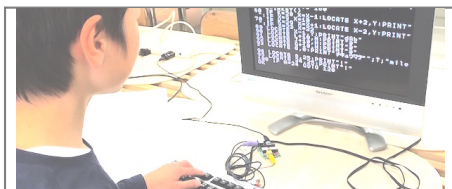


# IchigoJam BASIC reference - 0.9.3



## what is IchigoJam?

IchigoJam is a simple PC to program by BASIC for Kids.  
 LED 1, hit the enter, light a LED, LED 0, hit the enter, off a LED.  
 See also <http://ichigojam.net/>

## BASIC instruction

instruction	description	ver
key	type chars	
Shift	type upper chars	
Enter	send a line to computer (if edit the list, you must hit a enter)	
cursor	move the cursor	
Backspace	delete backward	
Delete	delete forward	
CapsLock	switch upper case and lower case	
Insert	switch insert mode and over write mode	
ALT(right)	switch alphabet and kana (input with roma-kana)	0.8.2
ESC	stop the program	
F1	short cut to CLS	
F2	short cut to LOAD	
F3	short cut to SAVE	
F4	short cut to LIST	
F5	short cut to RUN	

## BASIC command

command	description	example	ver
LED num	if num = 1, light otherwise off	LED 1	
WAIT num	wait num count, 1=1/60sec	WAIT 60	
:	commands on a line	WAIT60:LED1	
linenum command	add or edit a line to the program	10 LED 1	
linenum	delete a line from the program	10	
GOTO linenum	figure next command line	GOTO 10	
PRINT num or string	show string, use "," to connect / ?	PRINT "HI!"	
RND(num)	return random 0-(num-1)	PRINT RND(6)	0.3
CLS	clear screen	CLS	
INPUT (string,)var	put the number to var from keyboard	INPUT "ANS?",A	0.6
LET var,num	put the number to var / var=num	LET A,1	0.7.6
LOCATE x,y	locate x,y to print / LC	LOCATE 3,3	
VPEEK(x,y)	return the char code x, y	PRINT VPEEK(0,0)	0.7.2
BTN()	return the button status	PRINT BTN()	0.6
INKEY()	return a char code from keyboard (0 when no inputs)	PRINT INKEY()	
CHR\$(num)	return a char from a char code	PRINT CHR\$(65)	0.7.4
ASC(string)	return a char code from a char	PRINT ASC("A")	0.8.7

OUT port,val	output to OUT port(1-6 / 5,6 ver0.9)	OUT 1,1	0.8.7
IN(num)	return IN port(1-4)	LET A,IN(1)	0.8.7
ANA()	return a value(0-1023) from IN2 analog voltage(0-3.3V)	A=ANA()	0.8.4
TICK()	return a tick count (increase 1/60sec each)	PRINT TICK()	0.8.1
CLT	clear tick count	CLT	0.8.0
x + y	return x + y	PRINT 1+1	
x - y	return x - y	PRINT 2-1	
x * y	return x * y	PRINT 7*8	
x / y	return x / y	PRINT 9/3	
x % y	return x % y	PRINT 10%3	
(num)	calculate first	PRINT 1+(1*2)	
IF num THEN next	do next command if num is zero / THEN is optional	IF A=B LED 1	
x = y	return 1 if x=y / ==	IF A=B LED 1	
x <> y	return 1 if x is not y / !=	IF A<>B LED 1	
x <= y	return 1 if x <= y	IF A<=B LED 1	
x < y	return 1 if x < y	IF A<B LED 1	
x >= y	return 1 x >= y	IF A>=B LED 1	
x > y	return x > y	IF A>B LED 1	
RUN	start the program	RUN	
LIST	print the program	LIST	
NEW	clear the program	NEW	
LOAD num	load a program (0-2 default:0 / 100-226 external EEPROM)	LOAD	0.8.0
SAVE num	save the program (0-2 default:0 / 100-226 external EEPROM)	SAVE 1	0.8.0
RENUM	renumbering the program (must change line number of GOTO/GOSUB)	RENUM	0.6
END	end the program	END	
REM	nothing after this command (comment)	REM START	
BEEP num1,num2	sound BEEP num1:wave length(1-255) num2:tone length(*1/60sec) *EX2-GND:speaker	BEEP	0.9.0
PLAY string	Play music by <u>MML</u> *EX2-GND:speaker	PLAY "CDE2CDE2"	0.9.0
TEMPO num	set tempo of playing music	TEMPO 1200	0.9.0

### Geek command

command	description	example	ver
[num]	array, use 101 ([0]-[100]) array vars	[3]=1	0.7.6
GOSUB linenum / RETURN	set a line next to do, back if RETURN	GOSUB 100	
LIST linenum1,linenum2	LIST after linenum1, before linenum2 / only linenum2	LIST 10,300	
FREE()	return free memory for program	? FREE()	0.8.9
OUT num	output num(0-15) to OUT1-6 (output is 3.3V) (5,6 ver0.9)	OUT A	0.6
IN()	return IN1-4(0-15) (IN3 has no pull-down resistor)	A=IN()	0.6
x & y	return x & y (bit mask)	? 3&1	0.7.2
x   y	return x or y (bit or)	? 3 1	0.8.3
x ^ y	return x xor y (bit invert)	? A^1	0.7.2
x >> y	return y bit right shifted x	? A>>1	0.7.2
x << y	return y bit left shifted x	? A<<1	0.7.2
LRUN num	LOAD (num) and RUN	LRUN 1	0.8.0
SLEEP	halt the computer until BTN down (start from initilized)	SLEEP	0.7
BPS num	change bps of serial port (default:0 = 115,200bps)	BPS 9600	0.7.7