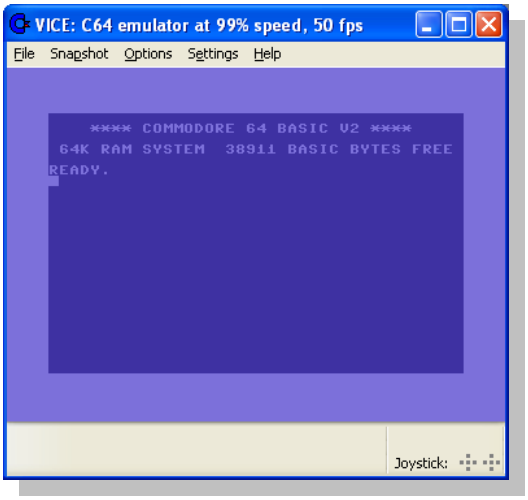
Commodore Free

Issue Number 4



EDITOR

Sigh !
I nearly packed the whole lot in, this issue has taken so much time you wouldn't believe the hassle and threats, I have received. I seem to have offended 1 or two large companies with some of my comments, why they were reading a Free Commodore magazine I don't know.

Also some problems with copyright of pictures text and logos that companies trying to cash back in on Commodore seem to have a problem with.
I have had a legal letter demand I remove all of there content and reference to them from the magazine.
I had really no option but to pull the last issues from the website and start Issue 4 from scratch, this time trying to ensure I contact everyone about text and graphics and logos before they went into the magazine.

I am hoping companies like Protovision wouldn't mind the use of there logo on the news section, and I presume pictures of Commodore machines are ok to use in the magazine.

Anyone know who owns the copyright to the Commodore machines shape? Can pictures of Commodore machines be legally printed in a Free magazine.

As you can see I have been having some problems, and while some readers have emailed me with concerns that I have stopped producing the magazine, you can rest easily knowing you have issue 4

How many readers looked at the magazine, well according to my ISP the total downloads for issue 3 were 300, I can obtain a report on each file and if that file was linked to from other places.

So I know that other websites have links to Commodore Free magazine and users have followed these links to find the magazine. I can also so what pages people went to on the site, some user clicked links direct to the Download of the PDF which is fine.

Commodore Free makes no money,
In the event that donations exceed the web hosting costs this money will be donated to Commodore Projects.

Thanks Commodore free
www.commodorefree.com

CONTENTS

Readers Comments

Dave "LOADSTAR"

Perhaps we could add a From LOADSTAR feature, which would have a link to a downloadable game. I can make a package that loads emulator and game and runs both, then disappears when the player is finished. This can be just a freebee, or as they say in Louisianna, a lagnappe -- a little extra.

I am working on a new BASIC extension, something like DotBASIC, but easier to use. Don't know if anyone is working on hobbyist software anymore, but I guess that is not the point.

COMMODORE FREE
Dave your help on the Disk magazine was most welcome, I think (hope) I have what readers were looking for. The software link would be great if you can help out with free software. Thanks.

CHUCK

Very nice magazine!
Chuck

COMMODORE FREE
Ok short and sweet thanks very much

ALEX
I just reading the mag, I'm a poor fellow, can't give you any money, but I can say "hat off!", nice work, hope you keep it coming!

YoursAlex Martin

COMMODORE FREE
Alex That's fine magazine is free, although donations are welcomed as they help to pay for web space that isn't free, If you want to donate but don't have money to donate why don't you donate and article you have written, on a favourite game, website, utility or on some hardware you use. Thanks for the comments though.

Semseddin
I just wanted to thank you for your great magazine, Commodore Free.
I read it i really enjoyed it. Keep it up.

*Semseddin Moldibi ^Endo of Glance^*

COMMODORE FREE
Comments Appreciated Hope this was your correct Christian name *Semseddin* appologies if this is incorrect.

That's all I had this month, You are welcome to submit ideas/ suggestions/ or other comments

Forever 8 - March 16.-18. 2007 08:08

It's going to be 8th Forever in a row so this will be a kind of round aniversary ;-) Forever is an annual multiplatform 8-bit party held in Trencin/Slovakia. The major plattforms are: ZX Spectrum (48/128) which is traditionally strong in released demo productions. They also have a strong ace up their sleeve - the most sympathetic foreveran - Gasman/Raww Arse a creative and smart gentleman whose witty crossplattfrom jokes became a traditional feature of Forever party compos. To add even more flavour of decent british humour, last time he brough another cool Speccy celebritney - Icabod - a raww.org scene news site maintainer. The list of other speccy celebritneys is so long, that I will keep it for another post ;-).

Atari (800xl/130XE) which is getting stronger visitors and compo-participants base every year which makes us really proud and happy. They also have a strong representant in their troops. A dude called Raster whose demos, intros and even graphics became legendary for their humour, originality and presentation. Not to speak about ever growing polish creative scene base which maybe started slow in first years of Forever party, but now it shows that it must be counted with.
...and C64 - traditionally getting the richest scale of visitors from all around the europe but lately having the least supported demo compo of all 3 plattforms which makes us feel humiliated and insecure ;-) (...can't get rid of habbit of writing in 3rd person). As for features. Last year we had more-or-less surprising visitors from Serbia, Jailbird and DaFunk who (according to JB) are plannig to repeat this trip again. We also had a live jamming Retroskoi session (idea by IDE developer - Visac/Cult) featuring TopSecret as improvisation leader and wannabe keyboardist with no experience (but substituting this handicap by enthusiasm) one an only - guess who would be so stupid - CreaMD. The last year performance should be topped by this years attempt where we would like to have more computers playing live than last time (total 2 ;-)). This year you can again expect the quizes, competitions, Music/Author guessing compos, presentations and other entertaining features as usual traditionally moderated by our court-speaker Wotnau/Dmagic. As for the rest. You can be sure that C64 scene has the greatest (and most exhausting) music compos ever. The beautiefooliest GFX compos of all the platfforms. We also have the most beautiful sceners at the party (thanx to me, my sister and Wotnau). All we need to make our reputation solid and secured is to make some demos and 1k intros. So please, keep that in mind when thinking about participating/coming to Forever 8 party.

You can check/register in the Forever #8 party visitors list Or check the Forever 8 page for info If you would like to compete, you can choose from GFX, Music, 1k intro, Demo or Wild compo cathegories. . As usual, send your stuff to creamd@c64.sk Have fun!
http://forever.zeroteam.sk/

News

Because some message boards seem to frown upon enthusiasm, I have created my very own message board where you can talk about Commodore computers, sports or just about anything:

http://b5.boards2go.com/boards/board.cgi?user=PaulPanks

Be nice, play fair and post. Most of all, have fun. I'm not sure how I'm going to divide the topics into folders, but that's something I'm working on. For now, everything just goes on the main page.
Paul

Ebay news

I followed this item on ebay hoping to pick up a bargin and a spare machine, The bidding went mad, Here is the description : the end price was £184 + £15 postage: WOW the seller certainly earned some pocket money. The machine looked clean but the games were all copies !

http://cgi.ebay.co.uk/Commodore-128-Desktop-with-136-Games-and-more_W0QQitemZ280059354971QQihZ018QQcategoryZ3544QQrdZ1QQcmdZViewItem#ebayphotohosting

A Commodore 128d (desktop version) in great condition and fully working. Its sad to see this go, but I simple do not have the room. It comes with the XE1541 cable for transferring software/games from a PC (parallel port) to the C128 (serial port), a mouse and a pair of joysticks. It also comes with over a 100 brand new disks that have never been used, and also includes a lot of disks with the following games:

After the War, Alien 3, Alienstorm, Alioth, Anarchy, Arkanoid, Arkanoid 2, Army Days, Auf Wiedersehen Monty, Back to the Future, Back to the Future 2, Badlands, Ballfever, Barbarian, Barbarians, Batman, Battle Command, Battle Valley, Beachhead, Beachhead II, Beachhead III, Beverly Hills Cop, Bionic Commando, Black It, Blob, Blood Money, Blood Valley, Bloodwych, Bombel, Bombjack, Bombjack 2, Bombuzal, Boulderdash, Bubble Bobble, Buggy Boy (Best driving game ever!), Cabal, Captain Blood, Cauldron, Chase HQ, Chase HQ 2, Chip's Challenge, Chuck Rock, Chuckle Egg, Cisco Heat, CJ in the USA, CJs 4th, CJs Elephant Antics, Commando, Continental Circus, Cool Croc Twins, Count Duckula, Crazy Cars, Creatures, Creatures 2, Critical Mass, Crystal Castles, Crystal Kingdom Dizzy, Dan Dare, Darkman, Defenders of the Earth, Deliverance, Delta, Die Hard 2, Dragon Ninja, Druid, Druid II, Escape from the Planet of Robot Monsters, Exile, Exploding Fist, Exploding Fist 2, First Samurai, Flimbo's Quest, Gangster, Garrison, Gauntlet 2, Gauntlet 3, Ghost N' Goblins, Ghostbusters, Ghouls N' Ghosts, Golden Axe, Great Giana Sisters, Greenberet, Heroquest, Hotrod, Hudson Hawk, Hunt for Red October, Hyper Sports, Hyperball, IK+, Ikari Warriors, International Karate, Into the Eagles Nest, Its Magic, Jack the Nipper, Jack the Nipper 2, James Pond 2 – Robocod, Katakis, Kikstart, Kikstart 2, Killer Rings, Klax, Krakout, Last Ninja, Last Ninja 2, Last Ninja 3, LED Storm, Legion of Death, Light Force, Line of Fire, Little Puff in Monsterland, Loopz, Lotus Turbo Challenge, Maximum Overdrive, Mayhem in Monsterland (GREAT GAME! – the only game to achieve 100% in Commodore Format), Meanstreak, Mega Pheonix, Menace, Microprose American Soccer, Microprose Soccer International (personal favourite!), Midnight Resistance, Mighty Bombjack, Mission Impossibubble, Myth, Navy Moves, Nebulus, Nemesis the Warlock, Never Ending Story, New Zealand Story, Nobby the Aardvark, Northstar Operation Thunderbolt, Operation Wolf, Outrun, Outrun Europa, Over the Net, Overlander

As you can see, that's 136 games and more than enough to waste your nights away! A monitor cable is also included and the monitor is available for an extra £10, but this will add considerable weight for postage.

Overall postage will be £15.00 (with insurance) - 16kg. The monitor weighs 12 Kg on its own and would increase the postage to £30 (it would need to go by Parcel Force). However, I am more than happy for you to collect. I am willing to send overseas, but the postage can be expensive.

The 1541 "Ultimate"

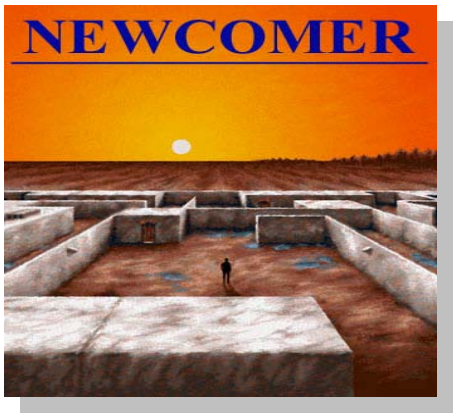
(On this moment on a Xilinx developing board)
The construction and future of the 1541 "Ultimate"
At this time, some hard work is performed to replace the widespread 1541 disk drive. Our club member Gideon Zweijtzer has made an implementation of the 1541 disk drive in an FPGA, and demonstrated one of the first versions of this hardware-emulation on Saturday December 16, 2006 in Maarsen. This prototype used a Xilinx development board. The prototype shows that it is possible to 'download' an image of a floppy disk from the PC to the 1541-emulator by means of Ethernet. This image is placed in a memory that the 1541-emulator has access to. The rotation of the disk and the stepper motor that moves the read/write head is mimicked accurately. The achieved compatibility is very high, because this implementation uses the original 1541 ROMs. At this moment the emulator is perfection to the point that even difficult speed-loaders such as the one from the Final Cartridge III work well.

Parallel to the implementation of the 1541 itself, work is being done on an interface to a SD-card, such that it should be possible to load .D64-files from there, rather than having to download them through Ethernet. These two functions together will appear soon on just one printed circuit-board; one that can be used as cartridge for the C-64. This cartridge will include the 1541-emulator, but will also implement another cartridge, such as the Final Cartridge III. With this cartridge it will be possible to select a floppy image and "put it in the drive', by means of a menu on the C-64 screen. For the purpose, the cartridge has a 'third button'. This button functions very similar to the freeze-function of other cartridges, but will be used to bring up a menu to select an image from the SD-card. When the user exists the menu, the Commodore will continue operation. To serve other Commodore users as well, other than C-64 users, the plan exists to have this cartridge operate as stand-alone unit as well. Since the on-screen menu will not be available in this case, the user needs another method to select the floppy image. There are several ideas to do this, but these ideas are not yet completely mature. The hardware is being developed such that new functionality can be added to the emulator system by simply putting some files on the SD-card. The first release will "only" implement the cartridge and the 1541 in its purest form.

Information used with permission and taken from **http://commodore-gg.hobby.nl/innovatie_1541kaart_eng.htm**

NEWCOMER NEWS
NEWCOMER by Cinematic Intuitive Dynamix got a 95% rating in issue 31 of Retro Gamer. Visit http://www.retrogamer.net to learn more about the Retro Gamer magazine. Currently in development: ULTIMATE NEWCOMER with shorter decrunch times, faster disk I/O on 1541, direct support for IDE64, C128 and SuperCPU, and most importantly a bug fixed story script to make the "Long&Complex" solution accessible for those really smart players. Further extra hardware may or may not be supported, depending on the developers' time, resources and the availability of gametesters.
At the moment the makers are stuck with a critical bug in the re-written game engine code, and it will probably only get fixed during holiday vacations, so release date has certainly moved to sometime 2007.

The English and Hungarian scripts are complete and under testing. The German version is under translation.For updates, register an account and subscribe for Newcomer news notification at http://www.newcomer.hu



HARDWARE SECTION UPDATED
Our hardware section has been updated: New plugins for the MMC and SD card reader MMC64 were added as well as software which supports the network card RR-NET. Furthermore the breadboard 8 BIT BABY for electronic enthusiasts and the COMPETITION PRO JOYSTICK were included. http://www.protovisiononline.de/hardw/hardwstart.htm

STILL LOOKING FOR A CHRISTMAS PRESENT?
You are still looking for a Christmas present for a computer friend, or for yourself? What could be more suitable than a brand new COMPETITION PRO JOYSTICK? Order it now at our Online Shop: http://www.protovision-online.de/catalog

FURTHER NEWS ON OUR HARDWARE PRODUCTS FROM AROUND THE C64 WORLD:

NEW VERSION OF DREAMLOAD MMC64
Good news for MMC64 users: Doc Bacardi/The Dreams published a new version of his DFI Plugin, which is the MMC64 version of his multiload and save system DreamLoad. Save, scratch and scratch-save should work now.Since this is another beta release, please remember to backup the content of your SD/MMC card! Further information, download link and the place for feedback is here: http://rrforum.ath.cx/viewtopic.php?t=34&start=108

D81 WRITER PLUGIN V0.2 FOR MMC64
An updated version of D81 writer plugin for MMC64 by tnt is out:

http://www.sci.fi/~tenu/c64/mmc64/d81.zip

V0.2 doesn't require burst mod (at the cost of 32 seconds per disk) but uses one if available.

IDEDOS 20061110 (0.90 PATCH 31)
A new version of idedos for IDE64 is out: idedos 20061110 (0.90 patch 31). This release adds EPCLink support, which means that now it's possible to use an ETFE or RR-Net card for highspeed transfers through the IDEDOS PCLink network drive. Reading speed reaches up to 40 kB/s (writing at 20 kB/s), which makes burning CDs for huge data transfers pointless. Unfortunately currently it's not so easy to get an ETFE card or connect RR-Net simply (RR+RR-Net+portexpander), but let's hope this will change soon ;) http://idedos.ide64.org

MWC V0.2ALPHA RELEASED
mwc by Jockstrap is a command-line Linux client for Graham's WarpCopy64 V0.6 server, allowing you to transfer disks from your 1541 to your Linux system through the RR-Net ethernet adapter. Download: http://www.swolff.dk/mwc/mwc-0.2alpha.zip

GUI4CBM4WIN UPDATED TO 0.6.0
Payton Byrd made a major bug fix to gui4cbm4win, the graphical user interface for the transfer software cbm4win. The bug fix is related to the migration to .Net. He added a few features as well.

