

# **Reference Encyclopedia For The IBM Personal Computer**

**Second Edition**

**Gary and Karen Phillips**

**G-Z**



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**Reference Encyclopedia  
For The IBM Personal Computer**

**Second Edition**

*Gary and Karen Phillips*



**ASHTON-TATE** ■  
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**G** — ASCII 71, HEX 47. **g** — ASCII 103, HEX 67.

**G** — Ground.

**G** — Generate signal. The output from an adder connected to a carry look-ahead circuit. It requires a propagate signal.

**G** — Go or execute program now in memory with DEBUG. Format:

**G** (=start address) (stop address1) (stop address2)

The program now being debugged will be executed starting at the current CS:IP value or at (=start address) if it is specified. If any (stop address)'s are specified, program execution will stop when one of these addresses is reached and a display of registers formatted as in the R command will be given. Default register is CS.

**Gain** — The output to input amplification ratio.

**Galaxy\*** — This is a game of exploration and conflict where the players compete for control of up to 40 solar systems. Players send their galactic fleets out to explore and conquer the universe by solar system. The game comes with sound effects and may be played against the computer. A different star map is randomly produced for each game. Avalon Hill Mirocomputer Games.

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**GALAXY TREK\*** — Video game player is the commander of a galactic starship, complete with onboard computer and space age weapons, with the mission of destroying alien invaders. N. F. Systems, Inc.

**GAME MASTER\*** — This sophisticated dice rolling and bookkeeping game is particularly designed for those engaged in role playing games. The advanced version includes chart rolling and other powerful commands. This utility assists the player of complex role-playing games to play much faster than average by managing the tedious portions of the game in a few seconds. The players have total control of the game. Alkazar Associates.

**Game Paddles\*** — Designed to work equally well for left and right handed players, these paddles feature a firing button "band" that can be unclipped, reversed, and clipped back on to change the firing button to the opposite side. T. G. Products.

**Games** — See Air Flight Simulator, Apparat Game Diskette, Astro Dodge, Asylum, ATLANTIC CITY, Blackjack Strategist, Blingsplatz, Butterflies, Champion Draughts, Chess 1.3, COMPUCUBE/IBM, Computer Poker, Computer Stocks and Bonds, Cross Clues, CYBORG, Oo-Topos, Deadline, Draw Poker, ELIZA, Everest Explorer, Exo-Fighter, Galaxy, GAME MASTER, GAMES PACKAGE 1, GOLFCAP, HORSE SELECTOR II, JABBERTALKY, LAS VEGAS BLACKJACK, Astrological Research System, MASTERMIND/MINEFIELD, Mega-

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## GAMES - GCR

Volt, Microsoft Adventure, Microsoft Decathlon, Midway Campaign, Millionaire, PC Man II, Pigpen, Pro Football-The Gold Edition, RAM-SAK, Set the Hostages Free, Space Guardian, Space Strike, STELLAR DEFENDER, Temple of Apshai, The Original Adventure, The Q System, Trilogy Three Games of Middle Earth, Voyager I, Zork I:The Great Underground Empire, Zork II:The Wizard of Frobozz, Zork III:The Dungeon Master. See also Ashton-Tate Public Domain Library.

**GAMES PAC I\*** — This is a game anthology of 14 menu-driven programs including A-MAZE-ING, SUB-COMMANDER, CARD CONCENTRATION, DUNE, HOWITZER, DICE, NUMBER GUESS, SCRAMATRIX, U.S. PRESIDENTS, WWII BOMBER, TIC TAC TOE, STAR TREK, BULLSEYE, and HAMMARABI. Alphanetics.

**GAMES PACKAGE I\*** — A collection of 10 popular games playable on the IBM Personal Computer. Games are a collection for young and old, and include: QUBIC, OTHELLO, KINGDOM, CRIBBAGE, BLACK BOX, SPACE TREK, BLACK JACK, MASTER MIND, AMERICAN QUIZ, and PRESIDENTS QUIZ. Ensign Software.

**Gap** — The space between two records or two blocks of information on a magnetic media. A gap is usually set to a predetermined value, such as all ones. It allows blocks to be rewritten in a slightly expanded or reduced format, due to speed variations of the drive.

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**Garbage Collection** — A technique for collecting unavailable, unused space in a mass memory and making it available for reuse by any of several schemes.

