

Instruction Set

Instruction	Assembly code	Comment
NOP	0000 0000	No Operation
LDA addr	0001 [4 bit address]	Load data from address to accumulator register (A)
STA addr	0010 [4 bit address]	Store data to address from accumulator register (A)
ADD addr	0011 [4 bit address]	Add value from address to accumulator register (A)
SUB addr	0100 [4 bit address]	Subtract value from address from accumulator register (A)
AND addr	0101 [4 bit address]	AND value from address with accumulator register (A)
OR addr	0110 [4 bit address]	OR value from address with accumulator register (A)
NOT	0111 0000	Bitwise NOT of accumulator
INC	1000 0000	Increment value of accumulator by 1
DEC	1001 0000	decrement value of accumulator by 1
CLR	1010 0000	Clear value of accumulator(set to 0)
OUT	1011 0000	Move data in accumulator to out register
SHL	1100 0000	Shift left value of accumulator by 1
SHR	1101 0000	Shift right value of accumulator by 1
NEG	1110 0000	Negate value of accumulator (2's comp)
SWP addr	1111 [4 bit address]	Swap accumulator with address