



IBM BASIC Language Reference Summary

SX26-3736-1
File No. S370-40

Second Edition (February 1986)

This edition makes obsolete, SX26-3736-0. It applies to Release 2 of IBM BASIC/VM, Program Product 5668-996, Release 2 of IBM BASIC/MVS, Program Product 5665-948. This edition will be updated from time to time; however, the basic documentation (*IBM BASIC Language Reference*, GC26-4026) is the authoritative source and will be first to reflect changes.

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BASIC Commands

AUTO

Provides automatic line number prompting.

AUTO [start-line] [STEP increment]

BREAK

Sets, removes, and lists breakpoints within a program.

BREAK [ON] line-num [,line-num]...

BREAK OFF [line-num [,line-num]...]

BREAK?

BREAK ?

CHANGE

Changes character strings within the statements in your workspace.

CHANGE [start-line [TO end-line]] delim
old-string delim new-string [delim [A[LL]]]

CHANGE [line-number[.segment-number]]

COMPILE

Translates BASIC source programs into object programs.

COMPILE [prog-name] [OBJ[ECT] (obj-name)]
[OUT (list-name)] [[OPTIONS](option-list)]

COPY

Duplicates one or more lines in the workspace.

COPY start-line [TO end-line] AT target-line
[STEP increment]

DELETE

Deletes the specified line, or group of lines, from the workspace.

DELETE start-line [TO end-line]
[,start-line [TO end-line]]...

DROP

Erases the specified identifiers.

DROP [identifier [,identifier]...]

EXTRACT

Removes all lines, other than those specified, from the workspace.

EXTRACT start-line [TO end-line] [,start-line
[TO end-line]]...

FETCH

Restores a program and its internal form to the workspace.

FETCH program-name

FIND

Locates character strings within a program line, or block of lines, and displays the containing lines on the terminal.

FIND [start-line [TO end-line]] delim string
[delim [A[LL]]]

GO

Restarts a program that has been temporarily halted.

GO [line-number|END] [STEP]

GOTO line-number

HELP

Displays information about BASIC.

HELP [request]

INITIALIZE

Closes all open files and clears the workspace.

INITIALIZE [program-name]

LIST

Displays some or all of the lines of the program in your workspace.

```
LIST [XREF] [ERROR[S] [ALL]] [OUT (list-file)]
  [line-number-range [,line-number-range]...]
LIST {FOR[WARD]|BACK[WARD]} [pages]
```

LOAD

Clears the workspace and loads a program from your library.

```
LOAD program-name
```

MERGE

Inserts statements from a file into the program currently in the workspace.

```
MERGE program-name [start-line] [TO end-line]
  [AT target-line] [STEP increment]
  [(REPL[ACE] [ ])]
```

PROFILE

Executes a profile during a session.

```
PROFILE profile-name
```

PURGE

Removes files from your library.

```
PURGE file-name
```

QUERY

Provides information about files.

```
QUERY [file-type] [file-name]
  [OUT (list-file [ ])]
```

QUIT

Ends the current BASIC session.

```
QUIT [return-code]
```

RENAME

Either assigns a name to the program in your workspace or displays the current name associated with your workspace.

```
RENAME [program-name]
```

RENUMBER

Changes some or all of the existing line numbers of the program in the workspace.

```
RENUMBER [start-line [TO end-line]]
  [AT new-number] [STEP increment]
```

RUN

Starts the execution of a program, starting with the lowest numbered statement.

```
RUN [program-name] [(SOURCE] [SPREC|LPREC]
  [PARM "literal"])] [STEP]
RUN object-name (OBJECT]
  [PARM "literal"])] [STEP]
```

SAVE

Copies the source program in the workspace to a file.

```
SAVE [program-name] [(REPL[ACE] [ ])]
```

SET LOG

Activates or deactivates logging of the BASIC dialog with the terminal.

```
SET LOG {[ON] [OUT (file-spec)] [APPEND]|OFF}
```

SET MSG

Controls the content of messages displayed at the terminal.

```
SET MSG ({I|W|E|S}) {ALL|TEXT}
```

SET OPTION

Defines the default values for options.

```
SET OPTION option [,option]...
```

SET PF

Establishes PF key definitions for command input.

```
SET PFn [IMMED|DELAYED] characters
SET PFn RETRIEVE
SET PFn
```

SET PROFILE

Controls display of lines and messages while reading a profile.

```
SET PROFILE {TERM|NOTERM}
```

SET TERM

Controls terminal input and output.

```
SET TERM {SCROLL|LINE}
```

STORE

Places the program currently in the workspace into a file.

```
STORE [program-name] [(REPL[ACE] [ ])]
```

SYSTEM

Executes an operating system command or enters the operating system subset mode.

```
SYSTEM ["operating-system-command["]]
```

BASIC Statements

BREAK

Suspends program execution.

BREAK

CALL

Invokes subprograms.

CALL name [(argument [,argument]...)]

CALL BASIC

Enables you to execute the SET TERM command in a BASIC program.

CALL BASIC (set-term-string)

CALL COBOL, FORTRAN or PLI Statement

Allow you to link to routines written in COBOL, FORTRAN, or PL/I.

