USB Keyboard Adapter for the Amiga A2000/3000/4000 or CD32

also in stock the **RYS MKII Amiga USB Adapter**



amigakit.com

Commodore 16 /plus 4 News

Club Info 142

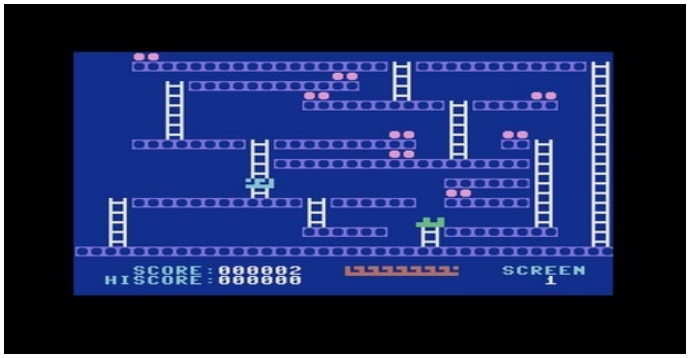
This is a German language disk magazine for the Commodore C116, C16 and the Plus/4 range of computers. In this issue are the following articles: Forum, Scene, Tipps & Tricks, Maerchenbgriffe, Golf, Computer Spass, Breitband, Hardware, Mastermind, Space Fort, Aprilschatz, ROM, Operation Thunderstorm, Jumpi, Borrowed Time and Dateimanager.

http://plus4world.powweb.com/software/Club_Info_142

Frutty Man - Plus/4

Frutty Man is a game written in BASIC for the Amstrad/Schneider CPC by Andreas Leicht. Roland Kunz has converted the game to the Commodore Plus/4, C16, and the C64. In the game you must collect all the fruit, but your opponent will try to obstruct you. When you download the game not only do you download the PRG but you get a text file with the program listed out to examine !

http://rksoft.info/



TED IMPLEMENTED IN FPGA

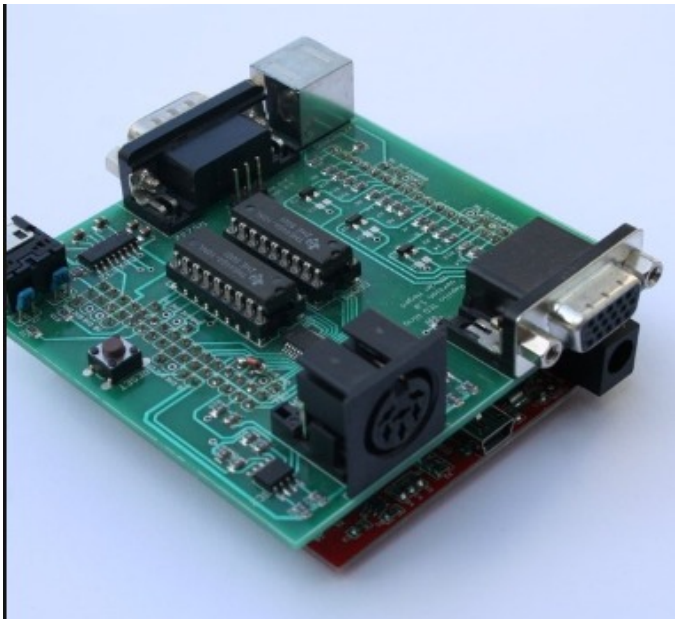
News from Chris Syntichakis

https://hackaday.io/project/11460-fpgated

TED of c16 etc., implemented on FPGA, as I read, is going to ported to MiST FPGA (unofficial news)

The website says

A cycle exact FPGA core for the MOS 7360/8360 TED chip written in verilog. The final goal is to have an fpga core that could be used as a drop in replacement for the MOS 8360 chip which is the heart of the Commodore 264 series 8 bit computers, namely the Commodore 16, Commodore Plus 4 and Commodore 116. This core can be the basis of a complete C16 or Plus 4 SoC implementation



MiST FPGA

More news from Chris Syntichakis

Hi commodorefree
core only can load/run .PRG files, no support for D64/tape images
https://github.com/mist-devel/mist-board/tree/master/cores/c16

cheers
chris

The dev site says:

FPGATED is a cycle exact FPGA core for the MOS 7360/8360 TED chip written in verilog language. MOS 7360/8360 is complex chip providing graphic, sound, bus and memory control for the Commodore 264 series 8 bit computers, namely the Commodore Plus4, Commodore 16 and Commodore 116.

C16 for MIST MiST port by Till Harbaum This is the source code of the MIST port of the FPGATED project. The MIST port has the follwing changes over the original version: - VGA scan doubler (can be disabled through the mist.ini config file) - MIST on screen display overlay (OSD) - Joystick integration - Switchable 16k/64k memory layout - builtin kernal can be overloaded (to e.g. switch to NTSC) - direct PRG injection into c16 memory - floppy 1541 (read only) taken from

http://darfpga.blogspot.de/2015/05/fpga64027-with-c1541sd-sources-available.html

AMIGA FOREVER AND COMMODORE 64 FOREVER

Amiga Forever

http://www.amigaforever.com

http://www.facebook.com/AmigaForever

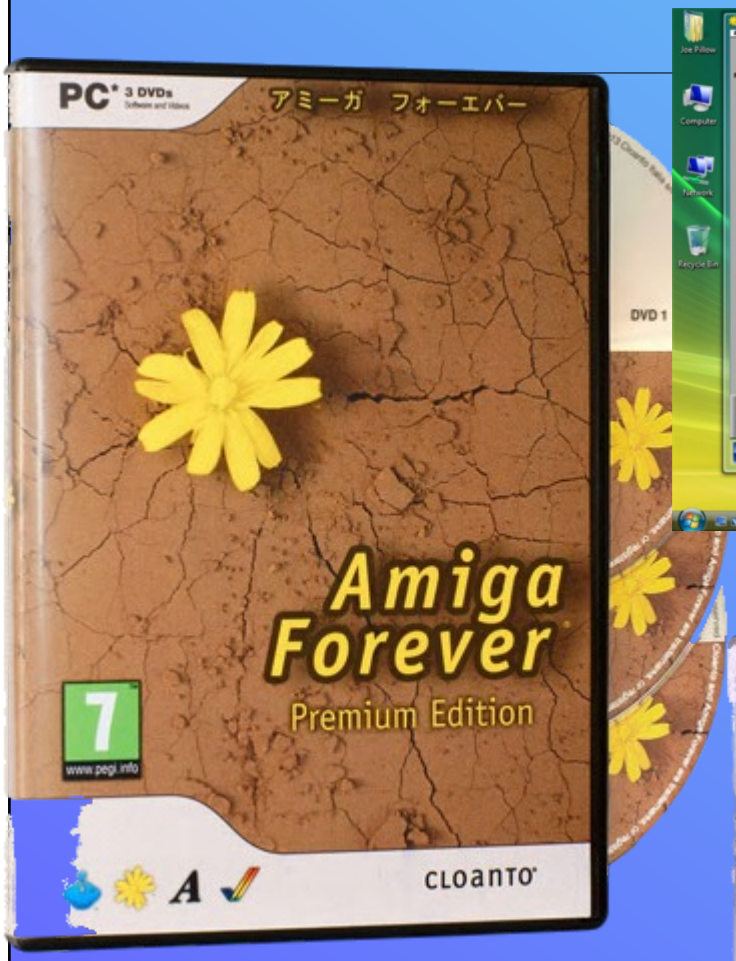
C64 Forever

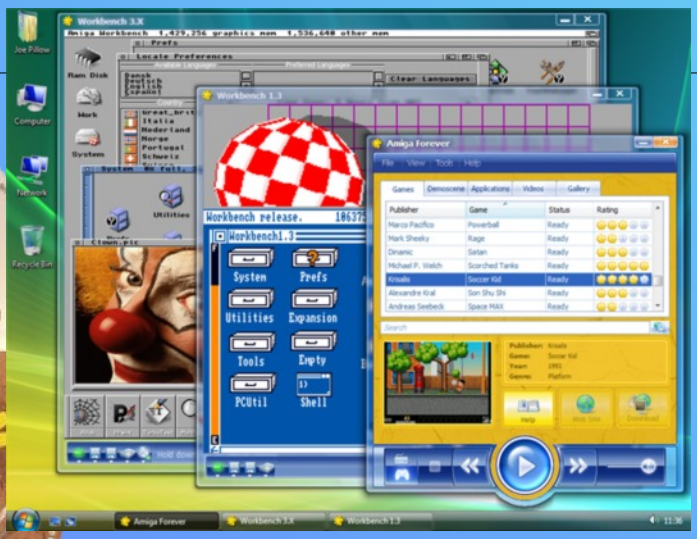
http://www.c64forever.com

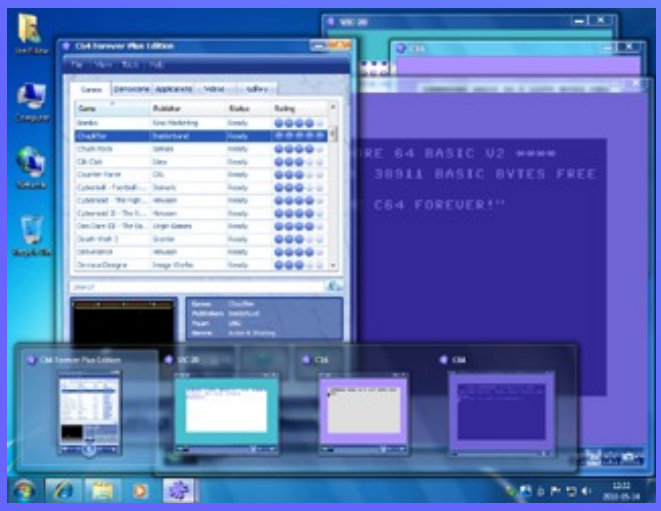
http://www.facebook.com/C64Forever

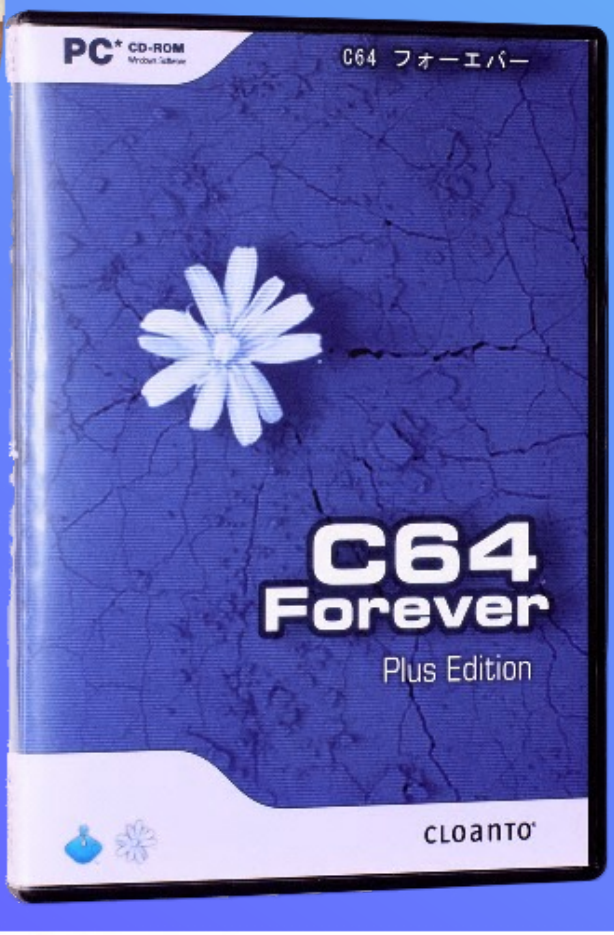
RetroPlatform Project

http://www.retroplatform.com









Commodore 64 News

DirMenu Updated
Joseph Rose, a.k.a. Harry Potter has updated his DirMenu program launcher for C64, CBM264 series and the C128. If this menu is Placed first on a disk it will allow the user to select any program to run. This could be useful for disk collections. Now with 1581 support. cc65 sources included.

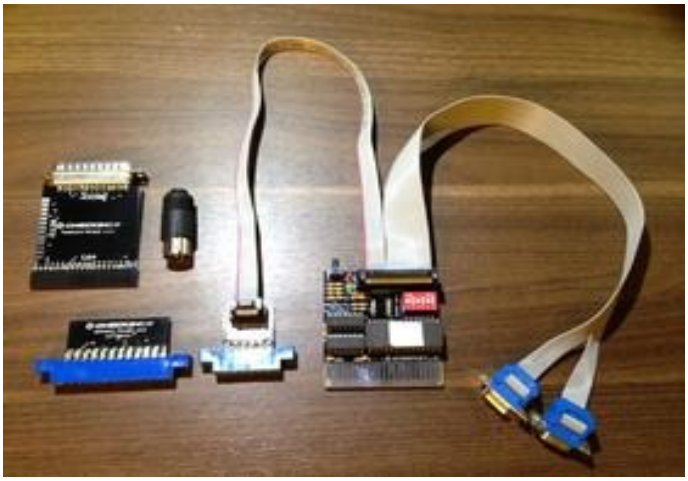
https://sourceforge.net/projects/cc65extra/files/

Galza-24 (C64 Edition)
Released by: Galza, Hitmen
I pointed this release out because of the ascii graphics. There is some music to accompany the release but the ascii mosaic art is very nice; with a download.

http://csdb.dk/release/?id=149487

Check64
Thomas has developed a test-harness system for the Commodore C64 available as a kit: with printed circuit board, electronic parts and a EPROM (programmed). The available tests are: C64 Dead Test ROM, C64 Diagnostic ROM, 1541 DIAG (worldofjani.com) and C128 Diagnostic ROM. 32 € + shipping. The website is in German.

https://www.forum64.de/index.php?thread/67371-check64-bausatz-c64-c128-d-diagnose-set/



Protovision news
* Protovision on Gamescom
* New: Update of the D42 Adventure System - now with Music Disk!
* D42 is available in our shop again - in a new version.
* Fresh Heroes & Cowards available
* New: Advanced Space Battle Scenario Pack (for free!)
* More Protovision games at itch.io
* Crowdfunding: Sam's Journey in Spanish and Italian
* New Social Media Master
* Wanted: Web Designer / Web Master
* Protovision classics available again
* Advanced Space Battle available again
* Metal Dust available again
* New Protovision Member
* IDE64 fixed version of music collection "Dimension" by Proxima

website
http://www.protovision-online.de/

Facebook
www.facebook.com/protovision64

ECCC/VCFMW 2016 pictures
ECCC (the Emergency Chicagoland Commodore Convention) and VCFMW (Vintage Computer Festival MidWest) teamed up. The show was held in Elk Grove Village, IL, USA (in the Chicago area) on September 10-11, 2016.

http://www.lyonlabs.org/commodore/eccc-2016/index.html

Recovering Commodore Engineer" Bil Herd attended the show. Here he examines Eric Kudzin's prototype of an unreleased Commodore 128.

