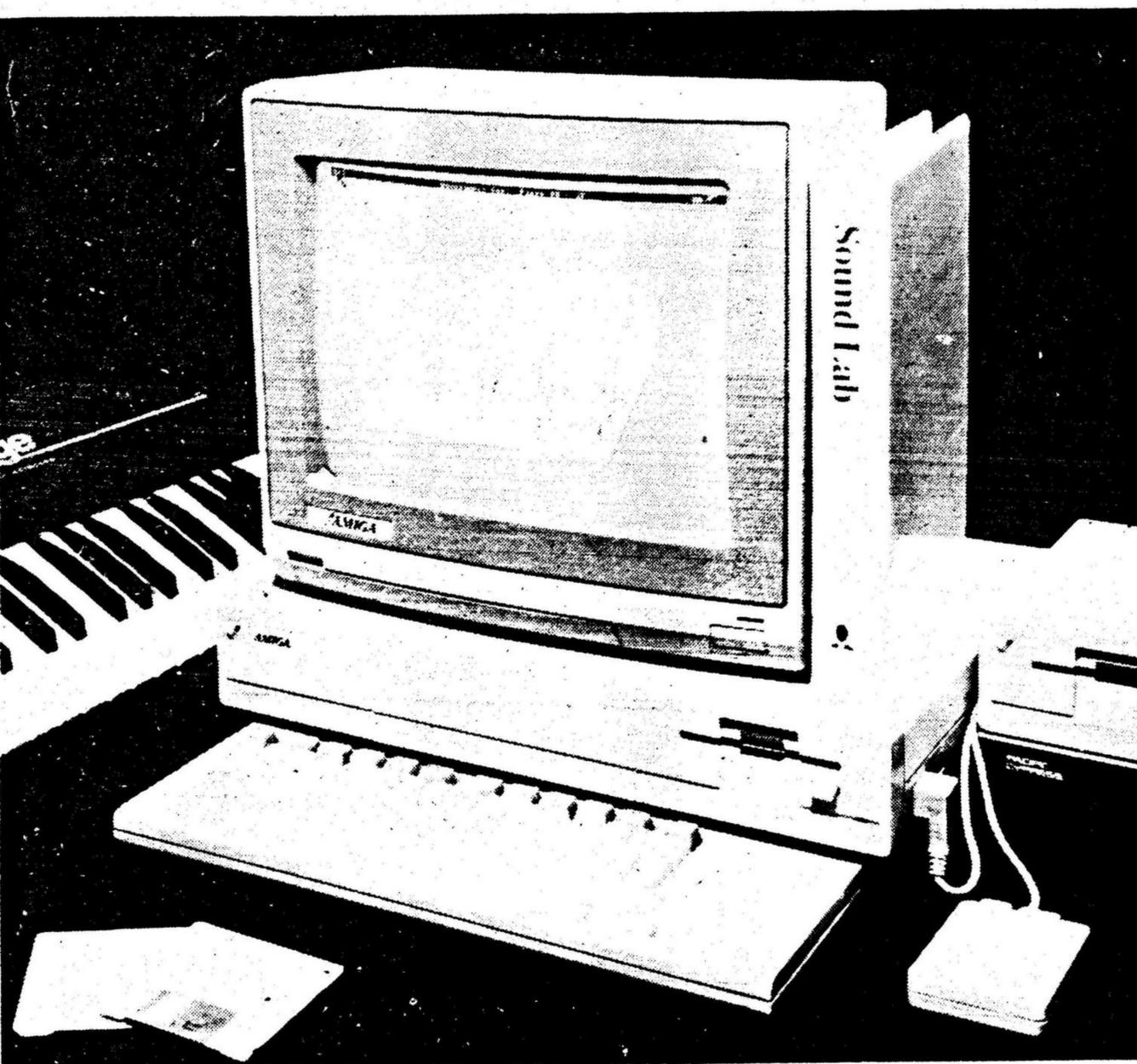


COMMODORE AMIGA

the alternative micro



Macs, STs and IBMs may be the most popular computers around, but they're certainly not the only ones. Our report clues you in on the past, present and probable future of the Amiga. Text by Stefan B. Lipson.

IF YOU'RE A musician researching a personal computer, it's important to know your options. The Macintosh, Atari ST and IBM PC have been receiving a lot of press lately, but there is one microcomputer alternative that has not been widely discussed: the Commodore Amiga.

The first of three Amigas, the Amiga 1000, was released in October of 1985. Touted as the most sophisticated of personal computers, it included independent co-processors for graphics, animation and sound. *Byte Magazine* called the graphics and audio "dazzling." Musicians and artists were thrilled; finally there was a machine designed with the musician/artist in mind.

And then Commodore seemed to drop the ball. In a less than brilliant move, they dismissed virtually the entire Amiga development staff and let the Amiga drift in the marketplace. Third-party developers

were leery of Commodore's half-hearted support, so software was slow in coming.

Since then, there have been some changes made. Commodore dismissed some higher-ups (The Prez is gone; long live the Prez) and released two new models - the Amiga 2000 and the 500. It seems that Commodore has finally thrown its support behind the machines; and in turn, third-party developers are providing additional products and support. After two years in the market, the Commodore Amiga has come to represent a solid alternative to the Atari/Mac/IBM options. What follows is a brief summary of the features that the Amiga 500, 1000 and 2000 have to offer.

System Basics

The basic specs on the Amiga line are pretty impressive. All of the Amigas use the Motorola 68000 microprocessor (the same 16/32 bit chip that is used in the

Macintosh), running at 7.16 Megahertz. That's pretty fast, especially compared to the IBM PC/XT's eight-bit 8086 chip with its sluggish 4.77MHz clock.

