

Micromite MMBasic

Version 5.05.02

Quick Reference

Program Management

AUTOSAVE [CRUNCH]
CONTINUE
CPU speed
CPU SLEEP [sec [, abortpin]]
CPU RESTART
CSUB name type [, type ...]
END CSUB
CFUNCTION name(type [,type ...]) typer
END CFUNCTION
DEFINEFONT #Nbr
END DEFINEFONT
EDIT
END
LIBRARY SAVE | DELETE | LIST
LIST [ALL]
MEMORY
NEW
nbr = PEEK(BYTE | WORD | VARADDR | CFUNADDR
 | VARTBL, | PROGME, | VAR args)
POKE BYTE | WORD | VARTBL, | VAR addr, dat
RUN
TIMER = msec
TRACE ON | OFF | LIST nn
VAR SAVE var [, var]... | RESTORE | CLEAR
WATCHDOG timeout | OFF
XMODEM SEND | RECEIVE | CRUNCH [filename\$]

Input/Output

SETPIN pin, cfg [, option]
cfg = OFF | AIN | DIN | FIN | PIN | CIN | DOUT
option = PULLUP | PULLDOWN | OC | gate | cycles
SETPIN pin, OFF | INTB | INTL | INTB, target [, option]
option = PULLUP | PULLDOWN
PIN(pin) = value
PORT(start, nbr [,start, nbr]...) = value
PULSE pin, width
pulsewidth = PULSIN(pin, polarity [, t1 [, t2]])
value = PIN(pin)
value = PORT(start, nbr [,start, nbr]...)

Commands

' (single quotation mark) - comment
? (question mark) – shorthand for PRINT
CLEAR
CONST id1 = expression [, id2 = expression, ...]
CONTINUE DO | FOR
DATA constant [, constant, ...]
DATE\$ = "DD-MM-YY" | "DD/MM/YY"
DIM [AS] [type] var [, var, ...] [AS type [, var AS type , ...]]
DO [WHILE <test>]
LOOP
DO
LOOP UNTIL <test>
ERASE array [, array, ...]
ERROR [message\$]
EXIT DO | FOR | FUNCTION | SUB
FOR var = start TO finish [STEP increment]
NEXT [var1 [, var2, ...]
FUNCTION name([arg1 [AS type] [,arg2, ...]]) [AS type]
END FUNCTION
GOSUB target
RETURN
GOTO target
IF <test> THEN <stmt> [ELSE <stmt>] [: <stmt> : ...]
IF <test> THEN — ELSEIF — ELSE — ENDIF
INPUT ["prompt string\$"; |,] var [, var, ...]
LINE INPUT ["prompt string\$",] var\$
LET variable = expression
variable = expression
LOCAL [type] decl [, decl, ...] [AS type [, var AS type , ...]]
ON ERROR ABORT | IGNORE | SKIP [nn] | CLEAR
ON nbr GOTO | GOSUB target1 [, target2, ...]
ON KEY subroutine
PAUSE ms
PRINT expression1 [, | ;] [expression2, ...] [, | ;]
RANDOMIZE nbr
READ var1[, var2, ...]
RESTORE [line]
REM comment
SELECT CASE — CASE [ELSE] — END SELECT
SETTICK period, target [, nbr]
STATIC [type] decl [, decl, ...] [AS type [, var AS type , ...]]
SUB name arg1 [AS type] [, arg2 [AS type], ...]
END SUB
TIME\$ = "HH:MM:SS" | "HH:MM" | "HH"

Functions

ACOS(radians)	ABS(nbr)
ASIN(radians)	ATN(radians)
COS(radians)	DEG(radians)
EXP(nbr)	LOG(nbr)
PI	RAD(degrees)
SIN(radians)	SQR(nbr)
TAN(radians)	EVAL(str\$)
CINT(nbr)	FIX(nbr)
INT(nbr)	
ASC(str\$)	BIN\$(nbr [, chars])
CHR\$(nbr)	HEX\$(nbr [, chars])
INSTR([start,] str\$, pat\$)	
LEFT\$(str\$, nbr)	RIGHT\$(str\$, nbr)
LEN(str\$)	MID\$(str\$, start [, nbr])
OCT\$(nbr [, chars])	SPACE\$(nbr)
STR\$(nbr [, m [, n [, c\$]]))	STRING\$(nbr, ascii str\$)
LCASE\$(str\$)	UCASE\$(str\$)
VAL(str\$)	
BIN2STR\$(type, nbr)	STR2BIN(type, str\$)
DATE\$	TIME\$
TIMER	INKEY\$
MAX(nbr [, nbr [, ...]])	MIN(nbr [, nbr [, ...]])
POS	RND(nbr)
SGN(nbr)	TAB(nbr)

