

JPC ROM

Quick Reference Guide for Version F

ADBUF\$ (*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**
- BFB : Character set defined by **CHARSET**, and
- BFC : Address of Lex files.

ADCREATE *file* [, *password*]

Statement: Creates 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 information, 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
- exact name 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: Writes a card (a string array) into an address file.

ADSIZE (*file* [, *password*])

Function: Returns the number of cards in an address file.

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.

CENTER\$ (*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 increased by the specified number of days.

DATESTR\$ (*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.

DCAT [*file specifier*] [**TO** *target*]**DCAT ALL** [**TO** *target*]

Statement: Displays the catalogue of the specified device.

DDAYS (*date1* , *date2*)

Function: Computes the number of days between dates.

DDIR See **DCAT****DMY**

Statement: Enables date input in numeric format *dd.mmmyyyy*.

DOW [(*date*)]

Function: Returns the day of week corresponding to the specified date or today.

DOW\$ [(*date*)]

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

EDIT [*file1*] [**TO** *file2*]

Statement: Extends the standard keyword to allow merging of Lex files, or editing of files on external peripherals. Nonprogrammable.

ENDUP *command string*

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

ENDUP\$

Function: Returns the command string specified by **ENDUP**.

ENTRY\$ (*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*] , *attn*

Statement: Creates an input mask and waits for data input from the user.

FKEY *key*

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

FORMAT\$ (*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 primer number after the argument.

FRAC\$ (*real number* [, *accuracy*])

Function: Approximates a real number by a fraction.

GCD (*arg1* , *arg2* [, *arg3* [, ... *arg10*] ...])

Function: Returns the greatest common divisor of two or more numbers.

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 a equivalent value in HMS format.

HMSADD (*arg1* , *arg2* [, *arg3* [, ... *arg10*] ...])

Function: Returns the sum of the arguments interpreted using HMS format.

HMSSUB (*arg1* , *arg2*)

Function: Returns the difference of the two arguments interpreted using HMS format.

HR (*argument*)

Function: Converts a number from HMS format to its decimal equivalent.

HTA\$ (*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

[**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.

Keystrokes defined are :

- [ATTN]: exit KA
- [(], [D]), [g][(] and [g][D]): move inside the file,
- [v], [^], [g][v] and [g][^]: move inside the card,
- [<], [>], [g][<] and [g][>]: move inside the file,
- [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,
- [A] to [Z]: looks for a name.

LCM (*arg1*, *arg2* [, *arg3* [, ... *arg10*] ...])

Function: Returns the least common multiple of two or more numbers.

LEAVE [*levels*]

Statement: Exits from the specified number of levels of structured programming loops such as **WHILE**, **REPEAT** or **LOOP**.

LOOP

program segment

END LOOP

Statement: Defines an endless loop.

LXOFF *file*

Statement: Disables a Lex file.

LXON *file*

Statement: Enables back a previously disabled Lex file.

MAP *file*, *string1*, *string2* [, *from* [, *to*]]

MAP # *channel*, *string1*, *string2* [, *from* [, *to*]]

Statement: Applies a mapping function to the contents of a text file.

MAP\$ (*string1*, *string2* , *string3*)

Function: Applies a mapping function to the content 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: Reads elements from **DATA** statements and displays them to create interactive menu facility.

Following keystrokes are defined:

- [ATTN]: exit **MENU**,
- [v], [^], [g][v] and [g][^]: move inside the menus,
- [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\$ (*address*)

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.

OPCODE\$ (*address*)

Function: Returns the mnemonic of the machine language instruction pointed 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.

PBLIST [*file* [, *start line* [, *final line*]]]

[**INDENT** *indentation*] [**TO** *target*]

Statement: Produces a structured listing of a Basic program.

PCAT [*file specifier*] [**TO** *target*]**PCAT ALL** [**TO** *target*]

Statement: Prints the catalogue of the specified device.

PCR

Statement: Moves the printer head to the beginning of the line.

PDIR See **PCAT****PEEK\$** (*address*, *number of nibbles*)

Function: Returns the contents of a memory area specified by its adress.

PERF ON / OFF

Statement: Enables or disables the perforation skip mode on the current printer device.

PERM (*n*, *p*)

Function: Computes the number of possible different permutations of n items taken p at a time.

PFF

Statement: Advances paper to the beginning of next page.

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 *address*, *data*

Statement: Writes to memory at the specified 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.

PPOLL [(*loop number*)]

Function: Returns the result if an HP-IL loop parallel poll.

PRIME (*number*)**PRIME** (*high part*, *low part*)

Function: Returns 0 if a number is prime, or the smallest divisor of that number.

RED\$ (*string*)

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

REDUCE\$ (*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).

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	@	P	`	p											
1	!	1	A	Q	a	q										
2	"	2	B	R	b	r										
3	#	3	C	S	c	s										
4	\$	4	D	T	d	t										
5	%	5	E	U	e	u										
6	&	6	F	V	f	v										
7	'	7	G	W	g	w										
8	(	8	H	X	h	x										
9	)	9	I	Y	i	y										
A	*	:	J	Z	j	z										
B	+	;	K	[	k	[
C	,	<	L	\	l]										
D	-	=	M	]	m)										
E	.	>	N	^	n	~										
F	/	?	O	_	o	~										

RREC\$ (*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.

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.

SPACE\$ ([*character / string* ,] *repeat*)

Function: Returns a string consisting of the specified number of characters or strings (or spaces by default).

SRQ [(*loop number*)]

Function: Sends an 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.

STARTUP\$

Function: Returns the **STARTUP** command string.

SYSEEDIT [*address*]

Statement: Puts the HP-71 into an interactive memory editor / disassembler mode. Following keystrokes are defined:

- [ATTN] or [f][OFF]: Exit **SYSEEDIT**
- [+], [-], [*] or [/]: Move the editor window through memory,
- [A][1] to [A][8]: NIBASC,
- [N][1] to [N][9] and [N][.][0] to [N][.][6]: NIBHEX,
- [C][1] to [C][6]: Decimal constant,
- [C][H][1] to [C][H][6]: Hexadecimal constant,
- [R][1] to [R][5]: Relative address,
- [H]: Hexadecimal mode,
- [D]: Disassembler mode,
- [L]: LCASC if disassembler mode active,
- [F]: Saving disassembler output,
- [=]: Direct move,
- [(]: Move and push address,
- [)]: Return,
- [ENDLINE]: Validation,
- [Z]: Address editing, and
- [f][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 the logical expression true.

WRAP ON / OFF

Statement: Enables or disables the printer wrap-around mode.

WREC *sector* , *address* , *device specifier*

Statement: Writes a 256 bytes string to the specified sector of selected mass memory device.

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<http://membres.lycos.fr/jeffcalc/jpcrom.html>

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