

The Interface

"Taking 8-Bits Into The 21st Century"

Volume 40 Issue 2
January/February 2021



Happy Rugged Start To 2021 From All Of Us At FCUG!

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Newsletter of the Fresno Commodore User Group – Fresno, California
www.dickestel.com/fcug.htm



THE EDITOR'S GODZILLA

by Lenard R. Roach

THE LAST ACT – A Christmas Story

As I sat one day in my usual spot at my local house of worship, I remembered an event that happened many years ago, and I thought it would be interesting to share it with those who read my prattle that I put down on paper from time to time.

If you attend or have attended a Commodore computer club meeting, you may have read the notes in the club newsletter that the club makes an annual donation to a non-profit organization which is benefiting the general welfare. For some, it might be some sort of rescue mission which feeds, houses, and helps in any way those who are facing hard times and are down on their luck. Others may focus their attentions to a local animal rescue haven where volunteers and staff care, kennel, and find homes for abandoned animals found throughout the area. Still others deal squarely with children's hospitals which, even though they are not non-profit per se, take donations from outside sources to provide special activities for the children in their care. These children face insurmountable odds of survival in some severe cases, and donations from organizations, foundations, and individuals go to deter costs, especially for those children whose family cannot afford the high costs of dealing with a life-threatening disease like cancer, for example. I am a long-distance member of the

Fresno Commodore User Group which donates a set amount annually to St. Jude Children's Research Hospital that is nationally known for its famous founder, Danny Thomas. I am proud to be a member of this Commodore club who thinks so highly of our children, especially our children in the worst of circumstances, but I'm getting off track here. My focus for this interlude is to look at one of the last acts of my own local Commodore computer club before it joined the graveyard of bygone Commodore computer clubs of the past.

I wish I could remember which year the Commodore User Group of Kansas City met for this occasion, but I do know that it was December, and we were meeting for our annual Christmas holiday snack-and-gab fest. Though we were joyous because of the holiday season, it was also a solemn occasion. I was the president of this Commodore chapter, and after much deliberation and consultation, we board members decided to disband the Kansas City chapter after having had a very long run. This time, after we cleaned up and packed up the fest, would be the last time we would see each other as a computer club.

Everyone who got the news that our club was closing its doors showed up for this meeting. Many faces from the past were in attendance, and the crowd was bigger than expected, which was good in some aspects but sad at the same time. You didn't know if people were here to attend a party or a wake. In either case, it was great to have such a large crowd in the space we usually occupied at the Main Street branch of the Kansas City Public Library.

As I milled around the crowd and shook hands with members past and present, the club's treasurer came up to me with a piece of paper in his hand. He pulled me aside and kindly instructed me to sit down in a chair with a table in front of me. He slid a paper face up on the

tabletop.

"Would you sign this on behalf of the club please, Lenard?" he asked.

I began to read the mysterious note that was placed before me, and tears started to fill my eyes. Although I cannot remember what the note said word for word, it read something to the effect that our Commodore club chapter was closing and that we as the last presiding board were giving the contents of our treasury to the children's hospital that saved the life of the club president's son no more than a decade or so earlier.

"What is this all about?" I asked the treasurer.

"Sorry, we didn't consult you earlier about this," the treasurer began, "but the other members of the board thought that it would be best to donate the remaining monies in the club's coffers to Children's Mercy on behalf of the fact that they were vital in saving the life of your son. All we need is your signature on this letter as president of the club, authorizing the transfer of funds."

I took a quick glance around the room to see if I could catch a glimpse of my son, who along with the rest of my family, decided to come with me on this special occasion. I instantly spotted him sitting at one of the game tables, playing a Commodore game, and sipping on a cup of soda while eating a few samples of meat and cheese from the tray I had bought at the store especially for this gathering. My mind rapidly went back to the time when he was just heading into the cusp of his teenage years, lying in his bed in the oncology wing of Children's Mercy with more tubes and wiring coming in and out of him than you would find in a Star Wars droid. Back then, my wife and I were worried if he would see the next day, especially since some of the hospital doctors and nurses were ready to give up on him and just make him comfortable enough to ease his steps into oblivion. I also remembered the one

doctor who was miraculously filled with righteous indignation and decided "come hell or high water" that she wasn't going to let this one slip away. This beautiful angel of healing threw every tested and experimental leukemia-fighting drug into my son that his frame could handle, and even in some cases, pushed it to excess. Out of all the worries and prayers, along with fortitude of one ostentatious doctor, came the necessary healing my son needed to make him sit that day in December, play a Commodore video game, and snack on a cheese, meat, and cracker sandwich. I looked up at the treasurer again. "Are you sure you guys want to do this?" I asked. "There are other worthy organizations out there who are in need as well."

