

After a short delay you should be presented with a window titled, "ARC Simulator." In the window should appear, from top to bottom:

- Editable text fields displaying PC, program status register (which is not editable), and 32 registers numbered from r0 to r31.
- A row of control buttons.
- A display of 8 machine words with their addresses, complete with checkboxes for setting breakpoints, disassembled source code, and navigation buttons for displaying other memory locations. These fields are not editable.
- At the bottom of the window, an editable display of memory addresses and contents.

The screenshot shows the ARC Simulator Version 1.2.5 window. At the top, there are fields for the program counter (%pc = 00000000) and the program status register (%psr (NZVC) = 0000). Below these are 32 registers, %r0 through %r31, each with a value. Register %r14 is set to f8000000. Below the registers is a row of control buttons: Exit, Print, Load, Reload, Edit, Step, Run, Stop, and Hex->Dec. Below these are three buttons: Clear RegFile, Clear BreakPts, and Clear Memory. The main display area shows a table of 8 machine words with their addresses, breakpoints, and source code. The addresses are 00000000, 00000004, 00000008, 0000000c, 00000010, 00000014, 00000018, and 0000001c. The source code for all words is 'nop'. To the right of the table are navigation buttons: Prev. 8, Prev. 4, Prev. 1, Next 1, Next 4, and Next 8. At the bottom, there is a table of memory addresses and contents. The addresses are 00000000, 00000010, and 00000020. The contents are 00000000, 00000000, 00000000, 00000000, 00000000, 00000000, 00000000, and 00000000. To the right of the table are navigation buttons: Prev. 16, Prev. 8, Prev. 4, and Next 4.

Loc	BreakPt	MachWord	Source Code
[ 00000000 ]	<input type="checkbox"/>	00000000	nop
[ 00000004 ]	<input type="checkbox"/>	00000000	nop
[ 00000008 ]	<input type="checkbox"/>	00000000	nop
[ 0000000c ]	<input type="checkbox"/>	00000000	nop
[ 00000010 ]	<input type="checkbox"/>	00000000	nop
[ 00000014 ]	<input type="checkbox"/>	00000000	nop
[ 00000018 ]	<input type="checkbox"/>	00000000	nop
[ 0000001c ]	<input type="checkbox"/>	00000000	nop

Loc	Offset 00	Offset 04	Offset 08	Offset 0c
[ 00000000 ]	00000000	00000000	00000000	00000000
[ 00000010 ]	00000000	00000000	00000000	00000000
[ 00000020 ]	00000000	00000000	00000000	00000000

### How do I run the simulator?

The buttons in the center of the window control the operation of the simulator. From left to- right, they are:

"Exit" exits the simulator by terminating the application.

"Load" allows the loading of a binary ARC file by bringing up the standard file opening dialog that your machine supports.

"Reload" will reload the current binary ARC file clearing the memory, program status register, and registers in the process.

"Edit" will bring up a text editor which will allow the creation of an ARC assembly program. Standard editing features are included.

The "Assemble" button will activate the ARC Assembler on the program currently being modified in the text editor.

The "Show Lst File" button on the text editor window will display the list file of the program being assembled in the text editor.

The "Show bin File" button will show the binary file of the program being assembled in the text editor.

The "Show Asm File" button will return the user to the .asm file after viewing the other file types.

"Step" executes the single machine instruction pointed to by the PC. Note that this instruction is displayed in the center of the screen.

"Run" runs the program beginning at the address pointed to by PC. Note that the machine will run until it encounters an arc stop instruction or a breakpoint. In the event that the program does not contain a stop instruction or a breakpoint, it can be stopped by pressing the "Stop" button.

"Clear BreakPts" and "Clear Memory" clear all breakpoints and all memory locations, respectively. Individual breakpoints can be set and cleared using the checkboxes in the center of the window. The contents of individual memory locations can be modified by editing the fields at the bottom of the window.

"Stop" stops execution of the simulator.

"Next" and "Prev" buttons are used to step through the machine code and memory display.