

**Economy Sized Computers
from Vector.
System 3005.**





RESUME

NAME: Vector 3005
POSITION: Integrated information system

I am the 3005, a truly remarkable Vector information system, applying for a job in your office.

As an integrated information system, I have many skills, including both data processing and full-time word processing. But I'm not OVER qualified because the abilities you don't need now may come in handy later on. And I'll never quit.

Like all Vectors, I am exceptionally easy to work with. For example, you give me commands in simple English words (or abbreviations) and I respond in the same way. And I am nearly silent, which contrasts with the loud buzzing of other similar systems even though they cost a lot more.

Further, to help you learn to use me, most of my applications have easy reference books, self-paced training manuals and even reference guides that appear right on my screen whenever you need them.

I was created to serve you in your business, your department, or on your desk more quickly and reliably than ever before possible. In fact I finish my work level, by far.

Find that hard to believe? Like all information systems, I store information like an automatic filing cabinet. Imagine a filing cabinet that holds 5 times as much as others at the same price, yet takes up 1/3 the space, makes 1/3 as much noise and allows you to find a file 10 times faster. That's me, the 3005. How do I do it? I use a "Winchester hard disk" to record information like the biggest systems, for the first time available for any size budget.

Don't worry about needing even greater capacity in the future. Like all Vectors, I will grow as you do. I can do this because my information storage unit is physically separate ("modular") so it can be supplemented or exchanged for larger ones.

My main concern is solving your problems, not creating new ones. For example, I offer a special feature which is unique among small systems: "automatic error correction." If an item of information is accidentally damaged while it is stored, I almost always correct it automatically. That's like a filing cabinet that erases smudges and fixes paper tears automatically.

Above all, I'll help you do your work more efficiently and effectively. But you remain in control. You make the decisions.

So, what's my first assignment?

Hardware at a glance

The System 3005 uses a 5 Mbyte (formatted) Winchester hard disk drive.

The disk features high speed (175 milliseconds average access time) and high reliability. Both result partly from placing all disk components in a sealed casing which keeps dust and other interference from the mechanism. Additional speed and accuracy result from the disk controller electronics, which permit buffered data transfers, automatic verification and retries, and automatic error correction.

Also standard on the 3005 is a double-sided floppy disk drive, yielding 630 kilobytes of storage. This diskette is used for backup, background storage and transferring programs and data.

The entire hard disk is backed up by only 8 floppy diskettes, eliminating the need for expensive auxiliary tape storage. To guarantee data integrity, the floppy disk drives are controlled by the same controller board as the hard disk, giving the floppies the same automatic error correction ability. Vector's floppy-disk-only systems can be used for cost-effective off-line data entry to the hard disk 3005.

The System 3005 is packaged extremely compactly, with both the hard disk and floppy drive contained in a desktop unit about 7 inches square. The hard disk is almost completely silent in operation, essential for office use, but previously not the case with hard disks. The console contains the computer itself. And because the screen is memory-mapped, our most advanced screen oriented software will run on the system.

The System 3005 CPU is a fast 4MHz Z-80,[®] with 158 instructions including memory to memory block transfer, I/O block transfer, 16-bit arithmetic, and numerous memory modes.

The user has 56K of high-speed, semiconductor memory, using our highly-reliable 64K dynamic memory board.

System 3005 software.

Vector CP/M[®] 2 is the standard operating system in the System 3005. It's a high-performance single-console operating system with a wide base of compatible software and sophisticated facilities emulating minicomputers. Release 2 fully supports the large storage capabilities of the hard disk, and all its facilities allow easy use of this large storage area.

The system can easily be configured to boot up to any particular application program. In addition, a feature has been supplied which permits creation of "submit" files that interact automatically with applications programs — as if a user were typing at the console. New utilities have also been added for copying and initializing diskettes, as well as for configuring CP/M to work with assorted printers.

The System 3005 provides software drivers with CP/M to interface with Qume or Diablo protocol printers, Centronics protocol printers, and standard serial printers. The system can also be interfaced with Vector's matrix or letter-quality printers.

A completely new text editor, SCOPE (Screen Oriented Program Editor), is standard equipment on the System 3005. Unlike any other text editor, SCOPE has full word-processing screen-based editing and file management capabilities. Simultaneously, it maintains line-orientation with horizontal scrolling, automatic line numbering and many commands that reference text by line numbers and cursor location. SCOPE can prepare program text for all CP/M compatible languages, and edit data files, as it can display all ASCII codes on the screen.

The System 3005's powerful new assembly language debugger/simulator matches or exceeds the best debuggers available on current microprocessor development systems. That's because our system uses the entire memory-mapped screen to display the state of the computer, disassembles machine language onscreen while it is being executed, and employs a wide range of break-point and tracing modes. Also standard on the System 3005 is a full Z-80[®] assembler, ZSM, which uses extended 8080 mnemonics.

The System 3005 offers as standard Microsoft BASIC-80 Release 5, one of the most powerful and fastest BASIC's in existence. The language's most outstanding features include the following: four variable types, including double precision floating point; print formatting; error trapping; input and output to ports; view or change memory locations; assembly language calls; matrices with up to 255 dimensions; random or sequential file access; protected files; variable length records; program chaining; boot directly to application program; program tracing; automatic line numbering and renumbering; and long variable names. Lastly, to increase speed dramatically an optional BASIC compiler is also available.

Finally, all of Vector's sophisticated yet easy-to-use application software are available for the 3005. Therefore, the 3005 can be purchased as a ready-to-use turnkey business system.

Interfacing the System 3005

The System 3005 has an industry standard S-100 bus, with 4 of its 6 slots occupied. It is built around our new single-board computer which features three PROM sockets, scratch-pad RAM, one serial port, and three 8-bit parallel ports.

The serial port is an RS-232C serial printer or modem port, with programmable data protocol, and switch-selectable asynchronous baud rates between 110 and 9600 bits/second. RS-232C handshaking is available without additions to the board.

The System 3005's parallel ports are fully programmable, using the 8255 interface chip, and can be configured for industry standard parallel Centronics-protocol printers. In addition, almost any serial or parallel printer can be interfaced to the system, along with most standard modems.

The last 2 motherboard slots can be used for other input/output boards, such as the Vector Bitstreamer II. This board offers an additional three serial and two parallel ports, allowing simultaneous connection of a serial printer and a modem, and allowing synchronous communications with minor modifications to the board. You can also use the slots for a built-in modem board with automatic dialing, a precision analog-to-digital board, or any other S-100 interface module.

Components.

Standard Hardware:

- Vector-3 console chassis with 12-inch CRT (18" W x 12½" H x 21" D), capacitance keyboard, 6-slot motherboard, and power supply.
- ZCB Z-80 based single board computer with 1 serial port, 3 parallel ports, 3 PROM slots, and 1K RAM, Flashwriter II Video board, 64K dynamic memory board.
- Desktop enclosure (7 7/16" x 7 7/16") containing both the Winchester and the floppy disk drives.
- DualMode disk controller board featuring a 32-bit error correction code (not a "fire code") that allows 5-bit burst error correction.

Standard software:

- Version 4 extended systems monitor on PROM, Vector CP/M 2, SCOPE Screen Oriented Program Editor, full screen dynamic simulating debugger, ZSM Z-80 assembler, Microsoft BASIC-80 Release 5.

Optional Software:

- Microsoft BASIC Compiler, FORTRAN, CIS COBOL, Pascal, APL V80, plus a wide range of application software.

*Z-80 is a registered trademark of Zilog.

*CP/M is a registered trademark of Digital Research Inc.

Above specifications are subject to change without notice.

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