

IBM PC^{jr}

An educational tool
in a class by itself

IBM



The easy-to-use IBM PCjr is a bright little addition to the growing family of IBM Personal Computers. Junior, the most compact personal computer from IBM, can be used at school and at home to meet a wide range of educational needs, with features that put it in a class by itself.

Size is one such feature. The IBM PCjr is compact and lightweight, so it can be carried from desk to desk, classroom to classroom, or wherever it's needed. And using the IBM PCjr is a lesson in simplicity. It's so easy to learn and use that students will find that the IBM PCjr can make learning more creative and more fun.

The IBM PCjr's versatile capabilities can be expanded by adding options that give Junior the power to compute and store more information, to print documents, to exchange information over standard telephone lines, and more. One of Junior's most appealing features is its price; the IBM PCjr is designed to meet your budget while it meets your educational needs.

For students and faculty alike. Students will find that Junior can help them in math, reading, and many other subjects. The IBM PCjr can act as a friendly, patient tutor to reinforce learning; combine education and entertainment by using enjoyable game formats; enable students to write and file class notes, essays and term papers; and even teach students of all ages the basics of computer programming.

Junior makes the grade with teachers and administrators, too. It can organize information and keep accurate records—providing a dynamic method of maintaining orderly grade books, lesson plans, lecture notes, to-do calendars, registration data, attendance records, enrollment information, and more. The IBM PCjr can even use standard phone lines to exchange this information with other IBM Personal Computers in a matter of seconds.

Sum of its parts. The IBM PCjr's standard elements are the System Unit—which does all the actual computing—and a cordless, typewriter-

like keyboard that uses infrared signals to communicate with the System Unit, similar to the way a hand-held remote control operates a TV set. Since the keyboard is not attached to the System Unit, you can use it in a way that is most comfortable for you. In the cordless mode, the keyboard will communicate with the System Unit from up to 20 feet away as long as there is nothing to obstruct its signals. For classroom situations where more than one IBM PCjr is used at the same time, the optional keyboard cord should be used.

To start computing, just insert your software—the instructions that tell the computer what to do—into the System Unit, and pick up the keyboard. Junior comes with a "Keyboard Adventure" program that introduces you to the keyboard and its functions.

A wide range of software can be used with Junior. The System Unit contains two slots for software cartridges. These slots accommodate programs published exclusively for the IBM PCjr.

In addition, with the optional slimline diskette drive, you can use many existing programs that are available for the IBM PC and IBM PC XT.*

To view the IBM PCjr's information, you'll need a display—the IBM Color Display, a TV set, or a video monitor—along with the appropriate adapter cable.† You may then choose to further customize the system by selecting from a range of options for the IBM PCjr, such as a printer, joysticks and modem.

You'll see that with so many different ways to help educators and students to work, plan, analyze, organize, learn, study and have fun, the IBM PCjr is truly an educational tool in a class by itself.

*Please refer to the software compatibility chart on page 10 for IBM Personal Computer software that can operate on the IBM PCjr.

†Television sets, video monitors, light pens, cassette players/recorders, external modems and their adapter cables are not part of the IBM PCjr system offering and must be purchased separately. The IBM Monochrome Display is not compatible with the IBM PCjr.

Student's companion

Any student can team up with Junior—a smart classmate with which to study. With the IBM PCjr to help them in their studies, students may find that learning can be more dynamic, more interactive, and more fun.

The library of software for the IBM PCjr is designed to meet the educational needs of children at various levels. Current programs have been designed to teach multiplication and other math skills, and much more. And many of the IBM PCjr's educational programs include several levels of difficulty to adapt to the learning levels of children of various ages, abilities and motivation.

One of Junior's most useful and versatile software packages is Logo, a study system that can keep pace with students as they learn. Logo is a

flexible, interactive language that provides basic tutorials and demonstrations to grade schoolers, then progresses to more advanced lessons and computer concepts, such as mathematical, logical and geometric relationships, advanced graphics, file manipulation, text handling, and assembly language subroutines.

