

ALL THINGS COLECO VISION

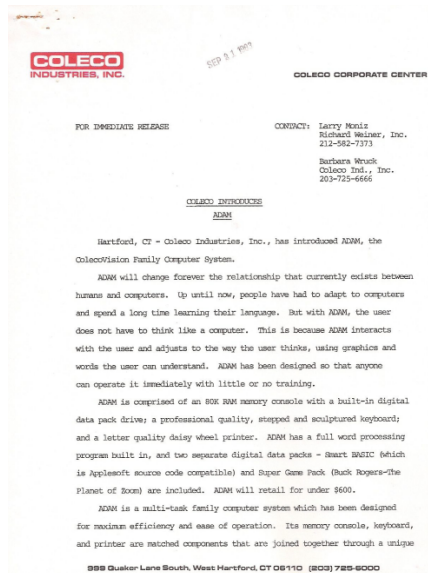
40 Years Ago

In September of 1983 Coleco announced The Coleco Adam. An expansion module for the ColecoVision and a stand alone computer. After 40 years lets see how their announcement held up:

ADAM will change forever the relationship that currently exists between humans and computers. Up until now, people have had to adapt to computers and spend a long time learning their language. But with ADAM, the user does not have to think like a computer. This is because ADAM interacts with the user and adjusts to the way the user thinks, using graphics and words the user can understand. ADAM has been designed so that anyone can operate it immediately with little or no training.

This is true if all you want to do is type which to be honest was still a going thing when the Adam was released. Anything beyond that you needed a little training or at least needed to read the manual.

(continued Pg 3)



Little Orphan Adam

When the Coleco Adam made its debut in 1983, it arrived at a time when personal computing was beginning to captivate the world. Despite facing tough competition from giants like Apple and IBM, the Adam distinguished itself with its unique features. The groundbreaking CP/M operating system and innovative data storage capabilities, including dual cassette drives and a robust built-in word processing package, solidified the Adam as one of the most advanced home computers of its era. The Adam had so much going for it but hardware problems and its abandonment by Coleco sealed its fate.

Fast forward 40 years, and the Coleco Adam has transcended the boundaries of a typical electronic device, becoming a cultural icon. It embodies not only a piece of technological history but also the nostalgia and memories of those who experienced its unique charm. Fans who grew up with the Adam often recount the hours spent typing away on its distinct keyboard, exploring its vast library of educational and entertainment software, and pushing the limits of their creativity.

While hardware and software have advanced exponentially since the Coleco Adam's release, there's an undeniable charm to its retro design and nostalgic appeal. For many collectors, part of the joy lies in owning a tangible piece of history, knowing they possess a unique artifact that represents a significant milestone in the evolution of personal computing.

Even though four decades have passed since its introduction, the Coleco Adam remains an enduring symbol of technological brilliance, innovation, and nostalgia. Its impact on the world of personal computing is undeniable, and its ability to evoke fond memories from those who experienced it firsthand is unparalleled. As long as there are technology enthusiasts and collectors, the Coleco Adam will continue to be a treasured relic, a reminder of the past, and an inspiration for the future.

Best regards,

The All Things ColecoVision Newsletter Team

The logo for 'ADAM' is displayed in a bold, white, sans-serif font. The letters are set against a dark background that features horizontal lines, giving it a digital or retro aesthetic.The hashtag '#FebruADAM' is shown in a white, sans-serif font. The background behind the text consists of horizontal lines that transition through a color gradient from red on the left to blue on the right.

40 Years Ago

(continued from Pg1)

ADAM is comprised of an 80K RAM memory console with a built-in digital data pack drive: A professional quality, stepped and sculptured keyboard; and a letter quality daisy wheel printer. ADAM has a full word processing program built in, and two separate digital data packs - Smart BASIC (which is Applesoft source code compatible) and Super Gave Pack (Buck Rogers-The Planet of Zoom) are included. ADAM will retail for under \$600.

When released the price was actually \$725, a 20% increase.

ADAM is a multi-task family computer system which has been designed for maximum efficiency and ease of operation. Its memory console, keyboard, and printer are matched components that are joined together through a unique networked system. ADAM actually has four computers that work together in harmony. While one component is working on one task, the other components are automatically accomplishing other tasks. These components are capable of "talking" to each other through a communication network called ADAM-Net. This method results in unusually high efficiency.

This is stretching the term multi-task, the user doesn't get to multi-task just the hardware but it is an interesting setup.

ADAM's software - Smart Software, is fully integrated. This means that all of ADAM's tools can be used together in a remarkably fast and easy way. Smart Software is also interactive - it can communicate with the user and actually prompts the user when necessary. With its matched components communicating through the ADAM-Net method and its Smart Software operating on an efficient and effective level, ADAM stands alone as the most advanced, yet easy to use family computer.

Smart Software, a term they seemed to have dropped. I am not sure how they integrated the various packages beyond using the term "Smart" in the title. I think they were trying to grab some of the early Macintosh and Window hype.

The center of ADAM's system is the memory console, which has 80K RAM built in.

This always made me smile, including the 16kb of video RAM in the specs as if you can use it for anything but video RAM.

Also built into the memory console is a digital data pack drive - a technological breakthrough developed by Coleco. This drive utilizes Fastransfer circuitry, which provides for the fast transmission of data - comparable in speed to that of a floppy disc, but at a much lower cost. The digital data pack drive accepts Coleco's revolutionary digital data packs - reliable, mass storage media that can store up to 1/2 million (500K) bytes of information- about 250 pages of text. In addition to the digital data pack drive, the memory console is equipped with a port that accepts all ColecoVision video game cartridges.