Bug Fixes:
- Fixed problem with reading the output file when detecting drives in the Options window

New Features:
- Added CBM Drive selector to main window

- Changed from calling the WIN32 Shell api to using .Net Processes

- Capture stdout and stderr through pipe redirection instead of reading temp files in most cases.

- Added running Log panel

You can download the file at
http://blog.paytonbyrd.com/?p=55

The Protovision team would like to thank you for your support in 2006. We wish you a merry and contemplative christmas.

http://www.protovision-online.de

The Commodore 64 monitor cable

Important notes
On circuit diagrams, plugs are displayed as viewed from the back side, the solder side. Chips are displayed as viewed from above; also, see the small semicircular cut for finding the correct orientation.

Construction
You need the following parts to build this cable:
One solderable 8-pin male DIN plug

Four solderable male RCA plugs, preferably, in red, black, yellow and white colors

Four shielded 1-wire cables of, preferably, at most 2 meters each; the impendance should be 75 Ohm but an audio cable should also work

Step 1. Solder one end of each cable onto the DIN plug.

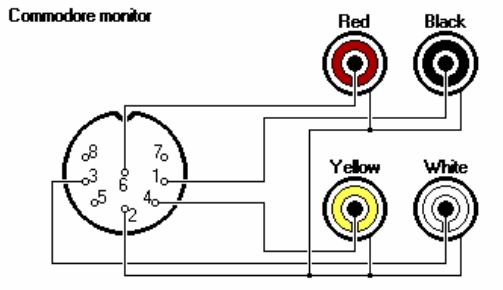
Step 2. Solder the other ends of the cables onto the tip of each of the four RCA plugs.

You should have the following connections:

DIN plug	RCA plug
1, Luminance	Black
3, Audio Out	White
4, Video Out	Yellow
6, Chrominance	Red

Step 3. Connect pin 2 (GND) of the DIN plug to the outer ring of all four RCA plugs.

Circuit diagram



Important notes
On circuit diagrams, plugs are displayed as viewed from the back side, the solder side. Chips are displayed as viewed from above; also, see the small semicircular cut for finding the correct orientation.

Construction
You need the following parts to build this cable:
One solderable male S-Video plug

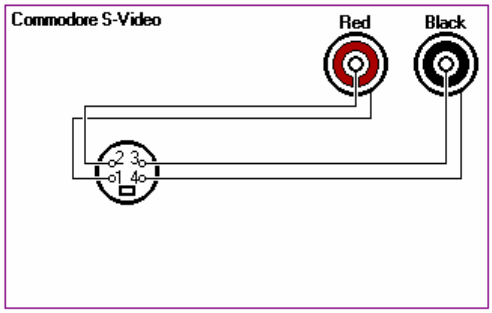
Two solderable female RCA ports, preferably, in red and black colors

Two shielded 1-wire cables of about 20 centimeters each; the impendance should be 75 Ohm but an audio cable should also work

Step 1. Solder one end of each cable onto the S-Video plug.

Step 2. Solder the other ends of the cables onto the tips and the outer rings of each of the two RCA ports.
You should have the following connections:

S-Video plug	RCA port
1, Chroma GND	Red, ring
2, Chrominance	Red, tip
3, Luminance	Black, tip
4, Luma GND	Black, ring



The information Has been written or collected by Joe Forster/STA.

http://sta.c64.org/

TargetD64

TargetD64 - Introduction

The basic idea behind TargetD64 is to shift as much processing as possible from the user to the computer before a particular program (or a group of programs) is executed by an emulator. After you have downloaded a program from the internet you usually find that this program is treated by archivers and often by more than one archiver. Well known examples should be the .lnx.gz or .d64.zip format. Normally you are going through a process of dearchiving which needs user interaction (e.g. calling gunzip or launching up WinZip and so on).

TargetD64 takes away all this work from the user. TargetD64 recognizes the archive format(s) and dearchives recursively. TargetD64 will finally produce D64 archives which are passed to an emulator.

Supported archive formats are zip, gz, lha, lnx, [1-4]!, d64, x64, t64, p00. If a file can not be matched to one of these formats it is treated as a raw C64 (PRG) file.

TargetD64 will process all horizontal and vertical combinations of the above stated archive formats. Vertical combinations are nested archives (e.g. .lnx in .gz). Horizontal combinations are an arbitrary sequence of archives (e.g. .lnx and .p00 file which are both contained in a .zip archive). The latter also applies to a sequence of archives you can give as command line arguments (in this case the sequence can also be achieved by filename wildcards). Neither nesting level nor sequence size are limited by TargetD64 itself (but they are by system resources).

All mentioned archives are builtins. So TargetD64 does not depend on any external applications (except the emulator of course).

TargetD64 is implemented in C++ with common sources for Win32 and Linux (distinction is achieved by compile switch). TargetD64, published under the terms of GPL, uses foreign GPL sources as mentioned at the credits page.

TargetD64, basically a command line tool, is fully "Drag & Drop" capable for Win32 and Linux's KDE. It is strongly recommended to configure "Drag & Drop" for the ease of use.

TargetD64 is pre configured for VICE (Linux) and CCS64 V1.09 DOS (Win32). It is fully adaptable to other emulators by a profile (INI-file).

With the Win32 binary distribution of TargetD64 there come configurations for CCS64 V2.0 beta DOS/Win32, C64S V2.52 and WinVICE 1.20.

A test suite is ready for download (there you can see what TargetD64 can do for you and compare it to other tools). The test suite is fully automated for Linux (result verification). For Win32 the result verification has to be done manually.

TargetD64 is right now available in source and binary distribution for:

Linux on i386-compatible processor, glibc-2.4 based Win XP (mind that other versions of Win are not tested anymore but supposed to work)

http://home.arcor.de/karlheinz.langguth/targetd64/

Emailed the website but gained no response

Game Over(view)

From the ashes of Scene World, a phoenix shall arise - lemon tried to keep us down with dodgy bans like the others, but it would take nation of millions to stop us. Once again we return, proud to present you with Game Over(view) #34. Featuring the first reviews from the Freestyle Jam, minigames, and more dodgy seuck than you can poke an elephant at - special guest editor Tomz of Tide will guide you through the depths of the human condition as we slay all diskmags in our path and continue our metoric rise to power!

Game Over(view) is a theoretically monthly c64 diskmag which reviews new (as opposed to old) c64 games, and sometimes throws in some opinionated ranting as well. It pretty much speaks for it self, so there's nothing really to say about it here.

NEWS: The Game Over(view) Freestyle Jam has started!

Issues

issue #34 (Released December 31 2006), Featuring reviews of:

- Green Runner
- Little Sara Sister 1.5
- Mission Bloodbath
- Goldquest III

http://www.dspaudio.com/~jaymz/

Commodore In the workplace

I work for a conservatory company and with 2 other members of staff look after 15 servers, 350 users and about 50 laser printers

When a “user” phones with a problem we have a system to “log” calls, the next free person will deal with the call depending upon the impact, the call could cost the business. The main interface looks like this

The application was put together by one of our programmers; at the time we didn’t have the budget to purchase a commercial system.

OK so what has this got to do with Commodore? I can here you asking, well if you click on the About option apart from a fancy screen of yours truly, the application plays at random a SID tune using Sidplay from a folder where the application is executed from.

you can see the music track playing next to the text MUSIC, I change the music at random, but one time we had the entire HSVC archive in a folder, unfortunately due to the amount of files this stopped the backup application running so I had to trim them down somewhat.

When each person has dealt with a call and closes the item with whatever was needed to fix the problem the application again plays SID tunes during the call closing period.

Just a gentle nod towards Commodore and the fantastic sounds of the SID chip. Do you have any Commodore related items in your work place?

Of course my desk has the usual wedding photo but also a nice C= logo in a wooden frame. Sad, Mad or just nutty about Commodore lets here those stories.

The server failure at cmdrkey.com

It was December 14, 2006. I came to work that morning and sat down with a cup of coffee expecting to check the email that had come in during the night, and everything seemed normal. The cmdrkey.com website was running, the email server was functioning fine just as it has been doing 24 hours a day for the past few years. Then all of a sudden, while accessing a file on the webserver, it quit responding. I waited and still nothing. Hmmm... maybe some heavy downloading is taking place and it's just not responding too well. I glanced at the network hub and didn't see any heavy amount of activity on the LED's. Since the webserver machine resides in the same office where I'm sitting, I took a look over at it and noticed all the error lights were lit up. Something bad has just happened.

As it turns out, the 5 volt section of the power supply had just failed. Most people would think the easy solution would be to just put in a new power supply. Well, not with this particular machine. It's a big computer that weighs over 100 pounds and contains 2 RAID-5 setups comprised of 6 hot-swap SCSI hard drives. It's got 7 fans in it. It makes a lot of noise, blows a lot of air around and has a not so typical 700 watt power supply that you can't just buy anywhere, let alone rob from another computer to get going again.

Well, things weren't a total loss. The site was back up and running in about 5 or 6 hours. I quickly configured up another Linux machine to act as a temporary server to hold the cmdrkey.com site, including store.cmdrkey.com and forum.cmdrkey.com. Without being able to power up the big main server, I couldn't get access to all the data. However, I have learned over the years to play it safe. I have another big server box with 6 big SCSI hard drives that performs a backup on all the computers here every night. So, everything was easily available from the backup server to load onto the new temporary machine.

There are still some things that aren't fully configured such as the search function on the cmdrkey.com site. Also, the "Check Out" section on store.cmdrkey.com hasn't yet been configured to allow sales transactions to be completed. For now, that hasn't bothered me much since I'm a bit behind on filling orders anyway.

Sorry if anyone has been inconvenienced over this. Most people probably didn't even know this happened as most everything appears normal here.

Always keep good backups of your data. I'm glad I did.

-Maurice

Emulation Insights

Presented by Luke Lynde

[1] INTRODUCTION

Hi everyone, here is Luke writing an article for you, all about Commodore 64 emulation. Well, I have a small collection of Commodore 64 hardware I use regularly (some of it, anyway), but I still enjoy the convenience of using emulators on the PC. I would be a bit disgruntled if I was stuck using emulators only, because I know and appreciate the real thing! The main 2 emulators that are ruling the "C64 on the PC" world are of course, WinVice, and CCS64. Many others have tried C64 emulation, with varying degrees of success, but have fallen miles short of these "2 leaders in the emu-scene", as they are known - proudly standing on the podium of a dazed emu-nation. High tech, indeed...

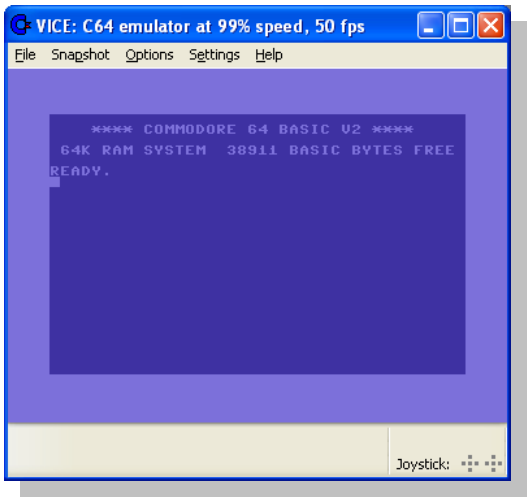
Not only in this article will I talk about WinVice and CCS64, I will also make Suggestions for improvement, which hopefully means the coders/creators will hear about and utilise. If a Suggestion I make is already incorporated, and I am unaware about it, I will no doubt feel a bit stupid. If again, a suggestion is incorporated in the program, but requires fiddling around too much, a much more user-friendly method is more appropriate, for obvious reasons. Technical is good, but a majority of people using Emulators, are people who had a C64 when they were young, wanted to play some games again, they don't want alot of confusing settings (and tech-tech jargon) because of the time away from using the machine - you know the story...

As suprising as it is what some people know about computers, it is also just as suprising what people don't know. Nothing wrong with being tech-minded, but someone asked me recently where the CD goes in?! They were talking about PC, if they were talking about C64 - I would probably forgive them (LOL)! Maybe in another 30+ years, emulation is going to be the only thing left to use, but until then, I fully support all those great hardcore users who are turning on their real C64's every day! As it stands today, the people behind WinVice and CCS64, should be applauded, for support of the C64, even if it is on a different platform. Man, when I started on C64 in 1988, who would of thought that around 20 years later, people would be using a emulator on a PC. Back then, PC's were total crap compared to C64. IMHO it wasn't until the Pentium processor (and Win'95), that PC's started taking off in leaps and bounds.

[2] WINVICE

http://www.viceteam.org/

Well, WinVice is considered the best Commodore emulator on the PC, but has some annoyances which I will include at the end of this section, under the suggestions area. As with CCS64, when you first install this program - you have to make about 10-20 changes to the settings, to get it just the way you want. Some people use less settings, some more. You have a windowed mode, which is really only good in 640 480 resolution - something not common to many newer PCs - but with Windows XP you can run stuff in this resolution. Windowed mode has no scanlines, whereas the full mode (which takes up all the screen in 800 600) has scanlines, making it appear somewhat like a television set. This is the mode I use. Modes higher than 800 600 will show this full mode as actually more of a window... however, I feel there needs to be incorporated a 3/4 size mode.



The SID emulation is excellent, but I prefer listening to SID on real c64 - the emulation though provides a different tempo and feel to the music, which is also quite nice. Compatibility is very high, with just about anything C64 can be thrown at this emulator, and it will handle it. D64 files are my main collection, though I have other types. Pressing Alt-D takes you to full screen mode, where all you see is the C64 screen. However when you need to make any changes to the settings, you have to press Alt-D again to get access to the menu options. If the menu options were available whilst in the full screen mode, this would be excellent. Printer emulation tends to conflict alot with D64 images that have been released recently, mainly demos. Not so much older wares, if I can recall. Anyway, the jerkiness of the on screen movements are pretty bad, and for this reason - whenever

play games, I only use CCS64. For SID music, I use WinVice. For Demos, WinVice - then CCS64 (WinVice has better sound than CCS64, but CCS64 is more smoother). For Disk Magazines, WinVice or CCS64. For Graphics, WinVice.The Machine Code monitor is WinVice is more fully developed than in CCS64, btw. WinVice would be the sceners choice, but I still like the latest version of CCS64.

Suggestions to improve WinVice

- Full Access to the menu system in Alt-D full screen mode, ie. all the miscellaneous options in drop down menus.

- Instead of only a small (too small!) window video output (no scanlines) and full size video output (scanlines) - have a window mode in-between these two sizes (with scanlines option [3/4 size?]). Most people still use 800 times 600 resolution on their PC's, so an in-between video size, as suggested, would be ideal. Even for higher resolutions on LCD monitors, it would suffice.

- Instead of dragging PRG files into the emulator window, have an option where you can double click on it from the menu system, and it automatically loads. The same goes for other similar single file types.
- SID file player built-in, ie. double click on a sid file for it to load and run under a built-in SID player (like PSID64). It would be cool if an inbuilt SID player had some nice graphics displayer.

- Movements on screen are very jerky, surely this can be improved, as CCS64 have proven - some of it can be eliminated.

[3] CCS64
www.ccs64.com

CCS64 is really nothing like WinVice, in terms of program, but is an authentic stand alone emulator of the C64. The graphic detail and sound quality is slightly less than WinVice (the sound being the most noteable of the two). I really enjoy using this emulator, probably mostly as the first C64 emulator I really used was the DOS version of CCS64 made around 2001. CCS64 has lower system requirements than WinVice. The DOS version ran comfortably on a Pentium 133 computer, I had. The latest version, may only require a slightly higher system. WinVice on the other hand, I think you need at least 600+ mhz - for use with basic settings. Interpolate SID in WinVice, I know, even slows down a 800mhz machine I have now. With the Latest version 3.1 of CCS64, if you have no 3D card - you may need to switch resolution to 16-bit (Medium color quality), or you get Direct-X errors. I really don't understand why this is not in the documentation, because I found this out by mistake - missing out on using the latest version for some months.