Options

OPTION AUTORUN OFF | ON
OPTION BASE 0 | 1
OPTION BAUDRATE nbr
OPTION BREAK nn
OPTION CASE UPPER | LOWER | TITLE
OPTION CLOCKTRIM ±n
OPTION COLOURCODE ON | OFF
OPTION CONSOLE ECHO | NOECHO
OPTION CONSOLE INVERT | NOINVERT
OPTION CONSOLE AUTO
OPTION DEFAULT FLOAT | INTEGER | STRING | NONE
OPTION DISPLAY lines [,chars]
OPTION EXPLICIT
OPTION KEYBOARD US | UK | FR | GR | BE | IT | ES
OPTION LIST
OPTION PIN nbr
OPTION RESET
OPTION TAB 2 | 4 | 8
OPTION SAVE

Operators	NOT ^	Logical inverse, exponentiation
	* / \	Multiply, division (float & integer)
	MOD	Modulus (remainder)
	+ -	Addition and subtraction
	x << y x >> y	Shift bits left/right by y bits
	= <> < >	Equals, not equals, less/greater than
	<= >=	Less/greater than or equals
	AND OR XOR	Logical and, or, exclusive or

Variables	Identifier = [A-Z _] [A-Z 0-9 . _] Max 32 chars.	
	Variable Suffix: FLOAT = ! INTEGER = % STRING = \$	
	Number Prefix: [&H &O &B] number	
	MM.VER	MM.DEVICE\$
	MM.ERRNO	MM.ERRMSG\$
	MM.HRES	MM.VRES
	MM.FONTHEIGHT	MM.FONTWIDTH
	MM.WATCHDOG	
	MM.I2C	MM.ONEWIRE

GUI Controls (MM+)	OPTION CONTROLS nn	
	GUI AREA #ref, X, Y [, width, height]	
	GUI BARGAUGE #ref,X,Y,W,H,F,B,m,m,c1,ta,c2,tb,c3,tc,c4	
	GUI BUTTON #ref, caption\$, X, Y [, w, h, FC, BC]	
	GUI CAPTION #ref, text\$, X, Y [, just\$, FC], BC]	
	GUI CHECKBOX #ref, caption\$, X, Y [, size, colour]	
	GUI DISPLAYBOX #ref, X, Y [, width, height, FC, BC]	
	GUI FRAME #ref, caption\$, X, Y [, width, height, colour]	
	GUI FORMATBOX #ref, format\$, x, y [, w, h, fc, bc]	
	GUI GAUGE #ref,X,Y,R,F,B,m,m,d,u\$,c1,ta,c2,tb,c3,tc,c4	
	GUI LED #ref, caption\$, X, Y [, radius, colour]	
	GUI NUMBERBOX #ref, X, Y [, width, height, FC, BC]	
	GUI RADIO #ref, caption\$, X, Y [, radius, colour]	
	GUI SPINBOX #ref, X, Y, w, h [, FC, BC, Step, Min, Max]	
	GUI SWITCH #ref, caption\$, X, Y [, width, height, FC, BC]	
	GUI TEXTBOX #ref, X, Y [, width, height, FC, BC]	
	GUI DELETE #ref1 [,#ref2, ...] ALL	
	GUI DISABLE #ref1 [,#ref2, ...] ALL	
	GUI ENABLE #ref1 [,#ref2, ...] ALL	
	GUI HIDE #ref1 [,#ref2, ...] ALL	
	GUI REDRAW #ref1 [,#ref2, ...] ALL	
	GUI SHOW #ref1 [,#ref2, ...] ALL	
	GUI BCOLOUR colour, #ref1 [, #ref2, ...]	
	GUI FCOLOUR colour, #ref1 [, #ref2, ...]	
	GUI BEEP msec	
	GUI TEXTBOX NUMBERBOX FORMATBOX CANCEL	
	GUI INTERRUPT down [, up]	
	coordinate = TOUCH(X Y LASTX LASTY)	
	ctrl = TOUCH(REF LASTREF) bool= TOUCH(DOWN UP)	
	value = CTRLVAL(#ref) CTRLVAL(#ref) = value	
	GUI SETUP #n PAGE #n [,#n2, ...]	
	button = MSGBOX (msg\$, b1\$ [,b2\$ [, b3\$ [, b4\$]]])	

