JPC ROM
Quick Reference Guide

ADBUFS (buffer id)
Function: Returns the address of the buffer specified by its identification number. The following table lists various buffers used by the system:
- 808: Hold a string of characters used by STARTUP,
- 83D: MARGIN setting,
- 83E: Hold a string of characters used by ENDUP,
- BPB: Character set defined by CHARSET, and
- BPC: Address of Lex files.

ADCREATE file [, password]
Statement: Create an empty address file. A card is composed of the following fields:
- name and first name, separated by a /,
- phone number,
- 4 lines to store the address,
- a line to store general informations, and
- a line to store a criterion to be used by your own programs.

ADDELETE file, number [, password]
Statement: Removes a card from an address file.

ADFIND (file, string [, password])
Function: Looks for a name in an address file and returns the number of the card. Rules used during search are:
- name only (without /),
- name and first name (with /), and
- abbreviated search (name terminated with a dot).

ADGET file, array, number [, password]
Statement: Reads a card and stores it into a string array.
ADPUT file, array [, password ]
Statement: Write a card (a string array) into an address file.

ADSIZE (file [, password])
Function: Returns the number of cards in an address file.

ARR (n, p)
Function: Compute the number of possible different arrangements (permutations) of n items taken p at a time.

ASC$ (string)
Function: Returns a string stripped of all non-displayable ASCII characters.

ATH$ (string [, mode])
Function: Returns the hexadecimal string corresponding to the parameter string. If mode = 1, nibbles in a byte are not reversed.

ATTN ON / OFF
Statement: Enables or disables the action of the [ATTN] key to stop program execution.

BELL
Statement: Causes the printer's beeper to sound if possible.

BOLD ON / OFF
Statement: Enables or disables the bold mode of the printer.

CASE element, ...
CASE relational operator element, ...
CASE element TO element, ...
CASE ELSE
Statement: Part of SELECT ... CASE ... END SELECT structure.

CENTERS (string, width)
Function: Adds spaces at the beginning of the string specified in parameter in order to center it.

CESURE (string, width)
Function: Returns the position of the first place in the string where a word-break can occur.

COMB (n, p)
Function: Computes the number of possible different sets of n items taken p at a time.

CONTRAST
Function: Returns the current contrast setting.

DATEADD (date, days)
Function: Computes the date corresponding to the specified date incremented by the specified number of days.

DATER$ (date)
Function: Converts a date to the HP-71 string format for date: 'yyyy/mm/dd'.

DBLIST [file [, start line [, final line]]]
[INDENT indentation] [TO target]
Statement: Produces a structured listing of a Basic program.

DDAYS (date1, date2)
Function: Compute the number of days between two dates.

DDIR [file specifier] [TO target]
DDIR ALL [TO target]
Statement: Lists directory of the specified device.

DMY
Statement: Enable date input in numeric format dd.mm/yyyy.
DOW (date)
Function: Returns the day of the week corresponding to the specified date parameter.

DOWS (date)
Function: Returns the name of the day corresponding to the specified date or today.

EDIT [file1] [TO file2]
Statement: Allows merging of Lex files, or editing files on external peripherals. Nonprogrammable.

ENDUP command string
Statement: Defines a command string to be executed when the HP-71 turns off.

ENDUPS
Function: Returns the command string specified in ENDUP.

ENTRYS (keyword [, sequence ])
Function: Returns the entry point address for the specified keyword.

ESC$ (string)
Function: Returns the string with a leading "escape" character.

EXECUTE command string
Statement: Executes the specified command string and stops program execution.

EXIT loop variable
Statement: Exit a FOR ... NEXT loop.

FILESIZE (file)
Function: Returns the size in bytes of the specified file.

FIND string
Statement: Finds a character string in a Basic program. Nonprogrammable.

FINPUT input, prompt [, format ], ann
Statement: Creates an input mask and waits for data input from the user.

FKKEY key
Statement: Insert a key code at the beginning of the keyboard buffer.

FORMATS (string, width)
Function: Inserts extra spaces inside a string so that it will have exactly the specified number of characters.

FPRIM (argument [, direction ])
Function: Returns the first prime number after the argument.

FRACS (real number [, accuracy ])
Function: Approximates a real number by a fraction.

GLINE x, length, first, size, gap
Statement: Builds a raster graphics representation of a drawn line for use with ThinkJet or LaserJet printers.

GPSET x
Statement: Prepares drawing of a pixel on ThinkJet or LaserJet printers.

HMS (argument)
Function: Converts decimal hour or degree data into an equivalent value in HMS format.