"The board's vote was unanimous," he answered. "All we need is your signature to make it official."

I read the note again, having trouble comprehending why the club would want to do such a thing, especially on behalf of my son. I took the pen out of my inner shirt pocket and gave the letter my best John Hancock signature that I had ever given on any document, all the while fighting back tears due to the wonderful gesture that the Commodore User Group of Kansas City did my family's behalf. After signing the document, I slid it back to the club treasurer who picked it up off the table.

"I'll put this note in with a check and mail it off first thing in the morning," the treasurer said. "Thanks, Lenard."

"No, thank you," I replied. "I never knew how highly you and the club thought of my family and me before all this."

"It's our pleasure," he said. "Merry Christmas, Lenard."

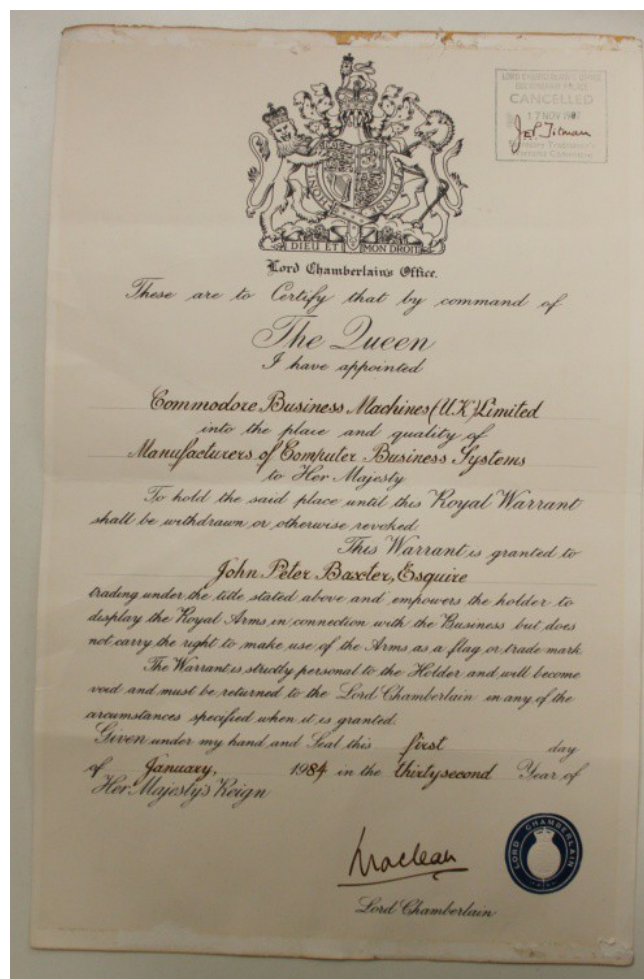
I stood up from the table and shook the treasurer's

hand. He walked back to his Commodore table with the letter in hand and proceeded to fold it up for stuffing into a number ten size envelope.

Sometimes a person needs to reflect on the good miracles that have occurred in their lives to keep them from getting bitter and cynical over all the evil things that life throws at them. I can still see my son walking out of the oncology wing of Children's Mercy for the last time as a patient, being escorted by the rest of the family and some of the hospital staff. A little over a decade later, I can still revel in his triumphal exit and the last act of the local Kansas City Commodore computer club to honor him. I will remember this special club for years to come.

○ NEXT
ISSUE

Despite COVID-19, it looks like the newsletter is starting to move smoothly again. With the newsletter editor getting some time off, things can get done on a more timely basis. With that note, the March/April 2021 issue of The Interface should be ready on or around May 15th, 2021.



This certificate is a Royal Warrant certifying Commodore Business Machines UK as 'Manufacturers of Computer Business Systems to Her Majesty.'

Royal Warrants are granted to companies who regularly supply the Queen, HRH (His Royal Highness) the Duke of Edinburgh, the Prince of Wales, or their households. It allowed the Royal warrant to be printed on the products and is still a real badge of honour for companies that hold them.