The Amiga series includes a set of custom co-processors for graphics, animation and sound. For musical applications, that means that an additional chip is dedicated to processing audio information, leaving the 68000 free for other tasks.

The Amiga's hardware capabilities make this machine a music synthesizer in its own right. All of the Amiga series machines provide four-voice polyphonic sound with stereo output, two voices per channel. The machines generate sound at frequencies up to 7.5kHz, representing a nine-octave range. While a MIDI interface is not provided, one is easily obtainable for about \$50 and can plug right into the serial port.

Voice Synthesis

The Amiga also includes ROM routines that allow for text-to-audio voice synthesis. Given a text input file, it uses the ROM routines to enunciate what has been written in the file. A number of different parameters can be adjusted, such as the pitch of the words, the speed of enunciation, and the gender of the speaker. The AmigaDos operating system even includes a "say" command which allows you to make the machine speak from the command line.

The Interface: Take Your Pick

The procedures required of a user and the screens through which those procedures are entered can loosely be called the user interface. Two basic interfaces are available on micros today; the icon-based interface, originally designed in the mid-seventies at the Xerox/Parc Research Center and made popular with the Macintosh, and the command line interface, which is found in both Unix operating environments and the MS-DOS based IBM PC/XT and AT. Both of these interfaces have advantages and disadvantages as well as supporters and critics.

The Amiga, however, lets you pick either interface. If you don't want to waste valuable RAM on an iconic interface, you can use the command line interface (dubbed the "CLI"). If you simply want to access applications software without having to roll around in the proverbial computer dirt, you can use the "Workbench," Amiga's version of the Xerox/Parc MUSIC TECHNOLOGY NOVEMBER 1987

interface. Changing between interfaces is easy, and you're always afforded the best of both possible worlds.

Multitasking

Another unique feature of the Amiga is its ability to execute more than one job at a time, commonly referred to as multitasking. Multitasking is analogous to washing the dishes and mowing the lawn simultaneously. With AmigaDos, you can have graphics animation running in one window as you edit an accompanying music score in another window.

The Amiga 500: Unique Features

The Amiga 500, which began shipping in June of this year, is selling a lot better than hotcakes.

In effect, the 500 is an upgraded version of the original Amiga 1000. The CPU and the keyboard of the 500 are combined into one unit. With a \$649 list price, the system includes the 68000 CPU, a two-button mouse, and 512K internal RAM, expandable to 1Mbyte. You can also expand RAM up to 9Mbytes externally. A 3.5" 880K disk drive is built into the side of the unit. The Commodore 2002 monitor, which at this moment lists for \$499 (it may have been lowered as this went to press) is sold separately. While the Commodore monitor does offer stereo outputs, there are better (and cheaper) monitors available. Package deals for the system reduce the cost considerably.

The 1000

The Amiga 1000 is the original Amiga. It differs from the 500 in that it has a detachable keyboard and a larger power supply. Unfortunately, RAM can only be upgraded internally to 512K, and then to 9Mbytes externally. With the introduction of the 500 and the 2000, this machine is being reduced in price and will probably be discontinued as the newer models take hold of the market.

The 2000: A Lot of Bang

With a list price of \$1999, the Amiga 2000 is a powerful, open architecture, hybrid machine. It provides all of the features that the 500 and 1000 offer, plus a 68020 expansion slot (with a socket for a 68020 co-processor) and seven internal expansion slots which - get this - may be configured as Amiga slots or IBM XT/AT slots. Commodore offers this option to accommodate its new 2088 Bridgeboard, an optional plug-in board that allows the 2000 to fully emulate an IBM. The PC emulation allows you to run much of the software available for the IBM, so that you effectively have the power of both an XT and an Amiga. Combine that with AmigaDos's multi-tasking capabilities and you get an MS-DOS application running in a window under AmigaDos (whistle as you

exhale). An awful lot of possibilities are available there.

The Amiga 2000 also comes with 1Mbyte of RAM and two built-in, 3.5", 880K disk drives. Like the 500 and 1000, it uses the 2002 monitor, which is not included in the package.

Software Options

Of course a machine is only as good as its software, and a number of different music programs are available for the Amiga. Texture, written by Roger Powell for Magnetic Music, has been released for the Amiga. Sonix by Aegis is a MIDI-compatible program that includes scoring and real-time playing capabilities. Mimetics Corporation has Soundscape, and Micro

Illusions of California is releasing Music X, which includes patch editors, librarian capabilities, and a variety of other functions. The list of available programs continues and the list continues to grow.

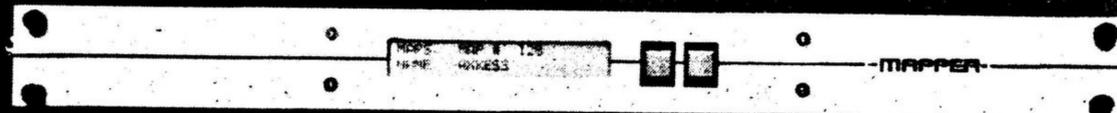
The Bottom Line

The Amiga microcomputers are professional, low-cost systems affording the user capabilities which other systems do not. Four-voice polyphonic sound, stereo outputs, voice synthesis, multi-tasking, and IBM emulation are some of those capabilities. If you are investigating a microcomputer system, be sure to check out the Amigas. When compared to the Atari/Mac/IBM options, you may be surprised at what they have to offer. ■

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