**Gate** — A single logic function. The NAND, NOR, AND, OR, XOR, and NOT functions are examples of gates.

**Gateway Processor\*** — Contains a 4MHZ Z80A processor that has 64K RAM and eight adapter slots for supporting a local-area network interface. It also includes a flexible disk controller that can support up to four 8" or 5-1/4" flexible disks, four communications boards to support 2 or 4 each RS-232-C or RS-422 at data rates of 19.2k bps, and four high-speed communications boards at data rates up to 56k pbs. Software applications supported include 3270 BSC, 3270 SNA, 3270 DSP, X25, and X.3. The processor also allows the PC to emulate a 3270 terminal and communicate between local and wide-area networks. Gateway Communications, Inc.

**Gauss** — A unit of flux density (one Maxwell per square cm.), named for German mathematician Karl F. Gauss.

**GB-4 Graphics Card\*** — Uses advanced BASIC commands such as circle, line, draw, paint, etc. to produce graphics with 640 x 200-pixel resolution in 16 colors. Discortex Corporation.

**GCR** — Group Coded Recording

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**GDX Interactive Graphics System\*** — The GDX System is a full-featured graphics entry and editing system which is a collection of programs and modules for creation, manipulation, and display of geometric data in two and three dimensions. Individual modules are specialized for drafting, PC layout, and numerical control applications. Subroutine sets will be available separately for graphic display processing, editing and I/O-interface. A path length optimization module is available individually. FTG Data Systems.

**GE** — General Electric.

**GE** — Greater than or Equal to; also represented by  $\geq$  and  $=>$ .

**General Accounting\*** — This self-contained general accounting and general ledger software system supplies all the basic tools necessary to automate the accounting functions of a business. Included is a payroll ledger, a simple accounts receivable ledger, a simple accounts payable ledger, and a general ledger. The software is capable of printing checks, and the system permits 10 divisions to be set up for profit-and-loss reporting. The following reports can be produced: trial balances, balance sheets, income statements, and assorted input transaction reports. On a system with approximately 500 accounts, the system can accommodate approximately 1000 transactions per period. BPI Systems, Inc.

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**General Educational Software** — See Computer Discovery, EASYLEARN, Math Drills, Question, TEACHER PC, THE SPEED READER, THINK + PLUS, U.S. MOTORS, VOCAB TEACHER, and WORDTRIX.

**General Ledger** — See Bookkeeping, General Accounting by BTI Systems, Inc., General Ledger, General Ledger 2.0, General Ledger by Peachtree Software, Inc., HAILINE General Ledger, TCS General Ledger, VERSALEDDER II, The Formula, and The Accountant.

**General Ledger\*** — This general ledger system was designed in response to requirements prepared by an advisory board of CPAs. The system supports up to 25 companies or divisions, 9999 major accounts per company or division, and 99 subaccounts or departments per major account. It provides complete budget and prior-year information for each account and supports a monthly or four-week accounting calendar for up to \$100,000.00 per account per period. The system receives data directly from other ABS financial packages. American Business Systems.

**General Ledger\*** — This multiuser general ledger package handles firms with up to one billion dollars in assets. With a flexible account-numbering structure supporting up to 99 subsidiaries or divisions, 99,999 accounts and 99 departments per account, numbering is totally at the user's discretion. The system maintains previous-year and budget information for reporting purposes, and supports 12 or 13 period fiscal years. The report writer function prepares user-defined

## **General Ledger**

reports for divisions and/or departments. The system supports up to 999,999,999.99 accounts per accounting period and receives data directly from all BACS financial packages. American Business Systems.

**General Ledger\*** — Designed especially for the first time computer user. Input screens for this program are designed and treated like filling out forms, and come complete with suggested answers. Separate ledgers can be kept on one diskette, and P & L's calculated separately by division, cost, or profit center and then stored or consolidated. BCC, Inc.

**General Ledger\*** — This client write-up and payroll program can handle up to 400 accounts and 3000 transactions on a single 8" diskette. Includes before-the-fact and after-the-fact payroll. CPAids.

**General Ledger\*** — Produces profit and loss statements for the whole company or individual departments, and trial balance and balance sheet for the whole company. Comparisons can be made of expenditures against budget with annual profit and loss projections and between a year or month's expenditures and those of the year before. Also features cash flow detailing abilities. International Micro Systems, Inc.