Several of Junior's education programs use an enjoyable game approach to learning. Adventures in Math challenges students to use math skills to explore a castle filled with many treasures. In Monster Math, the student comes face to face with a monster that can be erased from the screen only by solving a number of math problems. These are just a few of the game programs designed to make learning fun with Junior.

Many programs are designed for students at specific grade levels. For example, Bumble Games*, Bumble Plot* and Juggles' Butterfly* use colorful circus figures and friendly extraterrestrial creatures to teach young children concepts such as left/right, greater than/less than, and other relational concepts. Still other programs are designed for high school and college students.

As an added benefit, word-processing programs such as HomeWord* are ideal for keeping class notes on file for immediate retrieval whenever they are needed, as well as writing essays and term papers. And the versatile Word Proof program will check spelling on any document that's been created and offer correct spellings of misspelled words.

*Bumble Games, Bumble Plot and Juggles' Butterfly are trademarks of The Learning Company. HomeWord is a trademark of Sierra On-Line, Inc.



Junior is a natural for organizing and managing the information that an educator encounters every day. The IBM PCjr offers the teacher an "automated curriculum" to help increase individual productivity.

Significantly reduce your paperwork by keeping your records on file for recall whenever they're needed. Using software such as pfs:FILE and pfs:REPORT, you can store, retrieve, update, revise and print out the kind of detailed information that might otherwise be difficult to maintain. Keep an orderly grade book, lesson plan, or enrollment register... any of which can be displayed on your screen quickly and easily.

Keep your text at your fingertips. With word-processing programs such as EasyWriter* and HomeWord, you can write, edit and store essays, lectures, notes and exams. Revise them at any time. After your document is complete, hand it over to the Word Proof program, a computerized proofreader that scans the document you've created and checks your spelling. You can also print your document quickly and easily by using one of IBM's affordable optional printers.

Plan your day, week or month more efficiently. IBM PCjr software includes programs such as Time Manager,* which can help you plan your lessons and assignments, keep track of engagements and appointments, and remind you of important dates throughout the year, such as birthdays and holidays.

Create a dynamic communications network over standard phone lines. With the appropriate software and the optional internal modem that fits inside the IBM PCjr's System Unit—or with an external modem—you can exchange data and files with host computers or other



IBM Personal Computers. You can route memos from the school's central computer to anyone who uses a personal computer from IBM. With the Personal Communications Manager program, you can exchange files, memos and notes with other classrooms equipped with IBM Personal Computers.

The IBM PCjr's communications capabilities also enable you to tie into the data banks of large information and service networks for news and weather reports, airline schedules, "shop-by-computer" services, and more.

*pfs: is a registered trademark of Software Publishing Corporation. EasyWriter is a trademark of Information Unlimited Software, Incorporated. Time Manager is a trademark of The Image Producers, Incorporated.

Tomorrow's edge

Every day, more and more people are discovering the benefits that personal computers offer. Nowhere is this more apparent than in the education field, where children of all ages are finding that personal computing can be an exciting new way to learn and study.

Junior can offer today's students tomorrow's edge, with an array of software designed to show students what personal computing is all about. A "Keyboard Adventure" program is built into

every IBM PC^{jr} system. With this program, the student controls the movements of a friendly on-screen cartoon character who introduces students to the keyboard and its functions. Also included in every system is a *Guide to Operations* manual as well as *Hands-On BASIC*, a step-by-step manual that teaches students about the BASIC language and important concepts in computer programming.



If your IBM PCjr has a diskette drive, you receive an "Exploring the IBM PCjr" program. This program shows how the keyboard is used for various applications and introduces students to the IBM Disk Operating System, the BASIC language, and the optional printer.

To acquaint students with the BASIC language, there is *BASIC Made Easy*. This learn-by-doing manual uses friendly, conversational text, color, sound and sample screens to teach students the fundamentals of BASIC. The lessons are short, progressive and so easy to follow that by the end of the first lesson, most students should be able to write a short computer program on the IBM PCjr.