Sprite Castle

Sprite Castle is a podcast created by Rob "Flack" O'Hara. Rob is the author of Commodork: Sordid Tales from a BBS Junkie. You can find out more about Rob over at robohara.com. SpriteCastle.com began life as a video / Youtube podcast (a "tubeCast"). There are 30 episodes of the show in that format. You can view them by clicking on the Sprite Castle TubeCast category or by visiting http://www.youtube.com/SpriteCastle . All of the games were played using WinVice and were recorded and edited using a combination of software packages including Windows Movie Maker, ManyCam, Sony Vegas Pro 10.0, and Audacity

http://spritecastle.com/

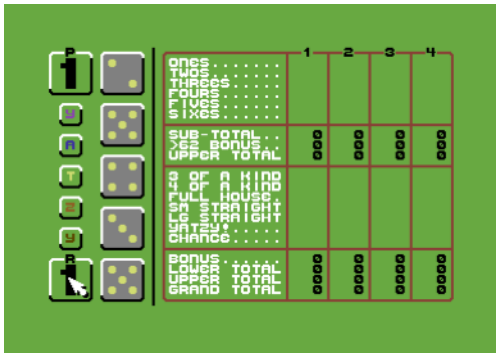
C64 Endings

c64endings.co.uk has loads of game ends from the Commodore C64, If you wondered how a game ended but were too rubbish to finish it yourself you can now watch a video of someone else finishing it. The most recent games added are:= Mancopter (Data Soft), The Last Ninja 3 (System 3), KGB Agent (Pirate Software), Jaws (Screen 7), Imagination (Firebird), Hawkeye (Thalamus), Gates of Dawn (Virgin Games) , Fighting Soccer (Activision), Elvin (Rainbow Arts), Dark Caves (CP Verlag), Captain Power and The Soldiers of the Future (Box Office) and Barbarian (Psygnosis / Melbourne House).

https://c64endings.wordpress.com/

Yatzy - C64

This game, created by Ron (code /graphics), with Fredrik (music) and shine (graphics). The game can be played with 1 to 4 players and is compatible with: PAL/NTSC Commodore 64/128 Commodore 64 Games System (C64GS) Commodore SX-64 WinVICE-2.4 Use the joystick in port 2 to move pointer in the game. Fire to select action.



http://csdb.dk/getinternalfile.php/150411/Yatzy20160702.zip

Kill the Alien

Released by: Laddh

Ok, not very original, but playable all the same. I still think it could do with the user being able to move the ship up and down the screen rather than just left and right, and some in-game funky sound track, but it is competently written. Use a joystick, move left and right and press fire to shoot the alien waves. Once they are killed you move onto another.

http://csdb.dk/getinternalfile.php/150493/killthealien.d64

Photos of CommVEx v12 2016

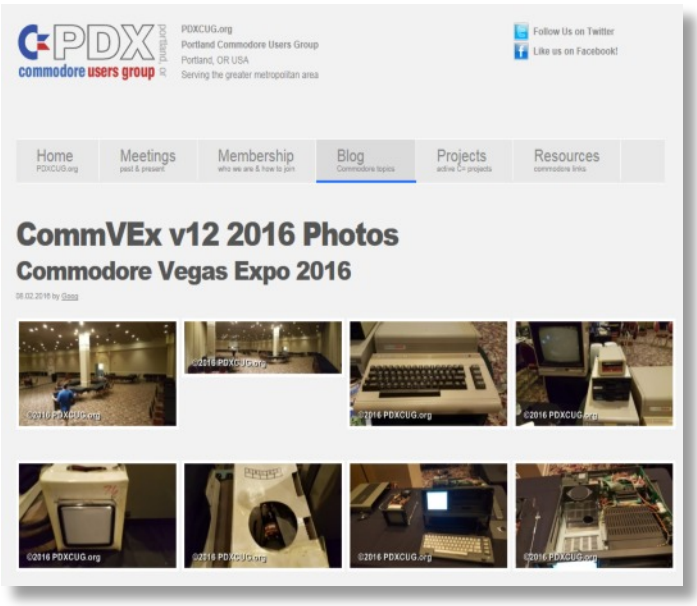
Photos of the recent CommVEx

CommVEx is the Commodore Vegas Expo these images were from the recent 2016 event

Because This year was the 40th anniversary of the KIM-1 and 35th anniversary of the VIC-20. At CommVEx it's the usual meeting of like minded people

- Meet other Commodore and Amiga enthusiasts.
- See demos and presentations on and about the Commodore 128, Commodore 64, Plus/4, DTV, VIC-20, PET, and Amiga.
- Come and present your own Commodore projects.
- Find those hard-to-find goodies at the vendor tables.
- And of course, see exciting Las Vegas, the city of lights in the desert!

http://pdxcug.org/commvex/Commodore_Vegas_Expo_CommVEx_v12_2016_Photos.asp

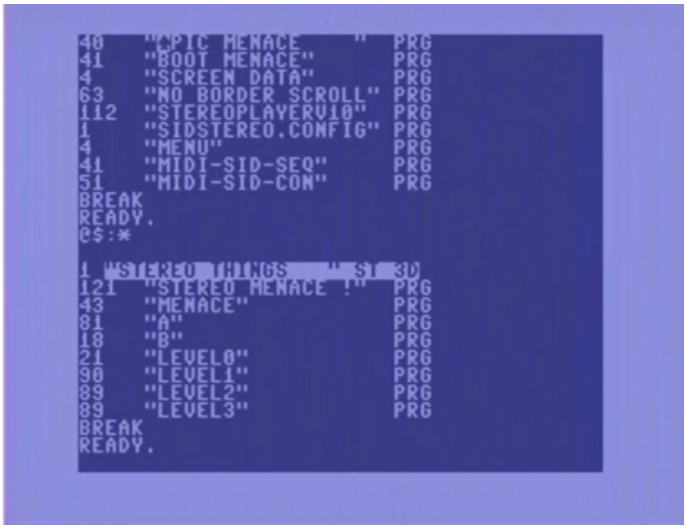


International Karate in stereo
Raymond Day says he "Found the disk I had it on. It was on a 1581 disk I just had labeled C65 and I made it so it worked on the C65 too. It will play the music on one side and the fighting sounds on the other side so it don't cut out the music sound."

He put it on my Google Drive here:
https://drive.google.com/open?id=0B5M3Rboz-h_uLUpyVWZqNm05dUk

He also made a stereo video of this International Karate:
https://youtu.be/9PfaVCoMh_w

Youtube has the following information
Raymond Says Years ago I used Super Snapshot cart to look at this game. I love the song in it and did not like that it cuts out parts of the song when it does a fight sound. So I made it in stereo. I have a 2nd SID chip addressed to $D700 and this will auto find the 2nd SID chip. Looks like it can't find the 2nd SID chip in emulators. With Super Snap shot I could use the "I - interpret" Then would put a 0 in it and read it back, and with a real SID chip it will have a number. It works real well and now you can hear all the music notes while the game sound plays too. F5 will turn off the game sounds. I think it did that already. The poke55168,64 changes to the built-in VIC-20 font I have burned in a 2nd part of the character ROM chip

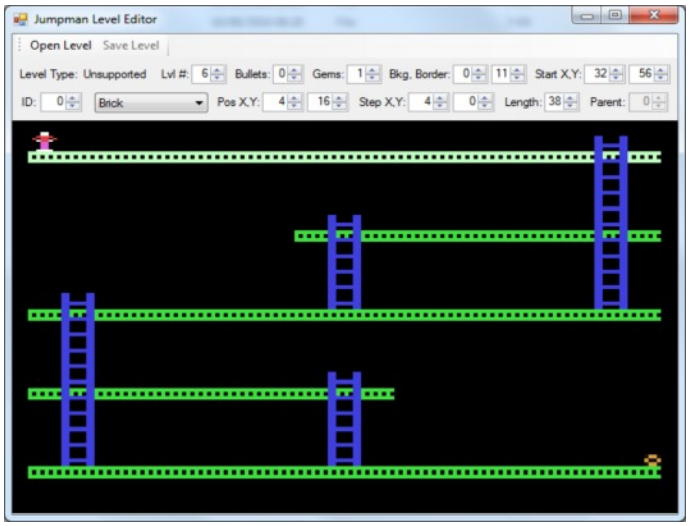


Jumpman Edit V0.9
Released by: **Hokuto Force** the accompanying documentation says : Jumpman Edit is still early in development and does not support full editing of all level types. Please make certain to save your work often and test it in the game - there are several hidden limitations of the level data format that don't appear until you try them out. Nearly all levels in Jumpman have some form of custom enemy type that involves embedded code and sprite data. This version of the editor (v.0.9) supports three basic types:

Standard: Bullets only, no special enemies. (Level 1)
Bombs: Falling bombs. (Level 3)
Bats: Enemy bats triggered by gem pickups (level 5)

More level types are planned for future development as well as possible support of Jumpman Jr. Contact me if you want to do something special or need a particular feature. Jumpman Edit was written using .NET platform v.4.0.. hopefully you can work with .NET, because I'd much rather develop in 6502 assembly than Win32/64/RT (or Mac), sorry

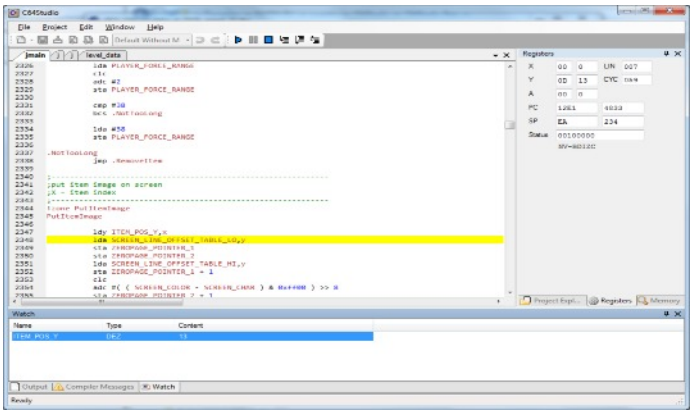
http://csdb.dk/getinternalfile.php/150678/Jumpman Edit 0.9.zip



C64Studio v4.8
C64 Studio is a .NET based IDE. The program supports project based C64 assembly or Basic V2. The internal assembler is using the ACME syntax. In connection with Vice the IDE allows you to debug through your code and watch variables/memory locations, registers and memory. Any other emulator can be set up as well if it's startable via runtime arguments. C64 Studio allows you to compile to raw binary, .prg, .t64, .d64 or cartridge format (.bin and .crt for 8k, 16k, MagicDesk) Additionally to this C64 Studio comes with a charset, sprite and media editor (tape and disk). An encompassing help documentation is part of the program.

New Features:
Add: Highlight of other occurrences of current selected text
Add: Display of memory content optionally as sprites/chars
Add: Exchange colors methods to sprite editor
Fix: Key mapping for BASIC should now be really functional
Fix: Pi constant for BASIC was mapped to wrong value
Fix: Lots of smaller fixes and added errors for compilation and opcode detection

http://www.georg-rottensteiner.de/en/index.html



Reset Issue 09

Reset is an pdf magazine for the Commodore C64 user. This issue is dedicated to Hewson Consultants. With a preview of Hewson's new game project and a chat to its creator, Jonathan Port. Paul Morrison chats to Andrew and Rob Hewson about Andrew's new book, Hints & Tips for Videogame Pioneers and the Reset team discuss their favourite Hewson titles in Blast From The Past. Rob Caporetto tests Paradroid Redux, a C64 update of Andrew Braybrook's Zzap!64 Gold Medal winning game, also reviewed is Barnsley Badger, Hessian and Tiger Claw. Vinny Mainolfi returns with Cheat & Beat column and round-up the 2015 16kb RGCD Cartridge Competition entries. regular columns return including Format Wars, Games That Weren't and a brand new Blow the Cartridge comic from Gazunta. The Mix-i-Disk contains an exclusive Redux version of a classic Alf Yngve shooter, with the new Reset intro by Dr J.

http://reset.cbm8bit.com/

Attitude Issue 17

Attitude is an English diskette magazine for the Commodore 64. This issue features the following articles: Editorial, Scene news, News from the groups, Ultimate II+ cartridge, interview with HCL/Booze Design, and the Gubbdata 2016 party report.

http://csdb.dk/getinternalfile.php/150431/Attitude_issue17_TRIAD.zip

http://www.cactus.jawnet.pl/attitude/files/attitude17.zip

http://www.cactus.jawnet.pl/attitude/files/attitude17-ide64.tar.gz

Dual Core C64

Telmo Moya replaced the standard 6510 CPU in the Commodore C64 and installed a dual-core CPU. The first core is 6510, the second is a Z80, making it possible for CP/M to be used in the C64 without the original CP/ M cartridge.

The website says:

Exploring reconfigurability of the ARM-powered C64 I added a Z80 emulator to the existing 6510 emulator. And for dynamic testing what better than cartridgeless C64 CP/M. So, heterogeneous multi-software-core C64 is obtained. Of course non-parallel concurrency is obtained, as only one hardware core (ARM) is available.

http://telmomoya.blogspot.co.uk/2016/06/dual-core-c64.html

20 Years HVSC

Released by: HVSC Crew The High Voltage SID Collection is now over 20 years old and to celebrate this monumental event a special music collection has been compiled. There is also an update available of the High Voltage SID Collection. There are now more than 48,500 SIDs in the collection. In this update 1022 new SIDs, 811 fixed/better rips, 791 SID credit fixes, 143 SID model/clock info's, 60 tunes identified and 74 tunes moved.

