

## Failure Case for ENTR200 Class Discussion

Based on [http://en.wikipedia.org/wiki/Commodore\\_International](http://en.wikipedia.org/wiki/Commodore_International) accessed 12/13/07



**Commodore**, the commonly used name for **Commodore International**, was an [American electronics](#) company based in [West Chester, Pennsylvania](#) which was a vital player in the [home/personal computer](#) field in the [1980s](#).

The company is also known under the name of its [R&D](#) operation, **Commodore Business Machines (CBM)**. Commodore developed and marketed the world's best-selling desktop computer, the [Commodore 64](#) (1982). The company declared [bankruptcy](#) in [1994](#), but since then, there have been several attempts to revive its [Amiga](#) systems.

## History

### Foundation and early years



Original Commodore logo: all-lowercase company name (1962–1984).



Commodore PR-100 programmable calculator

The company that would become Commodore International was started in [1954<sup>\[1\]</sup>](#) in [Toronto](#) by Polish immigrant and [Auschwitz](#) survivor [Jack Tramiel](#). He had already run a small business repairing [typewriters](#) for a few years while living in New York and driving a [taxicab](#), but managed to sign a deal with a [Czechoslovakian](#) company to

manufacture their designs in Canada, and moved to Toronto to start production. By the late 1950s a wave of Japanese machines forced most North American typewriter companies out of business, but Tramiel instead turned to [adding machines](#).

In [1962](#) the company was formally incorporated as **Commodore Business Machines (CBM)**. In the late [1960s](#) history repeated itself when Japanese firms started producing and exporting adding machines. The company's main investor and chairman, [Irving Gould](#), suggested that Tramiel travel to Japan to understand how to compete. Instead, he returned with the new idea to produce electronic [calculators](#), which were just coming on the market.

Commodore soon had a profitable calculator line and was one of the more popular brands in the early [1970s](#), producing both consumer as well as scientific/programmable calculators. However, in [1975](#), [Texas Instruments](#), the main supplier of calculator parts, entered the market directly and put out a line of machines priced at less than Commodore's cost of the parts. Commodore had to be rescued once again by an infusion of cash from Gould, which Tramiel used beginning in [1976](#) to purchase several second-source chip suppliers, including [MOS Technology, Inc.](#), in order to assure his supply. He agreed to buy MOS, who were having troubles of its own, only on the condition that its chip designer [Chuck Peddle](#) join Commodore directly as head of engineering.

## "Computers for the masses, not the classes"



Commodore PET 2001 (1977)

Once Chuck Peddle had taken over engineering at Commodore, he convinced Jack Tramiel that calculators were already a dead end and that they should turn their attention to [home computers](#). Peddle packaged his existing [KIM-1 single-board computer](#) design in a metal case, along with a full-travel [QWERTY](#) keyboard, [monochrome monitor](#), and [tape recorder](#) for program and data storage, to produce the [Commodore PET](#) (Personal Electronic Transactor). From its [1977](#) debut, Commodore would be a computer company.

Commodore had been reorganized the year before into **Commodore International, Ltd.**, moving its financial headquarters to the [Bahamas](#) and its operational headquarters to [West Chester, Pennsylvania](#), near to the MOS Technology site. The operational headquarters, where research and development of new products occurred, retained the name Commodore Business Machines, Inc. The corporate offices are now home to [QVC Studio Park](#).

The PET computer line was used primarily in [schools](#), due to its tough all-metal construction (some models were labeled "Teacher's PET"), but did not compete well in the home setting where graphics and sound were important. This was addressed with the introduction of the [VIC-20](#) in [1981](#), which was introduced at a cost of [US\\$299](#) and sold in retail stores. Commodore took out aggressive ads featuring [William Shatner](#) asking consumers "Why buy just a video game?" The strategy worked and the VIC-20 became the first computer to ship more than one million units. A total of 2.5 million units were sold over the machine's lifetime.<sup>[2]</sup>



Commodore 64 (1982)

In [1982](#), Commodore introduced the [Commodore 64](#) as the successor to the VIC-20. Thanks to a well-designed set of [chips](#) designed by MOS, the C64 possessed

remarkably capable sound and graphics for its time and is often credited with starting the computer [demo scene](#). Its US\$595 price was high compared to the VIC-20, but it was still much less expensive than any other 64K computer on the market. Early C64 ads boasted, "You can't buy a better computer at twice the price."