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**General Ledger\*** — This general ledger system maintains up to 13 accounting periods; handles multiple profit centers; has chart of accounts maintenance and list; permits general and standard journal transaction entry, editing and posting, including edit lists and journals; prints the working trial balance (a worksheet) and regular trial balance; allows on-line G/L account inquiry; prints the source cross reference report and the financial statements in flexible, user-defined formats; permits transaction detail to be kept for the year if disk space is available; has a flexible year-end closing procedure; and may be interfaced to the MBSI Accounts Receivable, Accounts Payable, and/or Payroll. Micro Business Software, Inc.

**General Ledger\*** — This easy to use program generates a balance sheet ledger list (full or partial) and an income statement with percentages. Editing may be done after data is keyed-in but before it is posted. Miller Microcomputer Services.

**General Ledger\*** — A general ledger system that can stand alone or be integrated with Accounts Payable. It can maintain accounts for up to ten companies, each with up to 100 accounts. Layouts of balance sheets, profit and loss accounts, and operating statements can be defined by the operator to suit individual requirements. MPSI.

**General Ledger\*** — Program permits user-controlled formatting of financial statements through the chart of accounts, and features keyed access, full-screen data entry, fast machine-language sorts, user-defined journals, 8 digit account number, and a detailed general ledger. Occupational Computing Company, Inc.

**General Ledger\*** — The Peachtree general ledger software is the core of the family of Peachtree accounting programs. It supports detailed records of all financial transactions. It has the capability to produce trial balances, balance sheets, and income statements. As many as 99 divisions may be set up, producing reports by division. The software is interactive with the Peachtree accounts payable programs. Capacity of the system is approximately 970 transactions with 500 general ledger accounts. Peachtree Software.

**General Ledger\*** — This highly parameter-driven program is written in Pascal MT+86, and eliminates the need to modify software to accommodate minor report, file, or screen revisions. Small Business Systems, Inc.

**General Ledger\*** — Program generates a trial balance sheet, balance sheet by department, income statement, end of the month processing, and a master file list by account number. It may be used as an integrated part of a larger system or separately. Software Laboratories, Inc.

**General Ledger\*** — This double-entry ledger system maintains current and historical transactions and generates a wide variety of financial reports. General Ledger is completely parameterized and ready to run. The user only needs to enter his own chart of accounts and balances. The full features of this program provide many options and reports. The system may run as a stand-alone system or in conjunction with other Solid Software accounting systems. Solid Software.

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**General Ledger\*** — A user friendly and comprehensive double-entry accounting system. The product employs screen-oriented data input forms, extensive error-trapping, information validation, and machine language routines for high speed operation. The system includes up to 500 accounts and 500 transactions per month, along with an extensive check register management system. It is capable of printing checks and mailing labels and produces these reports: transactions journal, account ledgers, income statement, balance sheet, and account listings. Spectrum Software.

**General Ledger 2.0\*** — This general ledger system with departmental income statements maintains a small business ledger and produces a balance sheet and departmentalized income statements on request. Information is maintained on a M-T-D and a Y-T-D basis. This free format, unlimited chart of accounts may define up to 99 cost centers. Also included is an input sheet (working trial balance) and schedules (print suppression of accounts). Computer System Design.

**The General Ledger for Professionals\*** — Can be used as a stand-alone program or interfaced with Verdict or Billkeeper so that client payments and expenses paid for are automatically collected for the general ledger. Overhead expenses and additional income are entered, and financial statements are produced. Micro Craft, Inc.



## **General Ledger – GENTERM**

### **General Ledger with Project/Job Cost Accounting\* –**

This completely interactive system handles up to 90,000 accounts per company and includes instant account description display at data entry, fast processing, true division reporting, and monthly budget and historical comparisons. Sophisticated file structure and reporting options are available. Executive Data Systems, Inc.

**Gencrate** BASIC line numbers automatically. See  
AUTO(number)(,increment)

**GENIE\*** – A fixed add-on 5.25' drive available in 5M, 10M, 15M, and 20M storage capacities. It includes a menu-driven utility package which provides for user-assignable 16-character names for virtual volumes. The user can backup to either diskettes or the 5 + 5 removable cartridge drive, and mix and match different system file types on the same disk. Genie Computer Corporation.

**GENIE 5 + 5\*** – A 10m hard disk drive that includes a 5m removable, hard disk cartridge and all the necessary hardware and software to plug right into the computer. Each cartridge replaces more than 30 double density floppy disks. Compatible with most popular software. Genie Computer Corporation.