Anyway, the menu system in CCS64 is comprised of a real C64 character set - which I find an excellent and innovative idea. The settings are easy to apply and change, and you no longer feel like you are in a windows point and click environment. Printer emulation is simple, but provides limited compatibility in what I have used it for. Drive emulation and general CPU handling has greatly improved since, say - the 2001+ versions, as it runs more programs than earlier versions.I always enjoy CCS64 for games, as it handles on screen movements with a less jerky feeling. It has something to do with a PC monitor versus TV set refresh rate, you can read about that in the CCS documentation. If CCS64 was the only emulator ever for the C64, I would not feel disappointed about it. CCS were actually a cracking group in the early 1980's, though I only ever heard of them through this emulator. Their cracks seemed nice, glad to see a member of the group made this emulator as some university project, I forget the details exactly.

Suggestions to improve CCS64

- Some interlace graphics look a bit bad, needs a finer touch.

- SID emulation is still pretty poor, though better than earlier versions, maybe some collaboration with SIDPLAY/RESID coders is needed? Decent SID emulation could make CCS64 the C64 emulator of choice.

- Machine code monitor, needs to undergo final development.

- Can't fault much else about it, nice stuff!

[4] IN CONCLUSION

Well there you have it. Kind of like an Alien V Predator showdown, well not really. Some features of one emulator (WinVice) are better than a feature in another emulator (CCS64), and vice versa. Anyway, I think it better having 2 decent C64 emulators to choose from, rather than one. If I dare to give them a percentage rating, I would give WinVice about 90%, and CCS64 about 88%. There is not that much between them, from a novice users point of view

maybe the technical side points towards a different picture. I look forward to buying the new C64 keyboard coming out next year anyway! Just joking, we can only hope that some eccentric billionaire loves the mellow beeps like we do... Catch you later!

Signing off,
Luke Lynde (IQ-Dna/People of Liberty)

Well recently I downloaded the HVSC top 100 sids, converted them into PRG format in a matter of seconds, and played them through my stereo via real C64 with 6581 Sid Chip.

Awesome! A tune like "FAME" you could not forget from the early days of c64, even if I have not heard it in such a long time. The "Last Ninja" tunes are there, which I love to listened to regularly anyway - but I do find the first Last Ninja tunes are below average when Compared to the 2nd and 3rd in the series. "Driller" is a killer tune by Matt Gray that takes up little space, but goes on forever.

"Batman" from JCH, definitely one of the most memorable tunes of all time. "Mutants" has the most ethereal spooky effect I have ever heard on the C64. Then you have all the Rob Hubbard and Jeroen Tel classics, and much more. Please download it from the HVSC site, if you have not done so already!

There are so many great tunes in this Top 100 collection, I find it as an invaluable resource - because you are getting the most outstanding tunes from the large HVSC collection.

The HVSC do a great work, and on that subject - the 10 year Anniversary demo from HVSC made my jaw drop! What an awesome collection of SID music!! This collection would be the best Music collection ever released on C64, surely! Such variety and differences in mood and style from all the musicians - it is like taking a journey through some wonderful soundscapes. As far as the design and layout of 10 years HVSC

- it could not possibly be better. Not only can you listen to these awesome SID's, but you can read the articles which are very informative in relation to C64 music. You must download this from CSDB now! I would never have expected such a great music collection to pop up, let's hope there are some great wares planned for the 25th Anniversary of C64 in 2007!

Signing off,
Luke Lynde (IQ-Dna/People of Liberty)

Commodore Free Interview with HVSC team

> Who are you and what do you do for a job?

My name is Peter Sandén (aka Yodelking) and I'm from Sweden.I got my first Commodore 64 in 1983.I work as a technican for a family company called Formec.

> I notice this is a collaboration who else is involved?

The HVSC-crew is well described in Creators.txt in the documentsfolder of the HVSC collection.
But we get a lot of help from external contributers who helps out a lot**.**

> Where do you live / what are your likes dislikes?

I live in Staffanstorp in the southern of Sweden**.**

> What attracted you to sid music?

It was always amazed by the lovely melodies that were created, and for it's time it was really cool sounds. Still today I favor tunes with good melodies over technically advanced tunes. This goes for all music, not only SIDs.

> What commodore machines do you own?

In the old days I had c64, c128, Amiga 1000, 500, 1200...(not at the same time, though...) I sold my last c128 in 1989 together with almost all my disks. (and YES, I still miss my old disks, and I've regret it ever since!) Somewhere in 1994 I bought a c64 again. Currently I have 6 c-64's and 2 diskdrives.

> What amount of time is spent maintaning HVSc?

Impossible to say, as we're a big team. But it's quite a lot of hours spent on ripping music, verifying credits, ensure that it works on a real c64, making the update script, and so on...

> How do you get the SID tunes who extracts them?

We have several music rippers in the team who works on this, newer music is often more easy to rip than those from old games where the coder made the music, spreading the routines all over the memory. Also we get some great help from some composers who send in their own tunes, which saves us lots of time.

> Has anyone complained about copyright? Have you had to remove songs due to copyright issues?

We didn't remove any tunes, but we've been asked to do it in the past.

> Do you know of any CHART music that has ripped off SID tunes?

Yes, as a matter of fact there is.. :)

> Does the music collection work for other platforms?

If you're refering to SID collections, HVSC works under several platforms, including Windows, Linux, Beos, Amiga... (some tunes can't be played on the amiga due to not updated players, though.)

> Do you plan a website version for the Amiga computers?

The HVSC already works on Amiga. And if you refer to collecting MOD's, there are already such sites.

> Do you listen to music other than SID tunes?

Yes, I like most kinds of music, except Jazz.
I'm specially fond of Mike Oldfield and Enya.

> How many tunes / authors are in the current download?

We have currently 33000 sidfiles in HVSC (some have several subtunes aswell...) I have no idea about how many authors, as several are unknown**.**

> How long has HVSC site been going?

HVSC was started 1996**.**

> How do you feel about current state of music / none Sid Commodore related?

I feel a lot music is being rushed, and mass-produced which lowers the quality. It's not often I buy a record where I like all tunes. (That actually only happened once: Merril Bainbridge with "The Garden")

> Are there any other projects you are working on?

I'm doing the composers page:
http://composers.c64.org/ and I'm also working on a "Sidhunt" page where people can request SIDs they miss out on in HVSC.

> Where does it go from here, obviously the project will never end, but do you have a final cutoff date or do you plan to maintane the collection for as long as possible?

We all grow older and the amount of spare time decreases. We haven't set any date for when we consider the project to be finished. We work on as long as we enjoy it, and hopefully when people in the crew gets other priorities in life, we might get other people to join.

> What question would you liked to have been asked?

Nothing comes to mind at the moment.
But feel free to ask more questions if you have any.

> Have you read Commodore free magazine?
No, personally I never heard of it.

Best regards, Peter

HVSC Frequently Asked Questions (F.A.Q)

[1] What is the High Voltage SID Collection (HVSC)?

HVSC is the ultimate SID tune collection featuring over 30,000 popularand requested SIDs from the Commodore 64. The collection includes SIDs (aka C64 music) from games, demos, intros, etc. HVSC has been in the making for six years and is the result of many contributors.

[2] What software and hardware do I need to play the tunes in HVSC?

Lucky for you, there are many devoted SID fans throughout the world. Many people have created or ported SID emulators to various OSes. To name a few: Win95, Win3.1, Linux, MSDOS, MacOS, AmigaOS, Atari Falcon, BeOS, OS/2, etc. For a complete list of which OSs are supported, see the HVSC web,page. You can also listen to the SIDs in HVSC on a real C64 with Real SID Play. More information is available on the HVSC web page.As for additional hardware, you only need a sound card. In addition to using your home computer, there are hardware devices out there that utilize the SID chip itself in conjunction with your sound card. See

http://www.hardsid.com and
http://www.sidstation.com
for more information.

[3] Isn't Commodore C64 music just silly beep-blop music?

Absolutely not! Although the C64 went into production in 1983, do not underestimate the C64's technology. In fact, Byte Magazine named the C64's Sound Interface Device (SID) as one of the 20 most important chips in computer history along side the PowerPC, Intel 8086, and Pentium. After all, there has to be a reason why there are so many SID fans. You should note that there were two distinctive regions for SID music, America and Europe. American SID music is on average lower in quality compared to European SID music. This is not to say that American SID music is crap, but if you are judging SID music based on the American SID music you have heard, I can understand partially why you might think SID music is silly. Why is American SID music lacking compared to European SID music? Mainly this has to do with much information sharing related to the SID composing tools in Europe (not to mention some theft as well). The best way for you to determine if SID music is or isn't for you is to listen to some of the best. Take a listen to some Hubbard, Galway, Daglish, Gray (Fred and Matt) and Tel. If you do not like any of those artists, then there is a strong chance you will not like any SID music. You should also note that C64 music has been played not just on specialist radio shows like the KDVS 6581 SID show (now sadly no longer with us) but also on Swedish national television. So much for silly beep-blop then :)

[4] Which tunes are added to HVSC, and why?

HVSC adds music from games, and C64 scene programs (whether they befrom demos, stand alone music packs, or disk magazines) which have been released into the public domain. However, we do not normally add any Compute! Gazette tunes (see [5]). Thus, if a tune has been released publically including

C64 FTP or WWW sites, this means it also allows for any other public collection such as HVSC to place it in their collections as well using the same unrestricted and free ethics that public domain software allows. We do this so that HVSC serves as an archive, not just for the SID fans, but for the composers as well if they ever need to refer to their work. There are also some previously unreleased tunes by composers which HVSC also has (such as /Gray_Fred/Sled.sid), where the HVSC Crew strictly asks for _composer permission_ before releasing such.

[5] Why aren't there any Compute Gazette SIDPlayer tunes in HVSC?

Mainly, because on average they do not sound as good as non-SIDPlayer tunes.SIDPlayer was a public domain SID composer and player available in the early '80s on the C64. The tool was predominately used by Americans and has a strong following among the public domain audience. SIDPlayer tunes are usually follow by a ".mus" and can be found on some C64 ftp sites.

The best Compute! Gazette SID tune collection HVSC knows of is maintained by Peter Weighill and the latest version can be found here: http://www.c64music.co.uk/

(note: do not confuse SIDPlayer with SIDPlay. SIDPlay is a SID emulator where as SIDPlayer is a SID player for the C64. Confusion is easy when there is SIDPlay, PLAYSID (Amiga), SIDPlayer (C64), Real SIDPlay (C64), etc.)

[6] What is the SID Tune Information List (STIL)?

The STIL is basically a text file which contains general information about the SIDs in HVSC. Such information includes the original composer's name, defects in certain tunes, interesting trivia, etc. Consult the STIL FAQ for more information. Hopefully your SID emulator has the option to display the STIL information for the current playing SID tune.

[7] What is PSIDv2NG?

PSIDv2NG (PSID format v2, Next Generation) was invented by Simon White and Dag Lem and is an extension of the Playsid V2 file format. It takes advantage of some free bytes in the header and allows for the following situations (the first one was already in the existing PSID v2 format):

* the SID file has a standalone player or is a Compute! Gazette SIDplayer tune

* whether the SID file is C64 compatible or specific to the old PlaySID formats

* whether the SID file is for NTSC (eg: USA) or PAL (eg: Europe) TV formats

* SID chip selection, 6581 (old) or 8580 (new) SID chip

* relocation fields, required to support a real C64(emulator) where additional code must be placed in C64 ram to play the SID tune.

All the above means that it also allows for better compatibility with a real Commodore 64 so you can play the tunes on the real thing (see also RSID below)

It also has the added advantage of being backwards compatible with most SID tunes, so that older SID emulators can still play them, but to take advantage of the features of PSID v2NG, you are highly recommended to use SID emulators based on the latest libsidplay2 emulation engine (for example, Sidplay2 for Windows) to play SIDs in HVSC.

RSID is an extension of the PSID v2NG format, introduced in HVSC 5.1. RSID is for those rips that require strict C64 compliance, and also ensure that older SID emulators do not lock up when attempting to play these SIDs. It does this by having "RSID" in the first four bytes of the SID file header instead of "PSID", which allows for safe rejection. Examples of an RSID format SID include sample tunes which require real-time sample playback, busy delay loops in real time and cycle-accurate timing.

The RSID format should only be used if the rip will crash older SID emulators. More detailed information about the formats can be obtained on the documents section of the Sidplay2 homepage

[8] Why has HVSC decided to go with PSIDv2NG?

The HVSC Team had thought for some time about going with the file format, as it would allow for better and more accurate rips, being played with the cycle-accurate Sidplay2 player. However, such an issue was important and so in March 2002 HVSC undertook its first ever user survey, which asked how the collection was used, what the users found important in a SID file format to them, and whether the collection should move to PSIDv2NG format. When you consider that of those surveyed:

* 73% wished for SID files to be played on a real C64 where possible

* 94% would like to hear SID tunes at their intended PAL or NTSC speed

* 91% wished to know which SID chip a SID tune was composed on and that a majority also wished for us to have SID files play more accurately, and for the collection to go to PSIDv2NG, then it was an easy decision to make. Further, PSIDv2NG is the only new SID file format thus far that facilitates what was preferred.

[9] Some of the file names have _PSID and _BASIC in their name. Why is this?

- If you use sidplay1, play the _PSID files if they exist.

- If you use sidplay2, play the non-_PSID files.

There were many SIDs ripped where they were hacked for compatibility or PlaySID extended digi registers, which are specific to older SID emulators like PlaySID and Sidplay only. Although Sidplay2 will play those rips, a real C64 will not and and in most cases it will lock up fwith them.

As the collection develops, C64-friendly versions of these rips will be added which will run alongside the existing PlaySID-specific rips. Most of these will be in the RSID format which will safely reject on the older SID emulators. Further, by marking the PlaySID specific tunes in this way, that user then knows which rip is suited best to their SID emulator.

Similarly, those SIDs that are marked BASIC were originally taken from C64 games which were wholly programmed in the BASIC language. To convert these BASIC programs into timer-exact machine code SID tunes would take not only a lot of effort, but inevitably you would also lose the accuracy of playback of these tunes. Emulation support is now provided by the latest versions of Sidplay2 to be able to effectively emulate BASIC (and thus the tunes created within BASIC) correctly. HVSC 5.7 saw the first BASIC SIDs in the collection, and as the collection progresses, more of these tunes will appear.

[10] My operating system doesn't yet (or can't) support Sidplay2. Will I still be able to play the SIDs in HVSC?

Yes. Part of the PSIDv2NG specification is to allow for backwards compatibility, wherever possible. The only SIDs you won't be able to play are those which are real C64 specific, and for the majority of those, they will have a PlaySID equivalent marked as mentioned above.

[11] When will the next update be released?

There is no fixed time schedule as to when each update is released. Each update is dependent on two factors: available time and available SIDs. Once enough SIDs have been sent in to equal around 1.44 MBs (compressed) and the HVSC crew has time enough to properly sort the SIDs, the next update will be released. At present, it takes on average three months to put together a new update. However, you should note that with the amount of SIDs already present in HVSC, it does become harder to compile updates full of new SIDs and three months should be seen as an absolute minimum.

Also, if you wish to be added to the HVSC Update Announcement list, which means you get an email the moment the HVSC website is updated announcing the new HVSC Update release, then please email HVSC Update Subscribe. Note too that you will be able to download the update from two sites on the main HVSC page which should ease Net traffic on the day of the update release.

[12] Do I have to download all of HVSC after each update?

No. The update comes with a tool that automatically updates HVSC to the next version. Instructions are provided in each update and within the tool. In particular, do NOT run the update tool more than once.

[13] Why isn't the update tool available for my system?

The update tool was made in mind to be portable, and at the moment is available for Win95/98/NT, AmigaOS, OS/2, MacOS, BeOS, Linux, FreeBSD, SolarisOS 2.6 on SPARC processor systems and Atari ST with external OS that handles long file names. If you would like to port the Update tool to your OS, the source code to the tool and information about the format of the HVS data file can be obtained by emailing

Stephan Schmid & Peter Sandén

[14] Why do the updates sometimes add SIDs that HVSC already had?