HVSC Update

http://www.hvsc.c64.org/

10 year collection

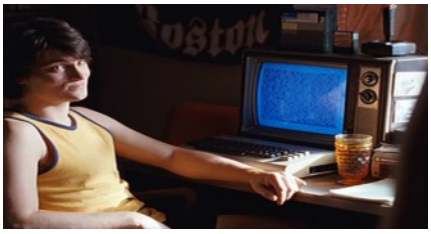
http://www.pouet.net/prod.php?which=27518

20 Years HVSC

http://csdb.dk/getinternalfile.php/150611/20_Years_HVSC.d64

FILMS STARRING THE COMMODORE 64
Always a source of interest are films with Commodore 64 computers or indeed any Commodore machines. Some of the sightings are quite recent, like from 2005, and one from 2010 as seen in the picture.

http://www.starringthecomputer.com/computer.html?c=66



Virtuoso 0.99
Released by: Vision released an update for their music composition tool. Features implemented now are as follows: Main editor: sequencer, patterns, instruments, step and FLO programs. Jam mode: mono, poly or layered

http://csdb.dk/getinternalfile.php/150633/virtuoso-0.99.d64

ASM-Version of V2 Basic Starfield Intro with smooth Scrolling (ASM beginner level)
Although not a tutorial the source code is included for anyone who wants to take a peek. The star field is very smooth though. Not sure where the ASM beginner lever comes in but the file is listed as a demo released by Bytebreaker, I was hoping this would be a tutorial .

Flicker free start filed effect prg and code files
http://csdb.dk/release/?id=149403

http://csdb.dk/getinternalfile.php/150610/starfieldfinal.s.txt

http://csdb.dk/getinternalfile.php/150609/starfieldfinal.prg

http://csdb.dk/getinternalfile.php/150769/starfieldfinal_flickerfree.s

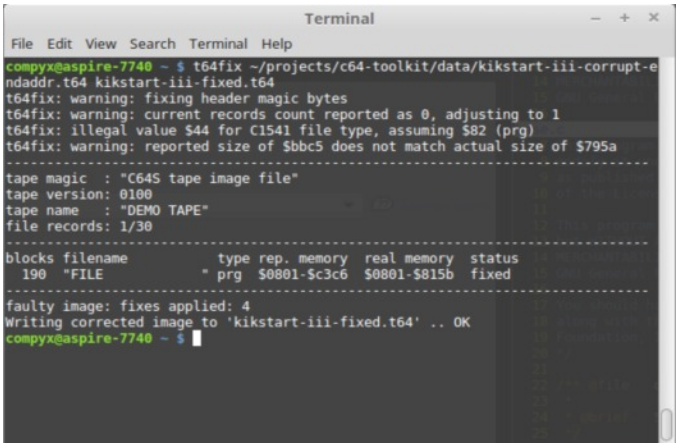
http://csdb.dk/getinternalfile.php/150770/starfieldfinal_flickerfree.prg

t64fix 0.1
Released by: Compyx The github documentation says t64fix is a small tool to fix faulty T64 tape images. T64 images are container files used by the old C64S emulator by Miha Peternel. The 'tape' in the name is a misnomer as these files have nothing to do with actual tape dumps, they're used as archives and for storing memory snapshots in C64S.

Download :
http://csdb.dk/getinternalfile.php/150520/t64fix-0.1.tar.gz

http://csdb.dk/getinternalfile.php/150525/t64fix_win32exe.zip

https://github.com/Compyx/t64fix

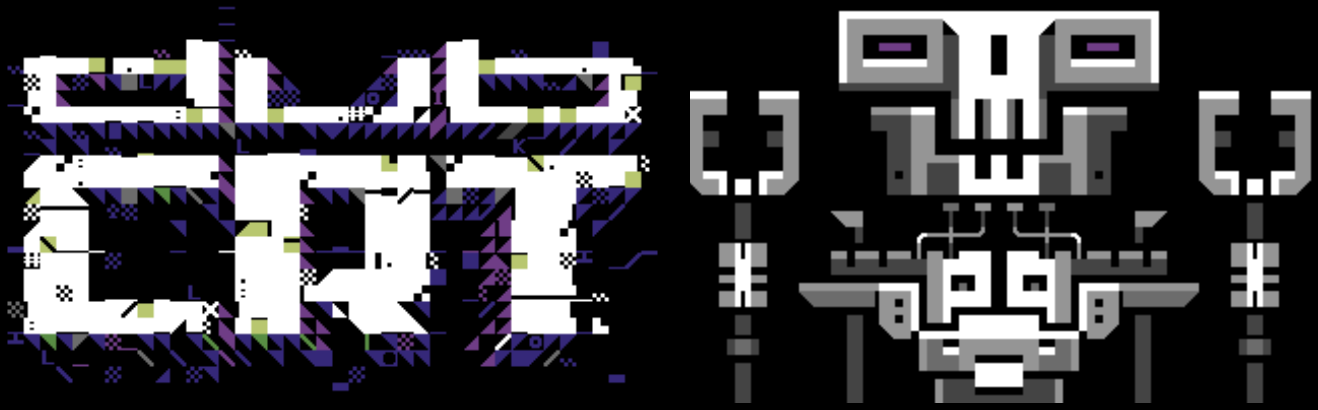


PET News

SPACE CHASE
Email
FROM Christian Krenner
TO Commodore Free

Hi Nigel,
just a quick update. You can see the latest reincarnation of Space Chase here (played on a real CBM II machine): https://youtu.be/Ixvac1yw_5M There are only a few bugs left, I am still planning to release 1.0 in a few weeks.
Regards Christian

COMMODORE FREE
Indeed the website is here http://www.spacechase.de/
And this issue of Commodore Free sees a full game review as Christian agreed the game was "releasable"



DUBCRT is a music album, interactive light synthesizer and remix gadget released as a Commodore 64 cartridge. With music and visuals from some of the most prolific experimentalists of the 8-bit scenes, DUBCRT taps into 1960s modernist forms, 1970s dub, 2000s glitch aesthetics, and 2020s sustainable computing. DUBCRT features:

- Eight songs ranging from ambient to IDM and drum n' bass
- Visualisers that react to the music, and that are user-controllable
- A secret remix module that allows you to re-interpret all the music on the cartridge

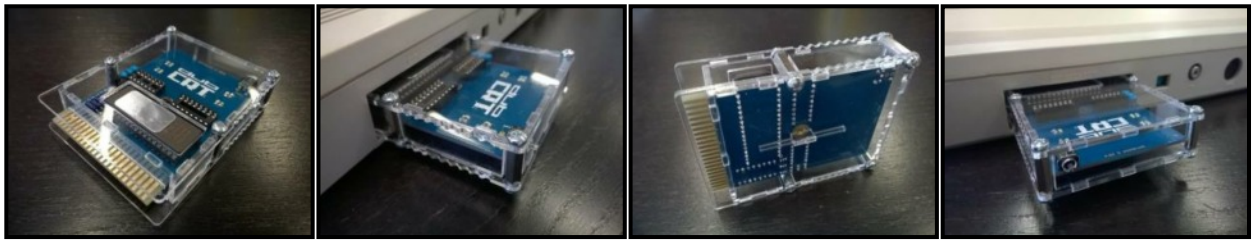
Uses only 64 kilobytes

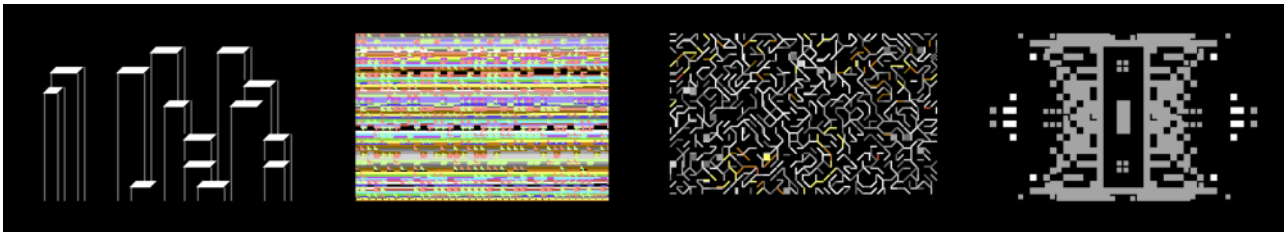
All of this uses only 64 kilobytes - equivalent to 1.5 seconds of MP3-audio. This is possible thanks to clever use of resources, and by making all the graphics in PETSCII, the colourful and quirky ASCII-variant of the Commodore 64.

DUBCRT™ will be released in late 2016 on DataDoor - a music / occasional Commodore 64 software label initially as a hardware cartridge for the Commodore64 (with a SID 8580 sound chip, PAL only), with a software version bundled (or available separately) that can run on modern emulators such as VICE for people who do not possess authentic antique hardware.

PERSONNEL:

Goto80 - All music / sound fx	www.goto80.com
4-Mat - All code / design -	4mat.bandcamp.com
iLKke - All PETSCII gfx / design -	ilkke.blogspot.com.au
Ray Manta - Original Concept / Design	





www.datadoor.net/dubcrt

Vic News

Athanor - VIC20

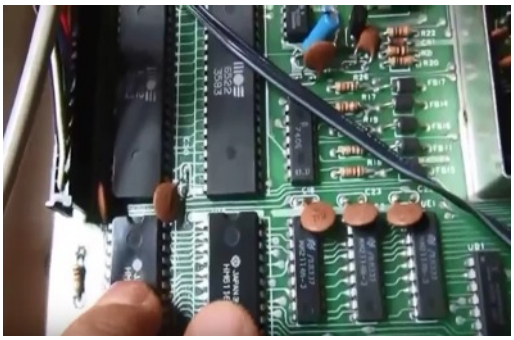
Majikeyric has released a new adventure game for the Commodore VIC20. The game needs a Commodore VIC20 with a 32K RAM expansion. In the game you are a Franciscan Monk and must discover the mysteries in the abbey.

http://sleepingelephant.com/ipw-web/bulletin/bb/viewtopic.php?f=10&t=8061

Vic 20 repair video

VIC-20 black screen repair. Bad BASIC ROM Commodore VIC-20 (VIC-20CR) serial number WGC196418 with black screen problem. Troubleshooting and repair. This is a cut & paste from several videos taken during the repair process.

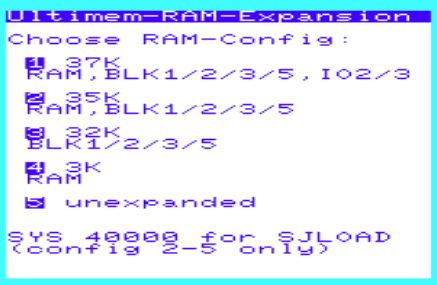
https://www.youtube.com/watch?v=jY_ne61TiPc



Ultimem RAM-Expansion ChooserCreated by tokra. This is A RAM-Expansion Chooser-image for the Ultimem, so you can use it as a simple RAM-expansion for all your needs. Fastloader (SJLOAD) included.

Download:
http://sleepingelephant.com/ipw-web/bulletin/bb/download/file.php?id=691

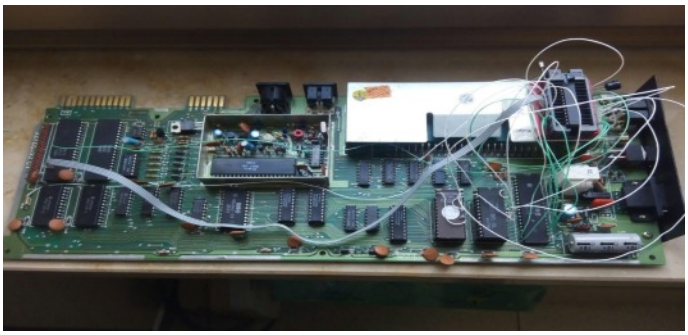
Discuss and Installation Instructions:
http://sleepingelephant.com/ipw-web/bulletin/bb/viewtopic.php?f=11&p=87470#p87463
Ultimem Ram expansion by Retro innovations
http://www.go4retro.com/products/ultimem/



WonderVIC

MCes is working on a modified Commodore VIC20. The modification is a FULL expansion **RAM** (**37K**) and an **alternative kernal**, all on board leaving the cartridge expansion free for user , the RAM/Kernel setting are chosen (during HW reset) through the function keys: **no hole on case!** HW reset can be generated by continuos pressing of "**RESTORE**" key

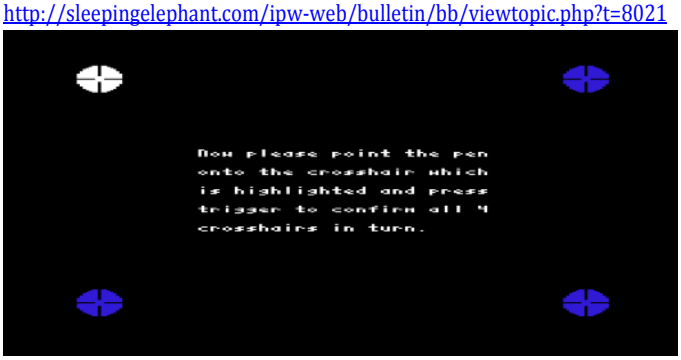
http://sleepingelephant.com/ipw-web/bulletin/bb/viewtopic.php?f=11&t=8068



MINISKETCH

Author: Michael Kircher Requirements: VIC-20 with +8K RAM expansion, Lightpen with trigger switch Description: Lightpen drawing program ...the ultimate VIC-20 doodle program! After calibration of your light pen you can press "N" to create a new sketch or "E" to edit an existing sketch. Then, the program immediately shows the graphics screen. When the lightpen is held near the screen and your VIC-20 can detect the position, MINISKETCH displays a cursor on-screen. MINISKETCH uses the MG file format. You can load the files into MINIPAINT to further refine and colourize them.