In addition, there are several software packages designed to introduce even very young students to the world of computing. One such package is Turtle Power, an entertaining program that turns the display screen into a "computer drawing board" and invites students to use the keyboard to create their own video art while learning about computers.



IBM is ready to provide the service that you expect for your personal computer. It starts with a one-year warranty that comes with the IBM PCjr. If the system requires any type of service during its first year of use, just bring it into the location where it was purchased—or to any Authorized IBM Personal Computer Dealer—for reliable, professional service.

After the warranty expires, you can still obtain reliable service through your Authorized IBM Personal Computer Dealer or IBM's nationwide network of Service/Exchange Centers and Regional Repair Centers.

See for yourself how this powerful yet compact personal computer from IBM can help meet a variety of educational needs both at school and at home . . . all at a very affordable price.

IBM PCjr's features



- System Unit with:
 - 16-bit 8088 processor
 - 64KB RAM
 - 64KB ROM (permanent memory)
 - RS-232 interface
 - Audio tone generator
- Connectors for options* such as:
 - IBM Color Display, television or video monitor
 - Serial printer
 - External modem
 - Cassette player
 - Joysticks
 - Light pen
- Infrared keyboard link
- Optional 5¼" 360KB diskette drive (standard with enhanced model)
- 2 cartridge slots
- Cordless, 62-key, color-coded infrared keyboard

Other options:

- Keyboard Overlays
- Keyboard Cord
- Internal Modem
- 64KB Memory and Display Expansion (standard with enhanced model)
- Parallel Printer Attachment
- Adapter Cable for the IBM Color Display
- Connector for TV (RF modulator)
- Adapter Cable for Serial Devices
- Adapter Cable for Cassette
- Attachable Joysticks
- Carrying Case

Technical Data: System Unit

- 4.77 MHz clock frequency
- 64KB ROM
 - Access time 250ns
 - Cycle time 375ns
- 33 Watt Power Supply
- Dimensions:
 - Width 13.9 in (354mm)
 - Depth 11.4 in (290mm)
 - Height 3.8 in (97mm)
- Weight: less than 9 lbs. with diskette drive, less than 6 lbs. without diskette drive
- Electrical: 120V AC, 60Hz, 33 watts
- Air Temperature:
 - System on 60°- 90°F (15°-32°C)
 - System off 50°-110°F (10°-43°C)
- Humidity:
 - System on 8-80% RH
 - System off 8-80% RH

Technical Data: Keyboard

- Dimensions:
 - Width 13.45 in (341.5mm)
 - Depth 6.61 in (168mm)
 - Height 1.02 in (26mm)
- Weight: 22 oz. without batteries, 25 oz. with batteries

Technical Data: Power Supply

- The transformer is a standard, step-down, 60-volt-ampere type that is separately housed.
- Air temperature: 60°-90°F (15°-32°C)
 - Humidity: 8-80% RH
 - Altitude: to 7000 feet

The System Unit. The IBM PCjr's System Unit is where all the actual computation and processing of data take place. The System Unit weighs less than nine pounds, so it can be carried easily. And its compact design enables it to be placed conveniently on a small desk top, in a study carrel, on a bookshelf, or wherever it makes sense for your requirements.

A lot of computing power fills this compact frame. The IBM PCjr has the same advanced 8088 processor used throughout the entire family of IBM Personal Computers.

Two IBM PCjr models are available. The entry model contains 64KB of user memory and two cartridge slots for IBM PCjr cartridge programs. The enhanced model contains two cartridge slots plus a double-sided 360KB slimline diskette drive for diskette programs. This means you can use many of the programs that are already available for the IBM PC and IBM PC XT. The enhanced model also comes with the internal 64KB Memory and Display Expansion, which increases user memory to 128KB and enables you to display 80 characters of text per line on your display screen.