I don't think they had the data pack standard finalized when this press release was written though some of this is true. The data drive is much faster than the disk drives of its contemporaries, the Atari and the Commodore for straight data throughput. Also it is hard to tell if they are saying that each data pack will be 500kb or if you had 2 drives you would have 500kb storage. In either case the number is wrong, each data pack holds 256k so even with 2 drives it would have been 512kb.

Of course, all ColecoVision expansion modules can be connected to ADAM as well. Two game controllers are included in the package for game play.

Not to quibble but not all expansion modules can be connected, you can't plug in an Expansion Module 3 to the Adam – though am not sure why you would even try.

The memory console is also designed to accommodate a second, optional digital data pack drive, so that programs can be run simultaneously, or saved on digital data packs for back-up storage. Furthermore, the memory console can be expanded to 144K RAM with the addition of an optional 64K memory expander,

This is inferring that you can run multiple programs at the same time which it can't. The memory expansion was barely support but you can actually expand it to 2MB of RAM.

ADAM's keyboard has been designed as a professional quality keyboard that combines ease of use with an impressive array of features. The keyboard is stepped and sculptured for maximum efficiency. It has 75 full travel keys; a series of six color coded Smart Keys which are redefined for each new application; a series of six Control Keys which are dedicated to the word processing function; and Cursor Control Keys for easily relocating the cursor to any point on the screen. Attached to the keyboard is a ColecoVision controller, which functions as a numeric keypad for easy data entry and has a joystick for easy cursor control.

Allowing the controller to be used as a numeric keypad was an awesomely useless feature. Have you ever tried to type on the controller keypad?

This controller can be detached from the keyboard and held like a hand-held calculator - a feature which makes working with numbers particularly easy. The keyboard itself attaches to the memory console via a coiled cable and can therefore be positioned for comfort and convenience.

ADAM's letter quality printer - SmartWriter, is a bi-directional, 80 column printer, which prints at a rate of 120 words per minute. It uses a standard and interchangeable daisy wheel, so a variety of print styles are available. A multi-strike carbon ribbon is used. The printer has a 9 1/2" wide carriage for either single sheets or continuous fan-fold paper.

120 words a minute is a good speed if you are typing, if you are printing from SmartWriter or another program bring a book to read.

ADAM comes with the SmartWriter Word Processing Program already built-in. This program requires little or no instruction. In fact, it is so easy to use that the user only has to "power up" and the SmartWriter Word Processor is on-line and ready to go. This program allows the user to type in text, then completely edit or revise it with the touch of a few keys. This is unusually easy because of a unique, cursor controlled highlighting feature. Changes are readily made - and, a series of interactive queries from the computer confirm the user's intentions before making them final. Even if the user changes his mind, he can return the text to its original state by pressing the "undo" key. With all of its options and interactive aspects, the SmartWriter Word Processing program is practically goof-proof.

It is also slow too but we are spoiled with the fast systems that we have today.

ADAM is CP/M compatible. Coleco will make available, on digital data packs, the most popular of the thousands of CP/M programs available. And soon, there will be all kinds of additional ADAM Smart Software including personal planning and spread sheet. There will also be financial management with ADAM's integrated information management system (we call it the SmartFiler), and family Learning programs based on Dr. Seuss, Smurf and Berenstain Bears. Forthcoming are licensed adventure games, strategy games and more licensed arcade favorites, as well as 4 computer literacy series.

CP/M on the data pack is painful. Every time you exit a program CP/M has to reload the CCP, which means rewinding the data drive back to block 0. If you ever want to stress the drive and the data pack, try playing Zork. With a disk drive CP/M is awesome on the Adam with the exception of the 32 column screen leaving you to scroll the screen left and right with the arrow keys.

ADAM is not only a self-contained computer system. As promised, ADAM is also available as an expansion module for the ColecoVision video game system at an approximate retail price of \$400. Both do exactly the same thing.

Not to nitpick but there are a few differences, among them one being that you can not use composite out on the Expansion Module.

Either way, ADAM is the only system a family will ever need.

Overall the Adam is an awesome system and we can only wonder what would have happened to it if Coleco had not given up so soon after its release.

Article by: William 'Milli' Hicks

This Press Release and others from Coleco are available in the Adam Archive:

<http://adamarchive.org/archive/Media/Coleco%20-%20Press%20Releases/>

Coleco Adam Prototype



From Hobby to Business

How Lundy Electronics was Born

The journey started in late 1983 when I was thirteen and purchased my first ADAM using the money I'd earned from mowing lawns all around the neighborhood. It was my first and only computer until I replaced it with an Amiga 500 in 1987. The ADAM sat in a dark closet until 1996 when I traded it along with my retro computer and console collection for a Williams Star Trek: The Next Generation pinball machine - a decision I later regretted.

Shortly after I acquired my second ADAM in 2018, I discovered the Facebook Coleco ADAM group which triggered the idea of dabbling with hardware. By this time, I'd had a career in medical electronics and pinball restoration and repairs and didn't realize the ADAM had lived on with so many amazing aftermarket products and software since its demise in 1985. I shared my first hardware project with the group, a conversion of my VDD drive emulator from A.N.N. to an internally-housed unit mounted inside a data drive bay. Comments from the group were positive and got me thinking about what I could do next.

Enter the ADE Project by Sean Myers. After being the first person to build Sean's ADE project from Github, I discovered an ADAMnet data signal issue affecting my console that Sean wasn't experiencing. I reached out to him and helped work out a hardware issue that prompted a design change to the ADE. Being the only active ADE user at the time, I was the logical choice to help test many subsequent beta firmware versions which led to a great friendship between Sean and me. Knowing the ADE was going to be an amazing device and having so much fun along the way, I designed the first standalone, housed ADE prototype unit.