It was granted to John Peter Baxter, Esquire on January 1, 1984, and is signed by the Lord Chamberlain of the time, Baron Maclean. It bears

the Lord Chamberlain's seal and a stamp indicating the cancellation of the warrant on 17 November 1987. Royal warrants are granted for a maximum period of five years.

The certificate has been framed by the Centre for Computing History for display purposes. Kindly donated by David Pleasance, former head of Commodore UK.

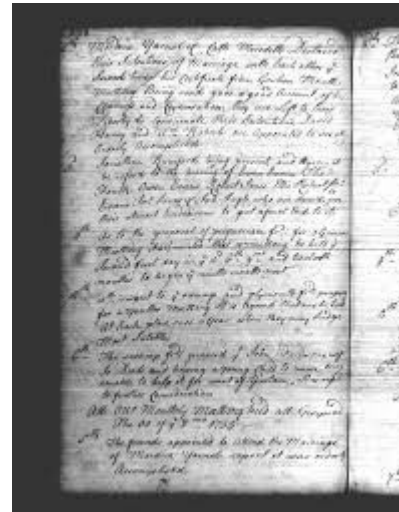
Date : 1st January 1984

Creator : Commodore / Lord Chamberlain's Office

Physical Description : Warrant Fitted in Frame

This exhibit has a reference ID of CH41061. Please quote this reference ID in any communication with the Centre for Computing History.

<http://www.computinghistory.org.uk/det/41061/Commodore-Business-Machines-UK-Royal-Warrant/>



MONTHLY MEETING REPORTS

by Robert Bernardo and Dick Estel

January and February 2021

It looks like we're back to where we were in March 2020 – no monthly meetings, at least for now, but keep looking ahead. We might be having monthly meetings again by mid-2021.





Interview with Gideon Zweijtzer

An exclusive conversation with the designer of the 1541 Ultimate cartridge and the Ultimate64 motherboard

by Guest David La Monaca (Cercamon)

(This article is from 2018. The Ultimate II+ cartridge drive and the Ultimate64 motherboard are still in production, with the latter now having sold over 2,000. Firmware updates are still produced 2 or 3 times a year with the latest update at v1.37 released on December 5, 2020.)

One of the more interesting side-effects in the world of retro-computing is certainly being part of a global community that boasts a large number of very active enthusiasts. In addition to retrogamers, pure collectors, nostalgic users of emulators, and retrocoders, we can count on a restricted number of experts in electronics and design, which we could perhaps call retro-designers. These are actually designers of modern hardware solutions and accessories for our beloved home computers, who make extensive use of today's advanced technology. So, these days, it is not uncommon to read about hardware innovations such as memory expansions, accelerators, mass storage peripherals, cases, and even brand new versions of the complete computers from yesteryear.

For the many lovers of the Commodore 64 out there, the most sought-after products are those designed and manufactured by Gideon Logic in Amsterdam – the 1541 Ultimate series of expansion cartridges and the Ultimate64 motherboard. Both are designed and produced by Gideon Zweijtzer, a 44-year-old electronic engineer with a heart that definitely beats to an 8-bit rhythm! Gideon is a very kind guy, and during this interview we talked about the past and present of the C64 world with an eye firmly fixed on the near future of retro-computing, for which the Ultimate64, given its features, represents a real and present hope.

Here follows the complete report of our exclusive interview.

DLM: Hi, Gideon and thank you so much for accepting my invitation for an interview. All the readers and the editorial staff of RetroMagazine are very excited to have the opportunity to ask you some questions about your experience in designing one of the most (if not the most) famous cartridge/expansion for the C64, the 1541 Ultimate. During 2017, according to your website, the final steps of the Ultimate64 design have been completed, so the long-awaited board has finally gotten into production and the first batches have been shipped to the final users earlier this year.

Most of the Commodore 64 fans out there are well-aware of your fantastic products, but I'm pretty sure they don't know how it all began. So let's start from the beginning.

Can you please shortly introduce yourself and tell us something about your own story (i.e., where you are born, growing up, your education, your personal interests, etc.)?

GZ: Hi, David, thanks for the invitation! Talking about myself? Sure... I was born in Amsterdam in

1974, in a quite stable family with one older brother. I have always been interested in technology. Before the home computers came, I was always with my technical Lego, although I also loved to race around on my bike through the neighborhood. I often played with circuits made from switches, motors and light bulbs, but unfortunately I did not have anyone in my surroundings with knowledge of electronics. From the secondary school, I went to the university TU (Technology University) Delft, where I studied Electronic Engineering.