In [1983](#), Tramiel decided to focus on market share and cut the price of the VIC-20 and C64 dramatically, starting what would be called the "home computer war." TI responded by cutting prices on its [TI-99/4A](#), which had been introduced in 1981. Soon there was an all-out price war involving Commodore, TI, [Atari](#) and practically every vendor other than [Apple Computer](#). This price war likely contributed to the [video game crash of 1983](#). By the end of this conflict, Commodore had shipped somewhere around 22 million C64s—making the C64 the best selling computer of all time—and in the process, drove TI out of the home-computer market, almost destroyed Atari, bankrupted most smaller companies, and wiped out its own savings. Tramiel's motto, "Business is war," had taken its toll.

## Tramiel quits; The Amiga Vs. ST battle



Second Commodore logo, with mixed-case company name (1985–1994).

Commodore's board of directors were as impacted as anyone else by the price spiral and decided they wanted out. An internal power struggle resulted; in January [1984](#), Tramiel resigned. He founded a new company, Tramel Technologies (spelled differently so people would pronounce it correctly), and hired away a number of Commodore engineers to begin work on a next-generation computer design.

Now it was left to the remaining Commodore management to salvage the company's fortunes and plan for the future. It did so by buying a small company called [Amiga Corporation](#). The company was better known for its forays into the video game market, designing controllers for game consoles as well as making games for the Atari 2600. Their video game business was successful, but the company had a strong interest in designing a groundbreaking new personal computer. Commodore brought this new [16-bit](#) computer design (known initially as the Lorraine, later dubbed the [Amiga 1000](#)) to market in the fall of [1985](#) for US \$1295.

But Tramiel had beaten Commodore to the punch. His design was 95% completed by June (which only fueled speculation that his engineers had taken technology with them from Commodore). In July 1984 he bought the consumer side of Atari Inc. from [Warner Communications](#) which allowed him to strike back and release the [Atari ST](#) earlier in 1985 for about \$800.

During development in 1983, Amiga had exhausted venture capital and was desperate for more financing. [Jay Miner](#) and company had approached former employer [Atari](#), and the "Warner owned" Atari had paid Amiga to continue development work.<sup>[31]</sup> In return Atari

was to obtain one-year exclusive use of the design. Atari had plans for a 68000-based machine, code-named "Mickey", that would have used customized chips – but details were sparse.

The following year, Tramiel discovered that [Warner Communications](#) wanted to sell Atari, which was rumored to be losing about \$10,000 a day. Interested in Atari's overseas manufacturing and world-wide distribution network for his new computer, he approached Atari and entered negotiations. After several on-again/off-again talks with Atari in May and June of 1984, Tramiel had secured his funding and bought Atari's Consumer Division (which included the console and home computer departments) in July.

As more execs and researchers left Commodore to join up with Tramiel's new company [Atari Corp.](#) after the announcement, Commodore followed by filing lawsuits against four former engineers for theft of trade secrets in late July. This was intended, in effect, to bar Jack from releasing his new computer.

One of Jack's first acts after forming Atari Corp. was to fire most of Atari's remaining staff, and to cancel almost all ongoing projects, in order to review their continued viability. In late July/early August, Tramiel representatives discovered the original Amiga contract from the previous fall. Seeing a chance to gain some leverage, Jack immediately used the contract to counter-sue Commodore through its new subsidiary, Amiga, on August 13.

