



# COLECO'S ADAM:

## A HANDS-ON REVIEW

BY ROBIN RASKIN

**W**hat does a toy company know about making computers? A lot, if Coleco's innovative new machine, ADAM, is any indication. Besides being the first reasonably priced, all-in-one package home computer system, ADAM is the first home machine to:

- Use digital data packs instead of audio tape or floppy disks;
- Offer a letter-quality printer as part of the package;
- Have the personality of a word processor rather than a programmable computer on power-up.

Even though ADAM came into the computer market with lots of bad press and many technical problems, it's basically a good system at a really low price.

For about \$750 you'll get a memory console with the digital data pack mechanism and the ColecoVision cartridge slot, two joysticks with numeric keypads, 80K of memory, a keyboard, and

to top it all off, a daisy-wheel printer. But, as my wise father repeatedly warns me, "There's no such thing as a bargain!" So, let's pick apart an ADAM, rib by rib, and see how it fares.

With ADAM, you can say bye bye typewriter. Turn it on and you're instantly in electric typewriter mode. Press the ESC/WP button and ADAM becomes a word processor. There's nothing to load; it's all built in. With the word processor, *SmartWRITER*, loaded into memory, you've got about 32K of memory left. That's about 18 pages of double-spaced text—enough for most homework uses.

*SmartWRITER*'s a cinch to use. Six HELP messages appear on the bottom of the screen corresponding to the six SmartKEYS at the top of ADAM's keyboard. They're all you'll need to control most word-processing options, including text moves, prints, saves, and margin settings. All other word-processing

keys are separate from the rest of the keyboard. *SmartWRITER* doesn't make you memorize a unique set of commands.

### ADAM'S APPLESOFT:

ADAM's SmartBASIC is modeled after Applesoft BASIC. You'll be able to type in most programs with only slight modifications. I liked its easy-to-use, excellent high-resolution graphic capabilities (16 colors, 256 × 192 maximum resolution). I've been told ADAM has a three-voice, five-octave sound range, but these aren't readily available to the user programming in SmartBASIC.

Coleco's digital data pack looks just like an audio cassette tape but acts differently, and can store 256K. The data pack is faster than the audio cassette. It automatically fast forwards and rewinds rapidly to disk files. You won't have the same kind of trouble loading programs as you might with standard cassette-based computers. It's a lot less expensive than the floppy disk—



Photo: Stephen Shames

**What you see is what you get, for about \$750.**



a good price/performance trade-off although inserting and removing the digital data pack was sometimes awkward.

### PRINTER:

One of ADAM's brightest features is its high-print quality daisy-wheel printer. Similar printers would cost about \$300. At 120 words per minute, it takes about four or five minutes per page. That's a lot faster than most typists but much slower than most daisy-wheel printers.

Letter-quality printers are extremely loud in general. But ADAM's is so loud, you might get your neighbors pounding on your door! Also, for some strange reason, the printer houses the computer's main power supply. If your printer goes haywire, your computer is out for the duration!

### CHASSIS & KEYBOARD:

ADAM's big appeal is its port for ColecoVision cartridges. The chassis houses two system-reset buttons, one for the ADAM's computer and one for ColecoVision cartridges. The ADAM keyboard combines efficient design and excellent performance. It's easy to use, and is as responsive as many of the higher-priced keyboards I'm used to. It's connected to the main chassis with a long coil so you can use it in the position most comfortable for you.

Although the documentation for the word processor is well written, easy to use, and quite complete, SmartBASIC's documentation is poor. Coleco should start over from scratch. Fortunately, the SmartBASIC manual has undergone thorough, page-

by-page revision with errors cleared up and an index added.

### ON THE WAY:

ADAM is new, and there are many kinks that must be worked out. Loads of entertainment and education software have been promised from hot companies like Electronic Arts, Synapse, Infocom, and Activision. At January's Consumer Electronics Show in Vegas, Coleco introduced a new disk drive, modem (300- or 1200-Baud direct-connect), and 64K memory expander among others. Signs like these bode well for ADAM's success. **k**

ROBIN RASKIN *likes climbing mountains almost as much as digging into the innards of a new computer.*

## FOR HACKERS ONLY

ADAM's really two computers in one—a Z80 with 64K RAM and a traditional ColecoVision game machine with 16K RAM. It's sort of a strange combo because only one computer's available at a time. You can't play games while someone enters a term paper. And you can't access the superb ColecoVision sound and graphics while programming with SmartBASIC.

The architecture of ADAM's Z80-microprocessor chip makes it suitable for advanced programming languages such as C, Pascal, FORTRAN, PL/I, COBOL, or LISP. Already, Coleco has announced production of a personal CPM operating system developed jointly with Digital Research. This sets ADAM apart from other machines, like the Apple and the VIC, that are based on the 6502 microprocessor—a simple and powerful chip, but a poor host for compiled programming languages.

Most manufacturers build BASIC into personal computers. ADAM doesn't count on BASIC to create the essential personality of the machine. It touts its built-in typewriter instead. The idea is that millions of people want to use, not program, microcomputers. ADAM is the first home computer that is more useable than programmable.

ADAM's digital data pack (DDP) is organized a lot like a floppy disk. ADAM loads files after consulting the directory that lists the tape's con-

tents. Automatic fast forward and fast rewind make it much quicker and easier to use than a cassette tape. It took ADAM one minute and nine seconds to save a one-line BASIC program. That same program took 37 seconds to load and just five seconds to delete. These times are slow by many standards (wouldn't it be nice if everyone had a Winchester disk?).

Coleco's DDP is the computer's primary technical innovation. Its best-known forerunner is probably the DECtape developed at MIT's Lincoln Laboratories in the mid-60s, and used extensively on DEC's PDP-8 computers. The current equivalent is DECtape-II, sometimes used on inexpensive LSI-1 computers, also from DEC.

### VITAL STATS:

MEMORY: 80K (will be expandable to 144K)

USER MEMORY AVAILABLE IN BASIC: 26K

TEXT DISPLAY: 31 char × 24 lines;

GRAPHICS: 16 colors, 256 × 192  
(maximum resolution)

SOUND: 3 voices, 5-octave range (for packaged programs)

KEYBOARD: Typewriter style, 75 keys,  
6 SmartKEYS

SUGGESTED RETAIL: \$750, includes letter-quality printer, main chassis, keyboard, 2 joysticks with numeric keypads.

—R.R.