DLM: I guess you have always been a computer fan and user since when you were a kid. What started you on the path of computing and what was your first experience with a computer? Was the Commodore 64 your first computer?

GZ: I was pretty young when we got an Atari 2600 game console. It was actually my brother who had started with the whole computer thing and he started to investigate the possibilities for programming. There was a basic interpreter for the A2600 at that time, but in the end he bought a ZX81. I was not really allowed to touch it, but sometimes I sneaked into his room and tried a few things, but as a kid without any help, I didn't get that far. Later, my brother got a Commodore 64, and this got big. It was so popular in that time! Computer clubs, meetings, copying games and programs! My brother infected me with his curiosity about programming, and although he didn't want me to bother him, I could sit on the floor in between his massive desk and the old color TV that was on top of another table in front of that. As long as he didn't hear me, I could just watch what he was doing. I saw Basic, assembler, etc. At a certain point I could tell him from behind the desk that he forgot a statement... It was not until I reached the age of 11 that I got my own Commodore 64.

DLM: How did you get started working on a C64, beyond playing games? Did you quickly find

interest in programming and discovering how the machine intimately worked?

GZ: I never really played a lot of games, actually. There are some exceptions, like Giana Sisters. But in general, I did not spend a lot of time on games altogether. As my brother focused a lot on the software, my interest in the hardware grew. At a certain point I made a simple thermometer, using an NTC thermistor on the paddle port of the C64. I needed my older brother again for his math skills to figure out the conversion curve. At the computer club in Amsterdam, I usually spent my time around the repair stand, where I could see how some guys were de-soldering and replacing chips in broken C64's. According to my mother, I had the full schematic of the C64 hanging from the wall in my small bedroom. But in all honesty, I don't remember that.

DLM: After the C64, did you get your first PC while still keeping the C64 on your desk? Did you ever use one of the many SD2IEC devices on the market before starting to design the 1541 Ultimate?

GZ: No, I haven't. In fact, I think you're now skipping quite a few years. My interest in the C64 faded as the Amiga 500 came and later the PC. Actually my first PC was a Pentium 120 MHz, so you can imagine that I have resisted PCs for quite some time. The love for the C64 never really went away... I just never used it. Neither have I ever been part of a demo- or game coder group, or the "scene" in general... So, there was basically never a need for an SD2IEC or any other C64 peripheral.

DLM: What inspired you to design the first version of the 1541 Ultimate, and when did you start?

GZ: The first version of the 1541 Ultimate was made in 2007. It all started with some implementations of the 6502 as I was learning and

getting more experience with FPGA design using VHDL. That was back in 2001 or so. There were a lot of things going on back then. For instance, Jeri Ellsworth was working on her C-One, which later became the DTV, if I am not mistaken. In any case, I had already done a lot of the C64 in FPGA at that time, but I didn't see the point of being a "me-too" player. So I thought I'd do the floppy drive instead. On one of the club meetings that we have in Maarssen, I demoed the very first prototype on a Xilinx Spartan 3 board. You needed a laptop or PC to download a floppy image over Ethernet into its memory, after which the board acted as a floppy drive. No menu, no other emulations, only the drive. Later, in a conversation with one of my colleagues at work, the idea arose to build it into a cartridge, such that the VIC could be used to display a user-interface. This idea crystallized in 2007.

DLM: Did you design the hardware and the software/firmware for the 1541 Ultimate all by yourself?

GZ: Yes, basically. There have been some important contributions from others over the years, though. But in essence, the hardware design, the FPGA design, and the firmware design and framework are made by me.

DLM: What was your computer system setup that you used to develop and test the early project of the cartridge?

GZ: Just a PC and one Commodore 64... And yes, that did not include a 1541 drive! Later it showed that this was not enough, but I did not have more hardware, so I visited some friends from the Commodore club that had impressive collections of machines to test the compatibility with. In fact, there I found out that the very first prototype of the 1541 Ultimate as a cartridge was not very compatible, which caused some design changes before the board went into production.

DLM: Did you take any courses to start you in the field of electronics? And if so, what were they and how much time did you invest? Or like many designers and programmers of the early Eighties, were you a self-taught techie?

GZ: Many things were self-taught, although studying at Delft University of Technology has made me understand many more things. But to be fair, I think that I learned most at the job after my studies. I started to work as a junior designer at Technolution B.V., and there I learned most of the practical knowledge that I have today, in terms of electronics design. Interestingly, I brought knowledge about FPGA design back as I was one of the founders of this discipline within the company.