Download, read more and discuss MINISKETCH
http://sleepingelephant.com/ipw-web/bulletin/bb/viewtopic.php?t=8021



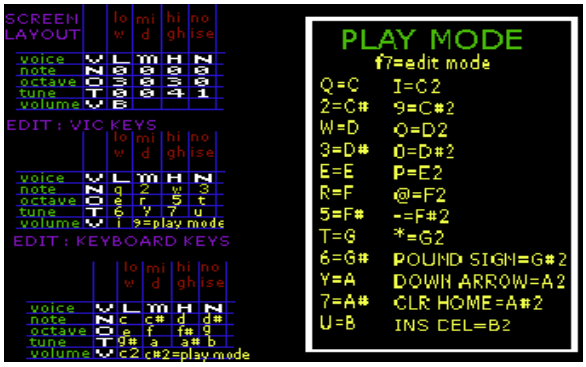
Micro Vicious
Author: R'zo (Ryan Liston)
Requirements: Unexpanded Vic-20, C=64 keyboard overlay(optional)
This is a monophonic synch that allows you to shift the tone, tune, and the octaves of the VIC's 4 voices across 2 playable octaves.

download
https://1drv.ms/u/s!As2kXhqHVPDzijafdIvLTQpLnGHp

Discuss
http://sleepingelephant.com/ipw-web/bulletin/bb/viewtopic.php?f=2&t=8076&p=88133#p88133

Micro Vicious 2.0
Features
-Works with c=64 keyboard overlay
-No noticeable latency
-Editable control over the octave, note layout and tune of the vics 4 voices
-Save and load up to 12 presets
-Downloadable .zip folder contains microvicious2.d64 disk image, a printable instruction manual and a type-in version with instructions

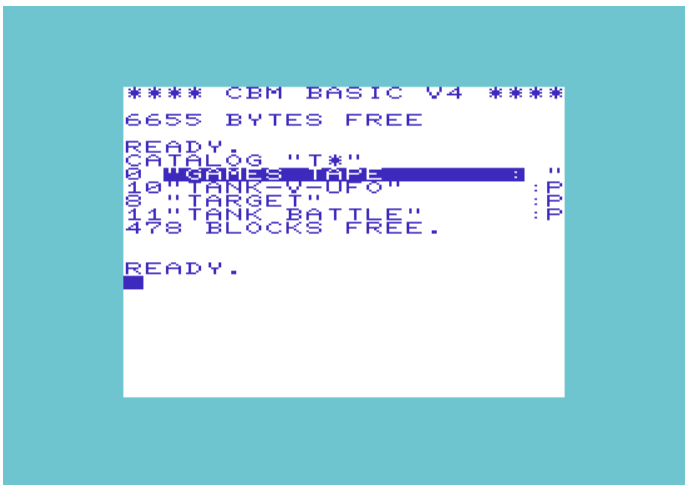
Download
https://1drv.ms/u/s!As2kXhqHVPDzijeQxXLoFtmpXEjk



NuBasic4
Author: Simon Rowe
Requirements: VIC-20 with 8K in BLK5, VIC-1112 optional

This is an Extended BASIC with disk commands, and works with both serial and IEEE-488 devices. Basic 4.0 is a set of additional commands added to the regular set available in the standard Basic 2.0 language. This section is intended to outline and explain in simple terms the additional commands available with the Basic 4.0 language. It is not intended to teach programming or explain in detail the techniques which can utilize these commands. For more comprehensive information the following sources may be useful:

Download:
http://eden.mose.org.uk/download/nubasic4.zip



Exit Plan Z
Author: Ryan Liston (R'zo)
Requirements: Vic-20, 16k expansion, joystick.
A zombie survival action micro rpg. Crawl through dark level after dark level of ravenous zs to escape a secret underground laboratory alive. This is great if you have ever played five nights at freddys games. I personally think it's on this line, well... in a vic vibe at least, it really gets your heart pumping with some great music effects.

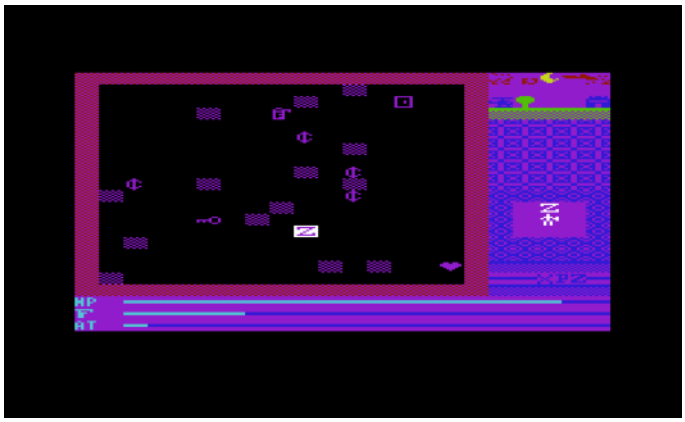
features
5 difficulty levels
Randomly generated levels
Multiple endings
Whack a Z battle system

d64+booklet (zip)
https://onedrive.live.com/redir?resid=F3F054871A5EA4CD!1330&authkey=!AMkGmkz-Az-PqEo&ithint=file%2cd64

d64
https://onedrive.live.com/redir?resid=F3F054871A5EA4CD!1330&authkey=!AMkGmkz-Az-PqEo&ithint=file%2cd64

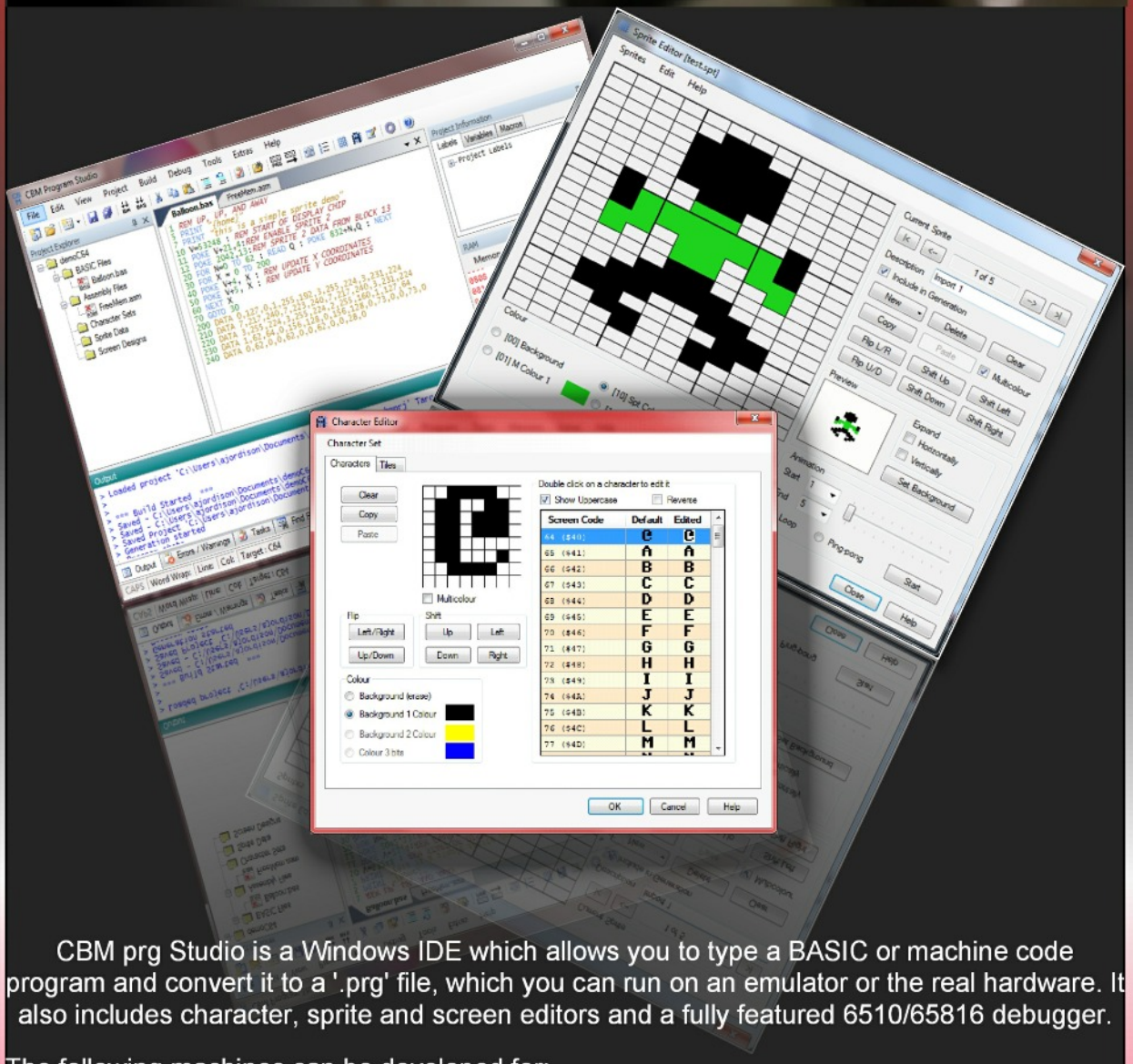
(update) now at Zimmers
http://www.zimmers.net/anonftp/pub/cbm/vic20/games/16k/index.html

A you tube video showing five nights at Freddy's (no I am not sponsored to promote either game)
https://www.youtube.com/watch?v=iOztnsBPrAA



CBM .prg Studio

A handy Commodore 8-bit program development utility for Windows



CBM prg Studio is a Windows IDE which allows you to type a BASIC or machine code program and convert it to a '.prg' file, which you can run on an emulator or the real hardware. It also includes character, sprite and screen editors and a fully featured 6510/65816 debugger.

The following machines can be developed for:

- Commodore 64 (and SuperCPU)
- Commodore 128
- Commodore VIC 20
- Commodore 16
- Commodore Plus/4
- Commodore PET BASIC 2 machines, e.g. PET 2001
- Commodore PET BASIC 4 machines, e.g. PET 4000/9000

http://www.ajordison.co.uk

Commodore SID chip

Although the SID chip itself doesn't need any sort of introduction, I will do one anyway for the purpose of educating the people who don't know.

SID is an acronym for **S**ound **I**nterface **D**evice. The chip was Developed by Bob Yannes, who worked for MOS Technology. He wanted to create a real subtractive synthesis chip, so it would stand out from the usual music chips of the time. The chip is a combination of both analogue and digital circuitry, because of this, many people say the sound is impossible to emulate with 100% accuracy The first Commodore 64 or breadbin uses the 6581 chip while The Commodore 64 mark II and Commodore 128 use the newer 8580 chip.

SID at a glance

- 3 voices,
- 4 waveforms (sawtooth, triangle, rectangle pulse width modulation, (white) noise
- 3 amplitude modulator,
- 3 envelope generators
- Synchronization of the oscillators
- Ring modulation
- Programmable filters (low pass, bandpass, high pass)
- Master volume control
- 2 A/D-converter (8 bit, low frequency, used for reading paddle input)
- Random generator
- Audio input

There are a number of differences between the two versions one being the filters, many SID musicians prefer the errors in the original 6581 chip, Yannes worked and corrected many of these for the newer 8580 chip. Speech sounds better on the first chip, while the second sounds muffled in comparison

Emulations

Unfortunately for the SID chip, many of these devices produced between 1982 and 1993 reach the end of their life span. It is getting harder to get a replacement parts, although some seemed to find their way onto ebay they were thought to be rejected by Commodore and someone returned them to the market, with faulty filters and even sound chalnnels. Thus, it was deemed that we need a proper substitute. And as the website says this is what the FPGASID project is all about!

The project was started to overcome not only the shortage of replacement chips, but try to produce a more stable substitute, and in the emulation this is said to reach close to 100% emulation, or as the site states " it aims for a better SID than any SID has ever been before..."

The Mission

- Create a pin compatible drop-in replacement for the MOS6581 device as well as for its successor, the MOS8580.

The Targets

- To-the-cycle exact reproduction of all digital parts including sound and envelope generation and paddle readouts.
- Exact modeling of the analog parts leading to a result that is almost indistinguishable from the original.
- Making it configurable to easily switch between various SID variants
- Adding extra features like wavetables, stereo sound, more voices, etc., while keeping full compatibility.

The Means

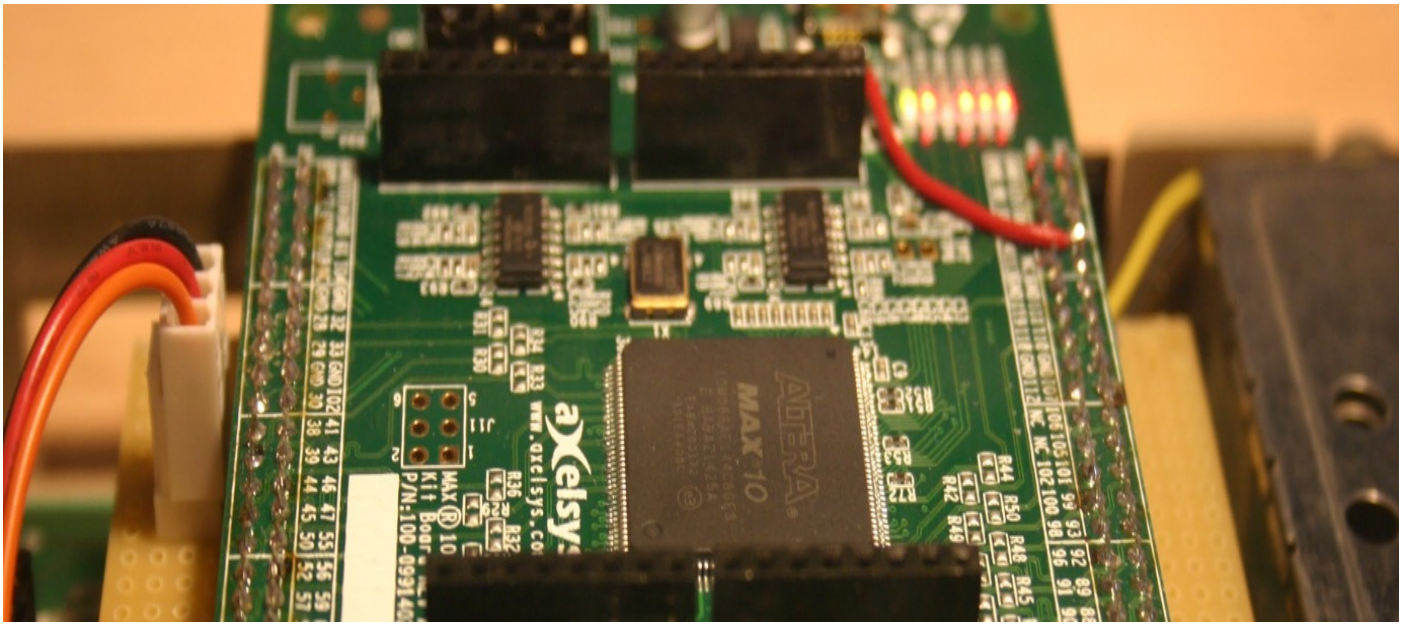
- Use of FPGA technology. It is more suitable than software related emulation.