We often replace SIDs in HVSC with better versions. Reason for replacing SIDs could be (1) more sub-tunes (2) 100% rip (3) significantly smaller (4) merger of several SIDs. A "100% rip" includes SID tunes that are fully C64 compliant and where applicable have all subtunes. Thus, there is a chance that a new version of a tune could sound identical to the current version in HVSC. The new rip, however, has some internal changes that does in fact make it superior. Note that occasionally we do mistakenly add repeated tunes (and please tell us if you spot them.)

[15] After I ran the Update, I can no longer find some SIDs. Where did they go?

To find out more details as to where SIDs were moved, why they were deleted, why they were replaced, etc., view the
/DOCUMENTS/UpdateXX.hvs
file for the current update. The "XX" in the path mentioned in the previous sentence represents the current update number. So if after
running Update #7 you can no longer find a favorite SID, check /DOCUMENTS/Update07.hvs and search the file for the location where that SID was manipulated. The UpdateXX.hvs file serves as a data file for the UPDATE tool but is also readable by humanoids and does contain some comments. The best way to find the section of the file that contains the information you seek is to do a string search on the old SID or the path where the SID resided.

[16] How can I tell what version of HVSC I have?

Look at /DOCUMENTS/hv_sids.txt. The first few lines will tell you what version you have.

[17] Why should I get HVSC when I can just load up the game/demo and hear the music on a real C64?

First off, remember that HVSC isn't just for emulator users. In fact, the tunes in HVSC are still in raw C64 code only prepended by some header information. There now exists a really useful tool called PSID64, which takes a .sid from HVSC and turns it into a RUNnable C64 .prg file, which you can load and run on the real thing to play the tune. The only ones you can't are those with _PSID in the filename (see [9] above for more information) but gradually there'll be real C64 versions of those SIDs, too. We appreciate that there's still many C64 diehards out there (in fact, several of the HVSC Crew still compose music on the real thing too.) hence our wish that all SIDs can be made into a C64 runnable form. C64 users enjoy HVSC because it is the largest SID collection on Earth. It is unlikely that you have all of the programs from where the SIDs in HVSC originated. Plus, with HVSC, you can select any level tune at any time. SID emulators are getting better all the time, and with libsidplay2's cycle exact timing, moving onward too. And for people who no longer own a C64, SID emulators are a dream. Imagine how many C64 disks you would need to store the whole HVSC on.

[18] Why do some tunes sound different compared to how I remember them on the C64?

SID emulators are very good, but not perfect. Although SID emulation is not perfect, the actual rip of the SID tune may be corrupt. In addition
to rippers corrupting tunes, crackers would often make mistakes and muck up the tunes' speed (most infamously, Skate or Die and Driller.) Another common problem is that some people may not be

aware of is that North America (NTSC) and Europe (PAL) had differences in their TVs that influence the speed of SID tunes that used raster timing. However, where possible in HVSC SID tunes are now flagged as being PAL or NTSC so you can now hear them as the composer intended. You must use Sidplay2 to take advantage of this feature, otherwise in older SID emulators you can force the clock speed to PAL or NTSC to hear it as you remember it.

If you believe you have found a corrupt tune, it would be best if you load up the old tune on a C64/128 and compare it to the HVSC version. If you then notice a problem with the HVSC version, by all means, let us know. We strongly recommend that you do not compare the HVSC tune to a tune played in a C64 emulator, as often it's not accurate. You might also want to check out the STIL which documents any known problems with the SIDs found in HVSC if the game or demo also played the SID tune the same way.

[19] How do I rip SID tunes from games/demos?

http://www.geocities.com/SiliconValley/Lakes/5147/sidplay/

This gives a basic guide to the fundamentals of ripping, although please note that you should not use the PlaySID extended digi registers anymore. All rips should be C64 compliant. Once you've ripped the C64 data (and wherever possible, tested your ripped data on a real C64) you should use the SIDEdit tool to convert your rip to PSIDv2NG format for HVSC. Please use the
PSIDEdit link at http://lala.c64.org/ for more information.

However, do not set an y of the PSIDv2NG fields unless you are absolutelysure you are correct. Consult the documentation with SIDEdit for more information. You should then use Sidplay2 to test your rip to make sure it works correctly.

One other important thing to bear in mind - if at all possible, rip from the _original_ release of the game. The initial wave of game cracks back in the late 1980s often missed out tunes, mucked up tunes etc and are never treated as a 100% reliable source for the correct game tunes, just to be on the safe side. Also, you will find that the release date given in a crack can be inaccurate, along with the credits, as the cracker would often overwrite the correct credits with who cracked the game etc.

[20] Why isn't tune X in HVSC?

Of course, not every SID ever made on the C64 is in HVSC. We feel that the majority of the most requested tunes are in HVSC. This does not mean we feel that almost _all_ C64 tunes are in HVSC. The HVSC crew is always busy ripping new SIDs and always receiving more SIDs. The best thing you can do if you would like to hear a certain tune in HVSC is to check out the SID Hunt web page which can be reached from the main HVSC web site. Also, the HVSC Ripped Tunes page is a good source to check if a tune has been ripped and due for a HVSC Update.
You may also want to consider Vincent Voois' "Sidbace 32" which helps you locate information in both HVSC and STIL that you require.

[21] I can't find tune Y in HVSC which was used in an old intro/demo. Can you tell me where it is?

Unfortunately, many intro coders and programmers failed to properly give credit to the music they used in their work. HVSC, thankfully, is very accurate in the credits it gives. We have worked for years contacting the original composers of tunes to help verify SID credits in HVSC. I don't think you are going to like what I am leading up to. C64 musicians have long been ignored on the C64. Many people will say, "Do you have the music to Commando?" not knowing who made the music. The time has come that you too should learn these composers' names. Basically, what I am telling you is that there is a chance that you will have to roll up your sleeves and dig through HVSC searching for your old favorite tunes. Before you do this, though, you should check out the HVSC search engine at the HVSC web site. With just a fragment of information, you can perhaps find the tune. Also, note that the professional composers (i.e., ones who received money for their work) are at the root of HVSC. Some of the lesser known composers and composers from post-1992 are in the "VARIOUS" directory.

Knowing this information should help reduce your search time. For demos, you might wish to pay a visit to Stephan Schmid's excellent Demo Dungeon site - it has lots of demos, but also which tunes were used in each one. Very highly recommended.

[22] Why do some of the tunes in HVSC not play?

More than likely, a silent tune is a PSID-only tune or the tune isn't fully C64 compliant. Our goal is to eventually all these tunes with versions that will work in the real C64 environment mode of Sidplay2. Further, some tunes use ADSR values which the original Sidplay's libsidplay library does not like.

[23] Why are there some incorrect or ugly-looking credits in HVSC?

Slowly but surely we are taking care of this. With each update, we make at least 200 credit fixes. So please be patient and if you notice any incorrect credits, email us and we'll try to fix them for the next update. Note also that any documented proof you have of the credit fix will help. Some people may not realise the amount of effort that has gone into HVSC since they have no idea of the collection's history. The chart below proudly shows the amount of progress HVSC has made since its existence. An explanation of the key: deleted tunes were either damaged or repeated; fixed tunes that replaced inferior rips; new is for new SIDs added; credits are fixes or additions to current HVSC credits.

The chart shows several things. Not only does HVSC average over 400 new SIDs per Update but the collection also averages over 400 credit fixes per Update. Also, note how the number of repeats added and the numberof fixed rips have been kept extremely low. This shows the amount of quality in the collection. Eventually we hope that the number of credit fixes per Update will drop below 200.
[24] Can I just download the individual tunes I want?

Yes. HVSC is available unzipped at a few web and ftp sites. A listing of these sites can be found at the HVSC Mirrors Page.

[25] How is it determined which composers go under the /VARIOUS dir?

The current rule is:

(1) If the artist has no tunes made in 1992 or earlier, go to step #4

(2) If the artist has game tunes (3 must be made in 1992 or earlier), above Various... else go to step #3

(3) If the artist was a famous demo composer in 1992 or earlier, above Various...else go to step #4

(4) Below Various

Note: Rule (2) above has slightly changed. This is in order that an artist who may have produced only one game tune for a magazine covermount prior to 1992 does not make it above VARIOUS.

Also, as of HVSC 3.1, the /VARIOUS directory changed structure. In order to make it manageable chunks, /VARIOUS now has four subdirs, A-F, G-L, M-R and S-Z, so you can look in those to find the composers you seek.

[26] Do you offer HVSC on CD?

Yes we do :) Please contact the below for further HVSC on CD information:

Jason MacKenzie
Binary Zone PD
ENGLAND
Website: http://www.bzpd.freeserve.co.uk/

Imre Olajos Jr.
Website: http://lala.c64.org

Bionic Grasshopper
Email: bg_mfc@usa.net

Stefan Scheffels
Website: http://de.geocities.com/sokratekk.rm

In addition, the HVSC Crew have ensured that any programs distributed on a HVSC CD have had written permission from the programmers concerned to include their work, such as Sidplay, PlaySID, APlayer etc.

If you are a public domain library and wish to include HVSC on a CD-ROM then please email Stephan Schmid & Peter Sandén for permission -that's all we ask. As long as you are making no profit on the CD, we will be more than willing to support you. One final thing. You may also see C64 compilation CDs (such as the C64 Classix CD) which contain to have "over 10,000 SID tunes". They have copied HVSC onto those CDs without permission and are making profit from it, which is not only against the HVSC ethic, but also means that the composers' works are being abused.

[27] When will HVSC be completed?

In all likelihood, never. Far too many tunes were made on the C64 to reasonably expect that every SID will be collected. In addition, people are still composing music on the C64 to this day (some of the HVSC team themselves are among them). Consider HVSC a living collection.

[28] I find myself listening to SID music all the time. Am I normal?

No, you are a SID-aholic. But we consider this a good thing. ;)

[29] So how do I make my own SID tunes?

In most cases, you will need access to either a real C64 or a C64 emulator such as CCS64 or VICE. Ideally it is preferred that you actually compose on the real thing, as you know the emulation is going to be 100% :-). You will also need a music editor program, which will enable you to easily alter the sequences with the notes in, the voices that the C64 will use, and also which will let you compile your tunes to disk so that they can be loaded and run by other users.

ftp://ftp.funet.fi/pub/cbm/c64/audio/editors/

is a good place to start to download a Commodore 64 music editor. I would advise you to try out a few and see which one you prefer. Over the years many people have recommended JCH's Editor, Music Assembler, DMC Editor, Future Composer, Voicetracker, Siduzzit, Soundmonitor and many others, but do take the time to read all the documentation with them. They will help you a lot in creating the right sound for your tune.

Those of you who are used to tracker programs like Fast Tracker on the PC might like to check out CyberTracker - see http://noname.c64.org/tracker/

- it's a FT-like environment for making C64 tunes. And now there's a native PC application which will do the job very nicely for you. Lasse Öörni's GoatTracker uses the well known reSID emulation engine in conjunction with a friendly and simple to use interface so that within minutes you can be mastering the SID chip and producing your tunes. And for HardSID card owners, you can also use the real C64 SID chip on your HardSID to ensure your sound is as close to the real thing as possible. The beauty also is that you can save your tunes (when finished) to C64 .prg format, or SID format too.
For more information, please consult the following webpage: http://www.student.oulu.fi/~loorni/
And of course, once you have a saved compiled tune, it should be pretty easy to convert to a SID file to send off to the HVSC Crew (hint).

[30] What if I want to release a cover of a SID tune commercially?

You should importantly please bear in mind that often the C64 composer will own authorship rights to their SID tunes, and not the software company. This is particularly the case as often known game composers worked freelance and so kept the ownership to their pieces. You should endeavour to contact the original C64 composer to ensure not just permission but also that the composer gets due authorship credit (and payment of course) on the record. Feel free also to contact Chris Abbott with regard to this if you are unsure how to proceed**.**

Information printed from the FAQ`s with the agreement of Peter from HVSC

Interview with Aleksi Eeeben

1) Emulation of a SID - a tough enough job to do on PC, but how on earth can someone even think of bring the sound of the 64 into the unexpanded 5 KB of the VIC-20?

Common sense says it's not possible, so it had to be done with a little madness. No, it's not really a trick, but actually a quite faithful emulation of the inner workings of SID. Phase-accumulating oscillators are very much the same. Everything is just scaled down to such accuracy and detail that a 1 MHz 8-bit processor can handle.

2) Could you explain how you managed to make this happen to someone who does not understand that much of coding like - well, let's say ... a nerd like me?

The emulation consists of four parts:

1. Tone generator - The heart of the emulation, generates and mixes three static voices and outputs the combined sound through volume register 4-bit DAC (exactly like playing samples on C-64). Triangle, sawtooth, pulse Wave (with 32 widths) and noise can be selected with a jmp-switch and each voice has volume setting of 0-7. This code is running in an NMI timer interrupt called at 6.1 kHz rate. Locating the entire tone generator part on zeropage, using self-modifying code and counting cycles, I squeezed the oscillator code to 30-39 cycles per voice (depending on waveform), so there's a few cycles left for other routines too.

2. Original playroutine - 6502 and 6510 share the same instruction set, so the same original routine from C-64 can be used directly. For VIC 20, all writes to SID chip must be manually patched to some other memory location, since $D400-$D418 is ROM. Also zeropage usage must be checked, as almost entire zeropage is used by the tone generator part. Luckily most playroutines need only a few zero page locations. And finally, if the playroutine itself is located under VIC 20 ROM's then it has to be relocated somewhere else.

3. Register emulation and envelopes - This routine is called in sync with the playroutine. It's linked to IRQ and called only once a frame (50 Hz). It simply reads the SID register image produced by the playroutine part and then changes the inner state of the tone generator accordingly. Sid Vicious internal frequency values are SID-frequency divided by a constant. Waveform jmp-switches are set based on SID image waveform registers. This part also emulates the envelopes and updates the level bits in tone generator code. Gate bits are polled and attack/release phases started as required.

4. Noise emulation - Voices with noise waveform read from a 16-sample buffer. The buffer is constantly filled with new random numbers whenever there is free processor time.

3) Nevertheless the routine has to have some kind of magic to it because you state that on the 64 it could be used to play 2-SID-Songs on just one SID - now

that is awkward because we're talking about six voices here instead of three. What's the trick and how much memory does that trick need, or in other words: can we hope for someone doing a six-voice-tune for a upcoming game in the distant future?

On C-64 you can play 3 regular SID voices and 3 emulated voices. The emulated voices will take approximately 50-70% of CPU time, which makes it unsuitable for most games. It's possible if your game is not very CPU-intensive, but generally it's probably better for title screens and such.

The emulated voices are always sounding a little rougher. Low- and mid-range notes with pulse waveform sound best, very authentic actually. So arrange your basses, lower leads and not-too-high pads in the emulated voices. Also experiment with drums. The emulated voices have a sharper attack. Also the noise has a certain unique character, although it can't reach as high as SID.

4) Generally speaking: more memory, more voices? Can this be topped by a 128 playing 9 voices or is 6 the limit for the SID to manage/emulate?

It's not really a matter of memory. On C-128 you could probably use the 2 MHz mode for doubling the mixing rate to 12 kHz. 3 SID voices and 6 Emulated voices is possible, but you need to rewrite the tone generator code for high memory instead of zeropage and this decreases the performance.

Pulse waveform is the fastest to emulate, since it doesn't require atable-lookup for the envelope levels (level can be implemented directly bychanging the values of upper and lower edge). VIC 20 NMI's waste a few cycles because they jump through ROM. Thus, 4 emulated pulse wave voices should be doable on C-64 with similar quality.