DLM: What was your development process like? Did you use to sketch out concepts, design the mainboard and the firmware, etc.? Do you still take on the design process the same way?

GZ: Oww, that's quite a difficult question. Because I have always seen these activities as a hobby, I mostly just let it happen. I am the kind of designer that does a lot of design work 'as a background process'. I am not a very structured, method-following, step-by-step kind of engineer. (I made quite a few project-managers pull their hairs out, as they didn't see me work on new tasks they assigned to me in the first weeks...)

I work with iterations, basically. But mostly just in my mind. Sometimes under the shower or while driving. Once it 'feels right', I start to do some implementation. And sometimes after an implementation, I realize it doesn't feel as right anymore. I am not afraid of just throwing some work away and start anew. Of course, always taking into account the lessons learned in the previous step.

DLM: Talking about your biggest projects (the 1541 Ultimate cartridge and the new Ultimate64

mainboard), what technical challenge gave you the biggest feeling of accomplishment?

GZ: Ok, when I need to limit it to ‘technical challenges’, it would definitely be the solving of very hard-to-find bugs... You know, those nasty ones that make others quit on their project... Those!

[Secondly], it is when I power up a new board and everything works right away. (And that’s not uncommon in my case... ;-)

DLM: What was the biggest tech/programming obstacle that you ever overcome while designing, producing, testing, selling the 1541 Ultimate or the Ultimate64?

GZ: Obstacles... (thinking)... It depends a bit on how you define ‘obstacles’. Most things are just time consuming tasks. But yet, I think there are several obstacles. I think in case of the 1541 Ultimate, it must have been creating an easy-to-use user interface without having access to any framework, building everything from scratch. On an embedded platform, which the Ultimate clearly is, you can’t use standard frameworks like the ones commonly used in Java and C#, so you have to make one of your own.

Hmm, another obstacle was the development of a factory test system for the Ultimate II+. That took quite some time. But then, I do think it saves me a lot of time. Another one was the move to a web-shop system, rather than just taking orders and processing them manually.

DLM: What was/is your favorite game for the C64? Do you still find some time to play?

GZ: Giana Sisters and... err.. no time to play!

DLM: I imagine that you do own a collection of stock C64s (i.e. all versions: from C64 “breadbin” with every ASSY board revision, to C64c, C64g

and C128) for testing purposes. Are you a collector of retro-computers as well, not only Commodore branded?

GZ: My wife would kill me, if I were actually collecting more. I only have working C64 mainboards, of which I use mainly just one in a C64C case. This has been the same machine as I used to test over 3000 Ultimate’s over the years. The power switch and cartridge port are a bit sad now. I do have a C128 and a C128D, but I never use them. I do have several floppy drives, too.

DLM: Can you even think about calculating how many hours you spent designing and working on the several versions of the 1541 Ultimate cartridge? What about the Ultimate64?

GZ: It is very difficult. As I said, many design activities take place as a background task. If I would count only the hours that I spend on the PC it might give a falsely low figure. What I can tell, though, is that hardware designs, board layouts and such, usually don’t take that much time. I think I created the U64 board design in about 3 weeks’ time, but then of course only in the evenings and weekends. The schematics took a similar amount of time. Most time spent on technicalities goes into FPGA design, implementation and debug and firmware implementation.

From your question I sense that you focus a lot on the technical aspects, but I can tell you that the administrative tasks, including shipping orders and answering e-mails takes up most of my time, unfortunately.

DLM: Have you ever worked or are you planning to work on other projects involving the C64 or even different 8/16-bit machines?

GZ: Nope... :-) I wouldn’t have the time anyway!

DLM: How many people currently work at Gideon Lab on producing, testing and selling the two main products? Did you ever work in a team or simply get consulted with other electronics/software experts in order to achieve a particular result or to solve a bug?

GZ: Production is outsourced to a number of companies. [Production-testing] of the Ultimate II+ is also performed in the factory. [A] production test for the U64 doesn't exist yet as of today, but that will be the next step in order to accelerate the process. When we talk about assembling the U2+ into plastic cases, that's often done by my wife... when she feels like it. She also plays an important role in packing orders. The other things are done by me; there are no employees at this point. Whether this can continue like this, is questionable. I think I do need external help for the quantity of U64's that are currently on order.