A few Sid related websites

https://en.wikipedia.org/wiki/MOS_Technology_SID

https://www.c64-wiki.com/index.php/SID

http://www.waitingforfriday.com/index.php/Commodore_SID_6581_Datasheet



DATADOOR

The world's first music album, interactive visualizer and remix-tool on a C-64 cartridge. And it's all in just 64 kilobytes!

DUBCRT plugs straight into you Commodore 64 and offers 8 songs with reactive and interactive visuals in a 1960's modernist style.

Hidden in its mysterious interface are functions to control the visuals and transform the music beyond recognition.

With music by Goto80, code by 4mat and graphics by iLKke, you are in for a computer ride into the unknown!

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DATADOOR

DUBCRT will be released in late 2016 on DataDoor – a music / occasional Commodore 64 software label initially as a hardware cartridge for the C64 (with a SID 8580 sound chip, PAL only) with a software version bundled (or available separately) that can run on modern emulators such as VICE for people who do not possess the authentic antique hardware.

Interview with Andreas Beermann
Creator of FPGASID

http://www.fpgasid.de/

COMMODORE FREE
Please introduce yourself to our readers.

Andreas Beermann
Hello, I'm Andreas Beermann. I live in Germany where I work as an R&D engineer for a company that makes equipment for the semiconductor industry. In my daily job I deal with high-tech stuff, always at the edge of what's technical feasible. But I kept my heart open for retro technology such as 8-bit computers. This reminds me of the good times I spent with these machines in my youth were it wasn't just "old stuff" but the high-tech of that time.

CF When and why did you become involved with computers and especially Commodore Computers?

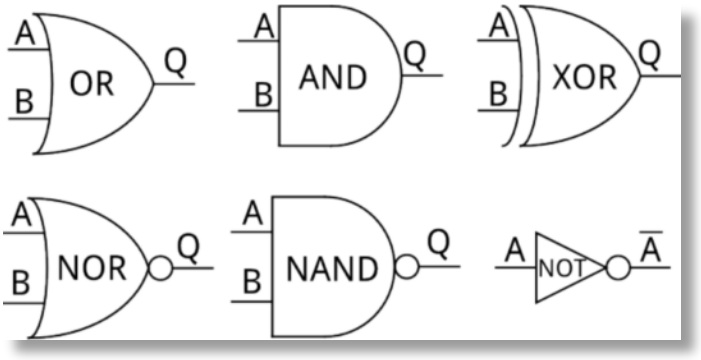
AB Hmm, it must have been when I was 12 years old maybe, my brother was attending a computer programming course at school and at that time I owned a book explaining how to program in BASIC. So I wrote a small game in BASIC just on paper as I did not have access to a real computer. My brother typed my code into the school computer (which was an Apple II) debugged it for me and in the end it was working. It was a car race simulation game with vertical scrolling border just with print statements. It was very simple, but it was my first code... . Then at the age of 14, I did a student-job and earned the money for my first computer. It was a Commodore 64. I was not interested so much in gaming but I spent the rest of my youth learning how to program the 64 down to the last memory bit.

CF Can you tell our reader about FPGA SID, firstly what is FPGA, and for the uninitiated, what is the Commodore SID chip?

AB FPGA stands for "Field Programmable Gate Array". FPGAs are devices can be programmed to fulfill any logic function you want. Every digital circuit consists of so called gates that can do very basic logical operations such as 'and', 'or' and 'not'. In an FPGA you have thousands of these such gates, but without any connections between them. Programming the FPGA means you have to define how these gates should be connected to implement a certain digital circuit. This description of the connections can be loaded into the FPGA as you would load them into a computer program into memory for execution. FPGAs are perfect for prototyping digital semiconductor devices. They are very fast and very flexible.

The Commodore SID chip, well I don't really have to explain that do I, I am sure all the readers know, anyway SID stands for "Sound Interface Device". It is a sound synthesizer chip that has been used in the Commodore 64 and many of its successors. At the time the chip was developed I would say it was probably the best sound chip of its type you could get. In contradiction to the simple 'beeping devices' that were used in other computers, the SID was inspired by music synthesizer concepts such as the famous MOOG synthesizers. This chip was very popular and still is up to today. Unfortunately these chips are not produced any-more and the existing SID devices are starting to reach the end of their lifetime.

CF On the assumption now that most readers will be aware of the Commodore SID sound chip Lets say it's the sound creation device in the Commodore 64 (amongst other machines), so your intention is to re create this hardware chip in programmable logic



AB Yes exactly. The FPGSID project targets for a pin compatible in-circuit replacement of the original SID chip. Mainly to overcome with the situation that it as time goes on it will get harder and harder to find the original chips for repairing Commodore computers, also because nowadays the SID chip is used in musical instruments that require not only one chip but multiples of them.

CF Wasn't one of the SID chips characteristics that is was a hybrid of analogue and digital technologies, no two chips sounded the same, and its sound could change with temperature? Surely, this is impossible to re-create just in software.

AB Yes, you are right. And in my eyes this is one of the biggest disadvantages of the SID chips. While the digital sound generator parts have no variation among different devices, the analogue filters and mixer circuits have large tolerances and as you say are susceptible to temperature changes. This results in a large sound variance between the SID devices especially when the filters are used. Some sound really great however others sound very poor. And it's always a matter of taste: What the one prefers could sound ugly for one user but great for another; nevertheless today's software emulation of the SID chip is quite advanced.

CF So what is possible to re-create?

AB The best emulation of the SID chip is by a software library called 'resid'. This library is part of many popular Commodore emulators such as Vice or JSidplay etc. Resid can reproduce the tiny imperfections of the analogue circuitry in a very accurate manner. Basically it is doing a numerical circuit simulation almost like a Spice simulation would do (Spice is a standard method of simulating electronic circuits). It reproduces all smaller and bigger non-

linearities of the SID chip as well as it's timing behaviour very accu

FPGASID is based on the same numerical model as resid. In some places however things are a bit different because compared to software, FPGAs work differently. However in principle it is the same thing. That's why FPGASID has a sound reproduction quality that is absolutely comparable to what resid does.

CF Apart from the actual re-creation of the Sid chip is it possible to better the original SID chip, and as you say, stability is one area the SID suffered from, could anything else be improved?

AB One main advantage is that FPGASID will be better in terms of reproducibility (no variation among the devices). But of course it will have some additional features that the original SID does not have and always keeping the full compatibility with the original.

CF Features? What kind of features do you have in mind?

First of all I am designing FPGASID towards a full featured stereo solution. So basically you will have two SIDs similar to other stereo solutions and compatible to existing stereo software. Other potential features could be a SPDIF compatible digital audio output for maximum sound quality. Maybe programmable wave tables or an 8 or 16 bit wide sample playback register. But the last two features would break compatibility so I am not so sure about them mainly because there will be no software supporting such features on its release.

CF So the device won't sit in the SID socket will it?, Surely it will be too big, how does it connect to the C64?

AB Oh no! It definitely WILL sit in the SID socket! The current prototype is based on a commercial FPGA evaluation board. It actually sits in the SID socket via some adaptor board. Of course due to the device's size, it is no longer possible to close the case of the C64 at this present time, But this is only the first prototype. Currently I am working on a new prototype that will be much smaller than what you see today. The goal is to keep everything so small that it is not bigger than the 28-pin socket of the SID. This may not be 100% achievable but from what I can say today, it will still be small enough to be just a small module for the SID socket. This will be achieved by using another version of the FPGA with a smaller case and by drastically stripping down the surrounding circuits to what is really required.

CF How big a market do you see for such a device? For example, they are using the original SID chips in music synthesisers. Are you planning something like this or is it primarily to design a compatible "chip"?

AB Hard to say really, I have any idea about a potential market size. The primary idea is indeed to have a compatible chip replacement, enhanced with some nice extra features. For this the market will certainly grow once more and more of the original chips will stop working. But I already have some requests from other projects that would like to integrate FPGASID into their implementation. Also synthesizer people seem interested so there will be definitely more possibilities in the future.

CF You state its Mos6581 and Mos8580 compatible. Can you explain for the benefit of our reader who may be unaware the differences in these SID chips? Also, does this mean it will be switchable to emulate both ?

AB The MOS6581 was the original version of the SID chip produced by Commodore. At one point in the late 80s Commodore modernised their chip production process from NMOS to HMOS technology, this required some rework of the SID design to adopt it to the new process. Doing this redesign the designers also repaired some bugs in the SIDs analogue circuit that came out was the MOS8580 chip. It is fully register compatible to the older 6581 but it sounds quite different especially the filters; that sound somehow 'cleaner' and more reproducible. It is however much easier to recreate a 8580 device because everything is much more linear, many parts of the 6581 simulation can simply be switched off to get a reproduction of the 8580 chip, in FPGASID it will be possible to switch between both chip versions by a simple register write.

CF How far from a purchasable product is the project at this moment, and when will products be available for sale?

AB Technically most hurdles are now overcome, what remains is just hard work. Unfortunately the FPGASID team is completely understaffed, Or in other words: It's only me that is doing all the work. Since I do everything in the little spare time that I have beneath a demanding job, the progress is very slow at the moment. I hope to have the next prototype ready by the end of this year, this prototype will be available for selected persons who volunteer to contribute to the project. But volunteers are always welcome! Currently I would like some help with the PCB design or with the Verilog coding for the FPGA. A final version of FPGASID will follow once the debugging of that prototype is completed, so definitely not before next year. I will try to find a partner for the sales of the final FPGASID, ideally everyone will be able to order it. The price is also not fixed yet. I have to admit that FPGAs are quite expensive. So the pure material cost of FPGASID will start quite high. I am targeting a price in the range of what a normal stereo solution with two SID chips would cost.

CF Is there a website we can compare an original SID to an FPGA version of the chip?

AB Some examples can be found on the project description page of the FPGASID homepage (http://www.fpgasid.de/project-definition). In the last months I did some listening tests with volunteers to check the sound quality and find the remaining bugs. I made many recordings comparing FPGASID against an original 'reference' 6581 and other SID chips and of course the VICE emulator. Maybe I should put these recordings on the web site for a broader audience.

CF The FPGA code, who wrote this originally, and is this freely available to anyone?

AB The code is entirely written by myself. Of course I had a lot of inspiration from the resid library so credits should also go to the authors of resid. At the moment the code is not in the public domain, but I am planning to release the full code once the first working prototype is available. I think it does not make sense to publish it before because until then no platform will be available were you can run it.

CF Do you have any final comments you would like to end the interview with?

AB I want to thank everybody who is showing interest in the project, it gives me a lot of motivation to know that some people are already waiting for the first hardware device. But I also want to apologize that it is taking longer than a commercial project would take. But hey, relax, it's all just a hobby, right? ;-)

rately. Some emulator engines even allow changing the configuration to select multiple profiles representing different SID chips. In the end the overall sound reproduction of resid is very close to the original SID.

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Growing Pains Part Siv
Where I Learned To Code In Style
By Lenard R Roach

Out of all the things we can do with our Commodore brand of computers, nothing seems to be more important to me than word processing and budgeting, and out of those two I put budgeting on top. Usually a good rule of thumb when it comes to budgeting on the Commodore is having a very good to excellent budgeting piece of software, and I found that piece of software in "Run" magazine's type in program "Money Manager With E-Z Budget" coded by Rex Day and published around 1989.

This Commodore Redneck owes a great deal of his coding knowledge to Mr. Day when it comes to my making the packages I did for helping users to budget on the Commodore via various software aforementioned in previous articles. With the exception of my best friend and Commodore guru, Carl, Mr. Day has taught me the most about programming on the Commodore. The funny part about this whole educational department for me is that Mr. Day and I have never met. In fact, Mr. Day doesn't even know I exist, but his coding of "Money Manager" deserves to be read by every serious Commodore coder who wants to learn a near perfect balance of BASIC, BASIC machine, and algebraic expressions. I've been using Mr. Day's "Money Manager" program for over 25 years and it has kept a great eye on my spending habits and has shown me in more than one instance "leaks" in my spending that needed to be "plugged." But, even great pieces of software have flaws and "Money Manager" was no exception.

It was February 2000, when I sat down at my Commodore 128 and started to work on the first of the month bills. Usually, "Money Manager" asked if this is a new month, and upon pressing "Y" the computer transposes the data from the previous month (like check book balances and etc.) to the new month, Not so this time! The program asked, "Is this the first input to the program?" Odd.

That's a beginning of the year function. Upon pressing "N" the program balked and demanded a valid month then sent me back to start up. I entered the same screen again and, to make a long story short, I had to set up for February like I did January inputting data all over again. Upon investigation of the program text, it seemed that "Money Manager" was suffering from a "Y2K" malady and needed to be fixed.

I must admit I was a little nervous to go into the BASIC of the program and start working on the problem. Mr. Day had the maximum amount of functions settled into a minimal amount of code. Any tinkering of that code may set an unbalance and cause the program to crash upon every boot with possibly no hope of recovery. I studied every line of the 71 block long program before zeroing in on the first 25 lines and deciphering that the date stamp lives in these lines. It took me a couple of hours of trial and error and several reboots before I finally got "Money Manager" to cooperate with the new date stamp I installed.

What I did in short was change the "mm/yy" stamp into a "mm/yyyy" stamp,then going through the program and change any GOTO or GOSUB references to the old date stamp to agree with my changes. There was a numerical expression of "100" which told the program to stop working in a year stamp past 99 to "10000" so the program would totally agree with years starting from 2000 and beyond.

After making a program like "Money Manager," written by a great master of Commodore code like Rex Day to work beyond it's intended life expectancy, I wanted some cussing credit for my effort. At the beginning of "Money Manager" is the introduction screen which was coded at the beginning of the program (stands to reason). Before I put in the necessary PRINT statements I thought it best to write in Mr. Day as the primary coder and myself for just adding the "Y2K" updates.

Also, for anything I wrote or was a contributor to, I included the name of my local Commodore user group, and yet, when all this was done, the intro screen still lacked the necessary information I felt was necessary, so I changed the name of the work from "Money Manager" to "Money Manager 2K," signifying that this work was now compatible with the year 2000 and beyond. Also, as a side bar, I added that "Run" magazine published the original code.

"Money Manager" itself is a great tool with features like an electric checkbook, checkbook analyzer, and department keeper. In the "E-Z Budget" half there is a budget calculator, a future forecaster (you input the numbers and "E-Z Budget" calculates them down), and a break down by department. The setup is simple: At first input you create your own department heads where each input into the electric checkbook *must* go under a heading. As the year progresses you can add departments as you go up to 16 extra inputs, or you can change a department head that is inert into a new active department.

