



## THE EDITOR'S GODZILLA

by Lenard R. Roach

### CLOSE TO LIVING THE DREAM

It is too bad that all this goodness that has happened to me over the past ten years had to start with my losing my wife to the arms of another man. It would be great to share some of this with someone who helped me through all the sweating, crying, and screaming of getting my first work to some sort of press with the person who stayed with me in the beginning, but I guess she couldn't stand the heat and had to get out of the kitchen, so to speak. Sure close friends, close family, and a growing fan base are a comfort, but I don't think nothing could beat sitting down on a cold winter night with that special someone curled up next to you on the sofa, wrapped in a quilt, and going over the manuscript of my next up and coming creation to get it ready for the publisher or alpha testing a new Commodore program that just came off my machine in the computer room.

I don't mean to start this tale off on a sad note. These are happy times. I went from a manic depressive down and out loser to semi-successful Commodore narrator and programming hobbyist in a decade and the only direction to go from here is up. Sure there are still bumps, curves, and potholes in the road but those things that don't kill you only make you stronger. I've faced a lot ever since I was left alone to fend for myself without a

woman at my side. During my Commodore career I've been writing and continue to write about this crazy 8-bit machine that has entranced many a user for decades. I've put my hand to programming in the BASIC language that is offered in the Commodore BIOS and came up with some programs that I use to help me stay on top of the hardest thing that I could ever do and that is budgeting. Rex Day and his "Money Manager" program that was published in "Run" magazine got the ideas started for me. All I did was take his idea and expand it into a few programs in BASIC so a user could have a quicker access to certain sections of the budgeting process. Before I seriously sat down and started to work with the budgeting tools that I wrote on the Commodore I was spending money like I was a member of Congress. I went bankrupt three different times in my lifetime and, until recently, was a frequent visitor to the local payday loan office in my neighborhood that preyed on people like me. Before long I was bankrupt and deep in debt with two different payday loan companies hounding me. I didn't know what to do except allow the consequences to overtake me and try to pick up the pieces after the dust settled from the fallout.

I sat down at the Commodore desk in my home one evening after spending hours on the telephone dealing with creditors, lawyers, and other people I owed money. I reached into my Commodore disk file and found the disks that contained all the different programs I had and wrote that were supposed to help me avoid being in this position, but I expected these programs to "buy" my way out of debt in the way of selling them to fellow Commodore users. I got \$150 from "Run" magazine back in 1992 for a simple 25 block program called "Check It Out." I hoped to keep the streak going but first one would have to have a streak before a streak could commence. The sale of one program was not a "streak."

I put "Money Manager" into the 1541 disk drive,

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turned on the Commodore, and loaded the program into the machine's memory. When the program was loaded, I started going through the process of looking at the features offered in the package. I put a negative number into the computer as my checkbook balance and then, when the computer granted me access to the main menu, I went to the EZ Budget feature. What in God's name was I looking for? Hope. Hope that somewhere in the data that I was going to punch in would show me a way out of my dilemmas. I pulled down out of a cubby on the Commodore desk a collection of bills and past due notices and started to list them one by one into the budgeting tool offered in EZ Budget. Some of my debts were steep – several thousands of dollars. Others were not so bad – maybe a couple of hundred dollars here and there. After several minutes of inputting the information into the Commodore, I looked at the final total of expenditures. Holy moley! How was I ever going to pay that off? I was starting to go into a deeper depression but at that moment, a voice rang out. Whether it was audible or I was just thinking the words I don't know. All I know was that I heard it...

“How do you eat an elephant?” it asked.

I didn't know. I sat there in my chair, staring at the monitor, waiting for an answer to this odd question to raise itself up from wherever this first voice came from. Several minutes passed and I was still waiting and still staring. Here I was both broke, stupid, and now hearing voices. I really thought that my bipolarism was finally going into a final stage of insanity. My next stop would be the Osawatomie State Hospital and Sanitarium. I still stared at the screen looking over the numbers, waiting for an answer...

“Just pay the man,” I thought I heard the voice say.

Then I saw something on the screen. Nothing hallucinogenic, I assure you, but it was like a light

bulb went on in my head. All these butt faces want my money. They don't want my house, they don't want my car, they want MONEY! And, they will do anything; negotiate anything, to get it. An idea started to form in my head. I wonder, just wonder. I picked up the top piece of paper from the stack of bills and looked for a phone number. After locating it, I picked up the phone and dialed the number. My conversation went something like this:

“Hello. My name is Lenard Roach. My account number is” blah, blah, blah. “I owe your company a certain amount of money and I was wondering if we could work up a repayment plan?”

After a pause for the collection department to get my information off their computers they took me off hold and said, “Yes, Mr. Roach, we can work something out. What did you have in mind?”

I would lowball a number, allowing them to counter offer with a number of their own. Most of the time the company just accepted my first offer and I made a deal to send them a check on a certain day of the month for the amount that was specified. The deal was set. I thanked the person on the end of the line and hung up. Then, I would get back onto my Commodore and get into that account and change the amount owed to that creditor. The total for the month went down. This was starting to look promising.

I did that with all the bills stacked on my desk, calling each one, one at a time, talking to the accounts receivable or billing department, and setting up a repayment plan. Some of my negotiations didn't go well as many were waiting quite a while to hear from me so they could try and bilk me for the entire amount due. I informed those miscreants that this is the offer on the table. You can either take it or I can hang up now and you receive nothing. With each phone call I was getting bolder and bolder, especially since I

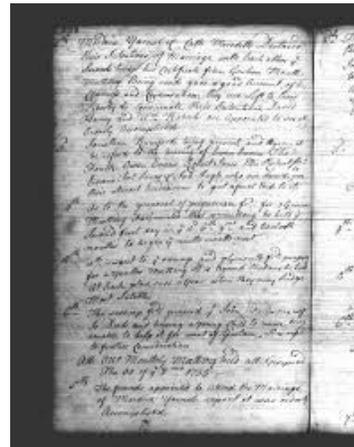
started to see the numbers on the Commodore monitor go down to where the monthly expenditures due was becoming something more manageable. Before long I had all the companies that I owed money to contacted and the new amounts owed registered into the budget section of EZ Budget. Now, I had a new number to work with that was considerably smaller. I printed the new budget off onto my printer and taped the sheet to the front of my desk face. I then exited “Money Manager” and loaded up “The Ledger,” then transposed those numbers into a single block SEQ files that would track my progress. When I got my first small debt paid off, I sent a letter along with the last payment asking for a letter from them stating that my debt was paid in full. When the letter arrived, I put it in a manilla envelope and placed it in the cubby on the Commodore desk.

This process has been going on for a decade now. Most of those original debts that I owe are well past paid off but new ones accrue to usually take their places. I was eating the elephant – one bite at a time. Sometimes a new debt would not come to replace an old one so I could take the money that was being spent on the old debt and put it into savings. Soon I would have something building up in my new savings account. I could start giving, too. I started sending a small check or two to a charitable organization each month and enjoying the benefits of knowing that I was helping out in a worthy cause.

