

VIP2K Monitor Program Ver. 1.4 and CHIP8 Memory Map -- 1/2/2019

Address

0000 - 7FFF	EPROM/ROM contains VIP2K Monitor Program Ver. 1.4
8000 - E7BF	User RAM and STACK memory
E7C0 - E7FF	Monitor Program's protected memory for its variables
E800 - FEF7	Video Memory
FEF8 - FEFF	Monitor Program's protected memory for its variables
FF00 - FFFF	Reserved for CHIP8 variables

Monitor Variables

0FEF0	Storage for current Line number
0FEF1	Storage for current Column number
0FEF8	Scroll: 00h = Scroll ON, any non-zero value = Scroll OFF
0FEF9	Storage for keyboard input
0FEFA	Storage for Keyboard Timer
0FEFB	Storage for HI order Interrupt Timer
0FEFC	Storage for LO order Interrupt Timer
0FEFD	CHIP8 load variable. 80h=file loaded, 00h=No file loaded

CHIP8 Memory Map

8000 - 81FF	Not used, but in theory could be used for CHIP8 code
8200 - 8FFF	CHIP8 user space
E800 - EC77	Video RAM
E800 - E8CF	Top 8 lines, not used by CHIP8, should always be 0
E84E - EB8D	CHIP8 video screen for 3x5 pixel format
EB8E - EBF5	Bottom 4 lines normally used by CHIP8 for games like Pong
EBF6 - EC77	Bottom border lines, should always be 0
E8D0 - EC0F	CHIP8 video screen for 2x4 pixel format
E800 - E84D	Top 3 lines, not used by CHIP8, should always be 0
EC10 - ECF9	Bottom 9 lines normally used by CHIP8 for games like Pong
ECFA - ED95	Bottom border lines, should always be 0
FF00 - FF9F	Key Mapping table
FFA0 - FFA4	CHIP8 identifier text
FFA8	Speed, 0 to 0x30 in steps of 6
FFA9	Screen resolution, 0 = large with 3x5 pixel size, non-zero = small with 2x4 pixel size
FFB2 - FFCF	Jump table for CHIP8 instructions
FFE0 - FFEF	CHIP8 variables V0-VF
FFF0 - FFF3	Graphic scratch area
FFF9	Keyboard code
FFFA	CHIP8 counter, counts down to 0 from value set by CHIP8