The computer saves all your departments to disk and will access all your departments and load them into your Commodore. In "Budget Analysis" all your departments are calculated for the month thus far and printed onto screen or printer. "E-Z Budget" also does an analysis from projected (your guess) to actual (what really went down) to give you an idea on where yours was planned to go and where it actually went. Mr. Day also added handy "Help" messages that refer to the screen currently displayed. Simply go to the screen in question and press "H" and a box in reverse field will appear at the bottom guiding the user as to what to do.

After using "Money Manager With E-Z Budget" for over two decades I've found only two quirks in the work that I personally blame on the publisher of the code text and not on Mr. Day himself: One is that
the computer will syntax and crash at one of the "Help" messages, but I don't use the help messages anymore so this is not a cumbersome issue, but for the beginning user of the program it can be a problem. When this happens just type in RUN at the flashing cursor and the program will restart, but any unsaved input will be lost.

This brings me to the second problem: If too much data is entered in one sitting without an occasional dump to disk, "Money Manager" will lock up and not even the pressing of RUN/STOP-RESTORE will break the program loop. Here the user must turn off, then turn on the computer and reboot the program. All unsaved data is definitely lost. I've found a way around this is to SAVE after every third or fourth input. It's tedious, it's long, but it is a big headache saver in the end.
As you probably guessed, I would like to call my programs for Commodore the "best written works" available, but with such great Commodore programmers like Mr. Day, Carl, and others past and present, I will have to take a seat in the back of the room.

If you would like a copy of "Money Manager With E-Z Budget" I'm sure an image of it can be found on many Commodore archive websites for free download, but those copies will not have my "Y2K" updates. Then again, we are well past the first decade of the new century so Mr. Day's original code should work fine; but if you want the program with my updates then please send me a self addressed stamped envelope big enough to hold a 5 1/4" disk to the address found on my website http://elomaster.wix.com/lenardroach along with $1 USD (to cover the cost of the disk) and I will get a copy to you. There's no way I can give "Money Manager" due justice in one short article, but if you've been looking for a great, affordable financial piece of Commodore software then Rex Day's "Money Manager With E-Z Budget" should be what you've been seeking.

DUBCRT Commodore 64 Limited Cartridge (PAL only) HARDWARE REVIEW

Stand aside X factor wannabies, droning on and on with the same old vocals as last year's entrants, singing the same songs looking all alike and auto tuned to death, surely it's time for a change isn't it?

Could this be the future of electronic music? Certainly in this format the device is unique! I used to play Jeff Minter's psycadellia to death with various albums on and the lights powered off. Just me and the C64 and a visual light show, flickering and dancing around my bedroom, I mean the lights -- not my good self.

DUBCRT is released as a music album interactive light synthesizer and remix gadget, the device is for PAL only Commodore 64 and comes in the form of a cartridge. On the cartridge we have music and visuals from (as the website states) "*some of the most prolific experimentalists of the 8-bit scenes",* If you're a "throbbing gristle http://www.throbbing-gristle.com/ or industrial music fan this is definitely the device for you" **Genesis Breyer P-Orridge** says that you don't need talent or instruments but you do have to create something new and not reproduce what has been done before, hundreds of people can sing but it takes a special magic to create something that hasn't been done before. (not taking anything away from the music on this, its unique and pushes the Commodore in a different direction than just chiptunes)

If your expecting Rob hubbard riffs you will be surprised/disappointed depending on your outlook, the websites links have the music you can listen to and get an idea of the music styles.

DUBCRT features are :

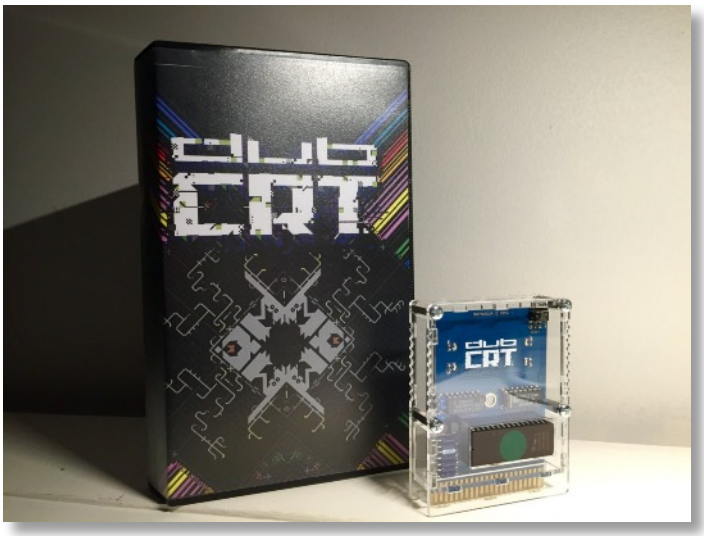
• Eight songs ranging from ambient to IDM and drum n' bass

• Visualisers that react to the music, and that are user-controllable

• A secret remix module that allows you to re-interpret all the music on the cartridge

With the Commodore 64 standard cartridges only holding 64 kilobytes – which the website says is the "*equivalent to 1.5 seconds of MP3-audio"*. making all the graphics in PETSCII art certainly make colourful and quirky variant on the Commodore 64.

The box and cartridge really look the part, the dub cart logo is truly a work of art and I would definitely love a poster of this in my man cave. The lights on the cartridge and the clear case add to the low-tech retro feel. If you love the Commodore 64 you can't fail to want one of these devices.



The basic idea is this: you boot your machine and select what I call Element. This is a number from 1 to 8 that will play music and feed back a visiual effect of petscii art. You can use various keys as outlined in the manual to manipulate the art in different ways. Changing the colour and the way the art moves are just two such elements. Pressing <space> takes you back to the main menu. If you watch/listen to the tunes in a specific way you can enter a remix section of the cartridge.

The final musical element is a petscii game where you control a ball using the joystick -- it's all very interesting stuff and the music is very evolving. Some may call it non-music but it all depends on your view of art.

There is also an audio version of the Commodore64 cartridge will all of the tracks that have been recorded from an actual MOS 6581 and MOS 8580 SID chips from authentic hardware - This has a stereo mix combining both of the SID models into one waveform. Also included in the audio version are eleven remixes from artists such as Datasette, Julien Mier and Mesak.

Summary
I don't have any comments how could you make comments on perfection, other than we need another batch of these and a follow up concept! Maybe more control over the music and effects?

NOTES
Goto80 (audio, Sweden) was one of three nominees for best C64-composer at Commodore's 25 year anniversary, the band regularly perform live around the world. They also do academic research on text mode graphics and retro computer cultures ther website can be found here. www.goto80.com

4-mat (programming/design, UK) makes tiny audiovisual art for various 8-bit computer systems, and works with game audio. He was also one of the first in the world to make chipmusic on the Amiga in 1990. 4mat.bandcamp.com

iLKke (graphics/design, Australia) is a notorious pixel artist and composer, who started in the Amiga demoscene in Serbia. http://ilkke.net

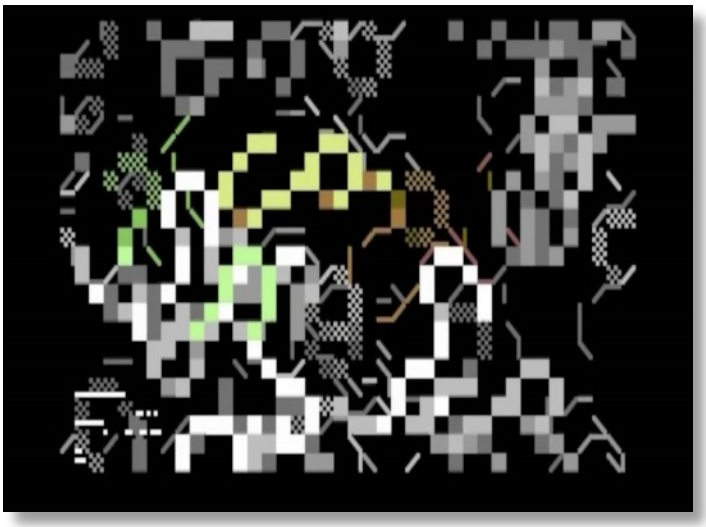
Ray Manta (concept/design, Australia) is the alias of veteran electronica producer

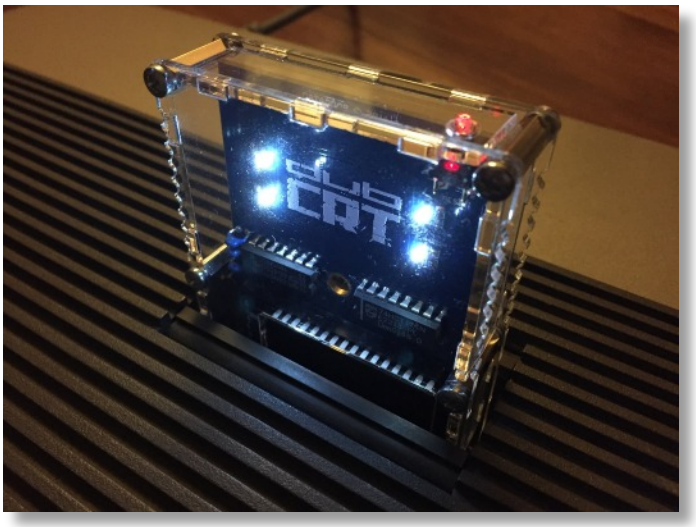
Tim Koch, who initiated and organized the project runs https://datadoor.bandcamp.com/ where you can download music by some of the artists named above, and from himself, it depends what you want out of your music but I would advise you to check out some of the unique pieces on offer.

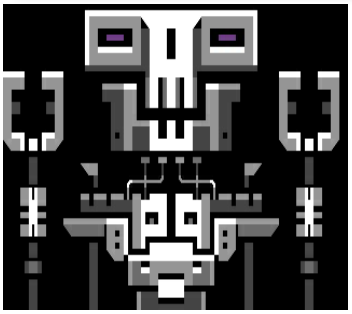
Websites

VIDEOS
https://www.youtube.com/watch?v=ZPXGA7R6gb0

Device
http://datadoor.net/dubcrt/
https://datadoor.bandcamp.com/album/dubcrt/

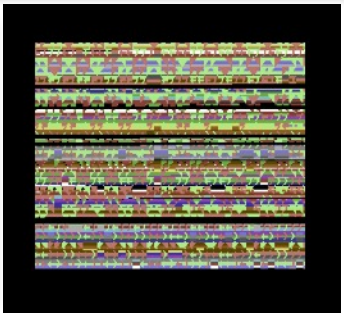






Packaging	10/10
Hardware design	10/10
Graphics	10/10
Sounds	10/10
Features	10/10

Overall 10/10 PERFECT !?



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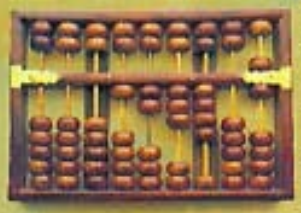

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COMMODORE 64

DUBCART
Interview with Tim Koch

Hi wondering if you would be interested in running an article on the Commodore 64 cartridge we just released? :)
some info attached!

https://datadoor.bandcamp.com/track/antispeed-tim-koch-cartridge-remix
https://datadoor.bandcamp.com/album/dubcrt

COMMODORE FREE
Please, can you introduce yourself to our Commodore Free readers?

Tim Koch
Hi my name is Tim Koch, I have been using Commodore machines since about 1985 - I grew up with a C64 and then in the late eighties jumped over to Amiga for music production - then strangely enough became heavily involved again with the Commodore 64 via a love of the SID chip in around 2008. Since then I have gradually started using trackers and other music tools (Prophet64/Mssiah) for live performance using the SID chip, and also toying with PETSCII in perhaps a more progressive way (I'd like to think anyway). I also run DataDoor which is the music label / software+hardware oddity label. Outside of Commodore / retro scene I have been writing, releasing, and performing electronic music for the past twenty years or so (under my real name as well as "10:32").

CF
So what was your first introduction to Computers, and especially the Commodore range of machines?

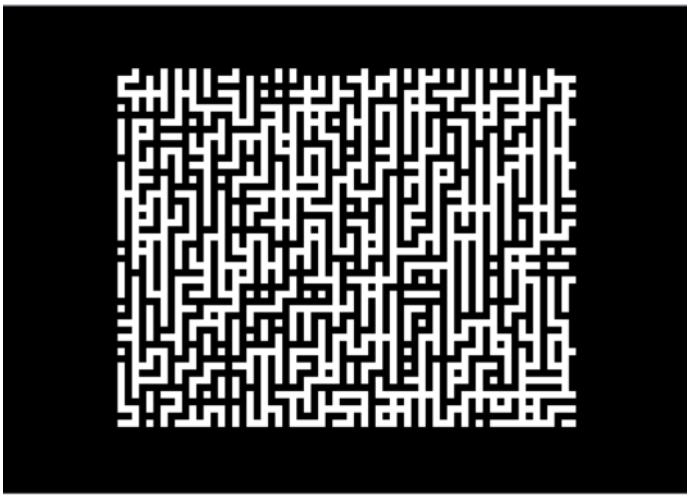
TK
in the mid 1980s as a kid many friends had Spectrums here in Australia, but somewhere along the line we scammed our parents into purchasing a C64 for 'educational' purposes which of course meant games. First and foremost I think I was blown away by this discovery of dynamic sound and music since I had just heard the more rudimentary blips on Spectrum / Amstrad / Texas Instruments of friends. After realizing just how different the SID sounded to fresh ears I think I did literally enjoy games more for their soundtracks than anything else, and of course Galway's Parallax title music and Hubbard's Delta in-game music exposed me to more interesting composition than standard melodic game-theme dynamics.

CF
So it's mainly the music /graphics that are a big part of your Commodore love then?

TK
Oh yes definitely, the odd qualities and restrictions of the 6581 and 8580 has always fascinated me, as has the PETSCII character set (or CBMSCII) for CBM machines. As has been stated quite a lot, the restrictions of a tool set or technology are often the factors that result in unexpected creativity or surprises, and I think the limitation of three oscillators with the SID and also the rudimentary nature of PETSCII have always fascinated me to the point of wanting to toy with both and learn a little more about what can be done.