As confidence increased, so did my confidence to start writing more things down and getting them into print. My condition would flare up from time to time and I would either lose a job, get behind on a bill or quit writing due to writer's block, but I am learning that all you have to do is take some time off, recalibrate your situation, then start hitting the streets for work. Like any job hunt it took some time to find employment, usually at a place where I do not feel comfortable at, but it would be only a layover as I would spend some

free hours looking about for something I would be more apt to do. After work was located I would call the creditors that I fell behind on, explain to them my situation, and let them know that I would be sending them money again very soon. Most were cordial and awaited my next payment. As for putting words into a word processor I would start with something simple then build myself up to where I was back to normal speed.

Like I said at the start, it's too bad my ex-wife can't see what kind of responsible man I've turned out to be. My kids are fed, my cats are fat, my bills are organized, and I'm getting great treatment for my disorder. You know what? Maybe this is for the best after all. I'm sure there's some young lady out there who would like to spend her time with a person who seems to have it all together. For now, just give me my pets and my Commodore computer. That will do.



## MONTHLY MEETING REPORTS

by Robert Bernardo & Dick Estel

### November 2021

At first it looked as if the attendees at our 40th Anniversary club celebration would be the “usual suspects” – Robert Bernardo, Roger Van Pelt,

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Dave Smith, and Dick Estel. As we were helping Robert bring in equipment from his car, a man got out of the vehicle parked next to Robert's car and said, "Hello, Robert." It was Andrew Wiskow, from Riverside County, and his son Alvin. Andrew had joined the club years ago and drove up from southern California a few times, bringing little Alvin with him. Military service and his subsequent civilian job prevented Andrew from visiting us for a long time, but a schedule change allowed him to join the special celebration. "Little" Alvin was now 20, about 6' 3", and best of all, able to share driving duties.

As we were setting up the equipment, we talked to a couple eating next to our tables. They were familiar with the C64 and had used one for record-keeping in their photo business back in the day.

When the meeting got under way Dick reported that we had been receiving donations from Interface Editor Lenard Roach every few weeks, which the club greatly appreciated. Then the membership voted to make our annual charity donation, \$50 to St. Jude's Children's Hospital in Memphis.

Robert reported on the Commodore LA Super Show (CLASS) held November 6 and 7 in Burbank. Attendance was 27 people, slightly down from the first CLASS in 2019. Among those attending was Mark Rifkin who worked at Commodore Business Machines from 1988 to 1993, and David Pleasance who worked at CBM UK from 1983 to 1994 and who video-conferenced into CLASS.

CLASS attendees were enthusiastic about continuing the event next year. A major part of CLASS was funded from remaining CommVEx funds; with those funds and CLASS 2021 ticket and raffle sales, there was a \$24 profit to be applied to the next show. With rent in the \$1,000 range, paying for a 2022 event will be a challenge. CLASS used to be in the spring, and CLASS 2022 will probably move back to spring

with a May date.

Dave Smith brought a number of old newsletters printed out from the Internet, most from Australia and most from 1981 (FCUG's founding year). One single issue was a half-inch thick; most were the more typical ten or twelve pages. Dick brought the first issue of the FCUG newsletter from November 1981. About two years ago he had talked to the man who produced the first year's newsletters.

For the presentation segment of our meeting, Robert showed a few minutes out of the Roger Van Pelt video on CAD-M, a Loadstar 64 program from 1986. The video was filmed for CLASS 2021, and subsequently, it was put on YouTube. CAD-M was a sophisticated but easy-to-use computer aided design program which ran adequately on the C64 but runs much faster with acceleration from a SuperCPU or Ultimate 64.

Robert had the Ultimate 64 set up, and he described its functions to Andrew and Alvin. He mentioned that it was out-of-stock at the moment, due to parts shortages caused by the pandemic.

Then Robert showed some hardware and much software that he bought from Wayne and Sonia Aller at CLASS 2021. The Allers were university professors who had a Studio City (Los Angeles) business, CompuLearn, which taught kids about computers. With VIC-20's and C64's, they taught children such as Colin Hanks, son of actor Tom Hanks; and Ahmet and Moon Zappa, the kids of songwriter Frank Zappa.

The hardware included a boxed Wico trackball, a Tech Sketch LP-10S light pen, and a Chirpee voice recognition module. The software was composed of several educational programs – Match Maker Spanish, Batalla de Palabras, Hop Along Counting, Lion's Workshop, Trains, and In Search of the Most Amazing Thing – and the Chirpee voice recognition software, Studio 64 music creation program, and the Micro Illustrator program that went with the Tech Sketch light pen.

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The educational programs were saved for another meeting, and Robert started off with the Chirpee module and its software running off the club C128 and its CRT monitor. Out of the several programs on the Chirpee disk, Robert ran the Balloon program in which the player had to fly a balloon by speaking into the module, "Up" or "Down." Robert had some success with flying the balloon, but when Andrew tried it, the microphone in the module did not respond to his voice. Because much of the program was written in Basic, Robert thought that with compilation or with acceleration, the program would respond better to voice commands.

Robert had brought chocolate cake for the 40th anniversary of the club, and as the club members took turns at Chirpee, the cake was passed out. It was totally devoured!

Next up was a look at the Studio 64 music creation program running off the C128. Not as sophisticated as the Deluxe Music Construction Kit for the Amiga which was demoed in past meetings, Studio 64 also let the user put musical notes on a staff for playback. Interestingly, the notes were made of PETSCII characters and thus appeared graphically rough in appearance.

After a quick look at Studio 64, Robert connected the Tech Sketch light pen to the C128 and ran its Micro Illustrator program. Robert had connected the light pen to the wrong joystick port, and the program was not responding correctly because of that. However, before he could correct this and run the program again, Dave had investigated why the restaurant was so empty. Where had everyone gone in Panera Bread? He returned to the meeting and stated that because of a lack of employees, management had decided to close the indoor dining area at 2 and to keep the drive-through open. It was almost 3 when we discovered this.

Feeling guilty for going so long past closing time, the members decided to stop the meeting right there. The equipment was hurriedly

disassembled, and Andrew and Alvin left for the long drive back to southern California, saying that they would return for another meeting.

## December 2021

by Robert Bernardo

FCUG continued celebrating its 40th anniversary with its December meeting, but only president Robert and v.p. Roger were there.

In old business, Robert remarked that he still had to post his left-over photos from the Commodore Los Angeles Super Show 2021. In new business, it was time to hold FCUG elections. Robert motioned to keep the same 2021 officers for 2022. The motion was seconded and passed.

For CLASS 2022, Robert said that there was \$26.00 which was the remainder from CLASS 2021. CLASS 2021 had started off with a \$400+ amount to devote to the show. With only \$26 this time, the show would be hard-pressed to break even with only ticket sales and the show raffle to cover a \$1,000 Burbank VFW venue fee (\$1,200 if the venue decided to raise rates). Robert and Roger bounced around ideas to raise money for CLASS. Sell items on eBay? Possibly. Raise CLASS admission? No.

Because CLASS 2022 was going to be in the spring and the last show had been in November 2021, the show would have to be organized relatively quickly. Who would be the CLASS presenters? Podcaster Doug Compton from Arizona? Repairperson Paul Resendez from southern California? Musician Seth Sternberger? David Pleasance talking about his book, From Vultures to Vampires, volume 2? Roger Van Pelt giving a presentation on how to convert a C64 Giga-CAD object to Blender?