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**GENIE X5\*** – This 5M removable Winchester cartridge disk drive includes all the necessary hardware and software to interface with the IBM PC. The two available models are the X5A, a stand-alone add-on, and the X5P, which fits into the IBM PC. Compatible with most popular software, each cartridge replaces 30 double-density floppy disks. The user can back up to either diskettes or the 5 + 5, and mix and match different system file types on the same disk. Other features include system status screen messages, the ability to assign 16-character names to virtual volumes, and to have up to eight volumes on-line at any one time. Genie Computer Corporation.

**Genius\*** – A series of full-page display monitors and terminals suited for word processing, accounting, financial modeling, and spreadsheet applications that enhance the throughput efficiency of microcomputer based systems. The operator views either text or numeric data in hardcopy form, because high resolution ensures a full page presentation of 57 lines by 80 columns, using 7 x 12 dot resolution characters. Micro Display Systems, Inc.

**GENTERM\*** – The IBM PC can communicate with most micro-, mini-, and mainframe computers that support line-by-line or character-by-character transmission with this comprehensive communications package. Any number of handshaking protocols may be defined and then saved. This feature, in combination with an autodialing function, provides for quick and efficient operation through a smartmodem. IAS Corporation.

**Geographics\*** — An educational program for teaching United States geography, using an onscreen map and rewarding correct answers by playing the song of the state correctly answered. Sunshine Computer Software Company.

**Geometric Trigonometric Analyser (GT-PAC)\*** — These trigonometric and geographic routines calculate such commonly used functions as coordinate plot, coordinate conversion, polar equation plotting, triangle analysis, and analysis of colonic sections. Information Systems.

**GE 3014 PC Printer\*** — This multi-resolution dot-matrix printer offers three print speeds. 160 cps (5 of a 9 x 9 grid) is EDP quality. 80 cps (9 x 9 grid) produces memo quality. 40 cps (9 x 18 grid) is "letter" quality. The printer interfaces through either the "Centronics parallel" method or the RS-232-C/CCIT (at up to 9600 baud). General Electric.

**GE 3020 PC Printer\*** — A 200 cps dot-matrix printer that prints graphics in a 72 x 72 dot-per-inch matrix and generates draft quality printing. It is designed for continuous duty cycles, and the head will print through three copies on tractor feed paper. Interfacing is through the "Centronics parallel" method or the RS-232-C/CCIT.

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**GE 3024 Printer\*** — This multi-resolution dot-matrix printer offers three print speeds. 200 cps (5 of a 9 x 9 grid) is EDP quality. 80 cps (9 x 9 grid) produces memo quality. 40 cps (9x 18 grid) is "letter" quality. The printer interfaces through either the "Centronics parallel" method or the RS-232-C/CCIT (at up to 9600 baud). General Electric.

**GET** — BASIC Statement. The GET statement will read a record from a random file into a random buffer. The format is:

GET (#)(filename)(,number)

(filename) — This is the number of the opened file.

(number) — This is the number of the record which is to be read into the buffer, ranging from 1 to 32767. When (number) is left out, the record following the previous GET statement is read into the buffer.

INPUT #, LINE INPUT#, or variables defined in a FIELD statement are used to read from the random file buffer after a GET. Because BASIC and DOS block as many records as possible in 512 byte sectors, a physical read from disk is not always performed.

## **GET, BASIC – Glitch**

You can also use GET for communications files. (number) then designates the total bytes to be read from the communications buffer. (number) cannot be greater than the value set by the LEN option in the OPEN "COM" ... statement.

**GET** — BASIC Statement (graphics). GET, used as a graphics statement, reads points from the screen. The format is:

GET (x1,y1)-(x2,y2), (arrayname)

(x1,y1)-(x2,y2) -- This refers to the absolute or relative coordinates of the area on screen.

The GET statement reads into the array the colors of the points within the rectangle designated by points (x1,y1) and (x2,y2) at the opposite corners. The array is used to hold the image. It must be numeric, but can be any precision, with a required size in bytes of:

$$4 + \text{INT}((x * \text{bitsperpixel} + 7) / 8) * y$$

where (x) is the horizontal length and (y) is the vertical length of the rectangle side. The value of (bitsperpixel) is two for medium resolution, and one for high resolution.

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In the graphics mode GET and PUT can be used for object motion at high speed. In this manner they act as "bit pump" operations moving bits on (PUT) and off (GET) the screen rapidly.