On the technical aspect, I sometimes talk with my colleagues about certain bugs, and of course I use the feedback and input from the community. There are some pretty smart guys out there that help me solve bugs sometimes. In order to achieve a particular result, I often apply patterns that I quietly pick up or learn from other projects.

DLM: Looking back to where you started it all, is there something that you regret about the PCB design or any other detail? Would you do something in a different way now if you could?

GZ: I mostly regret not taking the C64 FPGA code that I had made years before the U64 to a production level. I actually demoed a complete C64 in FPGA already back in 2011. I thought nobody would be interested in buying an FPGA-based C64 motherboard, since original C64 machines could be picked up for almost nothing, or else people would use an emulator anyway.

Regrets about other aspects – well, in retrospect many things could be regretted. But I think it is not fair to look at things like that, because as a person and as an engineer, you learn while you do it. Once you think things have to change, there is always the freedom to do so. I think that is one of the very cool things about having your own product. But I guess this principle applies to many things in life, doesn't it...?

DLM: I'm pretty sure that you worked very hard on both your projects during the last few years but also that you had so much fun doing it. What is the most funny/weird moment or story that you've been through while developing your products?

GZ: Oh, I absolutely had much fun doing it! Technically speaking, I have the most fun doing the FPGA code, second the hardware itself, and third the firmware. I think one funny moment was the moment I realized how naive I can be. In the whole process of creating the 1541 Ultimate, I *never* thought of actually making a sellable product out of it. Or let's say, that was not my goal; it had always been pure hobby until then. It was actually a Swedish scener, TwoFlower, who happened to visit the Commodore Club in Maarssen just when I was giving the demo of a cartridge with an embedded floppy drive. He said I should have it produced, but I was hesitant and thought that it was not even feasible to do so. He asked me how many needed to be produced, and I stammered, "maybe 40 or 50?" He smiled and said, "Just do it... I'll make sure you'll sell all 40 of them in Sweden alone!" And that's how it all started!

DLM: Gideon, thank you very much for your time. This interesting interview ends here. Would you like to add anything, or say anything to our readers?

GZ: There is one important thing to mention.. I would like express a huge 'thank you' to the

Commodore-loving community. One of the most rewarding aspects of this project is the great feedback, the positive words I receive. In short, without you guys, I would never have been able to do all this. Thank you.

1541 Ultimate cartridge and Ultimate64 motherboard official website – <http://www.ultimate64.com>

The Great Giana Sisters – Gideon's favorite C64 game is a very famous platform game released by Rainbow Arts in 1987. The title was shamelessly, deliberately, and ironically a clone of Nintendo's Super Mario Bros, which at the time was a smash hit on the NES system. So much that Rainbow Arts was forced to withdraw the game from the market after a few weeks under the threat of legal actions from Nintendo.

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

VHDL – Acronym of VHSIC Hardware Description Language. This is, with Verilog, the most used language for programming of digital systems and electronic circuits.

<https://en.wikipedia.org/wiki/VHDL>

FPGA – Acronym of Field Programmable Gate Array, an IC with functions programmable through one of the hardware description languages (namely Verilog and VHDSL)

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

Spartan 3 – An FPGA low-cost circuit family, ready to be programmed and manufactured by Xilinx

<https://www.xilinx.com/products/silicondevices/fpga/spartan-3.html>

C-One – A single board computer (SBC) built in 2002 by Jeri Ellsworth and Jens Schoenfeld to emulate an entire Commodore 64. The device was

later employed as a basis for the original joystick/console, the C64-DTV.

<https://en.wikipedia.org/wiki/C-One>

Jeri Ellsworth – An American entrepreneur and an autodidact computer chip designer and inventor. She gained fame in 2004 for creating a complete Commodore 64 system on a chip housed within a joystick, called C64 Direct-to-TV. https://en.wikipedia.org/wiki/Jeri_Ellsworth

TwoFlower – A Swedish graphic designer and musician in the 64 Scene, founder of the group Twilight, currently an active member of Triad <https://csdb.dk/scener/?id=8074>