The keyboard. The IBM PCjr's lightweight, typewriter-like keyboard enables you to communicate with the System Unit in a way that's most comfortable for you because the keyboard is cordless and communicates with the System Unit by sending infrared signals. One advantage of this capability is that the System Unit may be placed in a central location in a classroom and the keyboard passed around, allowing individual students to use the IBM PCjr.

If more than one IBM PCjr is to be used in a room at the same time, you should use the optional cord that connects the keyboard to the System Unit to convert the cordless keyboard into an attached keyboard.

The keyboard also features one of Junior's most useful benefits. Every one of its 62 keys is completely programmable; that is, any letter, number, function or command can be assigned to any key on the keyboard. For example, it's possible to assign keys in alphabetical order, common letter groupings such as vowels and consonants, or in whatever format best suits your needs.

The display. For display purposes, you can connect the IBM PCjr to the IBM Color Display, a television set, or a video monitor.* No matter which you choose, you'll be impressed by the vivid graphics that are generated.

Your display can be easily connected to its corresponding connector on the System Unit by using the appropriate adapter cable.*

Optional devices. By using the various connectors on the back of the System Unit, you can add optional devices to meet various computing needs. Attach joysticks, an external modem, a serial printer, and/or a cassette player to run software cassette programs.

There is also an optional System Unit attachment to connect a parallel printer to the IBM PCjr, and an optional internal modem to attach Junior to a standard telephone jack. (A telephone is not required.)

*Television sets, video monitors, light pens, cassette players/recorders, external modems and their adapter cables are not part of the IBM PCjr system offering and must be purchased separately.

IBM PCjr Software Compatibility Chart

Program Name/ Version	Operates on IBM PCjr	Comments*	Requires DOS 2.10	Requires IBM PCjr BASIC cartridge	Display
Adventure 1.00	Yes	7	No	No	Any compatible
Adventure In Serenia 1.00	Yes	1	No	No	Any compatible
Adventures In Math 1.00	Yes		No	Yes	Any compatible
Animation Creation 1.00	Yes	8	No	No	Any compatible
APL (A Programming Language) 1.00	No		N.A.†	N.A.	N.A.
Arithmetic Games (Set 1) 1.00	Yes	2	Yes	Yes	Any compatible
Arithmetic Games (Set 2) 1.00	Yes	2	Yes	Yes	Any compatible
Asynchronous Communications Support 2.00	No		N.A.	N.A.	N.A.
BASIC Compiler 1.00	Yes	3	Yes	No	Any compatible
BASIC Primer 1.00	No		N.A.	N.A.	N.A.
BASIC Programming Development System 1.05	Yes	4,5	Yes	No	Any compatible
Binary Synchronous 3270 Emulation 1.00	No		N.A.	N.A.	N.A.
BPI Accounting Software (All)	No		N.A.	N.A.	N.A.
Bumble Games 1.00	Yes		No	Yes	Any compatible
Bumble Plot 1.00	Yes		No	Yes	Any compatible
Casino Games 1.05	Yes		No	Yes	Any compatible
COBOL Compiler 1.00	No	6	N.A.	N.A.	N.A.
Decathlon 1.00	No		N.A.	N.A.	N.A.
Diskette Librarian 1.00	Yes		Yes	Yes	Any compatible
Dow Jones Reporter 1.00	Yes		Yes	Yes	Any compatible
EasyWriter 1.15	Yes		Yes	No	Any compatible 80 column
Fact Track 1.00	No		N.A.	N.A.	N.A.
FileCommand 1.00	Yes	5	Yes	No	Any compatible 80 column
Fixed Disk Organizer 1.00	No		N.A.	N.A.	N.A.
FORTRAN Compiler 1.00	No	6	N.A.	N.A.	N.A.
Home Budget, jr 1.00	Yes		Yes	Yes	Any compatible
HomeWord 1.00	Yes		No	No	Any compatible
Juggles' Butterfly 1.00	Yes		No	Yes	Any compatible
Learning DOS 2.00	No		N.A.	N.A.	N.A.
Learning to Program in BASIC 1.00	No		N.A.	N.A.	N.A.
Logo 1.00	Yes		Yes	No	Any compatible

Use this chart to determine which IBM software products run on your IBM PCjr and what your IBM PCjr needs to run each program.