Sid Vicious sound examples recorded from VICExvic:
www.cncd.fi/aeeben/temp/vic20-sid-emu-upsidedown.mp3
www.cncd.fi/aeeben/temp/vic20-sid-emu
commando.mp3
www.cncd.fi/aeeben/temp/vic20-sid-emu-zoids.mp3
www.cncd.fi/aeeben/temp/vic20-sid-emu-uuno.mp3

These run in VICE xvic (remove all extra memory and reset emulator Before loading):
www.cncd.fi/aeeben/temp/upside.prg
www.cncd.fi/aeeben/temp/zoids.prg

The source code, work in progress:
www.cncd.fi/aeeben/temp/sidemu_source_v0.zip
Other stuff:: www.myspace.com/aleksieeben
www.cncd.fi/aeeben

interview printed with Permission from http://www.cevi-aktuell.de.vu/ Magazine

Quikmenu

From Loadstar

On the Commodore free website you will find a link to the utilities page, from here you can download the full package given away from by “LOADSTAR”

Don’t like me jump in and start running everything, I suggest you start from the left hand side and read all the documentation. Here are the documents in an effort for you to read them.

WELCOME TO QUIKMENU
by Dave Moorman

As you can see, QuikMenu can present your disk in an elegant and easy-to-use manner. All programs and text files are displayed, with theoption to Read It or Run It (if aprogram is associated).

The Read It function presents the text on the screen in LOADSTAR's 38- column format, and can be sent to a printer on device 4.

Run It will load and run any BASIC 2.0 program.

Using QuikMenu on your own disks can be as simple or as dramatic as you want. Read how to do it in "World of QM" on this disk.

At the last minute, we added C-64 Encyclopedia just because it was there and we had a lot of free blocks on this disk (image). Here is EVERYTHING you ever wanted to know about the C-64, but didn't know where to look.

THE WORLD OF QUIKMENU
by Dave Moorman

Using QuikMenu on your own disks can be simplicity itself. Only twothings are needed:

1. QUIKMENU.PKD needs to be put at the top of your disk directory.

2. Text and bootable program files need to be renames. Text files need a prefix of "T.". Bootable program files (the ones that can be LOADed and RUN) need a "B." prefix -- and must have a"T." file with the same name. For example, B.MYPROG must have a text file T.MYPROG on the disk as well.

With QUIKMENU.PKD at the top of the disk, the whole collection can be started with LOAD":*",8 and RUN.

On the fist run, QuikMenu searches for all "T." files, then checks to see if there is a "B." file that matches. This information is put on the disk in a file called "QUIKLIST", which is then used to create the menu. On subsequent runs, the program simply uses QUIKLIST.

If you change the files on the disk, be sure to scratch QUIKLIST and run QUIKMENU.PKD again to generate a new list.

CONNECTING QM
by Dave Moorman

Your BASIC programs can return to QuikMenu with just a little editing. You will need to make sure the IRQ has been shut off (if the program uses music or Mr.Mouse) and that the default BASIC memory settings have been restored:

```
POKE44,8:POKE2048,0
POKE56,160:CLR
```

Be sure that lines 40000-40099 are free. Save your program.

LOAD"LSCONNECTOR",dv from this disk and LIST it. Then LOAD your program. Move the cursor to line 40000 and press <RETURN> on each line. Put GOTO40000 at the point where your program ends, and scratch and save.

Your program will now call HELLO CONNECT and return to QuikMenu.

If you have a program that is in Machine Lanuage and/or does not let go of the machine (requires a reset), you can use the boot program for Doodle to create a Does Not Return boot.

LOAD"b.Doodle",dv and LIST

Change line 30:

```
30 A$="DOODLE"
```

to the name of your program. Change line 10000:

```
10000 D=PEEK(186):N$="B.DOODLE"
```

to the B. name your want for your program.

Change lines 40150-40152 to the title you want to appear on the flash screen.

```
40150 data"MY PROGRAM"
40151 data"by Your Name"
40152 data"(c) 2006 Your Name"
```

Save the file with

GOTO10000

Your new boot is ready to go. The user has the ability to duck out before going to a program that does not return to QuikMenu.

DOODLING QUIKMENU
by Dave Moorman

We have included Doodle on this disk because it is one of the best and easiest-to-use high-resolution bitmap drawing programs ever. Extended docs are not necessary for Doodle -- every command is just a <RETURN> or <Shift RETURN> away.

With Doodle, you can draw a nice little picture for your QuikMenu background, then port it into an FTS file using STB Print and Scrn2Font.

Some considerations you will want to keep in mind:

* The FTS file uses the screen font as a bitmap. Therefore only about one- fourth of the Doodle screen can be used for the graphic.

* Your graphic will probably need to be a line drawing, though cell-by-cell text colors can be displayed from an FTS file.

* Make the Doodle negative before saving it. The colors do not matter -- these you can change with Mr.MICK. With a negative image, you can paint areas of the screen very easily with Mr.MICK.

To transfer your Doodle file to an FTS file, first use STB Print to convert the "DD*" file into "*.SHP" format. Then boot up Scrn2Font and do the conversion. Finally, use Mr.MICK to make it nice.

BEHIND QUIKMENU
by Dave Moorman

QuikMenu is a culmination of over 22 years of programming experience at LOADSTAR. From the beginning, LOADSTAR has created a continuous environment for the presentation of text and software.

I remember booting my first LOADSTAR issue, back in 1988. We lived a long way from any telecomputing service such as QuantumLink or Delphi, and I imagined that this easy-to-use menu which allowed me to go from program to program seamlessly was what it must be like online.

I was wrong. LOADSTAR was better!

QuikMenu brings this same seamless environment to YOUR disk presentation. Be sure to read the articles on this disk for step-by-step instructions.

Twenty-two years is a long time. For a computer platform, it is a very long time. Over the decades, LOADSTAR has led the way to elegant programming for hobbyists. Most everything the guys at the Mighty LOADSTAR Tower were doing was included on an issue with a full tutorial and documentation.

LOADSTAR became my graduate course in software development.

In 1988, Fender Tucker arrived at the Softdisk Catacombs as the Managing Editor of LOADSTAR. He soon set out on a quest for LOADSTAR Quality. He never really defined the term, but gave some important suggestions.

Unlike its competitors, LOADSTAR was not limited to what a hobbyist could type in from a paper magazine page. Programmers were encouraged to use custom fonts, music, sound effects and anything that would make the program great looking. The "blue on blue" screen was a big No-No -- even for a Machine Language utility.

LOADSTAR has always favored BASIC as the "control" language. To that end, we published many ML "modules" which allowed most any intermediate BASIC coder to include fast and fantastic effects. A module is a collection of related ML routines, called with a SYS command (including parameters). With these modules, anyone could put nice boxes on the screen, make menus, print at, and do slick disk access for a "file requester."

Other modules allowed direct access to a bitmap screen, easy use of bitmaps in programs, sound effects, music, font effects, and even raster interrupt split-screen effects. Many of these commands are available in one BASIC Extension or another -- but LOADSTAR had a special concern.

BASIC Extensions and many of the features offered by others would grab hold of the machine and never let go. This broke the continuousness of the LOADSTAR presentation. With modules, the programmer could Bload what was needed, adjust BASIC memory, use the extra commands, then put things back as they were before exiting the program.

Probably the greatest series of modules every created was Mr.Mouse. Suddenly, the C-64 was right up there with the Point and Click world. And any hobbyist could use Mr.Mouse in any program. Lee Novak, the creator of the various packages, included commands most often used -- such as Box and Menu -- and added programming objects such as multi-select, scrolling menus, and mouse-sensative regions. The ultimate Mr.Mouse (v.2.1) had 57 commands to make BASIC sparkle.

A couple of years ago, my PC guru challenged me to create a "Visual Basic" for the C-64. Of course, I first turned to Mr.MOUSE 2.1. Then I refurbished Mr.MICK to become a Visual Design utility. Not only could the programmer type, draw, and paint the screen -- now Event Regions could be defined and assigned roll-over color changes and Event Handling subroutine line numbers.

The template Boot program needed only to have its name changed to match the screen file. Everything else is nearly automatic. The Event Driven program waits for a click -- and does a hidden GOSUB to the Event Handler. And DotBASIC adds 74 commands to BASIC -- including the 57 from Mr.Mouse.

The Do-Loop is a breeze to use, along with Screen Objects, virtual string arrays in under-ROM memory, and auto-sorting.

So, when Nigel Parker needed a menu program for Commodore Free, I warmed up DotBASIC and did the principle work in about six hours. (And yes, debugging took another six hours!)

We hope you enjoy QuikMenu. I have not seen any other disk menu system (except LOADSTAR's Issue Presenter) that makes the whole disk into one, unbroken "operating system."

And it is yours -- free. Just don't forget LOADSTAR. Visit us at

http://c64.eloadstar.com/

commodore free

Each application has an accompanying text file, BEFORE doing anything else read and if possible print these documents out. Believe me it will make *everything more logical, easier to use and less frustrating.*

Mega Game Cartridge for Commodore C64

Yes, that's right. Imagine One Megabyte of gaming action instantly accessible. No waiting for the games to load, just pick from the menu and off you play. This cartridge stores up to 64 games.

The cartridge is the latest creation from www.64hdd.com, makers of the very popular PC based hard drive alternative for Commodore computers.

The cartridge contains: built-in menu system allowing you to cursor and select the game to play instant access for up to 64 games, plus the ability to exit to BASIC

push button RESET switch (so you can select a new game)

For the techies...
two 512kb EPROMs (to make up the 1MB total) memory banking logic heaps of wires!

As far as I know, this is the first time a game cart of this type that has been released for the C64. It has only taken 21years!!!

The unit can be supplied blank (you will need to own a modern EPROM programmer), or if you request, it can be pre-programmed after the auction to contain the titles shown in the screenshots below.

Commodore Free
Due to space I have only included 1 Screen shot

www.64hdd.com/projects/hardware/megacart.html

Vintage Computer Festival News Update

Yow! Just received this message and had the organizer talk about this at
the #c64friends chat. Chuck Peddle, one of the most important people in
Commodore Business Machines, is going to appear at the Vintage Computer
Festival East 4.0! I've got to go!

See below,
Robert Bernardo
Fresno Commodore User Group
http://videocam.net.au/fcug
The Other Group of Amigoids
http://www.calweb.com/%7erabel1/

-----Original Message-----
From: "Evan Koblentz"
Date: Thu, 4 Jan 2007 00:13:00 -0500
Subject: Chuck Peddle @ VCF East

Hello Commodore friends ... Just wanted to let you three know that Chuck
Peddle confirmed his VCF East 4.0 attendance today. The event will be
Saturday, June 9, at our computer museum [http://www.infoage.org] here inNew Jersey.

We may add Sunday, June 10 as well, but the Commodore panel (30th anniversary of the Pet) will be Saturday starting at 10:30AM. Our location is about one hour south of Newark Liberty airport and about 90 minutes northeast of Philadelphia airport. We'll announce a show hotel
when the date gets closer.

[snip]

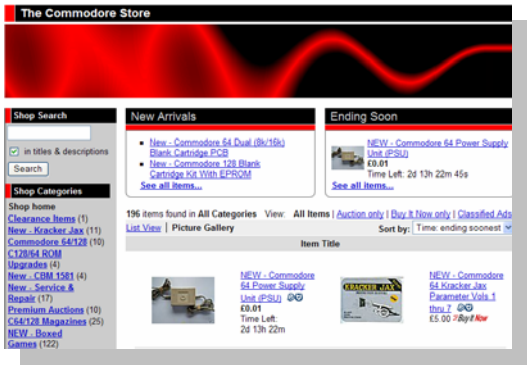
- Evan Koblentz
[http://www.vintage.org]

PS - let me know if any of you are interested in exhibiting / speaking at
our show.

An update ... we recently confirmed that Bil Herd and Dave Haynie will attend, in addition to Chuck Peddle. We also expect Bob Russell to attend but that's not yet official. Also, we're now strongly leaning toward making VCF East 4.0 into a two-day show (June 9-10) instead of only June 10. Keep your eye on www.midatlanticretro.org
And www.vintage.org for details.

- Evan

Ebay Favourite Sellers



Ebay the online auction, for anyone who has been hiding under a stone.

Ebay is an online auction website, each country usually has its own section for example the United Kingdom is accessed via www.ebay.co.uk but the main website is www.ebay.com (America)

To buy and sell on ebay you need to create an account, for that you supply your address and need a seller handle or name and a password to logon.

Then buying is little more than searching for the item you require for example if you were looking for a 1581 disk drive you could simply goto the main site and type in the search string “commodore 1581” hit return and sift through the results. You need to look on the site for fuller options of searching and syntax.

Most payments are electronic using a system called pay pal, you give pay pal a credit cards or bank details and they perform the transaction for you an in-between for the banks. Once a transaction is made Ebay ask you to leave feedback so you may for example say “excellent service goods as described arrived quickly” and leave positive feedback, as a result the seller gains a score ranking for each positive feedback rating, thus you can see how good a seller is by the number of positives and a percentage for happy customers.

Ok so one of my favourite sellers is “the Commodore Store” you can access the store directly via this link.

http://stores.ebay.co.uk/The-Commodore-Store

The seller has NO negative feedback whatsoever, is very friendly and always packs and despatches goods quickly and competently.

So what does this seller sell and why a write up of just one seller? Well the Seller specialises in hard to find commodore items, most are NEW and or never opened. For example Never opened disk games and never mailed out magazines.

Here is a small selection of items descriptions for you to view
.

64 Diagnostic Cartridge ROMS for the C64 & 64C

Professional Diagnostics by Commodore!

Here is a great way to all three Commodore 64 Diagnostic ROMS in one package. The Commodore PCB is fitted with a socket, so you can quickly and easily switch between the three different diagnostic packages for your 64. Plus you can make your own cartridges - use any 8k ROM on the PCB.

If you have any questions we will be pleased to answer them, this is a great way to get your hands on these professional diagnostic tools for the Commodore 64.

C128 VIDEO RAM UPGRADE
For 128 Owners Who Need Extra VDC RAM

When Commodore first released the 128D we got one, opened it up, and took a good look. It didn't take long to discover one MAJOR difference. The standard C-128 has just 16K of video RAM, while the newer 128D has a full 64K. That's 400% more!

We knew that there were tremendous advantages to the extra RAM. Like being able to scroll through video memory, of the potential for greatly enhanced colour resolution. And, since Commodore has seen fit to make it a standard feature on all the new 128D's, we knew it was only a matter of time before new software started taking advantage of the full 64K.

That time arrived. Programs like Maverick, FasTrac 128, BASIC 8, the BASIC 8 Toolkit, Spectrum 128 and News Maker have all been coded to take advantage of the full 64K of video RAM found on the 128D's. So if you've got a regular C-128 with only 16K of video RAM, you've got a big problem. And we've got the solution.

You could upgrade on your own - but if thoughts of splattered solder and heat-damaged motherboards bother you, relax. We've developed a module that plugs right in to your C-128 - and doesn't fill that empty ROM socket, either. Just open the 128, remove the RF shield and the lid that covers the metal box on the motherboard, and pull the socketed 8563 chip. Plug our board in its place and plug the 8563 into our board. Replace the covers and you're done. That's it. No soldering, no hassles. Now your machine can have the same 64K of video RAM as the newer 128D machines. And you'll be ready for whatever the future holds.

Plug In 64K Video RAM Upgrade, designed by Chip Level Designs
Supplied with fitting instructions & test software on disk. New & Shrinkwrapped

Deep Scan Burst Nibbler!
Powerful Software - Innovative Hardware!

The Burst Nibbler system is probably the most powerful disk copier available for the Commodore computer.

It gains its power by using parallel data transfer. With standard nibblers the data is read from the disk and decoded into a standard format before being transferred to the host computer by the serial bus. This is all well until it comes across some non-standard data on the disk. Because it can't recognise the code it is unable to decode into the form needed for serial transfer. With parallel transfer the data is read from the disk and transferred directly to the host computer without the need to decode it.

This is achieved because the Burst Nibbler System is actually hardware and software package. The hardware consists of a parallel cable that plugs into the computers user port. The other end of the cable plugs into the Via chip socket inside your disk drive. The software is a powerful Nibbler control program with various parameter settings to maximise results.

How much power do you want? How about:

> Only package to copy up to 41 tracks!
> Will copy a whole disk in under 2 mins!
> Full and half tracks copied - no problem! > Transfers raw GCR Code via cable!
> Fitted in minutes usually no soldering!
> Make a perfect copy every time!

Fitting involves lifting the 6522 Via chip inside the drive, inserting it into the socket on the cable and plugging the whole assembly back into the socket, the other end just plugs into the user port and has a through connector for your other hardware.