At this point, I wanted to use my electronics experience to offer professionally-built products that weren't otherwise available. The obvious choice was to start with the ADE, so I created an all-new, compact-housed ADE design with dedicated digital buttons that became the popular ADE Pro. Its success eventually led to the even smaller ADE Lite where the original disk swap feature was added. Over the course of the next couple of years, I created the ADE Pro Plus and Internal ADE Pro. Fun fact: The name "ADE Pro" came from choosing the small MEGA 2560 Embed "Pro" module as the base, combined with being the first professionally-built ADE available.

Around the same time Eric Pearson created his SD DDP data drive emulator Github project while also riding the momentum of the ADE Pro release, I decided it was time to expand to new builds. With a little rework of Eric's design, I came up with a version that had a dedicated front panel and front-mounted SD card slot which also paved the way to offer builds of the MIB238, MIB238-WiFi, and

EXPAⁿDDR boards. After that, I was able to help Eric dial in the hardware of the Dynomite II, MIDI-MITE II, and ADAM Speech Synthesizer.

Shortly after the release of the SD DDP, I took this hobby to the next level and became an official business as Lundy Electronics. It was the logical next step to simplify the administrative aspects of the operations, and the official Lundy Electronics branding was created.



Up to this point, most of the products I offered were modified versions or clones of an existing project, all with full blessings of the original designers. Since then, I've designed and released exclusive products like the USB Mouse/Keyboard Adapter, Ultimate ADAM External Power Supply, Coleco ADAM and ColecoVision I/O Expansion Hub, ADAM I/O Expansion Breakout Extender Development Board Set, ADAMnet Power Inlet Board for Internal and External Power Supply Adapters, ADAMnet to Coleco printer adapter, ColecoVision DRAM to SRAM Converter PCB, and ADAM Delta DRAM to SRAM Converter PCB. Other notable Lundy Electronics offerings include Super ADAM modified consoles, MEGACOPY REDUX, USB Coleco ADAM Keyboard Adapter, FujiNet Lite and Mini, Internal FujiNet, Internal ADE Lite, Chatterbox Remake Speech Synthesizer, and ADE Mini.

I look forward to continuing to release the highest quality Coleco ADAM and ColecoVision products available and expanding my offerings to this great hobby and community in 2024.

Resources and links:

<https://lundyelectronics.com>

<http://www.diroccovision.com>

<https://github.com/Kalidomra/AdamNet-Drive-Emulator>

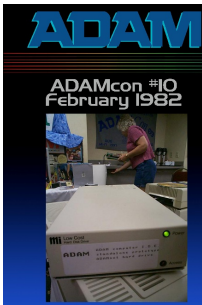
<https://github.com/epearsoe>

Article by: John Lundy

“ADAMnet” Hard Disk Drive

We are all familiar with the long awaited Coleco Adam 5.25” Disk Drive (#7817) released for the ADAM. However, at the time we all desired more...bigger drives, more speed but the costs were high!!

Coleco had worked on several different prototype drives and even had EOS support for future drive development built in. EOS operating system (rev. 5 & 6) is designed to support hard drives up to 4 gigabytes! Great 3rd party developers eventually released higher capacity drives in 5.25”, 3.5” and HD’s. However, aftermarket hard drives, as well as EOS rev. 7, cut this to 64 megabytes as a result of code patching and compaction to add other features. Aftermarket hard drives (Mini Wini, PowerMate, IDE, ADAMnet) are all electrically-compatible, but software-incompatible. Either they patch EOS or the code required to support exceeds the 8K footprint allowed for EOS at the top of memory.



One GREAT developer whom we just lost this past December, Mark Gordon of Micro Innovations took it to another level. Developing all types of hardware to support the ADAM. Most are familiar with his PowerMate IDE interface cards which allowed for the attachment of IDE Hard Drives, CF Card Drives, ZIP/SPARQ Drives or even PowerMate Enclosures. Many do not know of his revolutionary “ADAMnet” Hard Drive prototype.

This device connected directly to the ADAMnet and is recognized as disk#2. Allowing for access to the Hard Drive from EOS programs without going through any additional software or modifications. Additional partitions can only be accessed through *MI ADAMnet HD 3.9A*.



The project was scrapped due to some hardware purchasing issues and the failure to implement TDOS by a 3rd party. Originally two prototypes were produced and only one was thought to exist today in the hands of a true ADAMite. He collected it in Feb of '82 at ADAMcon 10. Recently parts (*thought destroyed*) were found to support another prototype, which is now fully functional thanks to the help of MicroFox!!! Thank you again to **MARK GORDON you are a LEGEND, R.I.P.**

Me and My Adam

It was the early hours in the morning near the middle of the Spring 1984 semester during my undergraduate studies. I was printing a paper that I finally finished – and that was due later that morning – on the Coleco ADAM that I had bought less than two months earlier.

About a third of the way through the paper, something went wrong and the printing stopped. No matter what I did, the printer would not restart. Fortunately, the computer was still operative. So I grabbed my portable typewriter and retyped the remainder of my paper by looking at what was on the monitor, and submitted it later that morning.

That is how I was one of the hundreds of thousands who found themselves with defective Coleco ADAM computers.

It was a terrible situation. I was once again left without a computer for college. My first hope had been the Intellivision add-on. But the Entertainment Computer System was just a toy (and the originally promised Keyboard Component never made it out of the test marketing stage). Eventually, I would buy a Commodore 64 and find full-featured word processing software, making use of that until I upgraded to a PC-compatible system in graduate school a few years later.