HMSADD (arg1, arg2)
Function: Returns the sum of two arguments interpreted using the HMS format.
HMSSUB (arg1, arg2)
Function: Returns the difference of two arguments interpreted using the HMS format.

HR (argument)
Function: Converts a number from HMS format to its decimal equivalent.

HTAS (hexadecimal string [, mode])
Function: Converts a string of hexadecimal digits into an ASCII character string. If mode = 1, nibbles in a byte are not reversed.

IF logical expression THEN
  program segment
END IF
or:
IF logical expression THEN
  program segment
ELSE
  program segment
END IF
Statement: Extends the standard IF structure to allow multiple line statements.

INVERSE [begin, end]
Statement: Displays the binary complement of the contents of the LCD.

KA [file]
Statement: Interactive address directory editor. Key strokes defined are:
- [ATTN]: exit KA,
- ([. ]), ([g][i] and [g][i]): move inside the file,
- [v], [*], [g][v] and [g][*]: move inside the card,
- [<], [>], [g]< and [g]>: scroll the display,
- [0] to [7]: direct access to a card field,
- [F][CAT]: display the number of cards,
- [F][DELETE]: delete the current card,
- [F][EDIT]: edit the current card,
- [F][INPUT]: input a new card,
- [F][KEY]: input a password, and
- [A] to [Z]: looks for a name.

KEYWAITS
Function: Waits until a key is pressed and then returns a string representing its keycode.

LEAVE
Statement: Exits from a structured programming loop such as WHILE, REPEAT or LOOP.

LEX file ON / OFF
Statement: Enables or disables a Lex file.

LOOP
  program segment
END LOOP
Statement: Defines an endless loop.

MAP file, string1, string2 [, from [, to]]
MAP # channel, string1, string2 [, from [, to]]
Statement: Applies a mapping function to the contents of a text file.

MAPS (string1, string2, string3)
Function: Applies a mapping function to the contents of a character string.
MARGIN (position)
Statement: Enables a beep when the cursor reaches the specified position, or disables it when position is missing or 0.

MAXD (device specifier)
Function: Returns the maximum number of entries that can be stored in the directory of a mass storage medium.

MAXM (device specifier)
Function: Returns the maximum storage capacity available on the medium.

MDY
Statement: Enables date input in numeric format mm.ddyyyy.

MEMD (device specifier)
Function: Returns the number of entries in the directory of the specified medium that remain available for new files.

MEMM (device specifier)
Function: Returns the available room in the file storage area of the specified medium.

MENU (number of elements [ , first element ])
Function: Read DATA and display them to create interactive menu facility. Following keystrokes are defined:
- [ATTN]: exit MENU,
- [V]. [1]. [2]. [3] and [4] [5]: move inside the menu,
- [ENDLINE]: validates the displayed item.

MERGE file [ , first line [ , last line ]]
Statement: Extends the standard keyword to Lex files. Nonprogrammable.

MODE argument
Statement: Changes the print pitch on the printer.

NEXTOP$ (hexadecimal address pointer)
Function: Returns the address of the next assembler instruction.

NLOOP (loop number)
Function: Returns the number of devices on the HP-IL loop.

NPRIM (n1 , n2)
Function: Returns the number of prime numbers in an interval.

OPCODES (hexadecimal address)
Function: Returns the mnemonic of the machine language instruction pointed to by the specified address.

PAGELEN [page length [ , text length ]]
Statement: Sets the page and text lengths on the printer.

PAINT ( [state ] x , y )
Function: Turns on a pixel on the HP-71 display and returns its value before modification.

PARPOLL (loop number)
Function: Returns the result of an HP-IL loop parallel poll.

PBLIST [file [ , start line [ , final line ]]]
[INDENT indentation ] [TO target ]
Statement: Produces a structured listing of a Basic program on the current printer device.

PCR
Statement: Moves the print head to the beginning of the line.

PDIR [file specifier ] [TO target ]
PDIR ALL [TO target ]
Statement: Prints directory of the specified device.
PEEKs (hexadecimal address, number of nibbles)
Function: Returns the contents of a memory area
specified by its address.

PERF ON / OFF
Statement: Enables or disables the perforation skip mode
on the current printer device.

PFF
Statement: Advances paper to the beginning of next page.

PGCD (arg1, arg2 [ , arg3 [ , ... arg10 ] ... ])
Function: Computes the greatest common divisor of two
or more numbers.

PHI (argument)
Function: Returns the number of integers between 1 and
argument that are relatively prime to argument.

