Three Workstations in One

The IBM Personal Computer AT/370 is an extended version of the IBM Personal Computer AT that can operate as:

- A personal computer
- A 3278/79 display
- A single VM/CMS machine running CMS applications.

This system enables the data processing professional, the engineering scientific professional, or the business professional to execute VM/CMS programs in the PC and to access the host, as needed. The CMS user interface remains consistent between the workstation and the host.

Up to three concurrent sessions can be established by the user. For example, a user can initiate a local CMS session, a 3278/79 host interactive session, and an optional host interactive session using the 3101 Emulation Program.

Features: Design features include:

- Intel 80286 Microprocessor
- Adjustable 84-key detached keyboard featuring 10 programmable function keys, a numeric keypad, cursor control keys, and green LED indicator lights when "Number Lock," "Scroll Lock," and "Caps Lock" are in use
- Online storage capability from 21.2 to 41.2 million characters
- 640Kb of user memory when in PC mode, 480Kb addressable memory in VM/PC mode, 64Kb read only memory (ROM)
- Ability to address up to 8Mb of virtual memory

- Three microprocessors—one for fixed-point System/370 instructions, one for floating-point arithmetic instructions, and one for all other System/370 instructions
- 3278/79 emulation feature that permits host connection of the IBM PC AT/370 via a coaxial cable to a 3274 Controller with an "A" port, a 4321/4331/4361 Processor via the Display/Printer Adapter, a 4361 Processor via the Workstation Adapter, or a 4701 Finance Communication Controller via the Device Cluster Adapter
- Serial/parallel interface
- Clock/calendar with battery backup
- Diagnostic capabilities that automatically check the system components—including power-on, self-testing, and parity checking
- Built-in sound system

Performance: The IBM Personal Computer AT/370, when operating under VM/PC as a CMS machine, executes instructions at 40% to 60% of the speed of a 4331 Model Group 1 doing commercial work and at 1.25 to 2.5 times the speed of a 4331 Model Group 1 performing scientific calculations. Trivial XEDIT commands are performed with less than one second response time.

Service: The IBM Personal Computer AT/370 comes with a one-year warranty. Post-warranty service is offered by the IBM National Service Division (NSD). Types of service include on-site and carry-in service. Mail-in service is also available on a maintenance agreement or time and materials basis.

Expandability: In the IBM PC AT/370, two slots are available for additional attachments.

To the IBM PC AT/370 you can add one additional 20Mb fixed disk drive, or one additional 1.2Mb diskette drive, or one 360Kb diskette drive.

The Serial Adapter permits your IBM Personal Computer AT/370 to communicate with your central site host, external data bases, or other personal computers using ASCII protocol. The parallel feature of this same adapter allows connection to a printer.

The Next Step: See your IBM marketing representative for more information on the hardware and software products available with this versatile workstation.

Your IBM marketing representative can also provide you with information on available system software, including the IBM Personal Computer Disk Operating System 3.0 with Disk BASIC and Advanced BASIC, as well as VM/PC 1.1 and other Personal Computer software that will operate on the IBM Personal Computer AT/370. You can also ask about the broad range of application packages and languages available to help you get the most out of your IBM Personal Computer AT/370 investment. These packages and languages meet a variety of data processing professional, engineering/scientific professional, and business professional needs.

Hardware Summary

System Unit 5170 Model 599

Size: Width – 21.3 inches, Depth – 17.3 inches, Height – 6.4 inches
Weight: 42 lb.
User Memory: Cycle time – 355ns, Access time – 150ns
Memory: 64Kb read only memory (ROM), 640Kb of addressable memory in PC mode, 480Kb in VM/PC mode
Standard: PC/370 Processor Card, PC/370 Memory Card with 16-bit bus interfaces, 3278/79 Emulation Adapter, jack for keyboard attachment, Serial/Parallel Adapter, two slots for optional adapters, one 1.2Mb diskette drive and one 20Mb fixed disk with combination fixed disk and diskette adapter, clock/calendar, built-in sound system
Environment: Air temperature – from 60°F to 90°F system on, 50°F to 110°F system off, Humidity – 8% to 80%, Noise levels – without printer, 42db; Electrical – 90-137V AC, 50-60Hz, 192 watt power supply
Diskette drive: One high-capacity, 5 1/4-inch diskette (1.2Mb capacity)
Fixed disk drive: Four 5 1/4-inch surfaces with 20Mb (20,480,000 characters) capacity. The fixed disk rotates at 3573rpm, has 615 tracks per surface with a 40ms average access time and a 5 megabit-per-second transfer rate.

Enhanced Keyboard

Size: Width – 18.4 inches, Depth – 8.3 inches, Height – 1.5 inches
Weight: 6 lb.
Keys: 84 full-function keys for data and text entry, with tactile and audio feedback; includes a special calculator-like keypad for numeric entry and cursor control (for scrolling and editing), 10

special function keys, green LED indicator lights when "Number Lock," "Scroll Lock," and "Caps Lock" are in use, easy access to 256 characters (ASCII and special), special "print screen" key
Keyboard: Detached from system unit and connected by a 10-foot coiled cable for flexibility, has adjustable typing angle, and most keys automatically repeat when held down.