But making it much worse was that it had erased all the joy that I had felt when I purchased the ADAM.

The machine used Apple BASIC – which I had learned in high school. So programs that once again use some of the simple programs that I had previously written. And Apple BASIC programs were commonly available in the computer magazines of the day, so that was another source of code.



The ADAM also was a functional Colecovision which had the best graphics for home video games systems at that time. The two I initially purchased were my two favorite games from the arcade at that point – Omega Race and Cosmic Avenger. Both games had their Intellivision ports canceled but now I was going to be able to play them.

So for the better part of two months, I thoroughly enjoyed being an ADAM owner. My father and I had built a computer station in my bedroom. I had an old black-and-white television for a monitor. I played the two Colecovision games – as well as the pack-in Buck Rogers ADAM game pack. I studied the manuals to ensure I knew all the intricacies of the built-in BASIC. And I used the built-in word process to complete my course assignments.

All of this came to a crashing halt that one fateful night. When I returned home after my classes and work, I tried to fix my ADAM. But my efforts were to no avail. Eventually, I took the only action available to me and returned the unit to Sears. At first, the store did not want to take the unit back because I did not have the Styrofoam blocks that had surrounded the computer in the box. After I instated that it did not have those, the clerk finally processed my return. (I found the Styrofoam several months later having been stored in the attic for safekeeping). Likewise, I took the games back to Toys R Us since I had had them for less than 60 days. So I was not out any money – just the convenience and joy that I had experienced with a working computer.

Years later, when I started collecting different video game systems, I re-purchased the Colecovision games – only then learning that Omega Race was in color on the CV. (The arcade version was black-and-white as was the TV I used for my ADAM.) I even acquired a working ADAM along the way – mostly to play pre-made games as the BASIC language and builtin word processor are now relics from another time.



Still, I wonder what would have been for me – and for a lot of other people – had the ADAM not been plagued with the quality control issues that led to its– and the Colecovision's – demise.

Article by: Michael Dougherty

Developing ADAMBBS for ColecoVision Family Computer System

The online computer world of 1986 was vastly different than today. There was no home Internet or social media. We, the early home computer and video game enthusiasts, seemed somewhere between the Dark Ages and the Age of Enlightenment.

Adding an **ADAMLink 300** baud internal modem to the **Coleco ADAM** computer system offered us new online opportunities and fun, but racked up hefty usage fees **BY THE MINUTE!** Even **America Online** was yet to be born, practically making the large **CompuServe** system our sole option for interactive online services.



In these mid-1980s, Electronic Bulletin Board Systems (BBS) really started taking off. They offered similar discussion boards and file transfer libraries. Many were completely free unless you incurred long-distance phone number charges. Owners of all varieties of computers could access these independently-operated services which typically allowed one caller at a time. We had to learn patience with the busy signals!

There were growing numbers of BBS systems hosted on **Apple**, **Atari**, and **Commodore** computers. In 1985, I purchased my first **Coleco ADAM** and started calling **CompuServe** as well as these free bulletin boards. Some online communities were kind and accepting, but the **Coleco ADAM** was generally shunned and ridiculed for the poor quality reputation of the disastrous 1983 Christmas rollout.

I quickly saw that my **Coleco ADAM** was a great game system, and a practical computer with built-in word processing and letter quality daisy wheel printer. With the purchase of **Coleco CP/M 2.2** operating system, **ADAM** gained compatibility with a vast library of established business programs too.

I felt the time had come to show the world that **ADAM** was more than capable as a home computer, and as a telecommunications system for the new online world. I had not found any **ADAM** BBS software for sale yet, and started toward my goal to program one. I knew BASIC well, but thought something more efficient was needed for the BBS that I had in mind. I began reading the 316 page long **CP/M 2.2 & Assembler** manual to learn Assembly Language.

I began that long learning curve but finally completed my BBS for release in 1986 with the original name “**ADAMCastle BBS.**” Today we simply call it “**ADAMBBS.**” It was sold and registered directly to customers, and selected by a very popular **ADAM** hardware vendor in Ohio who ran a modified version for years. My unique design ran entirely in 64K RAM memory so activity was instant, unlike those other computer systems with delays accessing floppy disk drive storage. I was happy that the **ADAMBBS** fast and smooth performance surprised many users of those other, more popular computer systems.

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ADAMBBS Pro Edition v4.3.0
Copyright 1986-2023
by Shawn Merrick
All rights reserved. SN:00001

[ANSWERING CALL] 07/12/23 PM
TOTAL CALLS:00000 TODAY:00000

<Game Fire> to Manual Answer
or <Space>

FILE LIBRARIES
# OL UL
[DRIVES]
STORAGE [A:]
RUN OPT [A:]
44MB
<Store/Get> AFTER
Exchanging Media 5

Message Buffer TOTAL:[32768]
Bytes [RAM] FREE:[31999]

