

# Z80 SIMULATOR IDE

Z80 Simulator IDE is powerful application that supplies Z80 microprocessor users and educators with user-friendly graphical development environment for Windows with integrated simulator (emulator), z80 basic compiler, assembler, disassembler and debugger for the **Zilog Z80 8-bit microprocessor**.

You are welcome to download the fully functional evaluation copy of the software on the [downloads page](#). Z80 Simulator IDE requires a license to operate after the evaluation period. For more information please visit the [licenses page](#).

## Z80 Simulator IDE main features:

- Simulation interface showing internal processor architecture with interrupts interface,
- Three memory editors for external 64K memory, to simultaneously view/edit three different memory ranges during the simulation,
- I/O ports editor and peripheral devices interface for simulation of I/O instructions,
- Variable simulation rate, simulation statistics and simulation logging with log viewer,
- Breakpoints manager for code debugging with breakpoints support,
- Z80 assembler, interactive assembler editor for beginners, Z80 disassembler,
- Interface for [TASM Z80 assembler](#)
- Z80 Basic compiler with smart Basic source editor,
- IEEE754 single precision floating point numbers conversion tool,
- Support for external simulation modules,
- Extensive program options, **color** themes, ...

## Site/Institution license owners reference list:

- Onondaga Community College, State University of New York, United States. Many thanks to Prof. Ramesh S. Gaonkar, the author of famous Z80 textbook 'The Z-80 Microprocessor: Architecture, Interfacing, Programming, and Design'.
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- Applied Invention, Burbank, United States

Simulation Log Viewer

No.	PC	Instruction	A	SZYHPNC	B	C	D	E	H	L
69	0302	EXX	84	10101000	01	82	9E	06	52	00
70	0303	LD C,A	84	10101000	01	84	9E	06	52	00
71	0304	PUSH BC	84	10101000	01	84	9E	06	52	00
72	0305	PUSH DE	84	10101000	01	84	9E	06	52	00
73	0306	LD B,H	84	10101000	52	84	9E	06	52	00
74	0307									
75	0308									
76	0309									

Assembler - example4.asm

```

File Tools Options
; 5: a = 9.876543 'First
LD BC,411EH
LD DE,0652H
LD (IX-04H),E
LD (IX-03H),D
LD (IX-02H),C
LD (IX-01H),B
; 6: b = 2.345678 'Second
LD BC,4016H
LD DE,1F97H

```

BASIC Compiler - example4.bas

```

File Tools Help
Dim a As Single
Dim b As Single
Dim c As Single

a = 9.876543 'First number
b = 2.345678 'Second number
c = a * b

Print 1, "Number ", a, " is "
Print 1, "multiplied by ", b, " equals "
Print 1, "equals ", c, "."

```

Memory Editor

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0000:	DD	21	00	FF	31	F4	FE	01	1E	41	11	52	06	DD	73	FC
0010:	DD	72	FD	DD	71	FE	DD	70	FF	01	16	40	11	97	1F	DD
0020:	73	F8	DD	72	F9	DD	71	FA	DD	70	FB	DD	5E	FC	DD	56
0030:	FD	DD	4E	FE	DD	46	FF	C5	D5	DD	5E	F8	DD	56	F9	DD
0040:	4E	FA	DD	46	FB	CD	B1	02	DD	73	F4	DD	72	F5	DD	71
0050:	F6	DD	70	F7	3E	4E	D3	01	3E	75	D3	01	3E	6D	D3	01
0060:	3E	62	D3	01	3E	65	D3	01	3E	72	D3	01	3E	20	D3	01
0070:	01	01	00	DD	71	01	DD	70	02	0E	07	DD	71	03	DD	5E
0080:	FC	DD	56	FD	DD	4E	FE	DD	46	FF	CD	37	04	3E	OD	D3
0090:	01	3E	0A	D3	01	3E	6D	D3	01	3E	75	D3	01	3E	6C	D3
00A0:	01	3E	74	D3	01	3E	69	D3	01	3E	70	D3	01	3E	6C	D3

Breakpoints Manager

Listing location	Line	Addr	opcodes	Label	Instruc
		0492	0304 C5		PUSH BC
		0493	0305 D5		PUSH DE
1	0007	0494	0306 44		LD B,H
2	0019	0495	0307 4D		LD C,L
3	0306	0496	0308 D9		EXX
4	031A	0497	0309 C1		POP BC
5		0498	030A E5		PUSH HL
6		0499	030B D9		EXX
7		0500	030C D1		POP DE
8		0501	030D 3E 20		LD A,20
9		0502	030F 0D	M208:	DEC C
10		0503	0310 0C		INC C
		0504	0311 20 1A		JR NZ,M208
		0505	0313 FE 09		CP 09H
		0506	0315 38 16		JR C,M208
		0507	0317 D6 08		SUB 08H
		0508	0319 F5		PUSH AF
		0509	031A D9		EXX
		0510	031B 79		LD A,C
		0511	031C 48		LD C,B

Z80 Simulator IDE

File Simulation Rate Tools Options Help STEP

Program location: D:\Program Files\Z80 Simulator IDE\example4.obj

Main registers:

A	20
B	52
C	00
D	97
E	00
H	52
L	00

Alternate registers:

A'	FF
B'	9E
C'	06
D'	96
E'	1F
H'	97
L'	00

Main F register:

7 SF	0
6 ZF	1
5 YF	1
4 HF	1
3 XF	1
2 PF	0
1 NF	0
0 CF	0

Alternate F register:

7 SF'	1
6 ZF'	1
5 YF'	1
4 HF'	1
3 XF'	1
2 PF'	1
1 NF'	1
0 CF'	1

Last instruction: JR NZ,\$+1CH

Next instruction: CP 09H

Clock cycles counter: 766

Instructions counter: 83

16-bit registers:

IX	FF00	SP	FEFC
IY	FFFF	PC	0313

Special registers:

I	00	R	68
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Interrupt control:

IFF1	0	IFF2	0	IM	0
NMI		INT		RESET	