The Amiga crew, still suffering serious financial problems, had sought more monetary support from investors that entire spring. At around the same time that Jack was in negotiations with Atari, Amiga entered into discussions with Commodore. The discussions ultimately led to Commodore's intentions to purchase Amiga outright, which would (from Commodore's viewpoint) cancel any outstanding contracts - including Atari Inc.'s. This "interpretation" is what Jack used to counter-sue, and sought damages and an injunction to bar Amiga (and effectively Commodore) from producing any resembling technology. This was an attempt to render Commodore's new acquisition (and the source for its next generation of computers) useless. The resulting court case lasted for several years, with both companies releasing their respective products. By March of 1987 they had settled out of court, with all suits against Tramiel's engineers dropped. His "Business is War" tactics had succeeded again.



Amiga 500 (1987)

Throughout the life of the ST and Amiga platforms, a ferocious Atari-Commodore rivalry raged. While this rivalry was in many ways a holdover from the days when the Commodore 64 had first challenged the Atari 800 (among others) in a series of scathing television commercials, the events leading to the launch of the ST and Amiga only served

to further alienate fans of each computer, who fought vitriolic [holy wars](#) on the question of which platform was superior. This was reflected in sales numbers for the two platforms until the release of the [Amiga 500](#) in [1987](#), which took over the market from the ST. Ultimately, the Amiga outsold the ST about 1.5 to 1, in spite of reaching the market later. However, neither platform captured a significant share of the world computer market.

## **Demise and bankruptcy**

In the 1970s and early 80s, the computer press had often sought Commodore (one of the industry's leading players), and its colorful management for information. The VIC-20 and C64, although aggressively marketed, were arguably more successful because of their price than their marketing. After Tramiel's departure, Commodore executives shied away from mass advertising and other marketing ploys, fearful of repeating past mistakes. Commodore also retreated from its earlier strategy of selling its computers to discount outlets and toy stores, and now favored authorized dealers.

By the late 1980s, the personal computer market had become overwhelmed by the [IBM PC compatible](#) and [Apple Macintosh](#) platforms. Commodore's marketing efforts for the Amiga were less competitive and seemed half-hearted. The company also concentrated on consumer products that would not see a demand for another few years—including a [digital TV](#) system called [CDTV](#).

In the early 1990s, CBM continued selling Amigas with 7–14 [MHz 68000](#)-family CPUs (even though [Amiga 3000](#) with 25 MHz [68030](#) was in the market by that time), when PCs with 33 MHz [486](#)'s, high-color [graphics cards](#) and [SoundBlaster](#) (or compatible) [sound cards](#) offered comparable, and eventually higher, performance, albeit at higher prices. By way of contrast, when introduced in 1985, the Amiga had competed favorably against [286](#)-based systems with [EGA](#) graphics and rudimentary sound capabilities that frequently cost 2–3 times as much.

In 1992, the production of the [A600](#) seemed like a backward move; it replaced the [A500](#), yet it removed the numeric keypad, Zorro expansion slot, SCSI capability, and other functionality in favor of PCMCIA and a theoretically cost-reduced design. It was basically unexpandable and lasted less than a year. Productivity developers moved to PC and Macintosh, while the console wars took over the gaming market. David Pleasance, managing director of Commodore UK, described the A600 as a 'complete and utter screw-up'. (Smith, 1994)

In late 1992, Amiga hardware began to reach parity with PCs with the release of the [A4000](#) and [A1200](#) computers, which featured an improved graphics chipset, the [AGA](#). By this point, both the IBM PC and Apple Macintosh had a much larger market share than the Amiga platform. As software developers shifted to these platforms, the Amiga lost value for mainstream consumers. The custom-designed and custom-built AGA chipset also cost Commodore considerably more than the commodity chips used in IBM PCs, further reducing Commodore's profit margins. Common wisdom was that even

though the AGA clearly improved upon the original chipset (OCS), it never returned to Amiga the clear dominance of multimedia computing that it once promised.