**GET and PUT** — BASIC 2.0. Statements have been enhanced to allow record numbers in the range 1 to 16,777,215 to accommodate large files with short record lengths.

**GI** — General Instruments, a manufacturer.

**Gibson Mix** — A statistically balanced mix of instructions that is representative of general data processing applications. It is one of many similar variations used for bench-mark testing.

**GLENDAS\*** — This general ledger accounting system is transaction based and produces balance sheets or financial statements. INFOCORP.

**Glitch** — A pulse or burst of noise. A small pulse of noise is called a snivitz. The word glitch is usually reserved for the more dangerous types of noise pulses which cause crashes and failures.

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**Global Filename Characters** — In DOS filenames, ? and \* can be used as special “wildcard” characters to allow matching a whole group of files (or one file from a partial specification.) ? means any single character occurring in this position is considered a match thus ABC? will match any four character file name starting with ABC, including ABCA, ABCZ, ABCS, etc. \* indicated that from this point on in the name any characters (including blanks or none) are considered a match. So ABC\* matches everthing ABC? matches, plus all longer filenames starting with ABC. The file ABCDE will match ABC\*. but not ABC?

The file extension is considered a totally separate match, with ? and \* used in exactly the same way as in the filename. Global filename characters can be used in many DOS commands including COPY, DIR, ERASE, etc. Global filename characters are not allowed in a command name. They may only be used in command parameters.

**Global Variable** — A variable whose name and value are accessible throughout the program or application system. Contrast with a local variable, accessible only within the block where it is defined.

**GLYPHIX\*** — This is an interactive graphics sketchpad routine for use in quickly developing graphics images on the Color/Graphics Adapter. It permits definition and storage of shapes, mixes text with graphics, and accesses all graphics features of Advanced BASIC. GLYPHIX is useful for isometric sketches, as lines are quickly drawn to any 90 degree or 45 degree axis with a single keystroke. Starside Engineering.

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**GND** — Ground.

**GO or GOTO** — dBASE II Command. Positions the record pointer to a specified place in a database. This may be a given record number, the TOP or the BOTTOM of the file.

**Gold Series II Payroll: Accounting Software** — Does multistate payrolls, calculates withholding for federal, state, local, and FICA taxes. Supports vacation and sick pay, and prints checks, tax reports, W2s, 941As, and complete audit trial reports. Gold Software, Douthett Enterprises, Inc.

**Gold Series II Software: Accounts Payable\*** — Package provides aged payable reports in user-defined periods, offers flexible payments of vendor invoices, and has total or partial check payment. Gold Software, Douthett Enterprises, Inc.

**Gold Series II Software: General Ledger\*** — General ledger remains open for two months and maintains balance records for 15 months. It handles multiple profit centers and features user-defined statement formats. Gold Software, Douthett Enterprises, Inc.

## **Gold Series – GOSUB**

**Gold Series II Software: Inventory Control\*** — Designed for wholesale distribution operations, this software provides an on-order report, status report, price list, and physical inventory report in location sequence. Gold Software, Douthett Enterprises, Inc.

**Gold Series II Software: Job Costing\*** — Allows the user to define categories, cost codes, and phases listing them on the job costing report. Provides 10 user-defined totals by category and the user enters estimates. Gold Software, Douthett Enterprises, Inc.

**Gold Series II Software: Job Order Entry/Invoicing** — Allows user entry of miscellaneous charges and order changes after entry. Also prints packing lists. Gold Software, Douthett Enterprises, Inc.

**Gold System II Software: Accounts Receivable\*** — Assesses late fees automatically, distributes invoice items to multiple general ledger accounts, and uses a balance forward system. Gold Software Systems, Douthett Enterprises, Inc.

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**GOLFCAP\*** — USGA golf-handicapping software. The system calculates and maintains handicap records for one to 200 golfers per diskette. This program can be used to keep personal, club or league records. Designed to be easy to use by computer beginners, anyone can enter scores. System stores course, data, and strokes for a complete history of the user's golfing year. Included with the system is one 5-1/4" diskette and a reference booklet. Systemics.

**Golf Handicap\*** — Calculates, saves and updates golf handicaps for up to 300 golfers per single sided diskette, using customized calculations or the USGA type standard method. Also is able to print wallet cards and alphabetized listings. Systemics.