Deep Scan Burst Nibbler - New Cable & software... Software Version v1.9. For the Commodore 64/128 & 128D and the 1541, 1570 & 1571 disk drives..

The RAMBOard
The Essential Maverick Accessory for your 1541!

Remember the 1970's. That's the decade that brought us the first affordable home computers? The 1980's was the decade that saw the development of stunning software that finally took advantage of the available hardware. What do you think of the 1990's will be remembered for?

For our part, we're going to remember it as a decade of killer copy protection.

No kidding. Our programming staff has just been flooded by the clever and crafty sophistication of some of the new breed of copy protection schemes. We've been writing parameters for years now, and yet with all that experience behind us we're seeing things that even our famous Maverick archival utility system can't handle.

At least, not without a little help...

The RAMBOard was designed from the beginning as an integrated component in the Maverick arsenal. It's a RAM chip mounted on a custom board that, in almost all cases, plugs right into your Commodore disk drive. This extra RAM creates a "virtual workspace" that gives Maverick enough elbow room to work some special magic.

With RAMBOard installed, Maverick is able to back up programs that can't be backed up by software alone. Current Maverick modules already contain advanced RAMBOard parameters. As future copy protection schemes become more radical, RAMBOard will be an indispensable part of the Maverick arsenal – and you can bet that our future parameters will reflect that.

Parameters aren't the only reason for owning a RAMBOard. The advanced user's amount you will be interested in the fact that the Maverick sports a state of the art track editor that reaches its full potential only with the use of the RAMBOard.

With the RAMBOard installed you can read, edit and write whole tracks at a time. Plus a dual GCR RAMBOard powered nibbler! This and other RAMBOard support utilities found in Maverick allow the experienced user to actually create custom copiers – a hacker's dream come true!

Yet for all its capabilities, the RAMBOard itself is simple to install: just open your drive, plug in the RAMBOard, and close the drive. That's all there is to it. There's no soldering, no wire cutting, and no hassles. None and our illustrated instructions will make you feel like a pro before you even begin. Anybody who has tried to backup some of today's software knows that it's not as easy as it used to be. The good old days of "Track 23" errors are gone forever. Welcome to the RAMBOard.

The RAMBOard designed by Chip Level Designs Includes -
Hardware, test software on disk & instructions.... New & Shrink-wrapped
Requires Maverick v5 or later, for the Commodore 1541 or 1541C disk drive.

Cartridge Backer 64
Feature Packed Utility Software!
The Cartridge Backer v2 from the publishers of the CSM Program Protection Manuals.

Cartridge Backer v2 allows you to quickly and easily transfer cartridge based programs to disk at the press of a button. A host of software utilities allow you to complete flexibility, you can save as an EPROM dump, a BASIC kernel version, ZAP version & many more options.... A settings manual gives you pages of dip switch settings and a comprehensive manual covers all the software functions.
A powerful system for If you have any questions we will be pleased to answer them, this is a professional cartridge backup system and even allows you to repair defective/corrupt cartridges.
Cartridge Backer 64 Includes -
Hardware, software on disk, instructions manual & settings manual.... New & Shrink-wrapped
No external RAM boards, ROMS or cartridges are required.

What is a Commodore Computer?

A Look at the Incredible History and Legacy
of the Commodore Home Computers

Reid C. Swenson, M.S.

There are many individuals who have probably never heard of the Commodore home computers and are unaware of their incredible legacy and the tremendous impact which they have had upon the evolution of computers. Some of the younger generation who are too young to remember the 1980's may still not have seen or heard much-- if anything-- about Commodore computers and likely have very little sense of their significance. Likewise, many of the middle aged and older generation who did not develop an interest in computers until recently may be equally uninformed. However, most individuals who were involved in the home computer and electronics fields during the 1980's are probably somewhat familiar or quite familiar with the Commodore products and their history.

The Commodore 64

Commodore's most popular model, the Commodore 64, was the Model T Ford of the home computer movement. As you may recall the Model T Ford was the first automobile that the average person on an average income was able to afford or justify buying because of its low price, extensive consumer-oriented marketing, and usability.

The Commodore 64 is an 8-bit computer that uses Commodore DOS instead of MS Dos or Windows. In fact, for the most part it cannot run IBM or Macintosh computer programs. The Commodore 64 has BASIC 2.0 and 64k of memory although when you turn the computer on it indicates only 38,911 bytes available because nearly half of its memory is used for internal functions. The Commodore 64 was actually part of the evolution of computers marketed by CBM (Commodore Business Machines) which had previously proliferated the CBM and PET business computers into business and academic settings and who had then subsequently developed the VIC-20 computer which was the predecessor to the Commodore 64.

The Commodore VIC-20

The Vic-20 (named after its revolutionary Video Interface Chip) had captured the imagination of many enthusiasts around 1981 because of its very user-friendly BASIC language, nice color graphics, programmable sound, comfortable keyboard, and the fact that it could directly connect to compatible disk drives and printers without expensive expansion modules and interfaces. The Vic 20 had been affordably marketed for around $400 when it first came out and it quickly caught the imagination of many consumers and educators with several user-friendly and affordable peripherals (such as joysticks, a "datasette" cassette storage device, modems, printers, and shortly thereafter the VIC-1540 floppy drive, etc.) being released.

The 1530 (C2N) Datassette

During the early 1980's IBM was promoting the PC Jr. computer which was radically inferior (in most ways) to the rest of the home computer systems on the market and vastly more expensive. Commodore was, therefore, really receiving more competition from the Atari 400 and 800, the Texas Instruments 99, the Radio Shack Color Computer and the Apple 2 computer. Despite the rivalry between these 8-bit manufacturers much of the credit for innovation goes to Commodore largely because Commodore consistently pushed the price down and because the Atari and Apple computers used the Commodore 6502 processor as their main microprocessing chip.

In the very early 1980's unique marketing schemes were developed by different firms trying to cash-in on the developing computer craze. The fascination that many people had begun to experience with the fledgling computer video game, educational, business, and word processing capabilities of these computers quickly led to various multi-level marketing groups trying to involve people in selling these machines. There were few computer stores at the time and most of them were small. Computers were somewhat of an uncertain novelty item which many of the larger electronics and department stores were a little slow to embrace because of the uncertainty and lack of experience in dealing with such products. Consumers were often equally tentative and uncertain although there was a great deal of enthusiasm on the part of those who were keenly interested in such products. Many factors such as these created opportunities and schemes for the smaller and more venturous and creative individuals who wanted to get involved-- sometimes in unconventional ways. Oftentimes young and penniless entrepreneurs developed some hot selling Commodore software or hardware on a very low budget resulting in overnight fame and fortune.

Just as the Commodore Vic 20 was beginning to become fairly popular and many stores and some multi-level marketing programs had acquired significant inventories of Vic products rumors began to emerge that Commodore was working on a vastly more powerful version of the Vic 20 to be called the Vic 64 and eventually called the Commodore 64 (many came to casually refer to it as the "C-64" or just the "64"). As the rumors of the impending release of the Commodore 64 continued they sparked excitement and uncertainty in the Commodore market. Those who had invested quite a bit of money into the Vic 20 line found themselves with ambivalent and mixed emotions. This was probably the first experience which many individuals had ever encountered with the phenomenon we now refer to

"upgrading". Undoubtedly some became resentful. Some of those who had developed their marketing strategy and acquired large inventories of Vic 20 products found themselves scrambling around to modify their plans or to obtain price-protection as the value of Vic 20 products began to plummet rapidly.

Commodore had originally planned to release the Commodore 64 for nearly $1000 (without any floppy drive or monitor) but by the time it actually hit the market they had already decided to reduce the suggested retail price to just under $500. This was still a lot of money back then-- keep in mind that $500 back then was about the equivalent of $1000 today. Still, it was the best deal on the home computer market-- especially since it had a built-in RF modulator for connecting directly to a regular television set. Amazingly, the price of the Commodore 64 plummeted to under $300 within a matter of months, and a few months later was down to $200. Suddenly customer interest in these amazing new computers began to heat up.

About this time many sizeable chain stores (some of which had already been carrying Vic-20 merchandise) began to carry Commodore 64 items. Regional electronic superstores got involved as did a significant number of smaller computer dealerships. Eventually Commodore 64 and Vic-20 software and hardware was carried by such national department stores as Sears, Montgomery Ward, Fred Meyer, LaBelles, K-Mart, and many others. Also, many toy stores such as Lionel Play World and Toys'R'Us began to sell these computers. The price dropped by another $50 and dealers were buying the Commodore for just over $100. Commodore became so popular that Commodore even offered shares of stock on the stock market for several years.

As the competition among retailers heated up it was not uncommon to see retailers willing to sell the Commodore 64 systems at cost or even at a slight loss in order to lure people into their stores. The strategy (which usually paid off) was that customers would see the computer selling at an incredibly low price of near $100 and come to buy the computer and end up buying the 1541 disk drive, a Commodore printer, Commodore modem, a 1702 Commodore monitor and a bunch of educational software, games, supplies and accessories to go along with it. By the time the customer walked out the door the purchase usually resulted in significant profit to the retailer.

Many after-market and 3rd party manufacturers subsequently began to create and market Commodore-compatible software, hardware, books, and accessories in an effort to get in on the blossoming industry. Many Commodore magazines also became established-- some of which even included monthly disks with many free programs on them. Many of our present software and hardware giants got their humble start during this period. Microsoft's Multiplan became a very popular spreadsheet for Commodore. Other companies such as Electronic Arts, Accolade, Activision, Cinemaware, Cosmi, Batteries Included, Sublogic, Epyx, Access, Infocom, Mastertronic, etc. soon became household words.

Commodore service and repair centers became quite common. Training centers taught computer fundamentals and programming using Commodore computers. Many schools, universities, research centers and educational enterprises began using Commodore computers. A significant number of small and medium size businesses used Commodore computers as well.

Unique marketing approaches continued to develop as smaller companies and private individuals began developing the concept of shareware or freeware. This new concept was based on the idea that a programmer could write and copyright a useful or fun program and then freely distribute copies of it to the public on the condition that end users would pay a registration fee to become an official user of the program. Usually a relatively small fee was supposed to be sent directly to the program's author. Oftentimes the author would provide an updated or more complete version or accompanying manual or program add-on or other benefit as an incentive to pay the registration fee. This kept overhead, production, and marketing costs down by relying on grass roots distribution and the "honor system" of marketing. Several shareware and freeware programs became fairly famous during this time, but undoubtedly a great many programmers' dreams never quite lived up to expectations. The idea of try-before-you-buy software has continued to evolve up to this day-- becoming more and more sophisticated and creative.

Also, during this same time period a great number of public domain programs began to emerge. There were many programmers who had written and not copyrighted their programs for various reasons whose programs began to be freely distributed without any registration fee being required. This greatly added to the availability of affordable software.

Another interesting phenomenon-- Commodore User's Groups-- began to unfold during this time. This phenomena was a result of the need and desire of people to share information regarding their computers and interests. User's groups were popular among other brands of computers, but probably not to the extent that they were popular among Commodore users. The Commodore was seen by many as the ideal hobby computer and many of those who had lower budgets had been attracted to the Commodore because of its price. Frequently these individuals (who often had more time than money) developed an incredible loyalty toward the Commodore computers. It was amazing that many of these Commodore users often showed more commitment to the Commodore 64 than Commodore Business Machines did.

A large factor in the success of the Commodore 64 was its amazingly versatile, futuristic and user-friendly design. The fact that this amazing computer had more memory, a nicer keyboard, and was easier to interface with peripherals than most computers of that era made it so it was and still is (in many ways) an ideal computer for educators, hobbyists, game players, beginning programmers and musicians. For the money it was also hard to beat as an affordable home word processing system. Its only weakness was in the area of larger business applications because of its 40 column video display, limited disk storage and slow disk access.

The powerful combination of Commodore chips allowed some amazing capabilities. The Commodore 64 utilized the Commodore 6510 microprocessor chip which was an advanced version of the Commodore 6502 microprocessor which had been used in the Vic 20, Apple 2, and Atari models. The 64 had revolutionary sound via the 6581 Sound Interface Device (SID) chip and was probably the first home computer to be able to emulate the human voice without additional hardware. This SID chip provided for 4 different voices and many sophisticated sound forms. The C-64 had superior 16 color graphics with sprite capabilities due to its 6567 Video Interface (VIC) Chip. The other support chips in the Commodore 64 were equally impressive for that time period. At the same time the early IBM home computers were non-color and non-graphic machines with sound that amounted to little more than beeping.

The Commodore home computers were fairly reliable considering their low price tag and sophistication. Many individuals went for years with very little maintenance and repair work required. However, certain problems with the hardware did manifest themselves periodically and somewhat predictably. Many of the repairs required for these computers stemmed from static electricity discharges blowing out the 6526 CIA chip-- usually from

touching the joystick or game port after picking up static electricity from walking across carpet or touching the front of the television or monitor. This would result in some keyboard or joystick control malfunctions. Power supplies would occasionally fail or develop deceptive heat-related problems sometimes blowing out ram chips in the process or causing strange looking colored blocks or characters to appear on the screen.

The 906114 PLA (logic array) chip (sometimes labelled with the number 82S100N or PLS100N) would sometimes fail spontaneously causing the computer to no longer have a picture. The 6581 SID sound chip would sometimes go out-- usually due to a monitor being connected improperly. On rare occasions the 6510 microprocessor, the 6567 NTSC VIC (video chip), the 901227 Kernal ROM, the 901225 Character ROM, or the 901226 BASIC ROM would fail. The Commodore disk drives would periodically need alignment and cleaning and an occasional chip replacement or bridge rectifier or such. Keyboards would likewise need to be cleaned infrequently. Because of the interdependency of each of the internal components of the Commodore computers it is not unusual for Commodore computers to have similar symptoms while actually having different underlying problems.

Even when experiencing occasional hardware problems the Commodore users rarely felt like they were at the mercy of the service wolves due to the many options which they had. Oftentimes there were simple and easy to implement solutions for Commodore malfunctions. Fuses (which were usually easy to replace) would get blown out in the computer, drive, or power supplies periodically, but they were all usually available at Radio Shack stores. New cables or external cleaning of contacts was sometimes all that was required. Some seemingly complex problems (especially with the Commodore 128 and Amiga) stemmed from the fact that various chips sometimes became loose in their sockets and could be easily pushed in tighter or removed and reseated. The good news was (and still is) that (even in a worst-case scenario) the Commodore computers and peripherals could usually be totally replaced with a new replacement unit for less than the average minimum repair fee for most IBM and Apple systems.

As used Commodore computers became widely available at amazingly low prices during the late 1980's and throughout the 1990's many of the Commodore repair centers had difficulty staying in business. Despite this, there are still a few local and several national places who do Commodore repair work, sell parts and manuals, and have diagnostic software and hardware tools and information available.

Commodore had to constantly work to develop peripherals to go along with the blossoming market during the 1980's. Because Commodore was marketed so widely in so many large national department stores and in so many foreign countries there began to be a big demand for these accessories and peripherals. During the mid to late 1980's individuals walking into most major department stores which sold computer products would typically have seen software and hardware for IBM, Apple, Commodore, and oftentimes Atari side-by-side or in close proximity.

The VIC 1525 Printer
The Vic 1525 printer and a higher quality model 1526 had replaced the early Vic 1520 printer. The Vic 1540 disk drive was replaced by the model 1541 drive.

Commodore also continued to work behind the scenes to develop new computer models. Commodore unveiled the Commodore SX-64 portable computer around 1984 which was incredibly nice and affordable for its time period. The SX-64 computer had a detachable keyboard and a 5" color monitor and a floppy drive built in. It needed to be plugged into an AC outlet, but for its time it was amazing. It is still considered to be one of the nicest collector's items available. The SX-64 did not become as popular as the Commodore 64 did, but the fact that it had almost total compatibility with the desktop Commodore systems made it quite popular-- especially to those who needed to travel and/or go to Commodore User Group meetings.