CALL {COBOL|FORTRAN|PLI} (program-name
[,argument]...)

CALL {CLINK|FLINK|PLINK} [(character-expression
[,character-expression]...)]

CALL GDDM

Performs graphic functions within an IBM BASIC program using the Graphical Data Display Manager (GDDM).

CALL GDDM (function [,argument]...)

CALL SQL

Accesses or manipulates data stored in a relational data base.

CALL SQL (SQL-stmt, status-info(),
message-var [,value-list])

CALL SYSTEM

Allows you to execute a limited set of system commands.

CALL SYSTEM (character-expression)

CASE

Immediately precedes a group of statements within a SELECT block that are executed when the value of the selection expression in the SELECT statement satisfies the criteria of the CASE statement.

CASE selector [,selector]...

CASE ELSE

Immediately precedes a group of statements within a SELECT block that are executed if none of the CASE blocks are selected. The group of statements is referred to as a CASE ELSE block.

CASE ELSE

CAUSE

Generates an exception during processing.

CAUSE numeric-expression

CHAIN

Halts processing of the program in which it appears and starts a new main program.

CHAIN character-expression [,FILES] [,name]...

CLOSE

Deactivates the specified file.

CLOSE #fileref [: [err [,err]]]

COMMON

Provides a means of sharing values between program units of a program or between programs when a CHAIN statement is executed.

COM[MON]
{numeric-com | char-com[*length]}
[, {numeric-com | char-com[*length]}]...

CONTINUE

Resumes execution at the statement following the statement causing an exception.

CONTINUE

DATA

Creates internal data tables for reference by READ statements.

DATA [integer*] item [, [integer*]item]...

DEBUG

Activates debugging facilities in a program.

DEBUG ON [TO #fileref]

DEBUG OFF

DECIMAL

Specifies which identifiers are to be assigned decimal type.

DECIMAL [{identifier|(letter-list)}
[, {identifier|(letter-list)}]...

DEF

Defines and names a user-defined function.

DEF name [(parameter [,parameter]...)]
[=expression]

DELETE

Deletes a record from a keyed or relative file.

DELETE #fileref [,] pos [: [err [,err...]]]

DIM

Specifies the size of arrays and the length of character variables and array elements.

DIM {numeric-dim | char-dim[*length]}
[, {numeric-dim | char-dim[*length]}]...

DO

Initiates the execution of a set of statements that may be processed zero or more times.

DO [{UNTIL|WHILE} logical-expression]

ELSE
Specifies the beginning of the ELSE block portion of an IF block.

ELSE

END
Indicates both the physical and logical end of the main program.

END [numeric-expression]

END IF
Signifies the end of an IF block.

END IF

END SELECT
Signifies the end of a SELECT block.

END SELECT

END SUB
Marks the physical end of a subprogram.

END SUB

EXIT
Specifies where control is to be transferred if a particular condition occurs during the execution of an input/output statement.

EXIT condition line-reference
[,condition line-reference]...

EXIT IF
Is used within a DO or FOR loop to transfer control to the statement immediately following the associated LOOP or NEXT statement when the EXIT IF clause is true.

EXIT IF logical-expression

FNEND
Indicates both the physical and logical end of a multistatement user-defined function.

FNEND

FOR
Initiates a FOR/NEXT count-condition loop.
FOR var=initial TO final [STEP increment]

FORM
Defines the exact appearance of both input and output data.
FORM item [,item]...

GET
Retrieves values from a stream or sequential internal file.
[MAT] GET #fileref : input-list [,SKIP REST]
[err [,err]...]...

GOSUB
Is used, together with the RETURN statement, to invoke subroutines.

GOSUB line-reference

GOTO
Unconditionally branches to the indicated line number or line label.

GOTO line-reference

IF
Evaluates a logical expression and conditionally transfers control or conditionally executes a statement or series of statements.

IF logical-expression THEN statement-reference
[ELSE statement-reference]

IF Block
Begins an IF block.

IF logical-expression THEN

IMAGE
Specifies the format of print lines or output records for display files.

[IMAGE]:[character-string]
[conversion-specification
[character-string]]...

INPUT
Provides input through the terminal.

[MAT] INPUT [input-prompt:] input-list
[err [,err]...]...



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INPUT FIELDS

Reads one or more data values from one or more specific fields of the terminal screen and assigns the value(s) to one or more variables.

```
INPUT [#fileref[,]] FIELDS field-definition:
  input-list [err [,err]...]
```

INPUT File

Reads either display or internal files, or from the terminal.

```
[MAT] INPUT #fileref [[,] input-prompt] :
  input-list [,SKIP REST] [err [,err]...]
[MAT] INPUT #fileref : input-list
  [,SKIP REST] [err [,err]...]
```

INTEGER

Specifies which identifiers are to be assigned integer type.

```
INTEGER [{identifier|(letter-list)}
  [, {identifier|(letter-list)}]...]
```

LET (Scalar Assignment)

Assigns values to both numeric and character variables.

```
[LET] variable [,variable]... = expression
```