Then Robert and Roger proceeded to the presentations of the day. Robert showed off the new, C128 commercial game, "Attack of the Petscii Robots," the first commercial C128

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program in decades. (Attack also sold in C64 and Plus/4 versions.) The Attack program disks (a 5 1/4" 1571 disk and a 3 1/2" 1581 disk) came in a very professional-looking box, along with a color manual and a C64 adapter for the use of a Super Nintendo joystick. The SN joystick would conveniently place several buttons in-hand which was necessary for easy gameplay. Without the joystick, control was left to keys scattered across the C128 keyboard. Attack wouldn't load with JiffyDOS, and Robert turned JD off.

Roger found that the graphical adventure game itself had sprites on a colorful, bit-mapped, graphical background; that's on 40-column screen. At the same time, on the 80-column screen, a map would be shown of the game area. Unfortunately, Roger brought the wrong club CRT monitor and also had not brought an 80-column cable. The next meeting, he'd bring the correct items and a SN joystick, too.

Then came the C64 games. Slip Stream was a 3-D shooter; you flew an angular spaceship, shooting the objects that appeared before you in space. It was hampered by a very slow loading time and somewhat monotonous music. Based on the novelette, the Briley Witch Chronicles was another graphical adventure game with good graphics. Like the above Attack of the Petscii Robots, it would take several hours to get through the game. Then there was Sonic the Hedgehog, a port from the classic Sega game. Authentic to the original game, Sonic was declared a milestone in C64 programming by those who thought that a port was impossible. However, to do its amazing scrolling background and gameplay, the game needed a Commodore RAM expander (1700, 1750, 1764, or emulated RAM expansion in the Ultimate 64 or Turbo Chameleon). And it took a long time to load as it put in all that data into the RAM expander. This was version 1.0 (at the time of this writing, the improved 1.2 and cracked versions had been released).

On another table, Robert had set up the Amiga

500 with v8 motherboard and a Vampire 500 v2 accelerator, which made the A500 hundreds of times faster than its original specification. First, Robert loaded up SysInfo, a little Amiga utility which calculated and displayed the speed, identified chip versions, and showed the amount of RAM in the system. The utility confirmed that the A500/V500 combo was one of the fastest classic Amiga computers available these days!

Then Robert ran a full-screen, HDMI version of Doom. This notorious, first-person shooter used lots of computer resources, but on the A500/V500 combo, it ran smoothly and without any problem. To further show the speed of the combo, Robert ran a MPEG video, "Gali the Alligator," a bit of computer animation which was a funny spoof of a kids' TV show. It, too, ran smoothly. However, due to funny "gore," it was not meant to be shown to young children. Unfortunately, a child with her parents was passing near when the video was running and saw the animated puppets being slaughtered. The child was amused, as were her parents. Robert could only sheepishly say, "Sorry!"

Finally, Robert got into what the A500/V500 combo could emulate. It had many emulators on its Compactflash drive, like C64 and two Macintosh emulators. Robert said that one of the Mac emulators, Fusion, had come with a folder full of apps, which worked for awhile but then deleted those apps (Self-destruct? Virus? Auto-delete after trial run?). The apps were replaced by a video entitled, "Don't Copy that Floppy," filmed by the software industry. In the part-humorous, part-serious, early 90's video, a rap song asked people to not copy disks! Both Robert and Roger laughed at the cheesy acting and the boring industry types in the video.

Like what had occurred in November, Panera Bread decided to close its doors early at 2 p.m., due to a lack of workers. And so, Robert and Roger had to cut short the meeting, leaving out further investigation into the Amiga 500/Vampire

500 combo and other new C64 games.



### The Infamous Commodore VIC-21

by Guest Contributor **Dave McMurtrie**

Yes, you read that correctly: there was a Commodore VIC-21 computer, but it's probably not what you're thinking. This wasn't a follow up to the VIC-20 created by Commodore International. No, the Commodore VIC-21 was created by a department store in Boston, MA (USA).



On Sunday, February 13, 1983 Lechmere Department Store took out a full page

advertisement in the Boston Globe advertising the "Commodore VIC-21 with Powerful 21K Memory!". If Commodore didn't create this computer, how was Lechmere selling it?

Simple – in a brilliant marketing maneuver, Lechmere decided to bundle a 16K expansion cartridge with a run of the mill Commodore VIC-20 computer and sell it as a new model, the VIC-21. The advertisement showed a picture of a VIC-20 computer, but the "20" from the VIC-20 badge was crudely scratched out. Remember, Photoshop hadn't been invented yet so this was Lechmere's low-budget marketing solution. To further the ruse, Lechmere also had VIC-21 stickers printed up and affixed them to the original VIC-20 boxes from their inventory to cover up every VIC-20 reference on Commodore's box.

Surely Commodore was somehow involved in this, right? Not according to Myrddin Jones, Commodore's Vice-President of Marketing at the time. If Commodore wasn't involved then surely they put a stop to this brand dilution, right? Nope, also according to Myr Jones, "You have to applaud Lechmere's creativity. I understand their sales are doing quite well." Similarly, Diane Ottinger, a Commodore spokeswoman said, "No one here seems upset about it. How they sell it is up to them."

While the VIC-21 made a bit of a splash in February, 1983 and drew the ire of competing computer retailers, they apparently weren't as successful as the InfoWorld article made them out to be. They were introduced in February at \$199, then quickly lowered their price to \$169, then \$149. By May of 1983 they were selling them for \$119.





## Dave Haynie —

### Rajant Engineer, Commodore Legend by Rajant Corp.

In celebration of the Commodore 64's 39th anniversary, a tale needs to be told about a Rajant prodigy who also happens to be a Commodore superstar.

Sitting quietly in front of two large monitors behind the closed door of office number 207 is Dave Haynie. Dressed inconspicuously in a tee-shirt and pair of jeans, most know Haynie as a laid-back senior hardware engineer in Rajant Corporation's Malvern, Pennsylvania office who plays guitar and enjoys snapping photos with one of his digital SLR cameras.

But before Haynie became part of the Rajant team in 2012, he had vast experience designing hardware for personal computers, media appliances, radios, and controllers for remote-control (RC) cars and small robotics for the U.S. military. One of his most critical military applications was a small RC robot that was used for hunting IEDs and deploying bombs ahead of foot patrols. More than 3,000 of these bots were sent to U.S. soldiers in Afghanistan and Iraq,

saving the lives of countless American troops.

Haynie would have the opportunity to use this expertise again to save even more American service members' lives with the Rajant LX4-SAB BreadCrumb, a secure network node that contains four of Haynie's circuit boards. The military-grade radio is used to rapidly deploy a resilient mesh network and supply high-bandwidth to support Secret and Below (SAB) applications in remote and extreme outdoor environments. His knowledge and skill set have allowed Rajant to produce custom circuit boards in-house for some of their most valuable customers while minimizing expenses and expanding opportunities.

"Our core technology is a result of Dave Haynie, and everything we build has his fingerprints on it," was proudly stated by Rajant CEO Robert Schena. "It's hard to overstate how important he has been to the company. He is brilliant! He took us to another level as a company with his talent and capabilities."