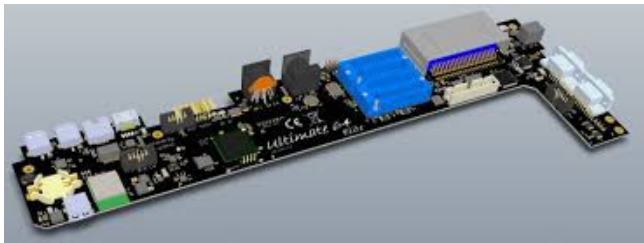
The Ultimate II+ cartridge in short

- Complete emulation of 2 C=1541 drives
- Support for .D64 and .G64 on USB drive
- Configurable ID devices
- Configurable ROM (1541 / 1541C / 1541II or custom ROM)
- RAMBoard expansion memory up to 40KB
- Embedded speaker supporting drive sounds
- Support for USB devices (storage drives, memory card readers, and even hard drives)
- Ethernet 100 Mbps port (for Telnet or FTP connections)
- FAT/FAT32, ExFAT, ISO9660 filesystem support
- Real-Time Clock with battery backup
- UltimateDOS interface module
- Dual SID implementation, embedded player, plays on real or emulated SID

- Full cartridge C64 emulation (Final Cartridge III, Action Replay, Retro Replay, Epyx Fastload, etc.)
- Commodore 1750/1764 REU emulation
- Configuration settings menu
- Support for Tape Emulation (.TAP files)
- Upgradable Firmware

Hardware specifications

- Board size: 62 x 90 mm
- Solid plastic case
- FPGA 1M-gate
- 6-pin DIN connector (IEC)
- Flash ROM 5 MB
- 64 MB DDR2 SDRAM
- 3 USB ports available
- 1 Ethernet 100Mbps port
- Stereo audio output
- Stereo audio input (not in use)
- USB 3.0 ports for mass storage devices or tape adapter (C2N emulation) or future available functions.



The Ultimate64 mainboard in short

- Motherboard to fit C64 and C64C cases
- Hardware FPGA implementation of all the C64 logic ports and electronic architecture
- All the U2+ features included
- Almost 100% compatibility with stock C64s
- Upgradable firmware
- 12V DC PSU included
- Full support for all standard C64 peripherals
- stereo UltiSID included, SID 6581 and 8580 full support
- Standard RGB video outputs DIN and HDMI
- Full PAL and NTSC support, Luma and Chroma signals separated

- Turbo Mode with speeds up to 48 MHz.
- Standard C64/128 User Port available through on-board pin-header
- 1 Ethernet 100Mbps (U2+) port
- 2 USB 2.0 (U2+) ports outboard, 1 USB 2.0 port inboard
- On-board Wi-Fi module (but not activated yet)

Reset/Menu through multi-function switch and F-Keys



A Tribute to Chuck Yeager

by Robert Bernardo

Pull up! Pull up! I was spinning out of control, going down... down! The sky, the horizon, everything was swirling! Finally, a message popped on the screen, "Wings ripped off..." My Lockheed SR-71 Blackbird was destroyed! End of game.

I destroyed many airplanes in the same manner on the C64 version of Chuck Yeager's Advanced Flight Trainer, an Electronic Arts flight simulator that I had bought in the late 1980's. No matter which high-powered plane I "test-piloted", I

didn't have the patience to learn the touchy controls. And I usually went into a deadly spin into the ground. Down went the Bell X-1 rocket plane, down went the General Dynamics F-16 Fighting Falcon. I did have better luck flying the boring but stable planes, like the Cessna 172 or the Piper PA-28 Cherokee. But they were boring!

My patience was low, though. Though Chuck Yeager's AFT was a big hit on the C64, Apple II, and other platforms, for me it was just a flying game.

And by flying, I mean that's all you did. There was nothing else to do... I wanted more of a flight combat game. Something where you could meet an adversary, fly your plane against that adversary, and shoot him down. Such a game didn't come until later with the release of Chuck Yeager's Air Combat, but that game wasn't released for the Commodore.

The packaging of Chuck Yeager's Advanced Flight Trainer came with a booklet of instructions and a biography of Chuck Yeager. What a man! A World War II ace and a daredevil test pilot in the early days of jet development. The first man to break the sound barrier.

Air Force General Chuck Yeager passed away on December 7, 2020, at the age of 97. A veteran, a hero... something I recognized even when I bought Advanced Flight Trainer back in the late 80's. Rest in peace, sir.



For more on the passing of Chuck Yeager, see

<https://www.nytimes.com/2020/12/07/us/chuck-yeager-dead.html>



FCUG Financial Report – 2020

by Dick Estel

Along with the basic facts and figures, I thought this year I would provide some information on how I handle certain aspects of my duties as treasurer.

