



ACT Sirius1

GRAPHICS TOOLKIT - No. 503
GW - BASIC





ACT Sirius1

GRAPHICS TOOLKIT - No. 503
GW - BASIC

GW-BASIC is an extended version of Microsoft's MS-BASIC, the most popular language in the micro-computer world. It meets the requirements for the ANSI subset standard for the BASIC language and supports unique features such as high-resolution graphics and music. GW-BASIC is an interactive interpreter. It translates a program into machine instructions one line at a time as the program is actually running.

GW-BASIC provides a unique and powerful program development environment. A program can be written with the full screen editing facilities of the GW-BASIC Interpreter and debugged using its program trace and immediate execution abilities. The fully-developed and tested program may then be saved in 'protect' mode to prevent listing or alteration of the source code. GW-BASIC is run under the MS-DOS operating system.

Major Language Features

Advanced (level 3) high-resolution graphics are available using commands such as the following:

- SCREEN
- LINE
- PAINT
- CIRCLE
- PSET
- PRESET
- DRAW

Text is entered by typing at the keyboard in AUTO mode. When a change is required, the cursor can be moved directly to the location in question and text inserted or deleted without leaving AUTO mode. During debugging, the EDIT mode works in a similar fashion. Characters, lines or the entire screen may be erased, and the cursor may be moved horizontally and vertically.

A full screen editor is included in GW-BASIC for ease in program development.

LCOPY supports the printing of the current screen contents, including graphics (on a suitable printer).

The SOUND statement generates a desired frequency for a specified duration.

Frequently used GW-BASIC commands (such as RUN, CONT, LCOPY, SAVE, LOAD, FILES and LIST) may be entered with a single keystroke. The command emitted by a special function key may be user defined with the KEY statement.

The cursor can be placed at any position on the screen using the LOCATE statement.

GW-BASIC supports four data types: Integer (± 32767), String (up to 255 characters), Single Precision Floating Point (7 digits), and Double Precision Floating Point (16 digits).

GW-BASIC has program trace facilities (TRON, TROFF) for easy debugging.

Error trapping is available using the ON ERROR GOTO statement.

With the interpreter, line numbers can be automatically generated and renumbered.

Boolean operators include:

- OR
- AND
- NOT
- NOR
- EQV
- IMP

Formatted Output is supported by the PRINT USING facility, including asterisk fill, floating dollar sign, scientific notation, trailing sign and comma insertion.

Extensive program editing facilities are available in the interpreter with the EDIT command and EDIT mode sub-commands.

Up to ten assembly language sub-routine calls per program are supported.

Program CHAINing with COMMON variables is supported.

Nested IF/THEN/ELSE constructs are allowed

Variable length Random and Sequential access files are supported with a full set of file manipulation commands:

- OPEN
- CLOSE
- GET
- PUT
- KILL
- NAME

Interactive mode commands in the interpreter include:

- AUTO
- EDIT
- LOAD
- RENUM
- CONT
- ERASE
- MERGE
- LLIST
- DELETE
- LIST
- NEW
- SAVE

DATE\$ and TIME\$ will retrieve or set the current date and time.

Graphics Support

The ACT SIRIUS 1's resolution is 800×400 . In the graphics commands, this allows the X co-ordinate to range from 0 to 799, and the Y co-ordinate to range from 0 to 399.

GW-BASIC graphics statements range from the very simple PSET (which turns on a single pixel at co-ordinates given as parameters) to the very complex PAINT (which fills a bounded area). Also included are the statements such as LINE (which uses pairs of co-ordinates to delimit a line or rectangle) and CIRCLE (which draws circles, ellipses and partial curves, given a centre co-ordinate, radius and aspect ratio).

The SCREEN statement sets the screen attribute to alpha or graphics mode

ACT (Sirius) Limited

Shenstone House, Dudley Road, Halesowen, West Midlands B63 3NT Telephone 021-501 2284 Telex 337007

The following are registered trade marks

CP/M-86, CP/M, MS-DOS, XENIX, Z-80(R), MS-COBOL, MS-PASCAL, MS-FORTRAN, GW-BASIC, CBASIC-86, LEVEL 2 COBOL, PMATE-86, MS-LINK, MS-LIB, MACRO-86, MS-CREF, FABS-86, AUTOSORT-86, EFONT, OMNINET