PATP – architecture (programmer's model)

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Main store
(32 words x 8bits)

PC

D0

CCR (just Z)

Opcode	Mnemonic	Macro operation	Description
000	CLEAR	[D0] ← 0	Set D0 to 0 (and set Z).
001	INC1	[D0] ← [D0] + 1	Increase the value in D0 by 1 (and set Z if the result is 0).
010	ADD# v	[D0] ← [D0] + v	Add the literal value v to the value in D0, keeping the result in D0 (and set Z if the result is 0).
011	DEC1	[D0] ← [D0] - 1	Decrement (decrease) the value in D0 by 1 (and set Z if the result is 0).
100	JMP loc	[PC] ← loc	Jump (unconditionally) to address location loc.
101	BUZ loc BNZ loc BZC loc BNE loc	If Z is not 0 then [PC] ← loc	Branch to address location loc if previous instruction left Z clear. BUZ = "branch until zero" (this description is only meaningful when constructing a loop) BNZ = "branch if non-zero" BZC = "branch if Z clear" BNE = "branch if not equal" These are all different mnemonics for the same instruction: ie they are synonyms – they all have the same effect.
110	LOAD loc	[D0] ← [MS(loc)]	Read the (8-bit) value from address location loc and put it into D0.
111	STORE loc	[MS(loc)] ← [D0]	Write the (8-bit) value in D0 into address location loc.