

10.7

SAP-1 Microinstructions for LDA and SUB

Macro	State	Cp	Ep	~Lm	~(CE)	~Li	~Ei	~La	Ea	Su	Eu	~Lb	~Lo	Active
LDA	T4	0	0	0	1	1	0	1	0	0	0	1	1	~Lm, ~Ei
	T5	0	0	1	0	1	1	0	0	0	0	1	1	~(CE), ~La
	T6	0	0	1	1	1	1	1	0	0	0	1	1	None

Macro	State	Cp	Ep	~Lm	~(CE)	~Li	~Ei	~La	Ea	Su	Eu	~Lb	~Lo	Active
SUB	T4	0	0	0	1	1	0	1	0	0	0	1	1	~Lm, ~Ei
	T5	0	0	1	0	1	1	1	0	0	0	0	1	~(CE), ~Lb
	T6	0	0	1	1	1	1	0	0	1	1	1	1	~La, Su, Eu

HEX

Macro	State	CON	Active
LDA	T4	1A3H	\sim Lm, \sim Ei
	T5	2C3H	\sim (CE), \sim La
	T6	3E3H	None

Macro	State	CON	Active
SUB	T4	1A3H	\sim Lm, \sim Ei
	T5	2E1H	\sim (CE), \sim Lb
	T6	3CFH	\sim La, Su, Eu

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Loading B register with contents from the accumulator:

Macro	State	Cp	Ep	\sim Lm	\sim (CE)	\sim Li	\sim Ei	\sim La	Ea	Su	Eu	\sim Lb	\sim Lo	Active
B <- A	T4	0	0	1	1	1	1	1	1	0	0	0	1	Ea, \sim Lb

Macro	State	CON	Active
B <- A	T4	3F1H	Ea, \sim Lb

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- b. High
- c. High
- d. High

10.10

- a. The contents of the accumulator are consequent of any other register's driving of the W-bus.
- b. A = 0010 1100 is being driven by A on the W-Bus
- c. ALU = 0000 1110 driving the W-Bus