While Haynie has primarily worked on building custom radios for specific markets, he is now designing a mainstream product for Rajant. Passionate about the journey of this project, his goal is always to make the best possible product for the rest of the team to succeed.

"I have to make sure we have a good foundation so that we can build up from there and not be limited by the product itself," Haynie said.

When asked where he is most excited to see the company branch out, he says, "I love the idea of us getting into artificial intelligence, finding new applications, and making our systems more flexible so we can make our technology more useful to users."

### Claim to Fame

Unbeknownst to many Rajant colleagues and customers, Haynie has risen to super-stardom across the globe as a Commodore legend with a

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devoted international following.

Founded in 1954 and dissolved in 1994, Commodore International was at one-time one of the world's largest personal computer manufacturers that soared to fame by developing and marketing the world's best-selling desktop computer, the Commodore 64, and later its Amiga computer product line. With an estimated 10 to 17 million units sold during its lifespan, the Commodore 64 holds the Guinness World Record as the highest-selling single computer model of all time.

Haynie acquired his rock star status when Chief Engineer at Commodore's headquarters in West Chester, Pennsylvania—just a stone throw away from Rajant's Malvern office. For over 11 years, he was a leading engineer behind the C128—another Commodore home computer that was the upgrade to the once very popular 64. Once acquired by Commodore, Haynie also worked on the Amiga, a line known for its unique ability to multi-task, stereo sound, and tools for multimedia production. He was the primary engineer working on the A2000 and, with his team, created the A3000.

At the time, the Amigas were primarily sold in the U.S. to the film industry and used to create computer-generated imagery (CGI) graphics for films such as *City Slickers*, *Fantastic Four*, *Jurassic Park*, *Star Trek VI*, and *Babylon 5*. In Europe, Commodore computers remained more wildly popular among consumers—especially during the 80s and 90s—leading to the creation of a large fan base of brand loyalists who still exist to this day.



What seemed like overnight, Haynie's authority and popularity as one of the Commodore legends skyrocketed locally and internationally. He became widely respected and praised on the Commodore on-line community for his insider articles and blogs on the Commodore technology and his experiences as employee and engineer and for countless interviews. When Commodore went bankrupt, Haynie worked on bringing the Commodore back to life while directing and releasing documentaries about the Commodore technology. With this, his popularity and following soared even more.

While Commodore was unable to make a successful comeback, a niche audience of deeply devoted fans continues to use their Commodore or Amiga computer. Still passionate about their favorite brand and community, overseas followers still host conventions and festivals to keep the fan base alive and connected. Haynie remains a regularly invited guest speaker in countries around the globe—including Italy, Germany, France, Amsterdam, Ireland, United Kingdom, Asia and more. It is during these fan mania times that Haynie is treated like an A-list celebrity with his travel expenses comped and a never-ending line of starstruck fans seeking him out for a selfie and autograph. Google "Dave Haynie Commodore" and discover over 385,000 results about his fascinating life in countless articles, video interviews, and on-line databases.

When Haynie leaves the Commodore hoopla

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behind and jets back to the States, he plugs back into his Rajant mindset. His thoughts and ideas are about Rajant and how to make great products even greater. A legend in his own time, Haynie is truly one of the great finds working at Rajant. With great engineers like Haynie behind the scenes at Rajant—including Andy Finkel and Fred Bowen who also worked at Commodore and are legends in their own right—the possibilities are endless for where Rajant will go next.

## Trevor's Blog – September 6, 2021

by Guest Contributor Trevor Dickinson

(Trevor Dickinson, the head of A-EON, the company that builds the new AmigaOne X5000, usually writes an article into his blog every few months. <http://blog.a-eon.biz/blog/> Trevor writes about Amiga OS, the AmigaOne X5000, and his plans for the new AmigaOne 1222. However, this time he writes about 8-bit Commodore! By the way, Trevor resides in Wellington, New Zealand.)

Over the past couple of weeks New Zealand entered into another snap lock-down caused initially by community cases of the Covid-19 delta variant.

So what does an Amigan do when he is locked up at home again? I know... work on volume two of the Vultures to Vampires book. To be honest, I thought I was really knowledgeable about the post-Commodore history but the more I research, the more skeletons I dig up. If you thought that the Amiga story was complicated, you really should spare a thought for our 8-bit cousins. I'm discovering that the fate of the Commodore trademarks is even more intriguing and convoluted. If you want to find out more, please check out our interview today with Amiga Bill on twitch.tv.



## Amiga Bill interviewing David and Trevor

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<https://www.twitch.tv/videos/1139978809?t=01h58m07s>

With the eBook version of volume one already released, David informed me the printed books have just arrived in the UK in preparation for shipment to the Kickstarter backers. A few weeks back I was sent a proof copy of the book for my review by the printers who are based in Turkey. I'm still waiting for the delivery. UPS contacted me last week to say they had misplaced the package which had arrived in Australia [and] then disappeared. I explained I live in New Zealand which is 1,600 miles (~2,600 km) away. The UPS person apologised and said the drop off for NZ was Australia. Three days later I received another call from UPS to let me know they still hadn't located my package. Last week they informed me the shipment was definitely lost and they were issuing a claim notice with the sender. Who said Commodore and Amiga was cursed? I think it was Dave Haynie, in volume one of our book.

## Floppy disks

Thanks to everyone who recently sent me birthday wishes. I received an excellent birthday card from one of my brothers, who shall remain nameless, mainly because his name features in a very early Billy Connolly monologue which I heard for the first time when I lived on the west coast of Scotland in the mid-1970's.

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I have to admit just saying that makes me feel so old! ? Talking about age, if you are old enough to remember, floppy disks really were floppy. No, I'm not talking about the 3.5" disk in the stiff plastic cases that we fed into our CBM 1581 drives and Amiga 500s. Back in time, floppy disks really were floppy. I first encountered 8" floppies in the mid-70s. This was followed by 5-1/4" floppies, which I used with my CBM 2031 disk drive which was connected to my Commodore PET. That was soon followed by a CBM 1541 drive with my C64 and then a 1570 drive for my C128.

Not many people use antiquated, electromechanical, floppy drives these days, preferring floppy drive emulators which support SD cards with gigabytes of storage (like the Gotek for the Amiga). Even the venerable C64 can be supplied with an 8GB [and more] SD card reader. I don't know... call me old-fashioned, but would I install a jet engine inside my DeLorean if I had one? Hmm... seems to me that part of the fun of classic computing is using the original hardware? Hey, who am I kidding? Give me that jet engine; let's burn some rubber!

### Flattery and emulation to the MAXI!

A couple of years ago I purchased THEC64 MINI

retro-gaming console. The cool little device is a scaled-down, miniature replica of the C64 breadbin model [and] emulates a Commodore C64. It's supplied with 64 classic 8-bit games and can also be operated in C64 Basic mode. I have to be honest [that] I did not recognise many of the 64 games supplied with the system, most probably because back in the day I was hooked on International Soccer, Football Manager, and Superstar Soccer (did you notice the trend?), and really did not play many other games on my trusty C64.