We used to have a checking account the club's name. A few years ago our bank informed us that they would be charging a monthly fee. We have very little income – dues and occasional hardware and software sales. On the other hand, we have almost no expenses, mainly the annual club lunch and a yearly charitable donation. Even so, the proposed bank fee would have chipped our bank balance down to zero in about two years.

After checking with several financial institutions, we opened an account at the Educational Employees Credit Union. The only catch was that it could not be a "business account" – it would have to be in the name of an individual. We opened the account in my name, with President Robert Bernardo also authorized to sign.

This meant that dues payments and other checks had to be payable to Robert or me. While we're happy with our bank, it tends to have long lines.

Standing for long periods is not only boring, but physically painful for me, so I started acting as de facto banker for the limited checking activity we have.

When I receive a check in my name, I deposit it into my personal account, and put an equal amount of cash in the club’s cash box. On the other side of the coin, I normally put the club lunch on my credit card. Then instead of writing a check to myself, I reimburse my expenses from the petty cash box.

Each year when I do the annual report I hold my breath as I count the actual cash. So far I have been able to breathe a sigh of relief as the amount each year has matched what the spread sheet says it should be.

As you can see from the historical year-end balances, our assets are slowly declining. We’ve dropped about 1/3 from 2010. If we get down below \$500, it will be time for some serious discussions about our financial future. I don’t think that will be necessary for at least another five years.

I keep the records in an Excel spreadsheet, with line items for each likely category of income and expense –the same items you see in the annual report. Each year I add 12 new columns, one for each month. At year end I create a new tab which has the line items, and pulls in the totals for the year. These reports go back to 2010. So I’ve used roughly 120 columns, and there are about 130 remaining, enough for another ten years before I have to create a new page for the basic records. I think I will declare 89 to be the retirement age for FCUG treasurers.

Club Officers

>>--> Officers and Keypersons <--<<

President	Robert Bernardo
Vice-president	Roger Van Pelt
Secretary/Treasurer	Dick Estel
The Interface Editor	Lenard Roach
Librarian	Roger Van Pelt
Club equipment	Roger Van Pelt
Meeting place reservation	Dick Estel

-The Small Print-

The Fresno Commodore User Group is a club whose members share an interest in Commodore 8-bit and Amiga computers. Our mailing address is 185 W. Pilgrim Lane, Clovis, CA 93612. We meet monthly in the meeting room of Panera Bread, 3590 West Shaw, Fresno, CA. The meetings generally include demonstrations, discussion, and individual help.

Dues are \$12 for 12 months. New members receive a “New Member Disk” containing a number of useful Commodore 8-bit utilities. Members receive a subscription to The Interface newsletter, access to the public domain disk library, technical assistance, and reduced prices on selected software/hardware.

Permission to reproduce content of The Interface is granted provided credit is given to the source, and when identified, the author. Club members are encouraged to submit articles, tips, or ideas for articles.

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Our disk library contains over 3,000 public domain programs for the C64 and C128.

Members are entitled to copies of these disks at no cost if a blank disk is provided. We do not deal with pirated, copyrighted, violent, or obscene programs. Please call our attention to any programs found in our library which may violate these standards.

2020 FCUG Financial Report

Checking IN							
Starting Balance 1/1/20	937.51						
Donations to FCUG	13.00						
Donations for CommVEx	0.00						
Dues	12.00						
VCR & DVD Sales	0.00						
Other Sales	0.00						
Transfer from cash	0.00						
Interest	0.48						
Total Checks IN	25.48						
Checking OUT							
Transfer to Savings	0.00						
Dinner/Picnic	0.00						
Newsletter	0.00						
Equipment Repair	0.00						
Charitable donations	50.00						
Motel for guests	0.00						
Total Checks OUT	\$50.00						
Checking Balance	\$912.99						
Cash IN							
Starting Balance 1/1/20	\$169.22						
Dues	36.00						
Raffle	0.00						
VCR & DVD Sales	0.00						
Other Sales	42.25						
Donations	0.00						
Adjustment	0.00						
Total Cash IN	\$78.25						
Cash Out							
Raffle	0.00						
Transfer to checking	0.00						
Dues	0.00						
Misc sales	0.00						
Club dinner	110.85						
Other	13.00						
Total Cash Out	123.85						
Cash Balance*	123.62						
Savings	5.00						
Total Assets	1,041.61						
Net Receipts	\$103.73						
Net Expenses	\$173.85						
Gain/Loss	-\$70.12						
The \$5 that was kept in treasurer's brief case, originally for member drawing prizes, has been moved to the cash box							