<Return>=Local Console Sign-on
<ESC>=SAVE and Shut Down
```

In time, I moved on to other I.T. career opportunities supporting **IBM** compatible PC systems. Most of my **Coleco ADAM** collection was passed on to others, except for a handful of irreplaceable and treasured mementos.

In late 2021, I returned to the **Coleco ADAM** community for my RETRO system. How bizarre! Who are you calling old? Anyway, sitting there in storage was my single, 35-year old **ADAMBBS** source code disk, and the rare, modified 3.5 inch disk drive unit. The diskette contained less than 720K of **CP/M 2.2** operating system, programming tools, and THOUSANDS of lines of my proprietary **ADAMBBS** programming.

I re-acquired a working vintage **ADAM** system while wondering if that fragile drive and the magnetic media had both survived 35 years intact. If not, the colossal BBS beast was gone forever, never to see the light of day again. The nature of selling directly, along with decades of modern replacement cycles for older technology meant there were probably no surviving program copies to be found anywhere today, let alone my original source code!

Miraculously, the artifact booted fine! With excitement, I carefully duplicated the contents to a modern SD card. I refreshed my memory on the ancient programming tools and made a promise to the **ADAM** community to release the dial-up version as a public domain program. That was completed with some new cosmetic enhancements and titled “**ADAMBBS Vintage Edition**” in December 2021.

Since then, I started working on **ADAMBBS Pro Edition**. This will allow support for WIFI modem Internet connections substituting transparently for the dial-up. With decades of computer experience behind me, I started redesigning **ADAMBBS** with even more comprehensive changes and user interface. The general functionality is nearly the same, but the experience is now much improved. I plan to finish documentation for the Pro version and release it for sale at a modest licensing cost in the Spring of 2024.

This was always a labor of love for the system that brought me so much joy since 1985. I hope you continue to enjoy your **ColecoVision** or **ADAM Computer System** just as much in 2024 and beyond!

Article by: Shawn Merrick



***Relive the 80's, access our BBS running ADAMBBS Pro via telnet at:
adambbs.servebbs.org Port 6400.***

Interviews

The following interviews were conducted via email by William Hicks and originally published on the 8 Bit Milli YouTube channel in January 2021.

Howard Eglowstein

Howard Eglowstein was instrumental in the development of a lot of the hardware used in the Coleco Adam.

What was your role at Coleco and in the design of the drive?

I was hired mid-1983 as a Sr. Engineer in the systems group. We were responsible for all firmware & software that was not considered games and not being written by consultants. By the time I started, the ADAM prototypes for the June 1983 CES were already done. The hardware folks had connected an Entrepo wafer drive (stringy floppy, which was commercially available) to the prototypes, and the game developers had explored the supergame format already. It was their experience that said the wafer tape was unreliable and had to go. I don't know specifically who came up with the idea of putting digital tape in a cassette housing, but that decision had been made as well. Teac had produced samples of drives. Gerry Wheeler (who worked with Walter Banks) was writing the firmware for the drive. When I started, there was a plan for ADAMNet (designed and developed in house) and we had Gerry's prototype drive which was capable of writing data and reading it back. It couldn't connect to anything though. In the weeks before any hardware was available to test with, I implemented the low level transport layer for ADAMNet block devices. Bill Rose had implemented the ADAMNet master code and cobbled together a demo of the keyboard. I took Gerry's low level code, added in the transport layer (which worked on the first test!) and after writing some Z80 test code and tuning that, the master and my new tape code, was able to write and read back data over the network. The design of the software interface to th drive evolved from discussions with the application developers and the folks writing EOS.

How long did it take to design the data drive?

The drive itself was supposedly designed from sometime the last quarter of 1982 until earlyish 1983 when the wafer drive was deemed to be garbage.

Did you use any existing tape devices as the basis for the design?

My understanding is that it was an in house decision to use digital tape, and that housing it in a standard cassette was easier to manufacture than any other options. I believe the drive itself was a purely custom design, possibly done with input from Teac, who was said to have built the prototypes.

Was the prototype built in house? Does the prototype still exist?

I believe it was. The first handmade units would have included the one Gerry Wheeler used to write his 6801 code. I got that to test the fledgling ADAMNet code with, and it's possible that I have it in my ADAM. It would have been one of small sample. If you're referring to some wacky test bench version made of duct tape and hot glue - if that version ever existed it was before my time there.

Was there plans for a upgraded data drive? Faster? More storage?

We designed the block transport mechanism on ADAMNet for drives that were immensely larger than any we'd have guess would ever exist. By the time the ADAM shipped, we had already explored disk drives and had come to the conclusion that a disk drive of some sort was the obvious next storage device.

How many data drives were produced? I know of at least 3 versions. One where all the wires are soldered to the 2 boards. One where some are attached with connectors and another where all wires are attached with connectors and has a very clean layout. Was there any other versions?

I'm aware of two manufacturers. The first set of drives were made by Teac. They are quieter and more precise than the ones that went into production machines. Hundreds of them were made. At one point some folks connected to the hardware team made tape duplicators out of dozens of those. A single drive was used as a master, and a bunch (1 or 2 dozen) were connected as recorders. They'd load a tape in the master and hit a button. That would rewind all of the drives, start reading from the master and recording on all the others simultaneously. Those drives were carefully calibrated and can be identified with unique 2-digit numbers written on the housing in liquid paper. I have a few of those. The only other ones I'm aware of were made by a vendor and sold in production machines. It's not surprising that the design was cost reduced along the way. If that meant removing connectors to save money, that was common. I wasn't involved with manufacturing so I can't say what happened or in what order. The folks in Amsterdam often took when we gave them and tweaked it.