**GOSUB and RETURN** — BASIC Statements. GOSUB and RETURN are used in conjunction and enable a program to access subroutines. The format is:

GOSUB(line)

(line) begin subroutine

RETURN

(line) — This is the line number of the first line of the subroutine.

You can call a subroutine using GOSUB any number of times in a program and a subroutine may be called from within another

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subroutine. RETURN causes a branch back to the statement following the GOSUB which called the subroutine. A subroutine can have more than one RETURN.

Although subroutines can be anywhere in a program, in order to keep a program from entering a subroutine that should not be executed, it may be necessary to precede it with a STOP, END, or GOTO statement to detour program execution around it.

Refer also to ON...GOSUB and ON...GOTO — BASIC Statements.

**GOTO (or GO TO)** — A branch instruction in a high-level language.

**GOTO** — BASIC Statement. The GOTO statement is used to exit from the program sequence to a line number. The format is:

GOTO (line)

(line) — This is the line number in the program you want to execute next.

The statement at the (line) specified after GOTO will be executed if it is executable; if it is non-executable, such as a DATA or REM statement, then execution will continue with the first executable line after (line).

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In debugging, the GOTO statement can be used in direct mode to re-enter a program at a desired point.

Refer also to — ON...GOSUB and ON...GOTO — BASIC Statements.

**GOTO** — DOS 2.0. Batch processing subcommand. GOTO (label) statement directs the sequence of execution through the file. The (label) must be defined somewhere in the batch file with a :(label) statement.

**Government/Municipal Software** — See Police Communications Log System, and Utility Billing 2.2.

**GP** — General Purpose.

**GP3A Graphics Tool Kit\*** — Two part package consists of a 2732 EPROM containing a GS-3 graphics applications software module (callable from BASIC and other languages) and an MB-3 memory board containing a graphics space of 256K of non parity memory and 192K of parity-checked memory for user programs. Memory remapping functions are supported. Discortex Corporation.

## **GPIB – Graphic**

**GPIB** — General Purpose Interface Bus. The IEEE 488-1975 interface bus standard. Also called ANSI Standard MC 1.1-1975 or the IEC Bus in Europe.

**GP1024 Color Printer\*** — This color ink-jet hardcopy device combines color, text and graphics in a single unit. By utilizing silent ink jet technology, the GP1024 supplies complete eight-color hardcopy with up to 125 shades. The device's resolution exceeds that of most commercially available graphics CRTs. With 120 dots per inch, the GP1024 prints up to 1440 dots in the horizontal, 85 dots per inch in the vertical. Enough ink for 500 typical graphic images is supplied by a disposable snap-in cartridge. The carriage of the GP1024 has a rated life greater than 6000 hours MTBF. The color head has a proven reliability of greater than 19 billion operations. Printacolor.

**GRAFCALC\*** — An easy to use graphics system that provides a simple means of producing scatter graphs, bar charts, pie charts, line and dot graphs, histograms, map graphs, and graph overlays. Graphs appear on the color monitor and may be printed on an Epson MX-80 printer, an IDS Prism printer, or the Hewlett Packard plotter. Can interface with VisiCalc to plot columns and rows from the VisiCalc model. Miracle Computing.

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**Grammatic\*** — A sophisticated spelling and grammar checker that not only detects such typing errors as doubled words, punctuation and capitalization errors, but also detects wordsy, trite language and misused or sexist language. Also produces style information such as average word and sentence length. Aspen Software Co.

**Grammatik\*** — Grammatik is a grammar and style checker/analyzer that goes beyond simple spelling checking. It analyzes documents for common typing errors, including doubled words, capitalization errors, and punctuation errors. It also points out trite, wordy, misused phrases, and sexist language. Produced is a summary of average sentence and word length, with other style information as well. Aspen Software.

**The Grand Slam\*** — Uses random access files to keep records on baseball teams and pitchers. A correct and proven betting line is calculated by a secret algorithm, to provide a leading edge to the baseball handicapper. International Disk.

**GRAPHEASE8** — Adds business graphics to the DATAEASE program, allowing graphics to be incorporated into text data. Extensive options are provided to design line, bar, area, x-y, and pie charts. Full color and a variety of printers and plotters are supported. Software Solutions, Inc.

**Graphic Tablets Digitizers** — See Digi-Pad 5 and HIPAD.

## Graphics – GRAPHIT

**Graphics** — BASIC 2.0. The graphics statements CIRCLE, LINE, PAINT, POINT, PSET, PRESET, and WINDOW now use line clipping. Lines that cross the screen or viewport are "clipped" at the boundaries of the viewing area. Only the points plotted within the screen or viewport are visible; points outside the viewing area do not appear and do not wrap.