CF
DUBCRT is listed as a music album with interactive light synthesizer and remix gadget released as a Commodore 64 cartridge. Was it important to fit everything on one cartridge? Were you ever tempted to maybe consider a memory bank switching cartridge with a number of CRT files held on different chips that could be switched on or off for different music?

TK
We did have a lot of discussion about potentially using bank-switching and some other tricks, but eventually thought it



would be better to stick to a focused group of just eight songs that effectively mimicked somewhat a conventional music album in length. Eventually we thought it better to cram as much as possible into the 64k of the EPROM rather than expand the architecture of the cart to allow for too much content which would perhaps result in the loss of focus of the crux of what we initially envisioned for the DUBCRT.

CF

For anyone not exactly clear, what does the cartridge actually do? So, once installed and powered on, what happens?

TK

Without giving too much away, after a very short intro the cart loads a menu that is essentially a blank puzzle template. At this point the user can jump into one of eight songs and their associated visualisers. Within each song and visualiser it is possible to alter the parameters of what is happening on screen (colour, type of PETSCII characters being used, rate of activity, and some other glitchy variables).

In it's boot-state - each of the eight songs are hard locked to their associated visualisers, but once the secret sections are reached, the user can alter the sequence of song and visualiser which displays how each visualiser reacts distinctly different depending on the type of SID activity.

Without giving too much away, listening to the songs in a certain order will gift the user with more puzzle pieces that appear on the main menu once you exit from a song/visualiser. One visualiser is an abstract PETSCII platform-game controlled via joystick in port2 - and the more tokens that are collected in this game also gift the user more puzzle pieces in the main menu.

So essentially once the user has filled the empty puzzle slots, they need to arrange them in a configuration that then alerts the user they have entered the next 'mode' (or secret section). Each new mode then unlocks more functionality, eventually resulting in a special section that then allows the user to have A LOT of control over remixing all of the songs on the cartridge.

There is a secret section that allows the user to remix all of the patterns of the song they choose, alter waveforms of each oscillator etc.

CF

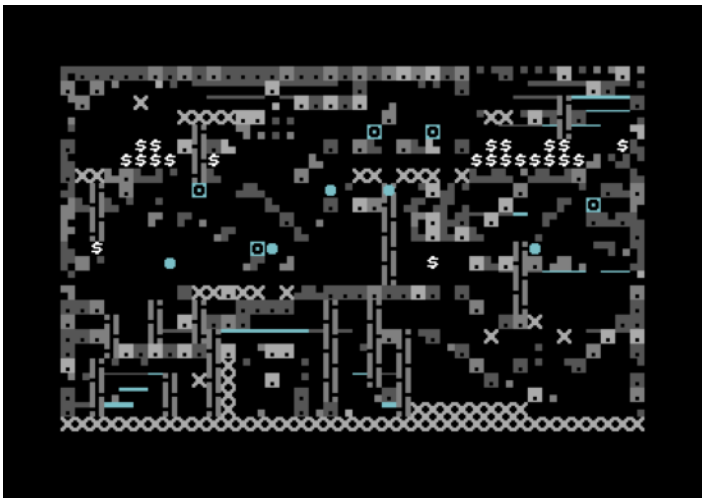
Has anything ever been created like this before?

TK

Well there have certainly been games and demos that have incorporated elements of DUBCRT, but as far as I can tell nothing has been released as a cartridge in this fashion where the onus is on experimentation and playfulness. Games such as Master of the Lamps or Frankie Goes To Hollywood certainly inspired the simple puzzle aspects of DUBCRT, and abstract music disks such as Disco Calculi (Wrath Designs 2007) definitely have some similarities. Jeff Minter's Psychedelia is also of course a very big inspiration. I think also that Goto80's vision in terms of perhaps pushing the SID into more progressive territory is quite distinctive especially since he uses defMON which is a custom-tracker in a way that it has been personalised to some degree to his own needs.

CF

So the Commodore 64 is best known for it SID chip and graphics, and I think your intention was to use petscii graphics. Was this purely down to memory or because of this classic retro feel?



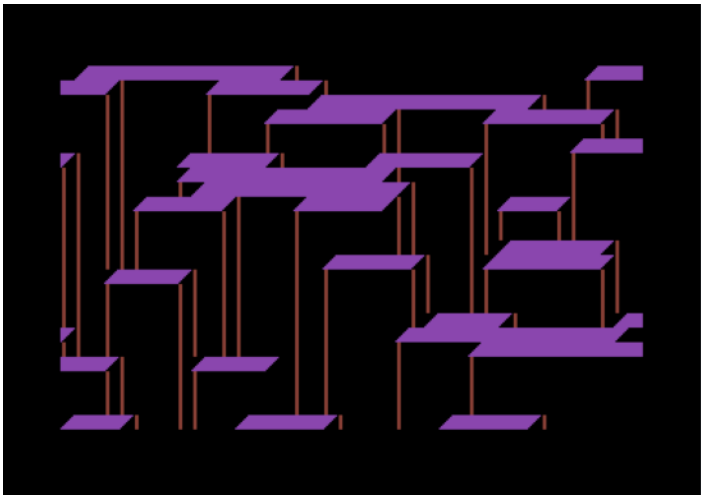
TK
Definitely a homage to SID and PETSCII, with a shift towards the restrictions that are offered by both. I think PETSCII is only now being fully explored in terms of the quirks and possibilities of using it creatively.

CF
Petscii graphics certainly can be very leasing and unique. Could you explain to our readers who was involved in the project, and how were they selected?

TK
Goto80 did all of the music, 4mat did all of the code, iLKke did all of the incidental PETSCII (logo, intro screens for each song/visualiser section). Personally I just came up with the idea and we all developed the design and ideas, with 4mat's code obviously guiding the general design in a very major way. Goto80 has always done very interesting things with the SID, so from the outset the project was he and I brainstorming how it was going to work and who we could find to code it and also do general PETSCII gfx such as logos and other components. 4mat had been doing great and interesting things with his more adventurous and abstract demos with Atebit and Orb (he and iLKke did a Commodore PET demo previously), and iLKke has such a great visual flair (and is also a great chip musician and coder in his own right) - so it all fell into place in terms of us all having a pretty similar vision in regards to how we regarded retro tech and art aesthetics.

CF
How was the production of the device achieved? How did you move from Art music and coding onto a physical cartridge format?

TK



Once the music choices of Goto80s were totally locked in, 4mat got busy finalising the code and the design grew from this. Once a working template was in place we got Goto80 to finesse the tracks we had chosen. Consequently once we had a working CRT file, I started working finding a suitable PCB design, and luckily DDI had a great PCB already in existence which then Dale @ DDI and I configured to work with a transparent plexi-case that complemented the LEDs on the PCB that threw light upwards, bouncing back off the plexi back onto the DUBCRT logo that is etched on the PCB :) Also the pulsing red LED on the reset switch is a great touch, almost acting like the beating heart of the whole PCB haha.

CF
I see from the website the cartridge has sold out, and pretty quickly. Are there plans to re-release the device?

TK
It sold out in approximately two and a half hours, and was always meant to be a passion project and done in a small run. Luckily Tim at Shareware Plus in the UK has licensed the DUBCRT to do another batch of cartridges later in the year (Tim has re-released Paul Slocum's Cynthcart recently with new packaging and extra features).

CF
There is an audio-only version available of the music. Was this created, I presume from feeding a "real" machine and not using emulation?

The audio version is an oddity in that I audio dumped the songs from the cartridge on a real C64 (6581SID) and a C64C (8580SID) - and then edited them into a stereo file with each version of the SID in left and right channel respectively. The DUBCRT is ultimately suited to the new SID chip (8580) but is still acceptable on a 6581 SID - just some odd quirks with filters and the like. The DUBCRT is however not suited to any NTSC machines, with some undesirable problems with speed and visuals!

CF
Will there be a follow on version?

TK
At this stage there is definitely plans for a DUBCRT2 - and actually the first batch of cartridges all have slotted EPROMS - so in theory there may be a chance people can just swap over the EPROM if we do a new version, but ultimately it would be nicer to do a whole new design, so that is the plan!

CF

How do you feel about emulation? Do you think it has a valid place in retro community?

TK

I think there is definitely a valid place for emulation in that it opens up accessibility for a project such as this - and we are planning to release a digital only version with VICE bundled maybe for those who have no experience with emulation. Large parts of the cart were done without even touching authentic hardware (I did a lot of the testing on my real machines here), with the code done in a PRG studio type environment.

CF

What has the general feed-back been like?

TK

There has been very good feedback so far - with people quite intrigued with the format and also the unusual nature of the graphics in that they really don't follow any conventions or standards, but they are more a homage to 60's and 70's optical art and general glitchy aesthetics. I think DUBCRT bridges the gap between retro enthusiasts more into games and nostalgia, and the electronic music / chip-music community who have more of an interest in the sounds of the SID. I think that is ultimately what we set out to achieve, an interest product / format that has some broad appeal in terms of graphics and sound and "gameplay" mechanics.

CF

Are there any comments you would like to end with?

TK

Thanks a lot for the interview questions - much appreciated! Also I would like to thank the guys for such an amazing effort in developing the cart, something which I think we were all passionate about in trying to do something a little different that perhaps has not been done in quite this way before with the Commodore 64. Stay tuned for DUBCRT V2 and potentially some other mini cartridge projects for the C64.

Growing Pains Part Sex - "The Program That Never Was" by Lenard R. Roach

If I understand my agriculture correctly, when planting a seed you first dig a hole in the ground and bury it, then water and sunlight are added. In a few weeks a startling metamorphosis occurs as the apparently dead and buried seed cracks open and out of the cracked seed comes new life. Very soon the new life conquers any vestige of the seed until all that can be seen is the new life. Such was the work in coding the program "Obligator Coordinator." It was also a work of Commodore vengeance.

Let me start from the beginning ... "Obligator Coordinator" was a work of anger and ego. If anyone has read my book, "Run/Stop- Restore: 10th Anniversary Edition," then you can read about the combat over copyright control of my work, "Check It Out." Basically, the people who bought all the software rights from the defunct "Run" magazine now owned it and I wanted to publish upgrades I made to the code. The new owners said that they would not release the rights of "Check It Out" to me without a monetary fee. I coded the cussing thing; I should have some rights! No. According to the "work for hire" contract I (hastily) signed, I surrendered *all* rights to the program in exchange for money. This also means that any upgrades I code for the program become the immediate and undisputed rights of the contract holder.

This includes "Checkmate," which is a derivative of the code I wrote for "Check It Out." Expletive! There were two choices at this point: Drop my 5 1/4" disk of work on "Checkmate" and "Check It Out" upgrades into the shredder or file it away never to be seen by another human eye. I chose the latter.

This was not going to stop here, oh no! I'm going to sit down at my Commodore and code an awesome piece of software so fantastic that it will make my last two projects look like the handiwork of kindergartners! I crossed the house to the computer room, sat down at the Commodore, trusted a blank 5 1/4" disk into the 1541-II disk drive, booted the system, poised my fingers on the keyboard, and ... banged my head on the computer desk with a wood cracking thunk. What was I thinking? "Check It Out" and "Checkmate" *were* my greatest Commodore achievements! Who was I fooling?

I leaned back in my computer chair and stared at the Commodore home screen and flashing cursor. Dover, my yellow striped tabby cat, came into the room and rubbed her head on my dangling right hand. I looked down while at the same time she looked up. She mewed. I scratched her head. I watched her as she walked over to the open cubby built into the computer desk where I store all my 5 1/4" disk files. She stood on her hind legs with her front paws supporting her on the ledge of the open cubby. A crouch, and a leap, and she was in the cubby, but there was no room for her and the two disk files so when laid down in the cubby, all four of her feet pushed both files out of the cubby and onto the floor, where the files cracked open and about forty 5 1/4" disks spilled onto the computer room carpet.

I looked at the mess, and then looked into the cubby. Dover licked her right front paw, stretched out, and got comfortable. This is an amazing thing about cats: They can destroy your entire living room, put it all in a pile right in the middle, climb to the top of said pile, lay down on top of said pile, look you square in the face with a look that says, "I didn't do a thing." Dogs: They make one piddle mark the size of a pence on your carpet and they *know* they have committed the greatest sacrilege. The dog looks at you with that face that says, "Oh snap! He's gonna kill me now!" Nonetheless, that stupid cat was not going to help me pick up those disks, so I got out of my chair and started picking up.

About half way into clean up I came across a disk label that caught my eye. "Bill Attack Workdisk" it read. What was this? It had my handwriting on it so it was something important. I sat back down, popped the blank out of the 1541-II, inserted the "Bill Attack Workdisk," and loaded the directory. The monitor showed me several different versions of this program, so I booted the latest version on the disk (I

think it was "8") and waited. Very quickly I saw a data base style program used for mainly recording information and storing that information onto disk. I didn't see where the "attack" part of the program was; it was more like a coordinator than anything else. I exited the program and listed the code. Hmm.

All this needs is a little subroutine here and a couple of GOTOs and GOSUBs there and this could be a viable work, but that name "Bill Attack" has got to go. I'll worry about that later... It took me a couple of months of working about a hour a day on the program to get it to where I wanted it, but it still needed a name; one that would describe what the program did and still make it sound cool in just a couple of words. I remembered that I once called this work a "coordinator" but what can I put in front of that word to help make an impact? Bill Coordinator? No, that lacked pizzazz. How about "Obligator Coordinator?" It tells what the program does and it even rhymes. I'll stick with that. Now to provide a little present for hose head publishers who scam off of hard working coders. I got onto the PC and pulled down a copy of Form TX from The United States Copyrights Office in Washington DC and printed same.

But this form was for a book and I needed to copyright a program. What do I do? I searched my local library's website under "copyright forms" and I found the book, "Legal Care For Your Software" by (name). I went to my library and checked it out. I read it not once but twice and decided that this was too valuable of a resource not to have, so I ordered a copy from my local bookseller ($30) and read it again (my new copy had updates and new forms added). I filled out the TX Form and mailed it, a copy of the program text, and a $25 check to Waahington. Six weeks later I had a bonafide Ownership Of Copyright paper in my hands. Eat that you spastic, lard, pickled headed, simpletons of the magazine industry! You're going to have to deal with *me* now instead of the other way around! I win ... or did I?