Program Name/ Version	Operates on IBM PCjr	Comments*	Requires DOS 2.10	Requires IBM PCjr BASIC cartridge	Display
Macro Assembler 1.00	Yes		Yes	No	Any compatible
Mailing List Manager 1.00	No		N.A.	N.A.	N.A.
Monster Math 1.00	Yes		No	Yes	Any compatible
Multiplan 1.10	Yes		Yes	No	Any compatible
Multiplication Tables 1.00	No		N.A.	N.A.	N.A.
One-Hundred-and-One Monochrome Mazes 1.00	No		N.A.	N.A.	N.A.
Pascal Compiler 1.00	No	6	N.A.	N.A.	N.A.
PeachText 1.00	Yes	4	Yes	No	Any compatible 80 column
Peachtree Accounting Software (All)	No		N.A.	N.A.	N.A.
Personal Communications Manager 1.00	Yes		No	No	Any compatible
Personal Editor 1.00	Yes		Yes	No	Any compatible
pfs:FILE 1.05	Yes		Yes	No	Any compatible 80 column
pfs:REPORT 1.05	Yes		Yes	No	Any compatible 80 column
Private Tutor 1.00	No		N.A.	N.A.	N.A.
Professional Editor 1.00	Yes		Yes	No	Any compatible 80 column
SNA 3270 Emulation/RJE Support 1.00	No		N.A.	N.A.	N.A.
Strategy Games 1.05	Yes		No	Yes	Any compatible
3101 Emulation 1.00	No		N.A.	N.A.	N.A.
Time Manager 1.05	Yes		Yes	No	Any compatible
Turtle Power 1.00	Yes		No	No	Any compatible
Typing Tutor 1.00	No		N.A.	N.A.	N.A.
UCSD p-System (All Products)	No		N.A.	N.A.	N.A.
VisiCalc 1.20	Yes		Yes	No	Any compatible
Word Proof 1.00	Yes		Yes	No	Any compatible

*Not Applicable

Diskette Programs

The programs listed above run on an IBM PCjr with 128KB of memory and a diskette drive, except for those which have "No" in the "Operates on IBM PCjr" column.

Cartridge Programs

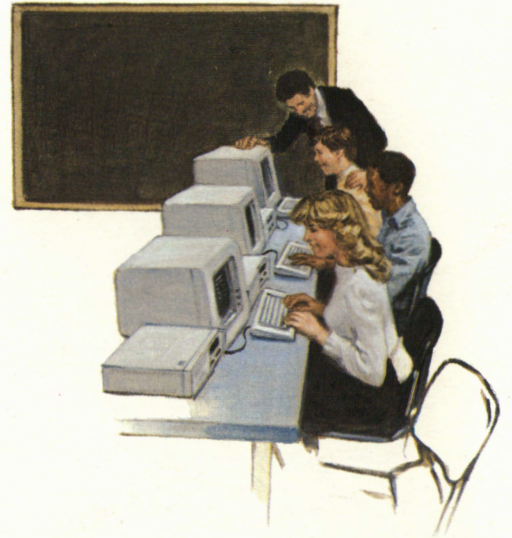
The following programs are available on cartridge and run on an IBM PCjr with a television, monitor or a color display: Crossfire 1.00, Mine Shaft 1.00, Mouser 1.00, ScubaVenture 1.00 and IBM PCjr BASIC 1.00.

*Comments

- 1—Colors may vary from IBM PC.
- 2—No color on composite monitor.
- 3—Must have sufficient storage for Compile and Link.
- 4—Not recommended for IBM PCjr.
- 5—Use same procedure to load DOS 2.10 as for DOS 2.00.
- 6—Compiler output will run on IBM PCjr if there is sufficient storage.
- 7—Cannot set foreground and background colors.
- 8—Will run on an IBM PCjr with 64KB of memory.

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