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]
  [(REP[LACE] [)]]
```

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 (OBJ[ECT]
  [PARM "literal"]) [STEP]
```

SAVE
Copies the source program in the workspace to a file.

```
SAVE [program-name] [(REP[LACE] [)]]
```

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] [(REP[LACE] [)]]
```

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
  [,argumment]...)
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
```

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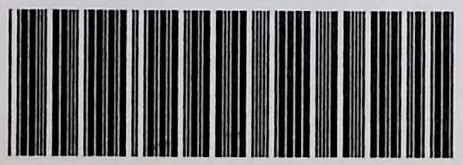

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END SUB
Marks the physical end of a subprogram.

```
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]...]
```

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]...]
```