It was 1994. "Run" magazine was out of print for two years. "Commodore World," a magazine division of CMD Industries had just launched and wasn't willing to deal with me unless I "surrender all rights" to the software. At the time I was too much of an egocentric knucklehead to be dealt with, so "Obligator Coordinator" sat in my files never to be released. In about 2002 I heard about Dave Moorman and "Loadstar" disk magazine and was about to contact him via the Internet and pitch "Obligator Coordinator" to him, but first I'd should boot a copy and see how I can best describe it's functions. I ran the program and started to tinker with it by creating a false bill note to track. A few keystrokes into the program and the dreaded "Syntax Error In XXX" popped up. This is not good. I ran the program again and inputted different information, but the same message appeared. Uh oh! I listed the code line given by the Commodore and that very line did a Harry Houdini on me and disappeared.

I panicked as a solemn thought hit me: What if I copyrighted a faulty text of program? I went through my files and found a copy of the text of program I originally sent to the Copyright Office and looked on the printed sheet for the missing code line. As sure as cow flatulence the code line was gone; I did copyright a flawed program. For a fleet moment I was madder than a stirred up hornet's nest, then a thought hit me: I was about to try and sell a flawed program to the general Commodore public and I was prevented in doing so by heaven above and the Caretaker thereof.

I sat down with the disk and Commodore and slowly started to work through each syntax one at a time.
Some were just missing code lines; others were missing or misdirected GOTOs and GOSUBs. I don't know how long it took but I finally worked all the "bugs" out of the program, but now I was stuck with a new problem: What do I do with a wasted copyright notice on a malfunctioning program? Answer:
Nothing.

I would have to get another copyright for the repaired work and title it under a different name. I was reluctant to do this since I copyrighted a bogus program in the first place; I didn't want lightning to strike twice, so it sat, never to see the light of day. Only until recently have I brought this program back to the light of day, and even then I was reluctant for the same aforementioned reason. I don't mind showing it at expos and club meetings, but to head to the public with distribution was scary. What would I do to improve "Obligator Coordinator?" Any improvements that could have been done were put into "The Ledger." I basically left "Obligator Coordinator" alone. I may put "Obligator Coordinator" out as freeware with "The Ledger" as the purchase product. Either way, what I thought was going to be a legal victory for Commodore coders everywhere turned into a nightmare as the whole thing blew up in my face.

I know now to investigate a copyright for periodicals so I can make improvements to what I code without having to apply for a different copyright each upgrade. "Obligator Coordinator" was hard to code since I didn't know how to make half of the features I wanted a reality in what BASIC I understood. I did learn extra commands while coding the work so "Obligator Coordinator" was not a total waste, but a learning experience that was treasured for future Commodore programming.

Space Chase on the PET
The 35 year old review
http://www.spacechase.de/

Interview with the creator of Space Chase can be found in Commodore Free here:
http://www.commodorefree.com/magazine/vol10/issue94.html#ARTICLE9

Space Chase is a 1 or 2 player split-screen shooter that was specifically developed for the CBM II series of computers (sold as Commodore 610, 620, 710 and 720 in Europe and as B128, B256 and CBM B128-80 and B256-80 in the U.S.). The game has been fully programmed in Assembler, uses the full "PETSCII resolution" of 160 x 50 and features music and sound composed by the famous SID composer Max Hall (CBM IIs have SID chips). Space Chase can be downloaded for free at http://www.spacechase.de.

VICE issue

"several keys pressed at the same time" issue if you test the game in VICE. This caused somewhere in the chain keyboard -> Windows -> VICE -> emulated CBM2 hardware

CBM machine history

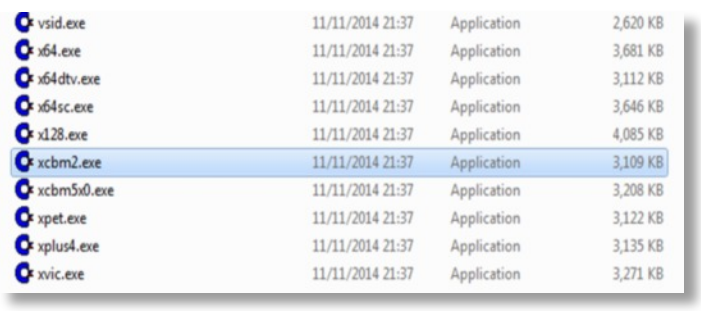
The CBM II series of machines was "text only" and doesn't have any graphics capabilities at all.
The only option open to the programmer is to use CBM's character set. Space Chase manages to create a 160 x 50 resolution that is fully utilized by the game. On the CBM I series, only 80-column machines with the CRTC chip are supported. Space Chase can be played by one or two players. In one-player mode the computer takes over player 2.

Space Chase is the only known game that REALLY uses to SID sound chip in the CBM II Sadly The CBM I machines do not have a SID chip. Space Chase is fully programmed in assembler. Utilising the full speed of the 2 MHz 6509 processor in the CBM II. On the CBM I machines 8032, 8096 and 8296 the game runs slower since their processor is clocked at only 1 MHz.

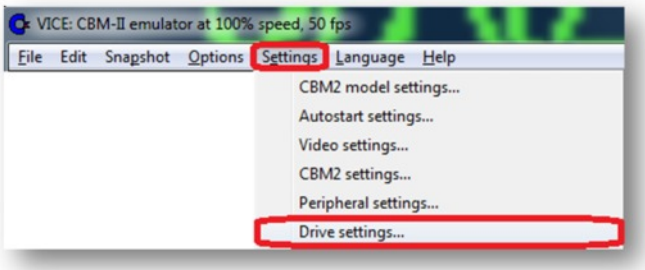
VICE SETTINGS

CBM IIs are quite rare. You can, of course, use Winvice to play the game. Download the latest version for your operating system, http://vice-emu.sourceforge.net/index.html#download

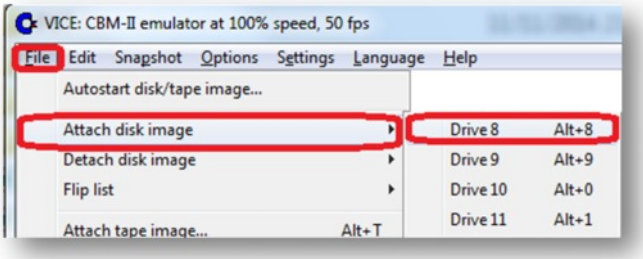
Start the "CBM II" emulation

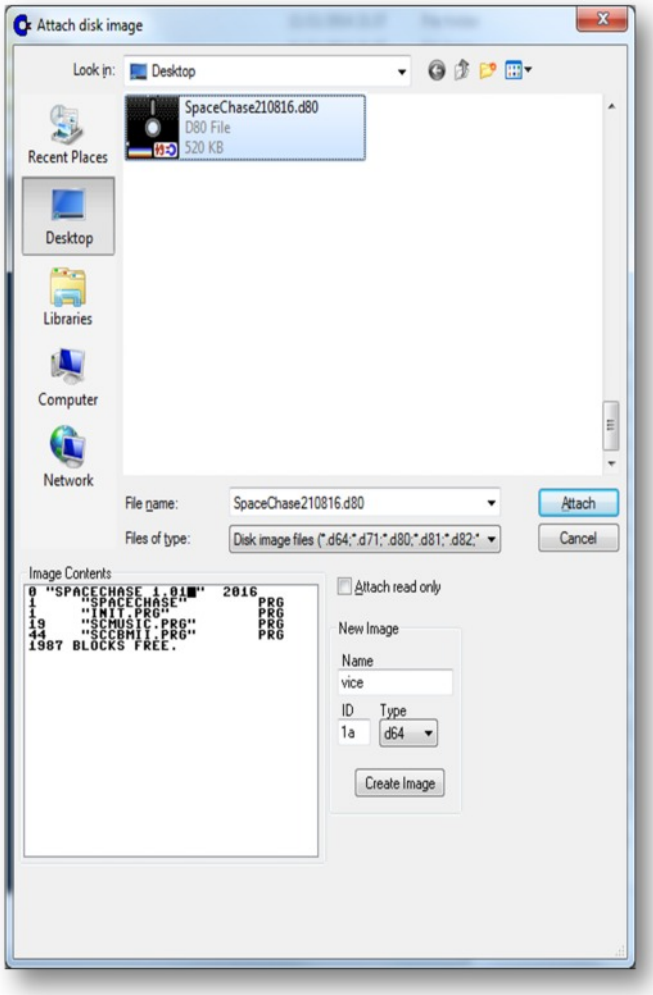


choose the "8050" floppy drive



Attach the Space Chase disk image called "SpaceChase.D80".

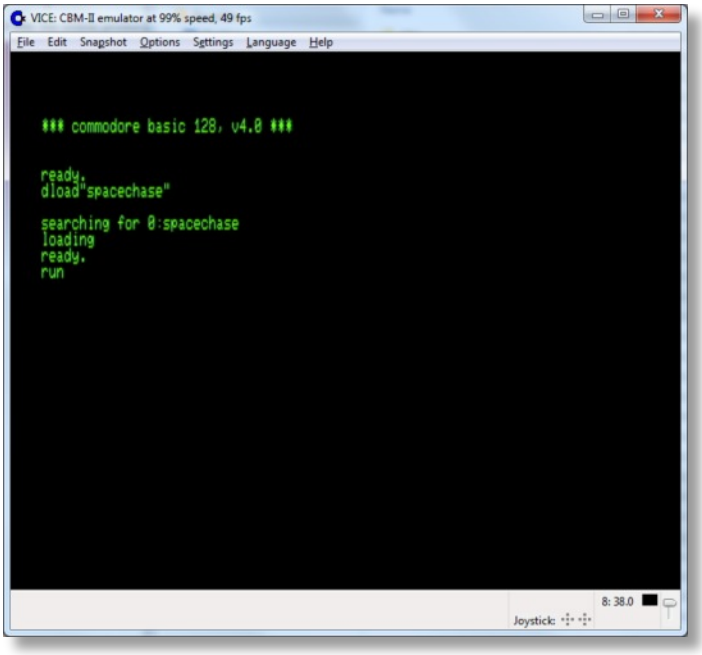




After the CBM II has started up, you load Space Chase with the command

DLOAD "SPACECHASE"

and the run it with RUN.



After some waiting from the original announcement of Space Chase and playing various Beta versions, Space Chase is finally released! And I confirmed it was ok to review for Commodore Free (wanting to be sure after playing so many beta or pre-released versions the author was happy for it to be classed finished)

THE GOAL

The goal of spacechase is to shoot and destroy the other player. Whoever loses all of their 5 lives first loses the game. There are 6 enemy ships allied to each player that will try to attack the opponent player, They don't shoot they just bump into it to distract the other player. Players and ships have a protective shield, so they are not killed upon the first hit, but have to be shot several times. The players' shields recover over time. So there tactic is, if you are just about to die Run away and let your shield recover!

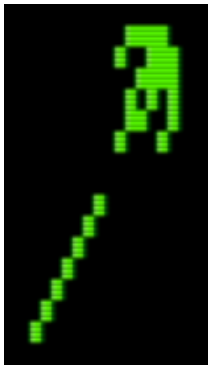
After a certain number of deaths the enemy ships will drop gems that you can collect. The gems will recover your shield or give you extra fire power or lives.

The title screen gives you the instructions on the keys used to control both your ship from here you can choose 1 or 2 player mode, 1 player mode you control the ship on the left part of the screen while the computer takes over player 2 (right hand side).

You can only rotate your ship left or right and accelerate your ship in the direction you are facing. The lack of gravity in space will keep your ship flying in that direction until you counter-accelerate like asteroids. The "thrust meter" in the upper left corner of each screen half will show the direction your ship is currently heading.

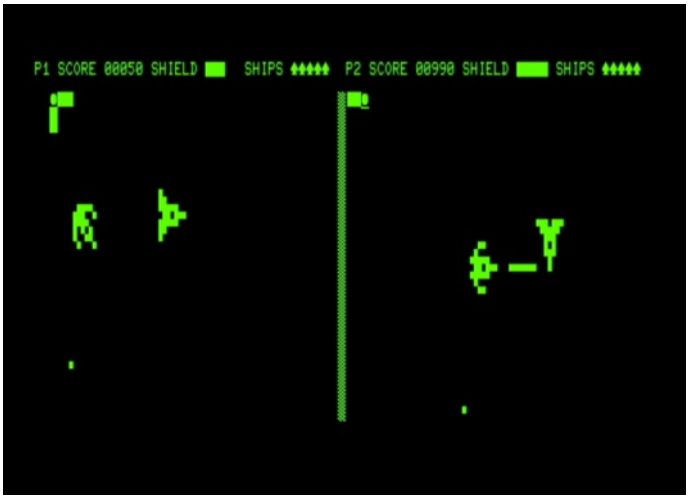
Since the playfield is huge, you can easily get lost hitting "auto pilot" key will make your ship turn and accelerate automatically towards the opponent player and will do so until you press another key.

The Title menu starts and the music begins to pump out, its quite short but loops round, to me it sounds oriental though it does seem to fit the game



One thing I do have to comment on, and I think I made the comment to the creator, of course it may be that you feel differently, but when you shoot, your bullets don't actually leave the ship and move of screen as in say asteroids, they just move away from the ship slightly, so it seems to shoot like a laser but when you stop shooting this doesn't continue to the end of the screen it just stops producing this laser fire !

Personally would have preferred the shooting as in say asteroids, where the bullets leave and move independently of the ship, However I am nitpicking



The menu at the top of the screen displays

Score
Shield power
remaining ships

Underneath is a radar type scanner showing the location of other ships

The speed of the game is something that sets it apart (as well as the music)
Playing against the computer isn't where the game shines, you need a second player, of course a tweak to the game would be two machines (or more) networked together so each player sees a full screen display

As it stands it's an enjoyable game (against another friend) sounds are ok, the music gets repetitive and doesn't play at all in the game only on the menu screen. In-game sounds are blips and crashes.

Interview with Max Hall Sid Programmer
http://www.remix64.com/interviews/interview-max-hall.html

Space Chase here (played on a real CBM II machine):
https://youtu.be/Ixvac1yw_5M

https://www.youtube.com/channel/UC86uBLUTbnTo5PEODptyXAg

Presentation	5/10 download	Overall 8.5/10
Graphics	8/10 Petscii	
Sounds	7/10 short music	
Gameplay	8/10	

Commodore Free Magazine

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Articles are always wanted for the magazine. Contact
us for details .We can't pay you for your efforts but you are safe in the knowledge that you have passed on details that will interest other Commodore enthusiasts.

Notices