[Software piracy](#) has often been given by trade publications and user groups as the reason for the Amiga's demise, but this is controversial. For information on the specific challenges in the Amiga market of the time, see the [Amiga Software](#) article.

In 1994, the 'make or break' system, according to Pleasance, was the 32-bit [CD-ROM-based game console](#): the [CD32](#), but it was not sufficiently profitable to put Commodore back in the black.

By [1994](#), only its operations in [Germany](#) and the [United Kingdom](#) were still profitable. Commodore declared bankruptcy on [April 29, 1994](#), and its assets were liquidated. The former site of Commodore's operational headquarters in [West Chester, Pennsylvania](#), now houses the headquarters and broadcast studios of leading cable retailer [QVC](#), Inc. (On [November 26, 2004](#), QVC became the first retailer to sell the [DTV](#), a "C64 in a joystick" designed by [Jeri Ellsworth](#).)

The company's computer systems, especially the C64 and Amiga series, retain a cult-following among their users years after its demise.

## **Post-Commodore International, Ltd.**

Following its liquidation, Commodore's former assets went their separate ways, with none of Commodore's successors repeating Commodore's early success.

Commodore UK was the only subsidiary to survive the bankruptcy and even placed a bid to buy out the rest of the operation, or at least the former parent company. For a time it was considered the front runner in the bid, and numerous reports, (all false), surfaced during the [1994-1995](#) time frame that Commodore UK had made the purchase.

Commodore UK stayed in business by selling old inventory and making computer speakers and some other types of computer peripherals. However, Commodore UK lost its financial backing after several larger companies, including [Gateway Computers](#) and [Dell Inc.](#), became interested, primarily for Commodore's 47 patents relating to the Amiga. Ultimately, the successful bidder was [German PC conglomerate Escom](#), and Commodore UK was absorbed into Escom in mid-[1995](#).

Escom paid US\$14 million for Commodore International, primarily for the Commodore brand name. It separated the Commodore and Amiga operations into separate divisions and quickly started using the brand name on a line of PCs sold in [Europe](#). However, it quickly started losing money due to over-expansion, went bankrupt on [July 15, 1996](#), and was liquidated.

In September [1997](#), the Commodore brand name was acquired by Dutch computer maker [Tulip Computers NV](#). Tulip's ownership was little more than the answer to a trivia question until [July 11, 2003](#), when Tulip announced it would re-launch the Commodore

name, including new Commodore 64-related products, and threatened legal action against commercial Web sites that used the computer's name without a license. On [18 June 2004](#), Tulip introduced the website [CommodoreWorld.com](#) (see external links, below), run by its new daughter company [Commodore International BV](#).

The Commodore brand name also resurfaced in late [2003](#) on an inexpensive portable [MP3](#) player made in the [People's Republic of China](#) by [Tai Guen Enterprise](#), sold mostly in [Europe](#). However, the device's connection to Tulip, the legal owners of the name, is unclear.

In July of [2004](#), Tulip announced a new series of products using the Commodore name: fPET, a flash memory-based USB Key drive; mPET, a flash-based MP3 Player and digital recorder; eVIC, a 20 GB music player; and the [C64 DTV](#).

In late [2004](#) Tulip sold the Commodore name to [Yeahronimo Media Ventures](#) for €22 million [\[1\]](#). The sale was completed in March [2005](#) after months of negotiations.

The Commodore Semiconductor Group (formerly MOS Technology, Inc.) was bought by its former management and in [1995](#), resumed operations under the name **GMT Microelectronics**, utilizing a troubled facility in [Norristown, Pennsylvania](#) that Commodore had closed in [1992](#). By [1999](#) it had \$21 million in revenues and 183 employees. However, in [2001](#) the [United States Environmental Protection Agency](#) shut the plant down. GMT ceased operations and was liquidated.