THEC64 MINI came with a unique and intuitive carousel feature for game selection, and I didn't even have to read the user manual to get it up and running. (Stand up, everyone, who said I never read the user manual. ;-)) It was not supplied with a PSU but came with with a USB cable, which needed to be plugged into a powered USB port and an HDMI cable to connect to a TV or monitor with audio output. Unfortunately at the time, only one of my HDMI monitors had audio output, and that was not compatible with THEC64 MINI, so the games did not have the benefit of the classic 8-bit music or sound effects. THEC64 MINI package came with a Competition Pro-style joystick which included four extra buttons that enabled easy navigation of the excellent GUI.

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Although the joystick navigation was excellent, the quality of the joystick itself was sub-optimal. It used a spongy gamepad-type mechanism that spoiled gaming action. I also soon tired of scrolling through the game carousel to find the one I wanted to play. There is no keyboard on THEC64 MINI, just a moulded plastic cover made to look like a keyboard. However, a USB keyboard could be connected to the second USB port which helped with entering text, but if you've ever used a C64 emulator like Vice or C64Forever, you will know how difficult it is to match the keys on a standard keyboard to the C64's special key-set. I downloaded and updated firmware which allowed me to add and play additional games stored on a USB pen drive. The games certainly loaded a lot faster compared my C64 with a fast loader, but with some games, there was an almost imperceptible lag between operating the joystick and the resulting action on the screen. It was emulation after all, not the real thing. Despite being a well-engineered product, THEC64 MINI couldn't match the C64 experience I remembered with such fond memories, and it wasn't long before I stored it away in a cupboard.



**THEC64 (MAXI) - made in China 2021**

At the time Retro Games Ltd said an updated version with a full-size working keyboard was in development. True to their word, they came up with the goods. THEC64 (MAXI) is not available in New Zealand, and I could not find one for sale

on Amazon either. I managed to track one down on eBay from a UK retailer and was really surprised when it arrived in New Zealand eight days after I ordered it.

There are plenty of unboxing videos and reviews on Youtube, so I will concentrate on the major difference I discovered.



**THEC64 MINI & MAXI**

Inside the outer cardboard protective packaging is THEC64 retail box, which on the surface, looked remarkably similar to the packaging design on my original C64 box which I purchased in 1983.

The designers have used the same colour scheme and image layout with the obvious difference being the replacement of the Commodore name and logo with THEC64 logo and a discreet Retro Games Ltd. logo. I watched a video review by the 8-bit guy in which he noted several differences between his original C64 case and that of THEC64. His original C64, which presumably is a USA model, had a slightly difference colour and form factor. His video showed that the height of the THEC64 was slightly greater than his original C64 breadbin case but exactly the same size as the VIC-20 case. However, when I compared THEC64 to my original C64 case, the sizes were exactly the same height and shape. The case colour was almost identical too.

I agree with the 8-bit guy that visually the case plastic is a bit too shiny and looks a little cheaper compared to my original C64. Weighing in at ~1.5 Kg, the case is also a little lighter than the C64 which is ~0.2 Kg heavier. To make up for the lack of the Commodore name on the case decal, the rainbow colour strip is elongated, but THEC64 logo is not embossed and neither is the Power text label next to the red power LED. The main keyboard keys are the same colour, but the function keys are grey while my original C64 had tan coloured keys.



### The key difference

The other major difference is the shift key does not lock down when pressed, and the key with the good, old Commodore chicken lips logo has been replaced by the THEC64 key, presumably for trademark reasons. In fact, the Commodore name cannot be found anywhere on the case, packaging, or in the quick guide manual, although the Classic mode screen does display the traditional \*\*\*\* COMMODORE 64 BASIC V2 \*\*\*\* text. Once again the ROMS have been licensed from Cloanto.

I am impressed with the keyboard which almost feels as good (or bad depending on your point of view) as the original. As this is an emulated C64, it does not have any of the C64 I/O ports, so none of my original C64 peripherals can be used. However, it does have 4 USB ports and an HDMI port along with a micro USB B power socket. Personally, for durability, I prefer USB C for

power sockets, but I presume the Micro USB B version is less expensive? However, unlike the MINI, THEC64 Maxi is supplied with a separate USB B power plug. Similar to its diminutive cousin, THEC64 Maxi is supplied with a Competition Pro-style joystick but, unlike the earlier model, it has microswitches rather than the cheaper, gamepad-type mechanism supplied with THEC64 MINI. Also the joystick handle is black rather than red.



### C64 & THEC64 User manuals

OK, now to test the beast! Using all the cables that came with the system, I connected THEC64 Maxi to my standard test rig which was set up for my A1222 beta system. With the power off, I connected the joystick, the HDMI cable to the monitor and finally the Micro USB B cable to the power plug. I powered up the monitor and selected HDMI mode and pressed the power button on THEC64 Maxi. The red power neon lit up and I waited for the monitor to burst into life....and I waited for the monitor to burst into life.... and I waited for the ..... OK. I think you get the message. Perhaps THEC64 Maxi did not like my monitor? I selected another HDMI monitor and went through the same procedure..... and got the same result! Fearing the worst, I disconnected the monitor from my X5000/40 and connected it to THE64 Maxi. Exactly the same result again. The screen remained blank. Was the machine D.O.A, was this the Commodore curse striking again? I retrieved THEC64 MINI and connected it to the same monitor. On applying power, the

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screen again gave me that blank stare! So unless the both machines were faulty it had to be either the PSU unit or the HDMI cable. I replaced the HDMI cable first and powered up THEC64 MINI. This time the screen burst into life. Who would have thought a brand new HDMI cable would be faulty?

Now to check THE64 Maxi. I connected it up again and hit the power button, after a couple of seconds the Retro Games THEC64 splash screen was displayed on the monitor, and shortly after that, the machine booted to the initial set-up mode.



I was able to quickly set up my preferences using the joystick; Language: English; Display: European 4:3 CRT; Boot mode: Classic; Computer Mode: C64 PAL. THEC64 Maxi had a nice little bonus in that it also offers a VIC-20 mode, not that I will be using that very much. I quickly checked out the GUI navigation, which apart from a few extra items, was almost identical to the very intuitive system introduced with the MINI model. I visited the RetroGames website to check for any updated firmware and found new versions for both the MINI and Maxi machines. The firmware is very easy to update. Simply format a USB drive as FAT32 and copy the downloaded firmware file to the drive. Insert the USB drive and navigate to the Device Settings/System information menu. If the firmware on the USB stick is a newer version, you will have the option of installing it, otherwise the file will not be shown.



### Basic, Basic on THEC64

There are some new games supplied with THEC64 Maxi, but after upgrading the firmware, I was really eager to check out the new, full-size keyboard. As I said, I was never much of a games player (unless it was football). I changed to the Classic C64 mode and wrote a few line of Basic code. I have to be honest, I had forgotten how awkward the C64 keyboard is to type on, but after a few minutes, it all came flooding back to me, 38 years later! I was pleasantly surprised. Now for the ultimate test, Superstar Soccer in 2021.

The game actually played OK on THEC64 MINI, perhaps not quite as fluid as playing on a real C64, although I'm sure the spongy joystick did not help, but loading times were so much faster from USB. I purchased the game in 1987 to play on my C128D when I lived in the USA. I know that date is correct, because the same unnamed brother I mentioned above visited me in Houston, Texas during his summer break from university. We played Superstar Soccer almost every day, whenever I had some spare time. Together we managed to create an all-conquering team that progressed from the division 4 [and] eventually winning Division 1 and the Playoff final. Ah, those were the days.

