

Tiny BASIC for Micro8085 board (manual)

This implementation is based on Palo Alto Tiny Basic. Credits to Dr. Li-Chen Wang and Roger Rauskolb, 1976. Additions and updates by Anders Hjelm, 2020.

Connect to PC using USB port. Open a terminal emulator, e.g. TeraTerm using comm. setup 19200 bps, 8 data bits, no parity. Setup a 50 ms delay at end of line for sending BASIC text files. Board is powered by USB cable. Alt. source is 5VDC from DC plug.

All numbers are integers. Range -32768 to 32767 in signed mode, or 0 to 65535 in unsigned mode.

Variables are A through Z and array @(0) .. @(N) where N depends on amount of free memory.

Direct commands (type direct at prompt)

```
LIST [n] Lists all statements (Option from line number)
RUN      Execute the current program
NEW      Purge all lines of the current program
SAVE     Save current program to non volatile memory
LOAD     Load program from non volatile memory
EDIT n   Edit or change program line with number n
MAN      This manual
?        Short help
```

Most recent typed line or command can be retrieved by pressing arrow up (or down). Then use left/right arrow to move cursor, delete or backspace for corrections, and type new text where needed. End the EDIT session by pressing <Enter>.

If the first line of a program which is saved in non volatile memory is 'nn REM AUTORUN', the program will automatically be loaded and executed after power on (nn is line number).

Program execution can be terminated by pressing <Ctrl><C>

Statements (type direct at prompt or put them on a numbered line)

```
FOR v=expr TO expr [STEP expr] Setup a repetitive loop, e.g.
                                FOR I=1 TO 10 (STEP is optional)
NEXT v      End delimiter of FOR loop
LET v=expr  Assign a value to a variable, e.g. LET A=2*B
IF expr     If expr is true, execute rest of line
GOTO expr   Jump to line number pointed out by expr
GOSUB expr  Jump to subroutine on line pointed out by expr
RETURN      Return from subroutine
INPUT ["Text",]v Lets user input a value to a variable
PRINT "Text",v  Prints text, values of variables, etc.
PUTC expr    Prints the ascii char of expr
POKE addr,value Perform CPU memory write operation
OUT addr,value Perform CPU io write operation
SOD value    Serial output data, SPI bus transmit
WAIT expr    Wait/halts execution for expr millisecs
BEEP expr    Makes sound with duration expr millisecs
XTAL expr    Manipulate the freq.division (default 6144)
SIGNED       Set signed mode (default)
UNSIGN       Set unsigned mode (use for time calculations)
STOP         Stop execution of program
REM          Use remark for comments
```

Print options

```
"_" or '_' Place text between double or single quotes
#n Numbers printed decimal using n positions (default #6)
$n Numbers printed hexadecimal using n pos (must be $2 or more)
\b Print the ascii char of value b
, (comma) Argument delimiter.
```

e.g. PRINT "DECIMAL=",#5,A,\10,"HEX=", \$5,A

