

d68k

Main Screen

The screenshot shows the d68k debugger interface with the following components and annotations:

- Machine code**: Points to the assembly code lines in the main window.
- Mnemonics and operands**: Points to the assembly code lines in the main window.
- Addresses**: Points to the address column in the assembly list.
- Next instruction to execute**: Points to the instruction at address 00078A.
- Executed instructions**: Points to the instruction at address 000780.
- Contents of memory pointed at by address registers (hexadecimal and ASCII)**: Points to the memory dump at the bottom right.
- Flags**: Points to the flag register (C, V, Z, N, X) on the left.
- Top of stack**: Points to the stack pointer (SP) register.
- Stack**: Points to the stack memory area at the bottom left.
- Register values**: Points to the register window (D0-D7, PC, USP, SSP) at the bottom.
- Effective addresses**: Points to the effective address field in the register window.
- Next instruction to execute**: Points to the instruction at address 00078A.

Disassembly View Navigation

- Arrow Keys: [Up] and [Left].....Move back two bytes.
 [Down].....Move forward one instruction.
 [Right].....Move forward two bytes.
- Keyboard: [Page Up].....Move back one page.
 [Page Down].....Move forward one page.
 [Home].....Move to the lowest address.
 [End].....Move to the highest address.
 [Ctrl+Home].....Move back \$10000 bytes.
 [Ctrl+End].....Move forward \$10000 bytes.

Keyboard Shortcuts

- [F2]** : Add a disassembly view
- [F3]** : Add a hexadecimal/ASCII view.
- [F4]** : Open and close the video output window.
- [F5]** : Set the start address of the view as the **PC**.
- [F6]** : Set the start address of the view.
- [F7]** : Open the breakpoint dialog box.
- [F8]** : Skip the instruction pointed at by the **PC**.
- [F9]** : Run (press **[Escape]** to stop).
- [F10]** : Step over – step to the next line displayed on the screen (runs a whole subroutine).
- [F11]** : Step into – step to the next instruction (does not run a whole subroutine).
- [F12]** : Step out – end the current subroutine.
- [Back]** : Undo an instruction.
- [Ctrl+R]**: Reset the 68000.

Edit Registers and Flags

Click any register button to open its edit dialog box.

- In the dialog box:
- [Arrow]**.....Reset the register to its initial value.
 - [=]**.....Result of the expression.
 - [Edit]**.....Change register value and exit.
 - [Cancel]**.....Exit without changing.

Expression examples:

- 5+4*2.....Operator precedence.
- (5+4)*2.....Brackets.
- \$50+%1001-28.....Different bases.
- 50+D0-A7+C.....Register and flag values.
- "1234" - '0000'ASCII strings.
- ~D0 | (D1&D2).....Logic operators: One's complement.....~
AND.....&
OR.....|
EXCLUSIVE OR.....^

To change a flag value, just click on its button.

Breakpoints

To set or remove an address breakpoint, click on the left border. Open and close the breakpoint dialog box by pressing **[F7]**.

Error Messages

An error message is displayed when an exception that cannot be processed occurs. The execution is stopped and the instruction that raised the exception is pointed at by the PC.