Ownership of the Amiga line passed through several owners, from Escom of Germany in [1995](#), and then to U.S. PC clone maker [Gateway](#) in [1997](#), before being licensed an exclusive lifetime licence to **Amiga, Inc.**, a Washington company founded by former Gateway employees Bill McEwen and Fleecy Moss in [2000](#). On March 15, 2004, Amiga, Inc. announced that on April 23, 2003 it had transferred its rights over past and future versions of the Amiga OS (but not over other intellectual property) to Itec, LLC, later acquired by KMOS, Inc., a Delaware company. On March 16, 2005, KMOS, Inc. announced that it had completed all registrations with the State of Delaware to change its corporate name to Amiga, Inc.

[Commodore Gaming](#) was formed to reintroduce the brand to the booming gaming PC market, after jointly acquiring the Commodore name with Commodore International Corporation in 2005.<sup>[\[4\]](#)</sup> . At the CeBIT 2007 show in Germany, four new gaming geared PC's were introduced; named Cg, Cgs, Cgx and Cxx. These are described as ranging from an entry level gaming PC to an “extreme specification model”. Each machine running Windows Vista with customization from a range of high end components and peripherals.

## Product line

### Computers, 8-bit

*(listed chronologically)*

- [Commodore KIM-1](#) - single board computer
- [Commodore PET/CBM](#) range
- [Commodore VIC-20](#) - aka VC-20 and VIC-1001
- [Commodore CBM-II](#) range - aka B-range aka 600/700 range
- [Commodore 64](#) - incl C64C
- [Commodore SX-64](#) - all-in-one [portable](#) C64 incl screen and disk drive
- [Commodore 16](#) - incl C116, incompatible with C64
- [Commodore Plus/4](#) - compatible with C16
- [Commodore LCD](#) - [LCD](#)-equipped [laptop](#) (never released)
- [Commodore 128](#) - incl 128D and 128DCR
- [Commodore 65](#) - C64 successor (never released)

## Computers, 16/32-bit

- [Commodore 900](#) (never released)
- [Commodore Amiga](#) range
  - [Amiga 1000](#)
  - [Amiga 500](#)
  - [Amiga 1500](#)
  - [Amiga 2000](#) - incl A2000HD
  - [Amiga 2500](#)
  - [Amiga 3000](#) - incl A3000UX & A3000T
  - [Amiga 600](#)
  - [Amiga 1200](#)
  - [Amiga 4000](#) - incl A4000T
- [IBM PC clones](#) - Commodore Colt, PC1, PC10, PC20, PC30, PC40, . . . , 486SX-LTC

## Peripherals

(listed by model number; [IEEE-488](#) devices primarily used with PET/CBM range systems)

- [Commodore 1084/1084S](#) Composite video and [RGB](#) monitor (*1084*: mono audio; *1084S*: stereo audio)
- [Commodore 1350](#) - [Mouse](#) (joystick emulation only, thus unable to track differing speeds)
- [Commodore 1351](#) - Mouse (for use with [GEOS](#) and point'n'click apps; analog input, allowing it to track differing speeds)
- [Commodore 1520](#) - Small serial [plotter](#).
- [Commodore 1525](#) - dot matrix printer.
- [Commodore 1530](#) - Data [cassette](#) recorder (aka C2N)
- [Commodore 1531](#) - Data cassette recorder (like 1530 but for C16 & Plus/4)
- [Commodore 1540](#) - 5¼" [Floppy disk](#) drive for use with the VIC-20
- [Commodore 1541](#) - 5¼" Floppy disk drive (incl 1541C and 1541-II) for use with the C64 and later