The Commodore 128 computer + 1571 disk drive
Then in about 1985 Commodore released the beautiful Commodore 128 computer (utilizing the Commodore 8502 microprocessor) which had three different modes of operation and two different display options. One of the reasons the 128 was quite successful was that it had the advantage of being able to use virtually all Commodore 64 software (while in the Commodore 64 40-column mode), peripherals, and accessories and yet also had a (rarely used) CPM mode and a fairly popular Commodore 128 mode which allowed an 80-column display, as well as the 128k of memory, BASIC 7.0, a numeric keypad, and a faster higher capacity disk drive-- the 1571 floppy drive. Therefore, the Commodore 128 overcame many of the weaknesses and drawbacks which the Commodore 64 had with regards to business applications. All of the Commodore disk drives at this time were 5 1/4" floppy drives. However, Commodore eventually also released a 3.5" disk drive-- the Model 1581 which had significantly higher storage capacity (800k).

The Commodore 128 could use the monitors and disk drives designed for the Commodore 64 quite well. However, to take advantage of the increased disk speed and storage capabilities of the 128 the 1571 or 1581 disk drive was required. Also, to take advantage of the 80-column mode an RGB monitor was required. Therefore Commodore made several monitors which had both an RGB mode and a composite (audio/video or audio/chroma/luma) mode.

Other manufacturers such as Philips (Magnavox), Thompson, Teknika, Amdek and a few others also made monitors which could support both the 40 and 80-column mode of the Commodore 128. Most of these same monitor manufacturers (and others such as Sakata and BMC) had also previously made models for the Commodore 64 and wanted to continue profiting from the Commodore consumers. In fact Philips (Magnavox) actually made many of the Commodore brand monitors for the 128.

In fact, it was not uncommon for Commodore to subcontract with other manufacturers to produce peripherals with the Commodore name on them. Most of Commodore's printers, floppy drives, and monitors were actually made by other manufacturers to Commodore's specifications. Most of these Commodore branded printers and monitors were essentially identical to existing or subsequent models made and distributed with the OEM (original equipment manufacturers) brand name-- except that the Commodore version almost always had special Commodore features and/or interfacing. Commodore compatible floppy drives made by other manufacturers also emerged, but they were independently developed (for the most part) due to the fact that the Commodore 64 and 128 drives were "intelligent peripherals" possessing chips that Commodore had decided not to license or supply to its competitors.Hard drives were not common (or affordable) back then, so virtually all Commodore programs had to be run off of floppy disks, datasette cassette tapes, or cartridges. The Commodore drive was fairly slow in loading programs so many different utilities, cartridges, and hardware modifications became available on the market for speeding up disk access.

By the mid and late 1980's a staggering selection of software was available for the Commodore 64 and 128. Literally thousands-- if not tens of thousands-- of different commercial titles had been marketed and an

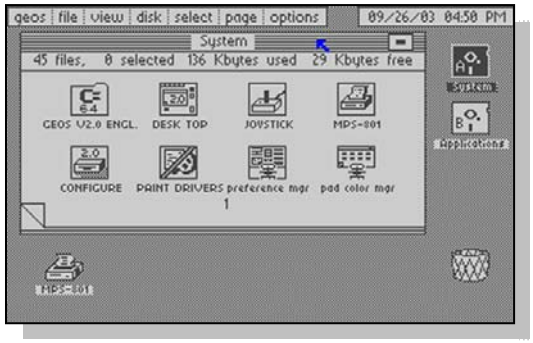
equal or greater quantity of public domain and shareware programs were available.

Unfortunately, not many games or educational programs took advantage of the 128's advanced modes because software developers chose to write programs for the larger base of users who owned Commodore 64 machines-- knowing that their programs would automatically work in the 128's C-64 mode. There were, however, numerous business, word processing, and developmental programs and some telecommunications programs written to take advantage of the Commodore 128 mode. Many of these features and programs became useful as businesses, writers, programmers and modem and BBS (electronic bulletin board services) began to see the advantages of using the Commodore 128 for serious professional applications.

We owe quite a debt of gratitude to many of these early developers and computer users who began to develop and utilize the fledgling computer software and telecommunications industry. Fortunately, Commodore and other manufacturers provided a good selection of software and telephone modems such as the model 1600, the 1650, the 1660, the 1670, and the 1680 modem. If it had not been for pioneering efforts of individuals like this we may not have had the great capabilities which we have now with computers and the Internet.

The Commodore 64c
Around 1986 or 1987 Commodore released the Commodore 64c computer which was essentially functionally identical to the original Commodore 64 except it was more sleekly designed and more attractive. Commodore also released the 1541c and the 1541-II floppy drives to go along with this nicer looking Commodore 64c.

The Commodore 1541-II floppy drive
Many people's lives have been greatly blessed by the advent of the Commodore computers. Many handicapped individuals and shut-ins have had great opportunities open up to them from these computers. Many slow learners and children who may not have taken an interest in learning found that learning can be fun because of the Commodore computers. Many family gatherings, birthdays, Christmasses, parties, and other social events have been enriched by the creative fun involved. By being addicted to something as enjoyable and of such a positive nature as this many have been lured away from (or spent less time and money on) harmful addictions such as drugs and alcohol. Many lifelong and job-related skills such as typing, programming, and word processing were acquired via these computers.



Many computer retailers, department stores, manufacturers, and programmers have profited financially from the Commodore computers. Many other businesses, researchers, students, and other ventures have also benefitted either directly or indirectly. Undoubtedly the social and technological spin-offs from these computers have had a ripple effect which has directly improved the lives and strengthened the economy of our entire nation and other nations.The ability of people to have wholesome and affordable recreation and a diversion from everyday stresses and pressures undoubtedly has helped the mental health and outlook of many individuals also.

Many of those who have gone on to make huge contributions to the computer industry began with the Commodore home computers. Many Commodore C-64, 128, and Amiga computers are still used in schools, businesses, production studios, and as control devices. They are still some of the best computers to learn computer fundamentals on. The fact that these Commodore computers have so many built-in functions and capabilities still makes them fun computers to experiment with. Because you can still obtain many hundreds of the original programs for these computers they are still viable choices-- especially for hobbyists and home educators. The fact that the Commodore 64 can connect directly into a normal television makes it a good choice still for those on a budget.

The fact that users of the Commodore computers did not need to constantly reconfigure, re-install, and uninstall software or worry about viruses and system crashes (as is common with our more modern Windows computers) allowed users to spend the majority of their time actually using the computer rather than spending so much time fighting it.

During the mid to late 1980's a certain amount of software piracy began to hurt the Commodore software market. Much of this piracy was likely induced by unnecessarily high prices. Fortunately, most people realized that the programs were such a good value for the money that it wasn't too big of a problem. Several software manufacturers developed sophisticated software protection schemes to make it difficult for people to duplicate Commodore software. However, these schemes seemed primarily to hurt the honest users more than the dishonest people some of whom became extremely adept at defeating the protection schemes. Many software manufacturers finally decided to eliminate the software protection or to use off-disk protection schemes so that the legitimate users wouldn't be hurt and inconvenienced. Eventually many of the software manufacturers began to realize that the best way to discourage software piracy was to make their software more affordable. Undoubtedly, however, the dishonesty and greed of some individuals contributed somewhat to the gradual decline of the Commodore software industry. Some of these individuals never learned that it is not wise to kill the goose that lays the golden eggs. Some of these hackers probably felt that they were just having harmless fun and felt somewhat challenged by the prospect of trying to outsmart the copy protection schemes.

As interest in the Commodore computers began to decline Commodore Business Machines and many other vendors of Commodore compatible products lowered their prices on both hardware and software in an attempt to maintain interest in their products. Commodore also began bundling software with hardware and making package deals as did other producers.

GEOS 64
Just when many individuals felt that the Commodore 64 may begin to lose ground to the newer IBM and Macintosh models of the mid 1980's a company named Berkeley Softworks created a new operating system for the Commodore 64 called GEOS which became immensely popular and helped to rejuvenate interest in the Commodore line. GEOS (which stands for Graphic Environment Operating System) was largely a takeoff of the popular early Macintosh (icon based) mouse oriented operating system. In fact, GEOS came with Geowrite and Geopaint-- much like Macwrite and MacPaint. Commodore owners were thrilled that they could have a computer which could perform nearly like the Macintosh-

- for just a small percentage of the price of a Macintosh-- while still having color graphics and sound which surpassed the capabilities of the Macintosh. The fact that Berkeley was able to squeeze so much power out of the Commodore 64's limited memory and disk capacity was a tribute to the highly efficient programming which Berkeley implemented. Certainly Microsoft could take a few lessons about efficient programming from those who wrote GEOS. A full line of GEOS-based programs ensued.

The Commodore 128D
Around 1986 or 1987 the Commodore 128D was released and became quite popular. The 128D was basically a Commodore 128 computer with a built-in 1571 disk drive and a detachable keyboard. The idea was to conserve desktop space and make a nicer looking computer to compare with the professional appearance of the IBM compatibles. This computer had the latest chip revisions made for the Commodore 128 and 1571 drives and had more video memory. This was perhaps the best 8-bit computer made by any manufacturer. The fact that there were not so many cables and wires running around and that it did not hog as much desktop space (due to the fact that the monitor could sit on top of it) made it very nice to use.

During the 1980's several large Commodore and Amiga trade shows and user conventions were held throughout the United States and in some foreign countries-- especially Canada. Commodore also usually had large displays at COMDEX and other consumer electronics shows. Thousands of users, retailers, and developers usually converged on these gatherings. This was quite a spectacle to see. The exciting and innovative new products which were unveiled at these shows kept Commodore users, dealers, and distributors coming back for more. The fact that there was fierce free enterprise competition-- and the fact that the computer industry had not yet conceded (or capitulated) to the dominance of Microsoft and IBM-- led to unprecedented creativity. Unfortunately, however, many people began starting to demand uniformity and standardization at the expense of innovation.

Commodore had been so competitive in the marketplace that IBM, Apple, and Atari had been forced to lower their prices and improve their features and quality. These other manufacturers were successful in doing so-- to the point where many people started being attracted away from Commodore toward other brands. However, if it had not been for Commodore being such a huge factor in putting downward price pressure and creating such innovative home consumer products the evolution of affordable quality home computers would have occurred much more slowly.A large number of Commodore gaming enthusiasts were also drawn away in the mid to late 80's as Nintendo and Sega began to market their 8-bit game systems which were somewhat simpler and easier to use (but in many ways less versatile) gaming systems.

The Commodore computers had permeated the U.S. and foreign markets very substantially by 1985. By the late 1980's somewhere near 10 million Commodore 64 compatible machines had been produced and distributed when sales began to rapidly decline. Probably 70 or 80 percent of the Commodore 64 compatible machines manufactured were Commodore 64s and 64c models and only about 20 or 30 percent were 128 models. Less than 5 percent of them were the SX-64 machines. It is probably safe to say that the Commodore 64 was the best selling computer model ever made by a single manufacturer-- if judged by number of units sold. Commodore's demise was largely a result of poor marketing and external market forces-- not lack of development.

The Commodore Plus 4
Of course, not all of Commodore's products were big hits. Commodore made several products which were fantastic ideas (in their own right) but never actually caught on because of poor timing or other unpredictable factors. One of these was the Commodore Plus 4 computer. The Commodore Plus 4 had been developed on the heels of Commodore's great initial success with the Commodore 64. The Plus 4 was very nice because it was smaller and had built-in software applications. Despite being a very beautiful little computer with many excellent features it never really became popular probably because it wasn't very compatible with the large base of software which had already been developed for the Commodore 64. Many (but not all) software manufacturers seemed hesitant to want to invest development efforts for this computer when there were so many who already owned Commodore 64 computers who were clamoring for software.Among other Commodore 8-bit products which never caught on well were the Commodore 16, the B-128, the SFD1001 disk drive, and several others.

The Amiga 500
Perhaps the biggest heartbreak of all of Commodore's efforts centered around the 16-bit Amiga computer which had initially been developed by a separate company. Commodore acquired or bought out the Amiga technology from its original developers and began developing and marketing Amiga computers during the mid 1980's. The Amiga computers were based on the Motorola 68000 processor and were somewhat akin to the Macintosh. The extreme power, user-friendliness, multi-tasking abilities, incredible graphics and (stereo) sound, along with built-in speech synthesis were way ahead of the competition. Many Commodore 64 and 128 owners immediately realized the potential of the Amiga and decided to acquire one. It appeared to many-- for a while-- that Commodore may actually retain a dominant position in the market place with the Amiga being such an obviously superior computer to any of the home computers of the time. Unfortunately, the lack of a diverse software base came back to haunt the Amiga as people chose to stay with inferior hardware and operating systems in order to stay compatible with the large number of IBM and Macintosh systems and software products which had taken over the business world despite still not being particularly well suited for home use.

Much of the downfall of Commodore stemmed from poor marketing, lack of dominance in the business sector, competition from other gaming systems, poor support, poor management, and growing competition. Commodore tried to expand into the IBM compatible market in the late 1980's with the PC compatible PC-10, PC-20, Colt, and even a 286 notebook computer and a few other machines which had only meager success. Commodore even developed an incredible interactive stand-alone CD unit (based on the Amiga technology) called the CDTV which (along with Philips CDI) were the predecessors to many of the CD-based interactive game systems which followed. In the final year or so before Commodore Business Machines ceased operations they had even developed the first 32 bit game system called

the CD-32 which may have been a big hit if Commodore had endured a little longer.

Amazingly, even after Commodore's decline started in the late 1980's the loyal Commodore and Amiga hobbyists and devoted users refused to give it up. A strong undercurrent of support arose. Even though most of the larger chain stores and distributors were forced to give up on Commodore products a strong effort to recirculate and refurbish old Commodore products has continued-- even to this day. In fact, in some countries, especially in Europe and Scandinavia the Commodore 64, 128, and Amiga computers are still immensely popular.

Because such a massive quantity of items had been developed and produced for these machines a great many liquidations and surplus inventories of Commodore-related products remained available for many months from many distributors. Those who chose to keep supporting the Commodore machines were frequently able to pick up brand new merchandise at tremendous prices and pass the savings on to their customers. Much of this surplus new merchandise is still available today through the surviving resellers.

It is not uncommon for past owners of Commodore C-64 or 128 computers to begin to feel a nostalgic attraction toward using the Commodore 64 again. Many of these individuals fondly reminisce about the intense fun they had in past years when computers were simpler and in many ways more fun. Back then the programs had to rely on content, strategy, and plot because many of the flashy special effects of the newer systems were not available. These older computers often left some things to the user's imagination-- by creating mental images-- instead of drowning the user in multimedia sensory stimulus overload as is often common with newer computers.

The Commodore computers and some of the Commodore-compatible software and accessories have become collectors' items for many individuals. Unlike most computers which seem to become outdated quickly, the Commodore computers seem to have a sense of timelessness about them.

There is no doubt that the newer multimedia computers have some major advantages over the old 8-bit Commodore computers, but a little diversity can be a good thing. Just like watching an old movie, using some older computer programs can help one appreciate different things and gain different perspectives. Many classic old computer games and educational programs were never made on any platform other than Commodore and Amiga. In the midst of the craze and pressure to constantly upgrade and fight compatibility problems and system crashes with many of the newer Pentium systems it can be somewhat refreshing to step back for a while to a more relaxing time.

Many home schoolers find the Commodore 64 to still be the best solution for younger children to learn with. For the price and simplicity it is still hard to beat. The simple programmability, availability of software, and ability to be integrated with existing televisions and curriculum make it a viable alternative for hands-on instructors and those on a budget. The fact that the Commodore 64 is viewed as being a "fun" computer often lures even the most resistive students into participation. Very few people are intimidated by the Commodore 64 because it (quite deceptively) almost seems like a toy. By making learning fun the Commodore 64 has already won half of the educational battle the moment it is turned on.

Despite the fact that Commodore programs won't normally run on other computers there are some fairly recent emulators which have been developed which allow many of the older Commodore programs to run on some of the newer computers. However, many people still want to use original Commodore machines and software to have the full feel and compatibility of the original experience.