Monochrome Display 5151 Model 1

Size: Width - 14.9 inches, Depth - 13.7 inches, Height – 11 inches
Weight: 17.3 lb.
Display capability: High resolution, 25 lines of 80 characters each, upper and lower case, 7x9 pels text character size within a 9x14 pels box, green phosphor characters displayed on an antiglare 11 1/2 inch (diagonally measured) screen—plus brightness and contrast controls
Highlighting Choices: Underlining, blinking, reverse image, high intensity plus nondisplay function
Electrical: 60Hz, 120V AC, 40 watts (plugs into system unit)
Attachment: Via optional Monochrome Display and Printer Adapter

Color Display 5153 Model 1

Size: Width - 14.9 inches, Depth - 13.7 inches, Height – 11 inches
Weight: 17.3 lb.
Display Capability: Up to 25 lines of text with either 40 or 80 characters per line, upper and lower case, 8x8 pels character box, text mode cable of displaying 256 characters in 16 foreground colors on any of eight background colors, high-resolution black and white graphics mode (640x200 pels), medium resolution color graphics mode (320x200 pels), which allows use of one of two sets of colors at a time, each set

including three foreground colors that may be used against a fourth background color, 13-inch (diagonally measured) screen—plus brightness and contrast controls
Highlighting Choices: Blinking, reverse image, and high intensity
Electrical: 60Hz, 120V AC, 1 amp
Attachment: Via optional Color/Graphics Adapter
Limitation: There is only default color support in 3278/79 mode.

Enhanced Color Display 5154 Model 1

Size: Width - 15.5 inches, Depth - 17 inches, Height – 11.5 inches
Weight: 32 lb.
Display Capability: Up to 25 lines of text with either 40 or 80 characters per line, upper and lower case, 8x14 pels character box, text capable of displaying 256 characters in 16 colors in PC

mode, high-resolution color graphics in any 16 colors at one time from a palette of 64 colors in PC mode (640x350 pels), 13-inch screen (measured diagonally)—plus brightness and contrast controls
Highlighting Choices: Blinking, reverse image, and high intensity
Electrical: 50/60Hz, 90-137V AC
Attachment: Via optional Enhanced Graphics Adapter for display capability described above or via optional Color/Graphics Adapter for display capability described under 5153 Color Display
Limitation: There is only default color support in 3278/79 mode
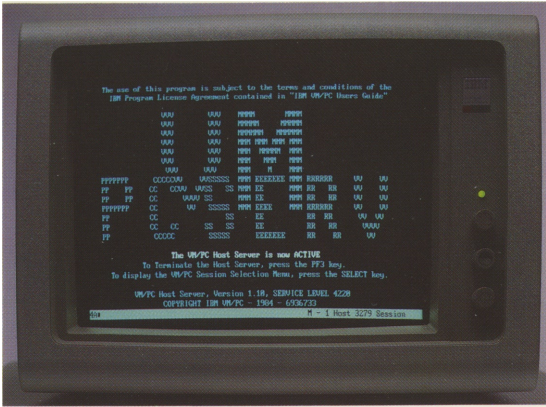
Graphics Printer 5152 Model 2

Size: Width – 15.7 inches, Depth – 14.5 inches, Height – 4.3 inches
Weight: 12.5 lb.
Print Capability: Up to 80 characters per second, four modes of all points addressable graphics, 18 character styles, up to 132 characters per line, 9x9 dot matrix

Other IBM PC AT Options

- One additional high-capacity Diskette Drive or double-sided Diskette Drive can be installed in the system unit
- In IBM PC AT mode only:
  - BSC Adapter
  - SDLC Adapter
  - Math Co-processor (80287)
  - PC Network Adapter
  - 5175 Professional Graphics Display and Professional Graphics Controller
  - Data Acquisition and Control Adapter
  - General Purpose Interface Bus Adapter

Software Summary

- All IBM PC AT Software Offerings
- VM/PC, which includes:
  - CMS
  - Host file server
  - DOS file export/import
  - Spooling
- IBM System/370 programs that can be licensed to the IBM PC AT/370:
  - OS/VS COBOL Compiler and Library
  - OS/VS COBOL Library
  - COBOL Interactive Debug
  - VS FORTRAN Compiler and Library
  - VS FORTRAN Library
  - VS FORTRAN Interactive Debug
  - Pascal/VS
  - IBM BASIC Processor and Library
  - PL/I Optimizing Compiler and Libraries
  - PL/I Transient Library
  - PL/I Resident Library
  - Assembler H
  - Document Composition Facility (SCRIPT/VS)
  - Interactive Instructional Authoring System
  - Interactive Instructional Presentation System
  - Display Management System/CMS
  - VM Interactive Productivity Facility (FLIST and BROWSE functions supported)
  - Interactive System Productivity Facility
  - Interactive System Productivity Facility/PDF
  - CMS Sort for VM/CMS and CMS Sort Extensions
  - High Accuracy Arithmetic (ACRITH) Subroutine Library (Release 2)
  - The Information Facility (TIF)