Was there ever an external data drive setup so you could have all 4 tape drives that EOS supported?

My understanding was that EOS supported two tape controllers (2 drives each). Devices 8 and 9 maybe? There must have been a physical prototype of an external tape unit which would have had space for two drives in it. The firmware does not have the flexibility to change ADAMNet addresses on the fly like the disk drive code does - so a special version of the code would have had to be done. If someone took the production code and changed the address from 8 to 9 for that, it wasn't me. The only update done on the tape code was to allow the drive to format tape. The formatting code would be delivered as a 1K data block to the drive (written in 6801 code) and "written" to a special block on the tape. Instead of writing the data to the tape, the drive would execute it as a subroutine. If memory serves, you'd write the code to block 0xDEADFACE or 0xDEADBEEF (I don't recall which). The drive would go offline while the formatter ran. We had already produced 100K or so of the production 6801s so this code was slated for the next run of 6801s which never happened. Two or three copies of that exist, one in my ADAM. The formatter than was a small program that simply read the 1K routine from a tape or disk, prompted the user, then wrote this special block. There was a CP/M version, and a updated version of Disk Manager knew how to do this.

James Notini

This is an interview I did recently with James Notini, an Adam enthusiast from the start and a person who may have single handily kept 1,000's of pieces of Adam software, documentation and other important pieces of information from disappearing into the trash can of history before the internet came along. James now manages the Adam Archive, the place for everything Adam.

When did you get your first Adam computer?

I received my first ADAM Computer, which was an Expansion Module #3, as a Christmas present in 1983. It was purchased from Service Merchandise in Norridge, IL a couple days before Christmas after my parents searched high and low for weeks for a store that had any stock available. Around the Chicago land area, they were a hot commodity and as soon as stores received stock, they were immediately sold out. This system worked perfectly out of the box and was used for roughly 3 years before I replaced the Expansion Module #3 Memory Console/ColecoVision combo with a Stand-Alone Memory Console that I purchased from Alpha-1. I think I sold the Exp. Mod. #3 Memory Console through NIAD after I started working at their computer store, CompuKingdom, in Lisle, IL.

All the other components from the Exp. Mod. #3 bundle worked flawlessly for me for years and were sold off in 1996 with my entire collection.

To backup a year, I received my first ColecoVision as a Christmas present in 1982, but only after I had to agree with my father that I would sell my Atari 2600 and collection of about 20 games. That was about the easiest decision that I ever had to make in my life and Christmas '82 and '83 are without a doubt the two best Christmas days that I've ever experienced.

From all that we have seen, over the years you have had basically everything that was made for the Adam. Is there any hardware or software you were never able to your hands on?

As far as software, there were a lot of titles listed in the M.W. Ruth Co. catalog that sounded interesting, but that I never did get a chance to obtain. I am sure that the largest majority of these titles were just shovelware, but there could have been a gem or two in there as well. Actually, when I worked for NIAD, I handled all the ordering of stock and when we needed items that M.W. Ruth Co. handled distribution of, I would always order some of these software titles so that I could check them out to see if they were worth adding to the NIAD Product List. For the most part I was right about shovelware (try the America's Cup disk image), but there were some good programs discovered this way such as the ADAMagic software titles, which were released by their author into the Public Domain not long after purchasing them.

As far as hardware, I never did purchase any of the Micro Innovations lineup of hardware for the ADAM. I already had a loaded system with 3 disks drives of varying sizes and I wasn't that interested in their Hard Drive lineup seeing as I thought it was more geared towards T-DOS users... which it really isn't once you learn your way around setting up the EOS programs for use with it. I finally did break down and buy the MicroFox IDE CF Card Package, so some 20 years after the fact, I got to see first hand what a Hard Drive setup functioned like on the ADAM.

So that was the long answer, the short answer is pretty much no except for those ultra rare or low production run items like the Super Talk Voice Synthesizer by Steve Jacoby Enterprises that was recently sold on eBay. I saw the advertisements for it back in the day, but never bothered especially since I already had the EVE Speech Synthesizer.

NIAD lasted for over 9 years starting in 1985. What was the motivation for NIAD and what was your involvement in it?

The founder of NIAD, Lyle Marschand, saw an opportunity to do something positive and create a Users Group for people located in the Chicagoland area probably sometime in the Fall of 1984, which was just before the real fall in January of 1985. Lyle's idea was to provide a full service users group that

published a newsletter, provided a mail-order service, held monthly meetings and offered tech call-in times for a computer that he felt was amongst the best home computer systems available at that time. Suffice it to say that when Coleco abandoned the ADAM, a few select groups/mail-order companies filled the void left by Coleco and really took off as very profitable businesses. In NIAD's case, it was so profitable that it afforded Lyle the opportunity to open a computer store and move NIAD out of his basement.