PLF [number of lines]
Statement: Advances the paper by the number of lines
specified.

POKE hexadecimal address, data
Statement: Writes to memory at the specified
hexadecimal address.

POSI (string, min [ , max ])
Function: Returns the position in a string of the first
character whose value falls within a specified range. Min
and max can be specified either as a decimal number or as
a character.

PPCM (arg1, arg2 [ , arg3 [ , ... arg10 ] ... ])
Function: Returns the smallest common multiple of all
arguments.

PRIM (number)
PRIM (higher part, lower part)
Function: Returns 0 if a number is prime, or the smallest
divisor of that number.

REDS (string)
Function: Trims all leading and trailing spaces from the
specified string.

REDUCEs (string)
Function: Reduces all substrings consisting of two or
more spaces to a single space, and removes leading and
trailing spaces.

RENUMREM [new start [, increment [,old start [,old end]]]]
Statement: Renumbers a Basic program with special
handling for comment lines.

REPEAT
program segment
UNTIL logical expression
Statement: Defines a loop which is repeated until the
logical expression evaluated by UNTIL statement is true.

REPLACES (string, pattern1, pattern2 [ , start ])
REPLACES (string, pattern1, pattern2, wild)
Function: Replaces a substring with another in the target
string using HP text editor rules (first syntax) or a wild
card character (second syntax). Text editor rules are:
- .: any character,
- @: any number of unspecified characters,
- &: the text that matches pattern1 when used in pattern2,
- ^: beginning of a line (must be the first character in
pattern1),
- $: end of a line (must be the last character in pattern1),
and
\: cancel the meaning of the previous \.
ROMAN ON / OFF
Statement: Enables the Roman extended character set
(see table below).

0123456789ABCDEF
0 0@p'p  áÁÀß
1 1AQeq AÉÉÀß
2 #2PQbr Aóóë
3 #3CScs ÉÊÉë
4 $4DdTd ÉCÁád
5 %5EUeu ÉcÉÉl
6 &6FVfv IÍÉë-
7 7GWgw ÍÁÍ0%
8 (8HXhx iáiÁ0%
9 )9IYiy 'çèóóß
A *:JZJz 'çèóóß
B +:KkK (EÜÜ«
C ,<L\l | Yääëm
D -=Mm) ÜÉÉU»
E .>N^n- ôóóóû
F / ? o_0 £eëöý

SHRINK file
Statement: Minimizes the size of a text file in Ram,
releasing memory that is not used to store text.

SLEEP
Statement: Puts the HP-71 into light sleep mode.

SPACES ( { character / string }, repeat )
Function: Returns a string consisting of the specified
number of characters of strings (or spaces, default value).

SRQ ( { loop number } )
Function: Sends identification message on the HP-IL
loop to check whether a peripheral requires service.

STACK number of levels
Statement: Sets the size of the command stack to the
specified number of levels.

STARTUPS
Function: Returns the STARTUP command string.

RRECS ( { address, device specifier } )
Function: Reads a record from the specified mass storage
device.

SELECT expression
CASE match item
  program segment
CASE match item
  program segment
|
CASE ELSE
  program segment
END SELECT
Statement: Provides conditional execution of program
segments. See CASE for match item syntax.
SYSEDIT hexadecimal address
Statement: Puts the HP-71 into an interactive memory editor/disassembler mode. Following keystrokes are defined:
- [ATTN] or [T][OFF]: Exit SYSEDIT,
- [+], [-], [*] or [/]: Move the editor window through memory,
- [A][1] to [A][8]: NIBASC,
- [N][1] to [N][8] et [N][I][O] à [N][I][8]: NIBHEX,
- [C][1] to [C][8]: Decimal constant,
- [C][H][1] to [C][H][8]: Hexadecimal constant,
- [R][1] to [R][8]: Relative address,
- [H]: Hexadecimal mode,
- [D]: Disassembler mode,
- [L]: LCASC if disassembler mode active,
- [F]: Saving disassembler output,
- [+]: Direct move,
- [G]: Move and push address,
- [0]: Return,
- [ENDLINE]: Validation,
- [Z]: Address editing, and
- [T][Z] or [M]: Memory editing.

TOKEN (keyword , sequence )
Function: Returns the Lex Id and token for the specified keyword.

UNDERLINE ON / OFF
Statement: Enables or disables underline mode on the printer.

VARSWAP variable1 , variable2
Statement: Swaps the contents of two variables or array elements.

WHILE logical expression
  program segment
END WHILE
Statement: Defines a loop which is executed as long as logical expression is true.