**GRAPHICS** — DOS 2.0. Enables a graphics screen to printer dump. Similar to the GRAF2 function for DOS 1.1 provided with the Ashton-Tate Public Domain Library, except that GRAF2 allows two sizes of graphics printouts.

**Graphics** — BASIC. See PUT (x,y),(array)(,action) and PAINT (x,y)(,paint(,boundary)).

**Graphics Analysis Package\*** — Computes lengths, distances, and areas of polygons by incorporating software that treats the included digitizer as a planimeter. GTCO Corp.

**Graphics Generator Software** — See Artist I & II, Chart Pro, CHART-MASTER, CHARTMAN I and II, COLOR DEMO, DGrapha, EASYGRAF, FAST GRAPHICS, FRIEZE, GLYPHIX, GRAPH MAGIC, Graphics Generator, GraphPower, Higraph-I, HP7470 PLOTTER DEMO, Lab-Vu, Micro-Graf, Print-Graf, Rat Trax for VisiCalc, Rat-Trax, Saucer/Painter/Palette, Slide Pro, Space Graphics/Space Tablet, Type Faces, VIDEO-ETCH, and VisiTrend/Plot.

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**Graphics Generator Subsystem\*** — Is totally transparent to any software written for the IBM PC, and replaces the ColorGraphics adapter. Significantly enhances colors, speed and graphics. Conographic Company.

**GRAPHICS LIBRARY\*** — IBM or Pascal implementations of all the graphic commands supported in IBM BASIC. Allows ten colors in medium-resolution graphics, and three in high-resolution graphics. Fast-Lane Computer Products.

**Graphics Master\*** — A multi-function board that provides high-resolution graphics by interfacing to the monochrome or color display on an IBM PC. IBM characters may be displayed over a video image, using an external sync and an external mixer. Tecmar, Inc.

**Graphics Utility\*** — Helps the user draw pictures or characters (up to 39 x 39 pixels) on the screen or on graphics-capable Epson or IBM printer. Characters may be combined, to produce larger images, or stored on disk. Supplied subroutines allow the newly created characters to be incorporated into other programs. Savant Software.

**GRAPHIT\*** — Produces single graphs of data such as dot, line and bar graphs, histograms, and pie charts for printing on Epson MX-80 printer with Graphtrax. Miracle Computing.



## **Graph Magic – GT**

**Graph Magic\*** — A graphics generator to create graphs, store and recall information and graphs from disk, use full-color capability, add text to graphs, and overlay one graph on another. The system supports most printers and operates independently.

**Graph n' Calc\*** — An integrated graphics/data transformation and analysis system that uses exponential smoothing, Strait-Line Trend and Regression Analyses, and demonstrates results on five types of color graphs. These can be viewed on a high resolution RGB or composite color monitor, or as hard copy displays on a dot matrix printer or pen plotter. Data entry is accomplished manually or using a variety of interfaces such as the DIF format. Function selection is menu-driven. A display screen appearance is consistent throughout the system. Desktop Computer Software.

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**GraphPower\*** — GraphPower is a business graphics and plotting system that is menu-driven and generates professional-quality business graphics at low cost. The system creates camera-ready graphics on paper or transparencies for presentations using data input from the keyboard or the Micro-DSS/Finance financial modeling system. It is capable of producing graphs and charts, including bar, stacked bar, side-by-side bar, line pie, text, and reports. Included in the system is automatic or manual scaling, eight letter sizes with five slants, up to four graphs per page, multiple image overlays, shading combinations, text annotation, mathematical operations, 260 data points, and more. GraphPower connects via serial interface to Hewlett-Packard one, two, four, and eight pen plotters, and to Houston Instrument Plotters. Ferox Microsystems.

**GRAPH-PRINT\*** — A machine language utility that can be used with FORTRAN, BASIC, or Pascal to print a graphics screen, creating either a positive or negative, normal or compressed image. Requires an IBM Color Graphics Adapter Card and an Epson printer with Graphtrax. Fast-Lane Computer Products.

**Ground** — The point of reference in an electrical circuit (not necessarily the physical ground). The ground point is considered at nominal zero potential, and all other potentials in the circuit are compared with it.

**GT** — Greater than (also represented by >).

ASHTON-TATE ■