LINE INPUT/LINPUT

Allows the unformatted input of character strings from a terminal.

```
[MAT] LINE INPUT [input-prompt:] input-list
  [err [,err]]
```

LINE INPUT/LINPUT File

Reads unformatted data from a display file.

```
[MAT] LINE INPUT #fileref [[,]input-prompt] :
  input-list [err [,err]...]
```

LOOP

Delimits a DO loop.

```
LOOP [{WHILE|UNTIL} logical-expression]
```

MARGIN

Specifies where output may begin and end on a terminal screen or page.

```
MARGIN numeric-expression
MARGIN [RIGHT numeric-expression]
  [LEFT numeric-expression]
  [TOP numeric-expression]
  [BOTTOM numeric-expression]
```

MARGIN File

Specifies the page margins for display type files being accessed by PRINT File statements.

```
MARGIN #fileref numeric-expression
MARGIN #fileref [RIGHT numeric-expression]
  [LEFT numeric-expression]
  [TOP numeric-expression]
  [BOTTOM numeric-expression]
```

MAT (Array Assignment)

Assigns values and dimensions to an array.

```
MAT arrayname = array-expression [(redimension)]
```

NEXT

Delimits a FOR loop.

```
NEXT variable
```

ON Condition

Indicates the action to be taken when an exception occurs.

```
ON condition action
```

ON GOTO/GOSUB

Conditionally transfers control to one of a group of statements. ON GOSUB also saves the return location

```
ON numeric-expression {GOTO|GOSUB}
  line-reference [, line-reference]...
  [NONE line-reference | ELSE statement]
```

OPEN

Activates a file and specifies file attributes.

```
OPEN #fileref: [NAME] file-id
  [file-attributes] [err]
```

OPTION

Permits the selection of a variety of options that can be applied to a program.

```
OPTION option [,option]...
```

PAUSE

Halts execution of the program in which it appears.

```
PAUSE [pause-message]
```

PRINT

Displays data at the terminal.

```
[MAT] PRINT [output-list] [err [,err]...]
[MAT] PRINT USING image-or-form-reference
  [: [output-list] [err [,err]...]]
```

PRINT FIELDS

Displays one or more data values on a display terminal screen in the specified screen field(s).

```
PRINT [#fileref [,]] FIELDS field-definition
  [: [output-list] [;] [err [,err]...]]
```

PRINT File

Transmits data to a display type file.

```
[MAT] PRINT #fileref  
  [[,] USING image-or-form-reference]  
  [[,] FONT expression]  
  [: [output-list] [err [,err]...]]
```

PUT

Places values in a stream file.

```
[MAT] PUT #fileref : output-list [err [,err]]
```

RANDOMIZE

Generates a new starting point for the list of pseudorandom numbers used by the RND function.

```
RANDOMIZE
```

READ

Retrieves the internal data table created by DATA statements.

```
[MAT] READ input-list [err [,err]...]
```

READ File

Retrieves a record from a native or an internal sequential file.

```
[MAT] READ #fileref [,] USING form-reference  
  [[,pos] : input-list [err [,err]...]  
[MAT] READ #fileref: input-list [,SKIP REST]  
  [err [,err]...]
```

REAL

Specifies which identifiers are to be assigned real type.

```
REAL [SINGLE|DOUBLE] [{identifier|(letter-list)}  
  [{identifier|(letter-list)}]...]
```

REM

Inserts remarks into a program.

```
{REM!} [remark]
```

REREAD

Makes the last accessed record in a native file available again.

```
[MAT] REREAD #fileref [,] USING form-reference:  
  input-list [err [,err]...]
```

RESET

Changes the position of a file pointer.

```
RESET #fileref [[,]pos] [: [err [,err]...]]
```

RESTORE

Lets you read the same data items more than once by restoring the data table pointer to the beginning, or other specified line, of the internal data table.

```
RESTORE [data-reference]
```

RETRY

Reprocesses a statement which caused an exception.

```
RETRY
```

RETURN

Returns control to the next executable statement following the GOSUB statement that called the subroutine.

```
RETURN
```

REWRITE

Updates an existing record stored in a native file.

```
[MAT] REWRITE #fileref [,] USING form-reference  
  [[,] pos] : output-list [err [,err]...]
```

SCRATCH

Erases the contents of a file.

```
SCRATCH #fileref [: [err]]
```

SELECT

Begins a SELECT block.

```
SELECT expression
```

STOP

Terminates program execution.

```
STOP [numeric-expression]
```

SUB

Begins and names a subprogram.

```
SUB name [(parameter [,parameter]...)]
```

SUBEXIT

Stops execution of a subprogram and returns control to the subprogram's caller.

```
SUBEXIT
```

TRACE

Turns tracing ON or OFF.

```
TRACE ON [TO #fileref]  
TRACE OFF
```

USE

Establishes a name correspondence in a chained program for those names passed via a CHAIN statement.

```
USE parameter [,parameter]...
```

WRITE

Adds records to native and internal files.

```
[MAT] WRITE #fileref [,] USING form-reference  
  [[,] pos] : output-list [err [,err]...]  
[MAT] WRITE #fileref : output-list  
  [err [,err]...]
```