I signed up for a NIAD membership sometime in early 1985 and eventually started attending some of the monthly group meetings that were held at a library. When the computer store was opened sometime in 1987, I would always drive out there when I wanted to purchase something instead of using the mail-order service. On one of these occasions that I was at the store, it was mentioned that they were going to be shorthanded and were looking to hire someone, so I jumped at the opportunity. That would have been in April of 1988 and as time went on I took over more and more of the daily duties of NIAD from processing and filling orders, tech call-ins, testing and simple repairs, newsletter editor and article writer, etc., etc. You name it, I eventually took it on especially since Lyle worked long hours at his job and still had a young family to raise. Oh, did I mention that NIAD was operated out of a computer store at this time and I was the store manager as well! Suffice it to say that I earned my hourly wage and probably worked as many hours at home on my time just to keep up and get the newsletter out in a timely manner... which was usually a couple weeks late all the time. When CompuKingdom closed (summer of 1992), we moved NIAD to my parents house and then in December of 1993, NIAD moved again to my newly purchased condo. By this time, NIAD was on its last legs especially since I was working a full-time construction job for the local gas company and just didn't have the time or will to keep it going by the summer of 1994.

What do you think was the largest influence that NIAD had on the Adam community?

Considering that Coleco abandoned the ADAM and a lot of fly-by-night ADAM businesses started in 1984 and 1985 that basically took people's money and ran, the largest influence of NIAD would have been as a reliable and honest business that provided years of service to ADAM owners throughout the world. The only regret I have is how NIAD ended with me just basically calling it quits and returning everything that made up NIAD at that time to Lyle.

What is the most interesting story about the Adam you can share with us?

That's a tough one to answer. I guess if we stick to a personal nature, in part because of the ADAM:

- I got suspended in High School for a week when I used SmartWriter to type up and print a True/False test about a fellow student and his mom.

One printout wouldn't have been bad, but then I made about 50 copies in the school library that got passed around!

- I quit my job of 5 years at a Dominick's Food Store where I was making \$11 dollars an hour to take the job at CompuKingdom/NIAD for \$7 and hour.... plus NUMEROUS perks!!!
- I stopped going to classes at the Junior College that I was attending and eventually quit school altogether because of my new job at CompuKingdom/NIAD.

On a non-personal nature, I guess the whole Soloman Swift/Digital Express fiasco would be the most interesting especially some of the personal conversations that I had with Sol when he was at his lowest. I'll leave it at that... sorry.

Looking forward, what do you see for you and the Adam?

Seeing as I am out of the collecting game where I had the need to reacquire everything ever made for the CV and ADAM and am now just content with having a hardware collection that covers all bases of usage, I just want to enjoy using the system, seriously playing all these new CV releases and learning new things about it for as long as it works. The ADAMem emulator is an awesome alternative and one that I use all the time in order to save extra wear and tear on the actual hardware, but there's nothing like using the real deal. Aside from that, I'll keep plugging away at the ADAM Archive organizing it and tracking down as many missing items as possible. Last, but not least, like I have done since the NIAD days, just help out others as much as possible with their questions and of course to keep championing the system.

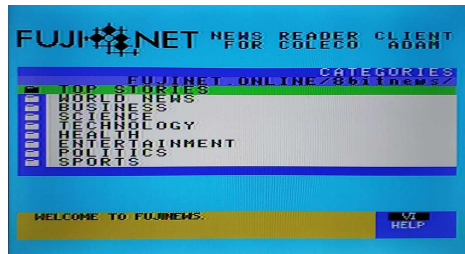
FujiNet – A User's Perspective

In late 2022, never having personally seen an Adam I discovered Fujinet had been developed for it. Forty years of computing have passed since the machine first hit the market, and today I can stretch its legs.

The Adam was theoretical to me for many years, for lack of peripherals. Beyond the supplied DDP deck and printer it has no means of communication outside of itself. RS232 serial cards were made, as have been floppy drives, hard disk cards and so forth, but the cost of these is relatively high for their utility.

Time heals all wounds and Fujinet is the world's apology for not supporting the wonderful Adam in its infancy. For less than a third of what a floppy drive would cost on ebay Fujinet supplies:

- Four Floppy drives supporting all disk densities the Adam can address, up to eight megabytes per volume. (32meg available at once).
- Two DDP tape decks.
- Adam printer with drivers for Adam daisy wheel and a couple dozen others.



So the 40-year-long peripherals shortage is solved for eighty or a hundred beans. You can even build your own; the design is entirely open-source.

In addition to the badly needed peripheral support, Fujinet supplies extraordinary features entirely new to our legacy computers. Fujinet connects to your Adam via its AdamNet connectors, and to the rest of the world via Wifi and the Internet. Not only can you boot and run your Adam from the sd-card on your Fujinet, you can boot and run your Adam from a server anywhere in the world - and there are many servers, such as mine at Atari8.us, presently supporting both Atari and Coleco 8-bit computers.

When you power your Adam, it will boot from Fujinet's Drive 1 and supply a connection wizard to get your Adam on wifi. After that, you may load software and games from any server in the list before you or you may enter a new server you have the address of, such as Atari8.u

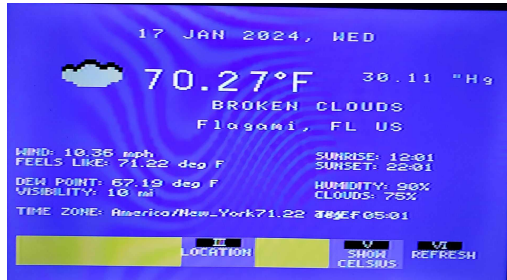
Fujinet's networking is not the familiar clunky band-aid but an integrated device addressable by the user at the operating system-level, as are the Adam disk or Adam DDP drives and in the same fashion. This allows for user-developed

applications to take advantage of the internet for multiplayer games, chatting and collaboration, and any other need you can imagine!

Presently there is a grassroots effort to modify existing games to report high-scores globally. No more fibbing on yours at Defender! and quite a few games so enhanced.

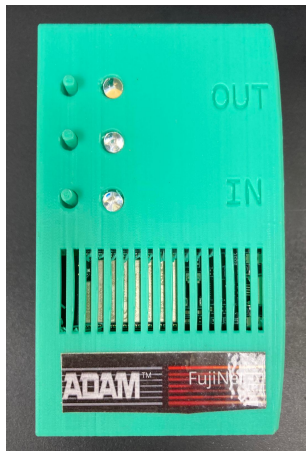
Examples of native networking applications for Fujinet users include:

- Multiplayer-games!
- A local Weather program, displaying your locality's present situation in a graphical format,
- An inter platform Fujinet chat program. Talk with other's on their Adam, Atari, Commodore and other 8-bit computers.
- A program with which to search and read wikipedia articles. This one is the gift that keeps on giving.
- Finally Adam can simply 'call' online BBS's!



Mature for Adam and Atari, Fujinet is being developed for Apple, TI 99, and TRS-80 Color Computer lines.

Article by: Jeffrey Worley



The Adam Computer and Expansions

Picking up where we left off with the ColecoVision and the Art of Expansions article last month, in this article we're going to focus on Adam specific expansions.

Keep in mind that all Colecovision expansions / enhancements can be used with the Adam so for Adam owners, the previous article still fully pertains to you.