Communications & File I/O

OPEN C\$ AS #fnbr
C\$ = "COMn: baud, buf, int, nbr, DE, 9BIT, INV, OC, S2"
I2C OPEN speed, timeout [, PU]
I2C WRITE addr, option, sendlen, data [,data]
I2C READ addr, option, rcvlen, rcvbuf
I2C SLAVE OPEN addr, mask, opt, i_send, i_rcv
I2C SLAVE WRITE len, data [, data]
I2C SLAVE READ len, buf, rcvd
I2C [SLAVE] CLOSE
ONEWIRE READ pin, flag, len, data, ...
ONEWIRE WRITE pin, flag, len, data, ...
ONEWIRE RESET pin
SPI[2] OPEN speed, mode, bits
received_data = SPI[2](data_to_send)
SPI[2] WRITE nbr, data1,, ... str\$ array()
SPI[2] READ nbr, array()
SPI[2] CLOSE
OPTION SDCARD CS [, CD [,WP]] DISABLE
OPEN fname\$ FOR mode AS [#]fnbr
'mode' = INPUT OUTPUT APPEND RANDOM
LOAD file\$ [,R]
LOAD IMAGE file\$ [, x, y]
MKDIR dir\$
RMDIR dir\$
CHDIR dir\$
dir = CWD\$
NAME old\$ AS new\$
KILL file\$
SAVE [file\$]
SAVE IMAGE file\$
SEEK [#]fnbr, pos
FILES [fspec\$]
fname\$ = DIR\$([fspec [, type]])
CLOSE [#]fnbr [,[#]fnbr] ...
State = EOF([#]fnbr)
INPUT #fnbr, var1 [, var2, ...]
LINE INPUT #fnbr, string variable\$
PRINT #fnbr, expression1 [, ;] [expression2, ...] [, ;]
INPUT\$(nbr, [#]fnbr)
nbr = LOC([#]fnbr) nbr = LOF([#]fnbr)
PLAY TONE left [, right [, duration]]
PLAY WAV file\$ [, interrupt]
PLAY PAUSE RESUME STOP VOLUME left, right

Micromite MMBasic V5.05.02
(Micromite Plus extra features are in red)

Downloads: <http://geoffg.net/micromite.html>
Forum: <http://www.thebackshed.com/forum/Microcontrollers>

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Devices

IR dev, key , int CLOSE
KEYPAD var, int, r1, r2, r3, r4, c1, c2, c3 , c4 CLOSE
LCD INIT d4, d5, d6, d7, rs, en
LCD line, pos, text\$ CLEAR CLOSE
LCD CMD DATA d1 [, d2 [, etc]]
PWM channel, freq, pwm1 [, pwm2 [, pwm3]]
PWM channel, STOP
RTC GETTIME
RTC SETTIME year, month, day, hour, minute, second
RTC SETREG GETREG register, value var
OPTION RTC data, clock DISABLE
SERVO channel [, freq], out1 [, out2 [, out3]]
SERVO channel, STOP
TEMPR START pin [, precision 0 to 3]
Temperature = TEMPR(pin)

LCD Display Panel

OPTION LCDPANEL type, orient, D/C, reset [,CS]
type = ILI9163 ST7735 ILI9341
OPTION LCDPANEL type, orient [, LCD-A] [, readpin]
type = SSD1963_[4][5][5A][7][7A][8]
OPTION LCDPANEL CONSOLE [font [, fc [, bc , [blight]]]]
OPTION LCDPANEL NOCONSOLE
OPTION LCDPANEL DISABLE
GUI CALIBRATE [, a1, a2, a3, a4, a5]
GUI RESET LCDPANEL
GUI TEST LCDPANEL TOUCH
OPTION TOUCH T_CS pin, T_IRQ pin [, click pin]
OPTION TOUCH DISABLE
PIXEL x, y [, colour]
LINE x1, y1, x2, y2 [, lw [, colour]]
CIRCLE x, y, r [, lw] [, a] [, colour] [, fill]
ARC x, y, radius1, radius2, start°, end°, colour
TRIANGLE x1, y1, x2, y2, x3, y3 [, colour [, fill]]
BOX x, y, w, h [, lw] [, colour] [, fill]
RBOX x, y, w, h [, rc] [, colour] [, fill]
TEXT x, y, str\$ [, align\$] [, fnt] [, scale] [, colour] [, bc]
GUI BITMAP x, y, data [, w] [, h] [, s] [, colour] [, bc]
CLS [colour]
COLOUR fore [, back] COLOR fore [, back]
FONT [#]font-number, scaling
BACKLIGHT percent
BLIT READ WRITE [#]buffer, x, y, w, h
BLIT CLOSE [#]buffer
BLIT x1, y1, x2, y2, w, h
colour% = RGB(red, green, blue colour listed below)
white black blue green cyan red magenta yellow brown gray
coordinate = TOUCH(X Y)