

Instruction set

Name of instruction	Mnemonic	Operation code	Operation performed	Condition code settings	Use of LA and LB fields
Add	A	0100	$A + B \rightarrow B$	cc=1 for negative, non-zero value cc=2 for zero result cc=3 for positive, non-zero values cc=4 for overflow (always occurs with cc=1, cc=2 or cc=3)	Used for two length fields with maximum of 10 positions each
Subtract	S	0111	$-A + B \rightarrow B$		
Multiply	M	0110	$A \times B \rightarrow B$		
Divide	D	0101	$B \div A \rightarrow B$		
Form numeric	FN	1101	$A \rightarrow B$	Condition code unchanged	Used for branch variants
Branch	BC	1011	See branch variant table		
Add address	AA	0010	$A + B \rightarrow B$	cc=1 for result address in common cc=3 for result address in partition cc=4 for overflow when result > 79999 (always occurs with cc=1 or cc=3)	LA=1; A is address LA=0; A is data LB is ignored
Read Write	R W	0000 0001	device \rightarrow A A \rightarrow device	(See condition codes for MTIOC and FAC devices)	††

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Move character	MC	1000	$A \rightarrow B$	cc=2 is always set	Used for one length field with maximum of 100 positions
Move numeric	MN	1001	$A \rightarrow B$		
Move address	MA	0011	$A \rightarrow B$		
Exchange	X	1111	$A \rightarrow B$, and $B \rightarrow A$	cc=2 is always set	
Compare	C	1110	(none)	cc=1 when $A < B$ cc=2 and 4 when $A = B$ cc=3 and 4 when $A > B$	
Edit	E	1100	$A \rightarrow B$	cc=1 for negative, non-zero operand cc=2 for zero operand cc=3 for positive, non-zero operand	

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† Add address instruction is only valid for Model 22 Processor.

†† When bit 1 in LB field is on, an IOC channel is specified and the LA field identifies a device number; also bit 3 is on for non-fill mode and off for fill mode. When bit 1 in LB field is off, an FAC channel is specified and the LA field identifies either disc or tape IO (LA=0 is for disc and LA=1, 2, 3 and 4 are for tape drives). When bit 2 in LB field is on, a read or a write control operation is indicated for either channel.