Interest in the Commodore computers has resulted in a longevity of product availability which has exceeded even the greatest expectations. There is still some development of products and software for Commodore 8-bit systems. Creative Micro Designs is still manufacturing newer CPU chips and accessories for the original Commodore systems. They even still publish a magazine called Commodore World. There are also a couple of Commodore on-disk magazines being produced such as LoadStar and Commodore Gazette. There is even a company which recently announced the production of a new device called Web.it which is an IBM Windows type system which can automatically emulate and run Commodore 64 programs and even access the Internet. Gateway 2000 has acquired the rights to the Amiga and is currently developing new Amiga compatible hardware and operating systems. Several national dealers still sell and support Commodore and Amiga hardware and software through the mail and via the Internet.

The internet has greatly helped maintain availability, support, and interest in old computers such as the Commodore by creating forums and awareness of available suppliers, users groups and other resources. The Internet is ideal for individuals who share a common interest such as this. Even though the Commodore 64 is not the ideal computer for surfing the Internet it can be done. However, most of those looking for Commodore support and affiliation on the Internet are probably using newer computers or devices such as WebTV to make surfing the Internet a little easier.

A very sizeable percentage of individuals who are accessing the Internet with a newer computer undoubtedly still own older computers which they acquired in previous years who lost interest in them only because support for their old computer became difficult to acquire. A large number of these old computers have the Commodore or Amiga name on them. Now that software, hardware, accessories and support is so easy to locate and obtain a noticeable resurgence of interest is occurring.

The main staying power of the Commodore and Amiga computers, however, is that they have become a part of the lifestyles of so many individuals. Many Commodore and Amiga user groups still meet regularly and publish monthly newsletters. People still enjoy their old games, educational programs, applications, and the creativity which these machines were so well suited for.If anything can now be said about the Commodore and Amiga computer systems it is this: "Rumors of the deaths of the Commodore and Amiga computers have been greatly exaggerated." Good things-- especially hobbies-- have long lives. Especially in the hearts of those who still love them.

http://www.oldsoftware.com/history2.html

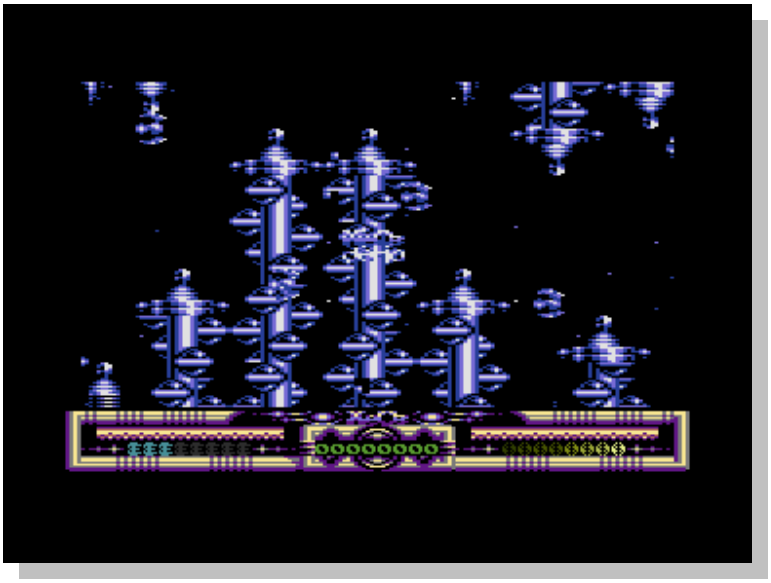
Xeon3 for the Commodore Plus 4
The ultimate plus 4 Shoot – em – up

A cooperation work by Mike Dailly and Luca Carrafiello (aka Luca/Fire)

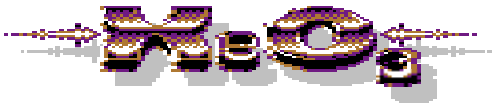
- Plus/4: A Short Introduction -

Plus/4 never got a real game market, 'cause its c64 incompatibility early discouraged both users and software houses. How many dedicated programs d'you remember for the Plus/4? Maybe some games from Anco, "Ace" and "Ace 2" from Cascade Game, "Mercenary" from Novagen...and very few others.

In this sight, users (many from Eastern Europe, especially Hungary) were forced to sustain their beloved 8bit system with selfproduced software; and this choral initiative tooks to create a Plus/4 'scene', surely smaller compared to the C64 one but with higher density of real coders.



Years passed and technology evolved (mmm...sure?). C64 still lives thank to a solid bunch of faithful guys, though you feel the presence of C64 in the net most of all 'cause lots of nostalgics and computers' collectors. In few words: a lot of retrocomputing but few retrocoders! Talking about Plus/4, this proportion decreases the actual amount of coders to almost ZERO!



- XeO3 / Xenon Trioxide -

Err..not zero but ONE: sincerely, I don't know why, but I can't stop coding, drawing, composing on my Plus/4. Years ago, I promised that nothing and nobody will take me away from my 8bit black box, nor if I'll remain really alone in the scene.

Mike Dailly, (co-)author of many games running on several machines (from "Blood Money" on C64 to "F1 2000" on PSX) had to code something nice for his homepage; he understood that there weren't Plus/4 emulators in the large emulation field on the net, and started to code "Minus4", nowadays one of the nicest Plus/4 emulators available. And the best way to show it surely is to code a cool action game that runs on perfectly.

In order to accomplish it, Mike and me have spent and will spend work time stealing it from family, job (Mike), study, job, university final work, girlfriends (Luca): Mike has to improve the emulator, write code and waves editor, maybe sprite editor too; I have to draw all graphics, compose musics and fx, draw levels, animate sprites.

- Will We Finish It? -

Follow the making of XeO3! Keep an eye on this homepage and you'll know if we will be able to create the ultimate shoot'em'up game for the mythic Commodore Plus/4! And if you think you can do anything helping us, from real participation to writing a friendly supporting email, DO IT!

Attention: please don't be scandalized by the poor, not technician explications written in this chapter, because the objective would be an easy explication for everybody.

- Colours -

If you have just seen the "levels" chapter and you said:"Pfh, so few colours!", probably you are a C64 user. At the moment I don't know if we'll use different colours for background graphics, or different coloured level zones (do you remember C64's Armalyte levels?), but it's almost sure that sprites (your ship,

ship's explosions, enemies...) will be coloured in the same colours, and background too.

You must know that Plus/4 has no hardware sprites!

Armalyte, © Thalamus

In order to avoid talking too technician, the C64 hardware sprite management allows to use several colours without clashes, as you can see in the game screen extract to the left.

Gwnn, © Mastertronic Championship Wrestling C16, © US Gold

C16-Plus/4 games using sprites, then, must:
-1) use same colours for sprites and background (see figure 2);

-2) use several colours but accept the consequent colour clash (see figure 3);

-3) use characters and not real sprites, but we don't care here.

- Graphics & Memory -

OK, now we know that Plus/4 has no hardware sprites...so, what can we do? We can code a routine managing software sprites. Using 2 character banks, a part of one has to be used in 'mixing' our sprite with the actual background characters which are moving in that moment into its square space. After overlapping the ship to the background, the whole square will be printed on the screen.

Do you noticed how much waste of memory? The worst consequence is that a big slice of the characters bank (256 chars) has to be used for sprites. If you think that another part of the bank is occupied by pinned graphics (broken turrets, explosion graphics for turrets, weapons, fonts), you can imagine in which little space we have to condense both background and the end level big enemy's graphics!

- Music & FX -

We will use for sure the SIDcard technology. Plus/4 users know it since years: the SIDcard permits you to insert the famous C64 SID chip into the black box. In this way, you can listen cool music (not the poor TED sound) without assigning too much work to your CPU. Often, nowadays any emulator shows its 'SIDcard on' option.

If possible, I would insert a frequency converter: your Plus/4 will read the 3-voices music but it will play a channel with a TED voice and both the remaining two, quickly alternating, with the second TED voice. Not much quality...but you can hear it, what the hell! It's quite fast and may be done.

Another ambitious solution has been recently achieved: both SIDcard for the music and TED sound for effects, with adjustable indipendent volumes by pressing keys F1/F2 and F3/HELP. If nothing changes, that will be the definitive solution.

At this point, the critical variable is the space: how many musics can I insert, is there enough space for the frequency converter? Well, actually I composed a whole 4K block for the 1st level, and I'd found lotta difficulties, because of the short memory: the level's music can't be so complex as I would, nor so much long in playtime. So, I must direct my efforts toward the melody and avoid complicate and original sounds, that waste much memory.Some precise valuations about game graphics data can't now be for sure.

I used a dedicated editor working on PC to assemble graphics into levels, coded for me by FatMan. In order to collect memory, a level is assembled by 200 3x3 chars blocks; I had to draw these blocks in the 3x3 editor (see figure on the left), then use blocks to compose screens in the map editor (see figure on the right).

- Panel -

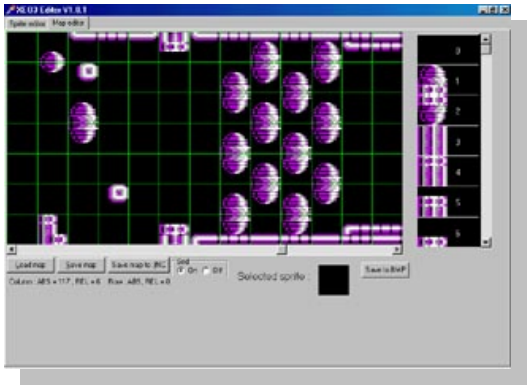
That's the 96 chars panel Mike consent me to draw : a 40x4 chars panel on the bottom, that will keep you informed about your ingame actual situation: ships left, score and coins you collected. We prefer to have single colour hires for alphabet (26) numbers (10) ships (1) and coins bar (4), because those are the indicators you'll read in the meantime a new wave comes.

- Sprites -

They must be 16x16 (8x16 MCM) pixel sized, 167 in all per level. You guess it, a so sized sprite is a very little one, and, trust me, it's very difficult defining ships and other enemies with so few pixels!

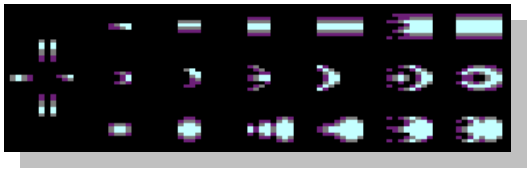
Sprites are also pickups and sprite explosion. Here you can see the first effort, enough to build up a playable demo.

Ship Coin1 Coin2 Up Down Rear Smart Laser Blade Ball Energy Boom Dude



- Weapons -

Apart of back fire and lateral ones, I'd chosen frontal enhancing weapons only.
Soon, Mike understood that we can't manage in the code large bullets, hence I had to reduce their dimensions. That's a real pity, I spent my effort when I drew the big ones; moreover, we're still looking for



some decisive variables that can give different characteristics for any weapon (shooting frequency, high power, background overlapping...). We shall see in the newar future, but let me show a quick index of all weapons.

- Final Enemies -

The bigger enemies in the game had been originally thought to be chararcters' based. After the project had begun a new life, the overall rewriting of the code makes us wonder they will be made of sprites assembled together. This trashed all the previously drawn enemies.
Hence, the final bosses will be drawn with sprites, you will find at the end of level, ready to blast you away. Together with final bosses, ocasionally the player will find some middle level's bosses, not less dangerous of the big ones. That's a preview of the 1st level's armoured guy.

- Intro Presentation Ending -

They should be done once the game is finished. Theorically, I would draw a short animated intro, a nice piclogo (is a logo drawn in graphic mode, not by characters), and an animated final. The pic you're watching on the left is the early one drawn for the game; it never will appear in the game, 'coz Mike judged it too 'empty'.

Time to play it unfair!

XeO3 will play SID music and native TED sound fx in the same time, and you'll get a real arcade game feeling overall!

In the game's frontend you can choose your audio configuration, mixing TED and SID stuff at your best to take all the possible from your hardware. There should be a good chance to have frequency converted music through TED device.

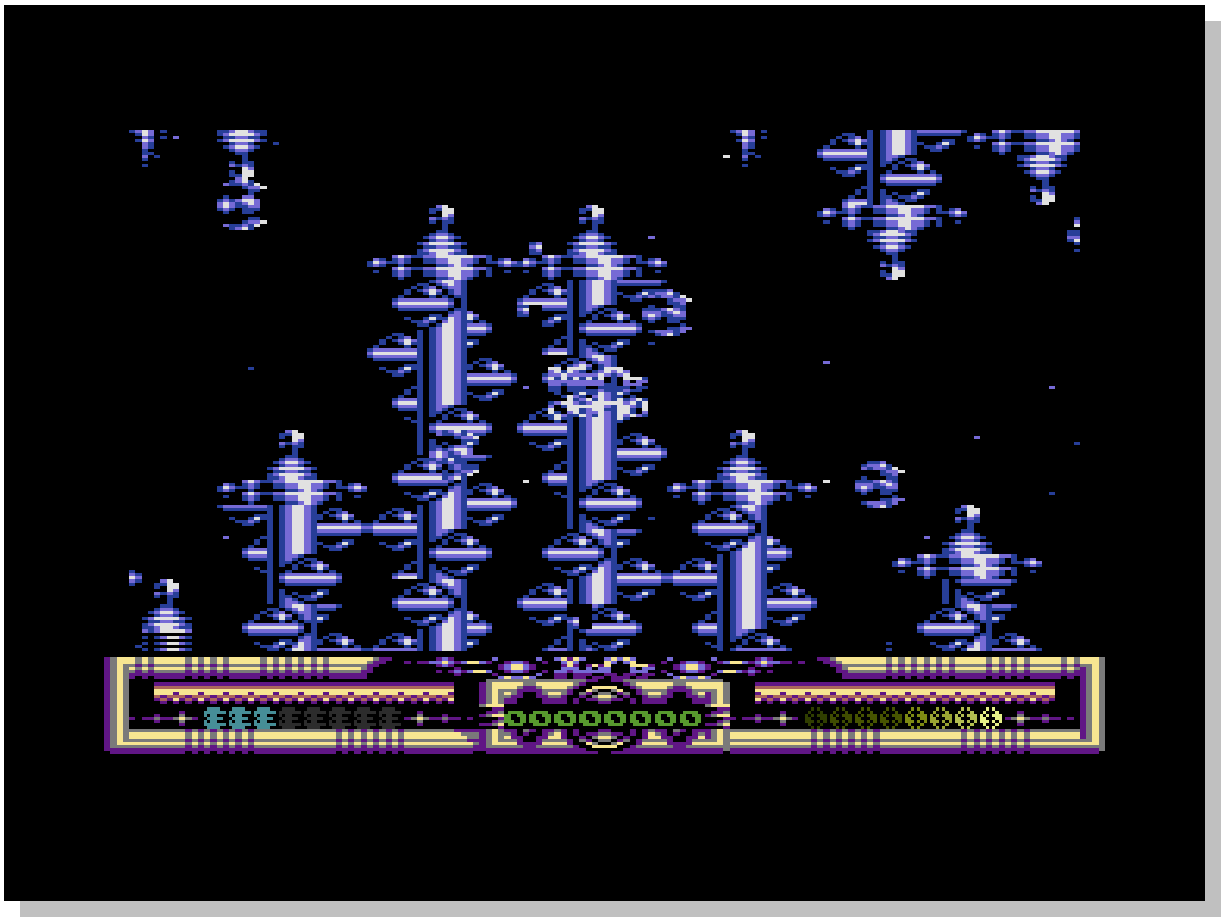
SID music plays from a Plus/4 via SIDcard, a well known hardware addon that plugs an 8580 SID chip (newSID) into the expansion port.
At the moment, I composed the SID tunes and fx, with my wonderful copy of SidWinder V01.23 running on Plus/4 (coded by TLC/Coroners, based on the Taki/Natural Beat original C64 version; see figure on the left).

Believe me when I tell you it's hard to fit the intro tune, the ingame soundtrack and a couple of derived jingles (end level and game over jingles) in 4 Kilobytes only, but I managed to do it for the first two levels, and it worked with decent results.

All the game's music can be heard in streaming with the XeO3's blog.radio. Click on the icon here to play all of them.
Here you will keep an eye on actually finished game levels.

We wonder about 8 levels, but it may change.

Two levels had been declared as ready, until we revised the whole project, deciding to severely change both levels.
Now, Level 1 had been completely redesigned, in both graphics and mapping.



THE END

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