Back to the test. As expected, Superstar Soccer loaded really fast from the USB stick connected to THEC64 Maxi. However, I could not get the joystick to work with the game. I connected a second joystick and was able to play the game with that, but I had to continually switch between joysticks after each game finished. I then

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discovered that you can change the joystick port on the fly by pressing and holding the menu button on THEC64 joystick and pressing either button A or B to swap between joysticks 1 and 2. What was that about not needing to read the manual? The new joystick with its microswitches had that noisy but reassuring clickety-clack sound as I moved my diminutive striker around the screen, chasing blocky 8-bit shadows as I struggled to recapture my performance of yesteryear.

As a comparison, I set up the game on my vintage 1983 Commodore 64. I loaded the game from the 1541 floppy disk drive. It took f-o-r-e-v-e-r to load the file, 92s to be precise even with a fast loader enabled, but finally the game loaded. It took 3s on THEC64, 1-0 to THEC64. Running the program once the file loaded, 36s on THEC64 versus 13s on the C64 with the compressed loader file. Score 1 -1 (although not really a fair test since the compressed file cuts out the program start-up screen and credits.) The blocky 8-bit graphics just didn't look right on a full HD 27" monitor, even with CRT scan lines selected, compared to the image on my 14" Commodore 1701 monitor, 2-1 to the C64. I'm sure the hi-fi experts would disagree, but the 8-bit music and sound effects seemed about equal on both systems. Still 2-1 to the C64. Playability just about the same on both systems. Still 2-1. Overall ease of use... I've got to hand that to THEC64, 2-2. Expandability and compatibility with existing C64 peripherals... only one winner, 3-2 to the C64. Price and performance, has got to be THEC64, 3-3. Pure retro-nostalgia – there's only one winner here, 4-3 to the C64.



### Superstar Soccer 2021 – THEC64

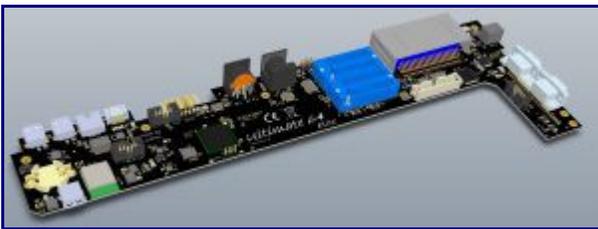
OK, not the most scientific or objective of tests but overall I have to admit THEC64 experience with its faithfully reproduced full-size keyboard is far better than I really expected. The joystick-driven GUI is easy to navigate, and if you can ignore the fact that none of the original C64 peripherals are compatible, then it's a really good option if you want a relatively inexpensive, fast-loading C64 which looks and feels like the real deal. If you are a fan of the Competition Pro-style joystick, then the updated version is a big improvement on the earlier model. If you don't have a working C64 machine and are looking for an easy, clean C64 experience with a working keyboard, then I can thoroughly recommend THEC64, and at £122 plus shipping, the price is just about right for the casual retro gamer. You can even begin programming in Basic again.

But if you are still a fully fledged C64 addict and really want total compatibility with your C64 peripherals and cartridges coupled with a turbo-charged performance, then THEC64 might not be the one for you. As you might expect, with the C64 the best-selling home computer of all time, there are plenty of C64 clone options to choose from.



### Turbo Chameleon Cartridge V2

The pick of the crop are probably the FPGA-based offerings which in theory should provide the best hardware emulation experience but usually at a much higher price. The Turbo Chameleon 64 cartridge from Individual Computers, which retails for €214.39, can be used with a C64, or if you don't have a C64, in stand-alone mode.



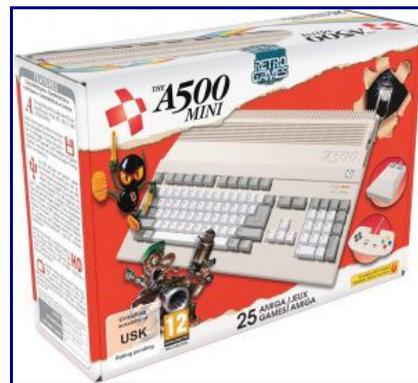
### The Ultimate64 Elite

For the ultimate turbo-charged experience, you should check out the aptly name Ultimate64, a replacement C64 motherboard designed by Gideon Zweijtzter who also created the 1541 Ultimate cartridge. A new version called the Ultimate Elite is available to order for €239 from the Gideon's Logic website.

### Amiga Mini (me)

If you are wondering about my interest in THEC64, its quite simple. A couple of years ago, Retro Games registered THEAMIGA MINI trademark in the UK and, as recently as May this year, registered the THEA500 trademark, both in Classes 9 and 28. Quite an impressive feat given the current legal dispute over the control and ownership of the "Amiga" brand. Given that

Retro Games hold both trademarks you might have expected that it would developed a product using one of those names. Instead the company recently announced it is developing THEA500 MINI console, a scaled-down version of the Amiga 500 which is available to pre-order on Amazon for £103.92 plus shipping. It is very similar to THEC64 MINI concept, featuring an Arm board running an Amiga software emulator in a miniaturised replica case but this time styled like the Amiga 500. The joystick has been dropped and is being replaced with a gamepad and replica Amiga tank mouse. The 64 8-bit games are being replaced with 25 classic Amiga games. According to the publicity it will emulate an Amiga 500, 600 & 1200 (ECS/OCS/AGA). Once again the Amiga ROMs have been licensed from Cloanto Corporation, and the product is scheduled to be released in March/April next year.



### THEA500 MINI available March 2022?

Will it be as successful as THEC64 MINI? It's difficult to say. David Pleasance estimated that ~27 million C64s were sold while the total Amiga sales are thought to be around 25% of that number. There are a lot of hardcore Amiga enthusiasts who already have access to a host of excellent FPGA clones which can accurately emulate multiple retro systems, not just the Amiga hardware. There are also Amiga software emulators on PCs and other hardware like the Raspberry PI. I think TheA500 MINI will appeal

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to someone who used an Amiga but has since moved away from the scene and wants a quick and easy way to replay the popular Amiga games of their youth.



However, if Retro Games were to develop a full-size MAXI version with a working keyboard, I think that would potentially attract a lot more die-hard Amiga fans. Hackers are already replacing the Arm board inside THEC64 with systems like the Mister to achieve near perfect hardware emulation provided by C64 FPGA core. I can imagine the same happening if Retro Games were to create a full-size THEA500 Maxi, especially if it were priced at a similar level to THEC64. Anyway, only time will tell.



## VIC 20 TURNS 40!

In 1981, Commodore released the VIC-20, a low-cost mass-market home computer that served up great video games and taught a generation of kids how to program. It sold millions of units and inspired a generation of programmers. Here's what made it special.

## The Wonder Computer of the 1980s

As the price of computer components dropped rapidly in the late 1970s, it became inevitable that some company would introduce a popular, low-cost, and user-friendly computer for the masses. That company turned out to be Commodore—and the computer was called the Commodore VIC-20.