- [Commodore 1551](#) - 5¼" Floppy disk drive (for C16 & Plus/4; connects to cartridge port)
- [Commodore 1570](#) - 5¼" Floppy disk drive (primarily for C128), single sided
- [Commodore 1571](#) - 5¼" Floppy disk drive (primarily for C128), double sided
- [Commodore 1581](#) - 3½" Floppy disk drive
- [Commodore 1701/1702](#) - [Composite video](#) and [Y/C \(chroma/luma\)](#) monitor
- [Commodore 1700/1750/1764](#) - RAM Expansion Unit (REU) for C64/128, with 128/512/256 [KiB](#) (in that order)
- [Commodore 1801/1802](#) - Composite video and Y/C monitor
- [Commodore 1901/1902/2002](#) - Composite, Y/C, and [RGB](#) monitor
- [Commodore 2031/4031](#) - 5¼" Floppy disk drive with [IEEE-488](#) interface
- [Commodore 2031LP](#) - 5¼" Floppy disk drive with IEEE-488 interface (PET/CBM version of Commodore 1541)
- [Commodore 2040/3040](#) - 5¼" Dual floppy disk drive with IEEE-488 interface
- [Commodore 4040](#) - 5¼" Dual floppy disk drive with IEEE-488 interface, 48 tpi
- [Commodore 8050/8250/8250LP](#) - 5¼" Dual "quad" density floppy disk drive with IEEE-488 interface, 100 tpi
- [Commodore 8280](#) - 8" Floppy disk drive with IEEE-488 interface
- [Commodore 9060/9090](#) - [Hard disk](#) drive with 5 [MB](#)/10 MB capacity and IEEE-488 interface
- [Commodore SFD-1001](#) - 5¼" Double sided, quad density floppy disk drive with IEEE-488 interface

## Software

- [AmigaOS](#) - Operating system for the Amiga range; multitasking, microkernel, GUI
- [Amiga Unix](#) - Operating system for the Amiga, based on [Unix System V Release 4](#)
- [Commodore BASIC](#) - BASIC interpreter for the 8-bit range, ROM resident; based on [Microsoft BASIC](#)
- [Commodore DOS](#) - Disk operating system for the 8-bit range; embedded in disk drive ROMs
- [KERNAL](#) - Core OS routines for the 8-bit range; ROM resident
- [Simons' BASIC](#) - BASIC extension for the C64; cartridge-based
- [Super Expander](#) - BASIC and memory extension for the VIC-20; cartridge-based
- [Super Expander 64](#) - BASIC extension for the C64

## References

1. <sup>^</sup> <http://investing.businessweek.com/businessweek/research/stocks/private/snapshot.asp?privcapId=262677>
2. <sup>^</sup> Bagnall, Brian. *On the Edge: The Spectacular Rise and Fall of Commodore*, Variant Press. Page 221. [ISBN 0-9738649-0-7](#)

3. [^ TOP SECRET: Confidential Atari-Amiga Agreement](#). *Atari Historical Society* (November 1983). Retrieved on [2006-07-23](#).
  4. [^](#)  
<http://www.commodoregaming.com/pcshop/About+Commodore+gaming/About+Commodore+gaming.aspx>
- Tim Smith and Chris Lloyd (1994), "Chewing the Facts", 'Amiga Format' Annual 1994, 106-111, 107.

## C64 Webserver

- [C64WEB](#) A real Commodore 64 running as a webserver.

## External links

### [Commodore International](#)

- [Commodore International Corporation](#) - Co-owner of the Commodore brand.
- [Commodore Gaming](#) - Co-owner of the Commodore brand and maker of
- [C64NET](#) - C64NET Your Commodore Porthole

Commodore branded gaming pc's.

- [Amiga Forever](#) - A web site, archive and commercial product featuring Commodore and Amiga videos and software
- [Chronological History of Commodore Computer](#) – by Larry Anderson
- [The Canonical List of Commodore Products](#) – by Jim Brain, maintained by Bo Zimmerman
- [Commodore Knowledge Base](#) – including Secret Weapons of Commodore
- [CommodoreWorld](#) – website dedicated to Commodore branded hardware.
- [Service Manuals](#) – and more
- [The Commodore Trivia Archive](#)
- [Many classic Commodores plus timetable, viewable in 3D.](#)
- [Last day of a Commodore Amiga Factory](#) - A sample video from the movie [Deathbed Vigil](#) by [Dave Haynie](#)