After the successful launch of the ColecoVision, Coleco was ready to move into the realm of the home PC. Unaware of the crash that was around the corner and other decisions and mistakes with how the Adam launched resulted in the demise of Coleco. I'm not going to spend a lot of time on this as there are much better articles and videos out there that go into the nitty gritty destruction of Coleco.

However, what might be less discussed in those stories is that the Adam in spite of it's commercial failure had one thing going for it. Coleco made a LOT of them before going under and this surplus ultimately found itself onto liquidator shelves and these computers didn't end up in landfills, but in fact in homes across America who were looking for a good computer for a killer deal. Sure it wasn't the best out there, but no other computer selling at normal retail value could hold a candle to it.

This emergence of a solid user base was large enough for 3rd party developers to see an opportunity to create software and accessories for the Adam to extend their usefulness. Unfortunately I couldn't find much documentation out there for all the niche expansions made back in the day and given their relatively small market are certainly still out there, but I've never come across anything so these expansions are best considered unobtainium today. Fortunately, we have modern accessories that match if not exceed the capabilities of these original upgrades, so we're fortunate to have options that exist today for reasonable prices.

Disclaimer: I am STILL not responsible for the money you are almost certainly going to spend before you finish this article :)

The Adam News Network (multiple products)

This is a fantastic site for Adam owners looking for some affordable memory and storage upgrades. I've bought several things from this site for my Adam and definitely encourage Adam owners to get the most out of their systems.



<http://ann.hollowdreams.com/adamsupplies.html>

Lundy Electronics (Multiple Products)

John has produced a slew of impressive Adam and Colecovision expansions. His website is well laid out and so I'm just going to put a link below. However, in case you're not looking to leave my riveting article, I can sum up a few really awesome products that he offers such as a MIDI Interface, a dedicated Adam Drive Emulator, and Adam Speech Synthesizer. Even more stuff out there if you're looking to take your Coleco and/or Adam to new heights!



<https://lundyelectronics.com/product-category/retrocomputers/>

FujiNet

This is a product that was made open source and a group of makers produce these. This is a fascinating piece of kit. It gives you several very powerful features for your Adam. This connects through the AdamNet port. It gives you the ability to:

- “print” to a PDF on a microSD card.
- Acts as a virtual tape drive to allow you to load roms / tapes from microSD card
- Gives you wifi and internet access to a group of Adam friendly
- Download Roms directly from the internet into the ram of the Adam



<https://fujinet.online/purchase/>

Adam Replacement Power Supply

The Adam, like the Colecovision is not immune to a bad external PSU. Thankfully it too has an alternative modern solution that will insure power will be reliable for years to come.



<https://8bitmillgames.com/coleco-adam-replacement-power-supply.html>



<https://www.arcadeshopper.com/wp/store/#!/Adam-replacement-power-supply/p/363366783>

Adam Cradle Replacement and Fix

There is a replacement cradle available to allow your controller to operate as an early alternative to the mouse.



<https://www.ebay.com/itm/115911763310>

Additionally if you have one of the original cradles, but the teeth snapped off, there is a solution that will allow you to securely connect your cradle to the keyboard.



<https://www.ebay.com/itm/115912101471>

In Conclusion

The Colecovision world was an impressive one in it's heyday and continues to prove to be one of the best supported modern classic platforms 40+ years after its arrival. There are great products that can empower anyone from the casual owner to the power user.

Article by: Caleb Garner

Contributors:

William “Milli” Hicks has spent the last 25 years working in the computer industry as a software engineer. During this time he has also been very active on the side with retro computers and video game consoles. In 2019 he decided to see if he could take his hobby and actually make money at it by starting 8 Bit Milli Games.

Rich DiRocco is now retired from the retail food industry living in North Georgia. Studied Business Administration/Computer Information Systems (Fortran, COBOL, Pascal) in college then never touched those languages again. Now venturing back into programming and digital art. First game system was a 2600 followed by a ColecoVision then had to have the ADAM EXP. #3 and has used it ever since. Now has a vast collection of ColecoVision/ADAM and related hardware and Software.

John Lundy holds a degree in electronics and has more than 30 years of experience in the electronics field. His background enables Lundy Electronics to provide professionally-designed products built using quality parts. Lundy Electronics is his retirement business to have fun and share solutions for those who have the same fondness of retro computers and pinball machines. When he is not working on electronic projects, he enjoys going to the gym, playing pinball, mountain biking, and home-brewing beer.

Michael Dougherty has played video games since Pong. While his first dedicated system was an Intellivision, he did have an ADAM upon release (briefly) before getting back into the Colecovision in the mid-1990s. He currently has over about 150 CV games – plus a few for the ADAM.

Shawn Merrick began studying small computer systems in high school during the early 1980s and completed formal education with a degree in Business Administration and Computer Information Systems. He learned to program in Assembly, BASIC, and COBOL languages for PC and midrange computer systems. Since 1982 he has enjoyed ColecoVision products and developed the ADAMBBS online system for the Coleco ADAM computer in 1986. He retired from a decades-long public service career in Louisville Kentucky supporting various computer and networked systems.

Caleb Garner is an avid classic gamer and aspiring homebrew programmer. He created www.8bitwidgets.com as a website to showcase the various controller couplers, cartridge shells, accessories, and adapter products of most of the original 8-bit consoles. He is happy to find ways to collaborate with others on cool new innovations.

Jeffrey Worley, from 1984's first modem known as 'Technoid Mutant', is a computer technician and collector of hardware he would have given a limb for when it was new: Amiga, Sun, DEC, SGI, NeXT... You can find him on Facebook's pages, as well as at Atariage.com.