The VIC-20 gained its name from its VIC graphics chip (“VIC” being short for “Video Interface Chip”) and the number “20,” because it sounded friendly. From its inception, the VIC-20 served a key strategic purpose: Commodore intended to preempt competition from Japanese computer manufacturers with a low-cost, mass-market machine.

Designed from the ground-up to fit those needs, the VIC-20 utilized the relatively inexpensive MOS 6502 CPU and only included 5 kilobytes of RAM (of which, only about 3.8 KB were made available in BASIC). It also included a mere 22-column text display that dramatically limited its appeal as a productivity machine. But its VIC graphics chip played color video games, with graphics that arguably surpassed the Atari 2600, which was the reigning video game console in the U.S. at the time.

Due to its heritage as a machine designed to compete with Japanese manufacturers, the VIC-20 made its original debut in Japan as the VIC-1001 in late 1980. That model included some extra features like katakana character support for the Japanese market, but it was otherwise almost identical to the VIC-20 that would launch in the U.S. the following year.

When it did launch in the U.S. in May or June of 1981 (reports conflict, and some units were in reviewers' hands in early 1981), the VIC-20 made waves for its staggeringly low price of \$299.95 (about \$885 today). Competing entry-level machines like the Atari 400 and the TRS-80 computers cost \$399 and \$499 respectively. (Around that same time, a 16K Apple II Plus sold

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for a whopping \$1195, putting it in another league entirely.)

For the VIC-20's American marketing campaign, Commodore hired Star Trek actor William Shatner to appear in print and TV commercials, asking "Why buy just a video game?" and touting the machine as the "wonder computer of the 1980s."

And a wonder it was: The Commodore VIC-20 was the first computer to sell a million units, which it achieved in its first year on the market. By the end of its run in January 1985, it had sold 2.5 million units in total—phenomenal sales numbers at the time.

### What Was Using a VIC-20 Like?

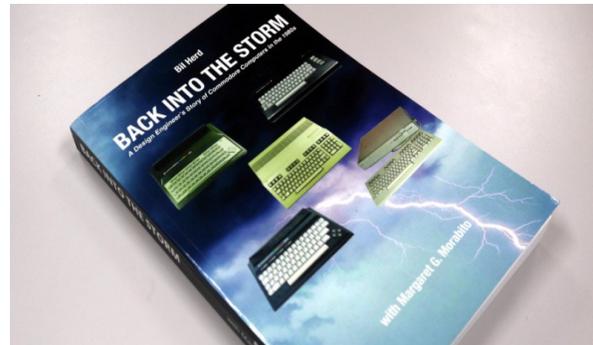
Most people with a VIC-20 attached the computer to a home television set for a display, and if they wrote any programs in the built-in BASIC programming language, they would save them to a cassette tape using the Commodore 1530 Datasette drive. Commercial software could be run off of plug-in ROM cartridges (as was often the case with games) or loaded from a cassette tape. Some more advanced owners also downloaded programs from BBSes thanks to the low-cost VICmodem available for the VIC-20.

Commodore earned high praise (such as in *BYTE* magazine) for the quality of the documentation included with the VIC-20, which taught computer novices how to use the machine and how to write BASIC programs.

While ostensibly capable of balancing your budget or serving as a word processor, the VIC-20 was also great for kids to play video games. The VIC-20 included a single Atari-compatible joystick port that unlocked a world of action titles such as *Jelly Monsters* (a great *Pac-Man* clone), *Demon Attack* and *Gridrunner*, deep RPGs like *Sword of Fargoal*, and even text adventure games by Scott Adams (which were reportedly some of the best-selling games for the platform).

## Bil Herd's Back Into The Storm

by Guest Contributor Jenny List



It's a morning ritual that we guess most of you share with us; before whatever work a new day will bring to sit down with a coffee and catch up with the tech news of the moment on Hackaday and other [web]sites. Most of us don't do many exciting things in our everyday lives, so reading about the coolest projects and the most fascinating new developments provides us with interest and motivation. Imagine just for a moment then that by a twist of fate you found yourself taking a job at the epicenter of the tech that is changing the world, producing the objects of desire and pushing the boundaries, the place you'd give *anything* to work at.

This is the premise behind our Hackaday colleague Bil Herd's autobiographical chronicle of the time, the mid-1980s during which he worked at Commodore, maker of some of the most iconic home computers of the day. We follow him through the three years from 1983 to 1986 as hardware lead on the "TED" series of computers including the Commodore 16 and Plus/4, and then the Commodore 128, a dual-processor powerhouse which was arguably the last of the big-selling 8-bit home computers.

It's an intertwined set of narratives peppered with personal anecdotes; of the slightly crazy high-pressure world of consumer videogames and

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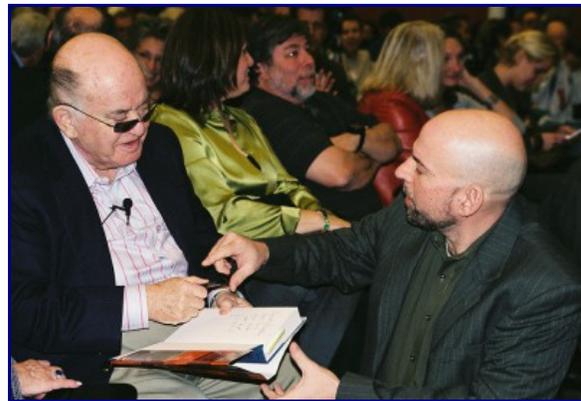
computing, the fine details of designing a range of 8-bit machines, and a fascinating insight into how the culture at Commodore changed in the period following the departure of its founder Jack Tramiel.

### Jack Tramiel's Vision For A Low-Cost Computer



Looking at the 8-bit computers of the early 1980s from our lofty perch here in 2021 it's tempting to believe that all the machines with similar processors were equivalent to each other and in direct competition, but in Bil's description of the landscape from which Jack Tramiel had conceived what would become the TED computers lies a reminder that the market was very much stratified. Processors such as the MOS 6502 and Zilog Z80 may have been at the heart of so many machines of the day, but their market positions depended so much more on the capabilities of their inbuilt video and sound hardware and other peripherals than it did on the microprocessor. Commodore had a runaway success story in the Commodore 64 as a premium gaming computer at the more expensive end of the market, but lacked an effective product to head off the threat from the much cheaper and less-well-specified Sinclair Spectrum at the lower end.

Tramiel's vision was for a new architecture surrounding the 6502 that would integrate less capable video and sound into the TED, a much cheaper single chip perhaps analogous to the Sinclair's Ferranti ULA, and simultaneously see off the competition for low-priced gaming hardware and open up an entirely new market for a budget business computer. The TED machines would be available in a three-model range starting at \$49 and going up to a fully-fledged business desktop with a numerical keypad and a talking GUI.



Bil describes the early TED period at Commodore as his "happy time", and reading his account of a twenty-something hardware engineer catapulted into the position of bringing a new Commodore computer to life, it's not difficult to see why. The tone changes over the book as the culture of the company shifted following the departure of Jack Tramiel, and for those of us who witnessed the catastrophic final years of the company through the lens of Amiga fandom it's a glimpse into the roots of the company's ultimate decline. He provides a candid look at Jack Tramiel's management style from the viewpoint of someone who was really there rather than through hearsay, and from that we gain a sense of how Commodore became the success story that it did.

Reading the book I'm left with the sense that we'll never hear the true details surrounding his

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departure from the company he founded and subsequent piloting of Atari, so students of the later years of the home computer era will have to accept disappointment on that front. The book provides a personal view of how during this period without the founder's vision the company fell under the spell of its marketing department, and the TED computers never appeared in the forms or at the price points which they deserved.

### The Last Of The Great 8-Bit Computers



The first half of the book takes us from 1983 through 1984 and the genesis of the TED computers, then through a short interlude with the ill-fated LCD machine. The second half follows the development of the Commodore 128 up to its debut at the Consumer Electronics Show (CES) in 1985. This machine was the last new 8-bit mass-produced home computer platform to be released by a major manufacturer, and the tale of its development is particularly interesting because, despite Bil and his colleagues pushing at the edge of what was possible with 6502-derived parts, he describes it in such a way as to make it readily comprehensible to readers here in 2021. In some cases he's doing things that would be relatively easy with modern test equipment but were extra-hard in the 1980s, such as when he uses persistence of vision and an analogue 'scope to spot a transitory echo on a PCB line. This feat resulted in the bodge wire that adorns every single

Commodore 128 board. The electronic engineer's craft demonstrated in these pages as he solves bugs in custom silicon should make this book required reading for any electronics student aside from the retro-computing angle.



The Commodore 128 with its two different microprocessors and three different operating environments comes through as an engineer's machine — designed *despite* the work of the marketers rather than *because* of them. He describes quietly not implementing a request for a proprietary video connector that wouldn't work with non-Commodore monitors because it would have compromised the final machine, and this is one of many running battles that were fought to deliver the best product that could be made. The thought of what might have been is a theme that pervades Commodore fandom, and here we see that the engineers were on "our" side, that of the customer rather than with those in the company who seemingly had little idea about the end users. One of the saddest parts of the story concerns the number of machines that the company developed and then never released; we mentioned the unreleased TED computers and the LCD machine above but he also makes reference to entire ranges of business machines that never saw the light of day. The Commodore story might still have ended in the 1990s had more of them been put on the market, but there's a vast sense of waste that such

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poor decisions were made about such promising hardware.

Reading the book as someone with a background in the computer game business during the following decade I immediately recognize the combination of bad management, very bright teams, a frenetic atmosphere, and extremely high pressure surrounding the industry's trade shows. It's a world that can deliver a huge buzz at the expense of fast burnout for those who aren't careful, and Bil's comments about seeking the adrenaline fix continuing after he left Commodore in early 1986 ring true. I was riveted by this book and have read it again more than once during the writing of this article. I wasn't the only one here at Hackaday who bought a copy as soon as it came out, and I can only suggest that you find yourself a copy too.

Back into the Storm: A Design Engineer's Story of Commodore Computers in the 1980s, by Bil Herd with Margaret Morabito, can be found for sale through Amazon, at \$19.96 on the Kindle and \$24.99 for a physical edition.



## Tramiel Brought C= Computing Home

Long before Facebook, Tinder, or even Doom, Commodore was the innovator of home computing, thanks to Jack Tramiel.

by **Guest Contributor Ranjit Kaur**

For some Americans, the word 'Commodore' conjures memories of vintage computers with

bulky keyboards, screeching modems, and 8-bit video games that hooked an entire generation. Long before Bill Gates dreamt of bringing a personal computer into every home, Jack Tramiel introduced the American households to Commodore PC.

People have vivid memories of writing BASIC programs on Commodore PC involving complex code and machine language. Commodore machines were a household staple despite all the hassles and brought real computing to the American living rooms. Of course, no one can forget how the kids stayed up all night to play the 8-bit video games.

Jack Tramiel, the founder of Commodore International, launched Commodore 64 model, and it changed the computer industry forever. From 1982 to 1994, 17 million units of Commodore 64 model were sold. There was no looking back, and every tech pioneer realized that personal computing is the future. Jack Tramiel's contribution to the computing industry has been relegated to the past, but his legend continues.

## Jack Tramiel – The Long-Forgotten Tech Pioneer

Born in 1928 in Poland, Jack Tramiel was an Auschwitz survivor. After reaching the United States in 1947, he built his life from scratch. Like a blessing in disguise, his experience in concentration camp taught him valuable life lessons that helped him steer through the rough ups and downs in his life.

Jack Tramiel founded the Commodore Business Machines in 1954. In the first ten years, the company focused on typewriters, electric machines, and electronic calculators. The 1960s are known for integrating advanced technologies in everyday life, especially the offices and industries. Hence, the Commodore name quickly gained popularity on the back of robust, reliable, and handy machines that helped lay the foundation of the digital age.

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In 1977, the company made strides into the computing arena with multiple launches. Commodore started manufacturing their processors after purchasing chip manufacturer MOS Technology in 1976. The development paved the way for PET and VIC-20 models that brought colossal success to the company. Then in 1981, Jack announced the VIC-II video chip that supported 64KB of RAM.

Finally, in 1982 CES, the Commodore C64 was unveiled, and the rest is history. Right from the beginning, the C64 held the limelight due to its low price, powerful performance, gaming support, and programming potential. Surprisingly, people could buy a personal computer at regular shops instead of high-end electronics outlets. No wonder around 17 million units of Commodore C64 were sold by 1994.

Software developers were in love with the C64 and churned out thousands of programs and codes. Gamers were awestruck by the performance of the VIC-II and SID chips that delivered unmatched graphics and aural experience. Gamers made C64 a household name as kids were addicted to 8-bit games.

### **Why Commodore C64 was More of a Cult than Just a PC**

Commodore 64, the most successful PC of all time, was a revelation unto itself. At the time, it boasted of impressive specifications being offered at an unbelievable price. The 64 KB of RAM at disposal ensured everything ran smoothly, including impressive graphics and immersive sound. Most importantly, the price of \$595 meant everyone, kids and adults, can aspire to own a Commodore 64.

Consumers couldn't get enough of the Commodore 64, and the PC became an icon of the 1980's era. Besides countless applications, emulation is still a massive part of the experience. The C64 lives on even today as enthusiasts build

new software, add-ons, and upgrade the hardware with modern HDMI ports.

Countless applications and emulators compatible with today's operating systems are available for the C64 fan base. Joystick adapters, floppy disk drive, and storage adapters further added to the appeal. In 1984, the Commodore SX-64 was launched with improved graphics, sound chips, and aesthetics. However, by the 1990s, competitors launched more affordable PCs, and sales of C64 declined until the company declared bankruptcy in 1994.

### **Jack Tramiel Revolution Still Lives On**

The rise of Commodore can be compared to that of Apple and Google today. But what makes it truly inspiring is the times – it brought computing to the 'Average Joe.' It was more than a personal computer – rather, it was a cultural movement that transformed an entire generation. The kids who played 8-bit video games on Commodore went on to build the supercomputers of the 1990s, the Internet, and smartphones of today.

Even though Jack Tramiel passed away in 2012, he gave birth to an ever-inspiring technological pursuit that is still relevant. The C64 lives on with a huge enthusiast community. Jack Tramiel's is one story that the tech industry will repeatedly witness – a visionary entrepreneur beating all odds to transform the industry with a revolutionary product.



# 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.

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