MC68000 Instructions

Instruction	Size	#	Dn	An	(An)	(An)+	-(An)	d(An)	d(An,Ri)	A.L	A.W	d(PC)	d(PC,Ri)	X N Z V C
ABCD Dn,Dm	B													* U * U *
ABCD -(An),-(Am)	B													* U * U *
ADD <ea>,Dn	BWL	*	*	*	*	*	*	*	*	*	*	*	*	* * * * *
ADD Dn,<ea>	BWL				*	*	*	*	*	*	*			* * * * *
ADDA <ea>,An	WL	*	*	*	*	*	*	*	*	*	*	*	*	- - - - -
ADDI #N,<ea>	BWL		*		*	*	*	*	*	*	*			* * * * *
ADDQ #N,<ea>	BWL		*	*	*	*	*	*	*	*	*			* * * * *
ADDX Dn,Dm	BWL													* * * * *
ADDX -(An),-(Am)	BWL													* * * * *
AND <ea>,Dn	BWL	*	*		*	*	*	*	*	*	*	*	*	- * * 0 0
AND Dn,<ea>	BWL				*	*	*	*	*	*	*			- * * 0 0
ANDI #N,<ea>	BWL		*		*	*	*	*	*	*	*			- * * 0 0
ANDI #N,CCR	B													* * * * *
@ ANDI #N,SR	W													* * * * *
AS[L,R] Dn,Dm	BWL													* * * * *
AS[L,R] #N,Dn	BWL													* * * * *
AS[L,R] <ea>	BWL				*	*	*	*	*	*	*			* * * * *
Bcc <label>	BW													- - - - -
BCHG Dn,<ea>	BL		*		*	*	*	*	*	*	*			- - * - -
BCHG #N,<ea>	BL		*		*	*	*	*	*	*	*			- - * - -
BCLR Dn,<ea>	BL		*		*	*	*	*	*	*	*			- - * - -
BCLR #N,<ea>	BL		*		*	*	*	*	*	*	*			- - * - -
+ BKPT #N	Unsized													- - - - -
BRA <label>	BW													- - - - -
BSET Dn,<ea>	BL		*		*	*	*	*	*	*	*			- - * - -
BSET #N,<ea>	BL		*		*	*	*	*	*	*	*			- - * - -
BSR <label>	BW													- - - - -
BTST Dn,<ea>	BL		*		*	*	*	*	*	*	*			- - * - -
BTST #N,<ea>	BL		*		*	*	*	*	*	*	*			- - * - -
CHK <ea>,Dn	W	*	*		*	*	*	*	*	*	*	*	*	- * U U U
CLR <ea>	BWL		*		*	*	*	*	*	*	*			- 0 1 0 0
CMP <ea>,Dn	BWL	*	*	*	*	*	*	*	*	*	*	*	*	- * * * *
CMPA <ea>,An	WL	*	*	*	*	*	*	*	*	*	*	*	*	- * * * *
CMPI #N,<ea>	BWL		*		*	*	*	*	*	*	*			- * * * *
CMPM (An)+,(Am)+	BWL													- * * * *
DBcc Dn,<label>	W													- - - - -
DIVS <ea>,Dn	W	*	*		*	*	*	*	*	*	*	*	*	- * * * 0
DIVU <ea>,Dn	W	*	*		*	*	*	*	*	*	*	*	*	- * * * 0
EOR Dn,<ea>	BWL		*		*	*	*	*	*	*	*			- * * 0 0
EORI #N,<ea>	BWL		*		*	*	*	*	*	*	*			- * * 0 0
EORI #N,CCR	B													* * * * *
@ EORI #N,SR	W													* * * * *
EXG Dn,Dm	L													- - - - -
EXT Dn	WL													- * * 0 0
ILLEGAL	Unsized													- - - - -
JMP <ea>	Unsized				*			*	*	*	*	*	*	- - - - -
JSR <ea>	Unsized				*			*	*	*	*	*	*	- - - - -
LEA <ea>,An	L				*			*	*	*	*	*	*	- - - - -
LINK An,#N	Unsized													- - - - -
LS[L,R] Dn,Dm	BWL													* * * 0 *
LS[L,R] #N,Dn	BWL													* * * 0 *
LS[L,R] <ea>	BWL				*	*	*	*	*	*	*			* * * 0 *
MOVE <ea>,<ea>	BWL	*X	*	*X	*	*	*	*	*	*	*	*X	*X	- * * 0 0
+ MOVE CCR,<ea>	W		*		*	*	*	*	*	*	*			- - - - -
MOVE <ea>,CCR	W	*	*		*	*	*	*	*	*	*	*	*	* * * * *

CCR Notation: * determined by result - unaffected U undefined @ privileged + MC68010 only X mode invalid for destination

MC68000 Instructions (continued)

Instruction	Size	#	Dn	An	(An)	(An)+	-(An)	d(An)	d(An,Ri)	A.L	A.W	d(PC)	d(PC,Ri)	X N Z V C
MOVE SR,<ea>	W	*	*		*	*	*	*	*	*	*			- - - - -
@+ MOVE SR,<ea>	W		*		*	*	*	*	*	*	*			- - - - -
@ MOVE <ea>,SR	W		*		*	*	*	*	*	*	*	*	*	* * * * *
@ MOVE USP,An	L													- - - - -
@ MOVE An,USP	L													- - - - -
MOVEA <ea>,An	WL	*	*	*	*	*	*	*	*	*	*	*	*	- - - - -
@+ MOVEC Rc,Rn	L													- - - - -
@+ MOVEC Rn,Rc	L													- - - - -
MOVEM <rlist>,<ea>	WL				*		*	*	*	*	*			- - - - -
MOVEM <ea>,<rlist>	WL				*	*		*	*	*	*	*	*	- - - - -
MOVEP Dn,d(Am)	WL													- - - - -
MOVEP d(Am),Dn	WL													- - - - -
MOVEQ #N,Dn	L													- - - - -
@+ MOVES Rn,<ea>	BWL				*	*	*	*	*	*	*			- * * 0 0
@+ MOVES <ea>,Rn	BWL				*	*	*	*	*	*	*			- - - - -
MULS <ea>,Dn	W	*	*		*	*	*	*	*	*	*	*	*	- * * 0 0
MULU <ea>,Dn	W	*	*		*	*	*	*	*	*	*	*	*	- * * 0 0
NBCD <ea>	B		*		*	*	*	*	*	*	*			* U * U *
NEG <ea>	BWL		*		*	*	*	*	*	*	*			* * * * *
NEGX <ea>	BWL		*		*	*	*	*	*	*	*			* * * * *
NOP	Unsized													- - - - -
NOT <ea>	BWL		*		*	*	*	*	*	*	*			- * * 0 0
OR <ea>,Dn	BWL	*	*		*	*	*	*	*	*	*	*	*	- * * 0 0
OR Dn,<ea>	BWL		*		*	*	*	*	*	*	*			- * * 0 0
ORI #N,<ea>	BWL		*		*	*	*	*	*	*	*			- * * 0 0
ORI #N,CCR	B													* * * * *
@ ORI #N,SR	W													* * * * *
PEA <ea>	L				*			*	*	*	*	*	*	- - - - -
@ RESET	Unsized													- - - - -
RO[L,R] Dn,Dm	BWL													- * * 0 *
RO[L,R] #N,Dn	BWL													- * * 0 *
RO[L,R] <ea>	BWL				*	*	*	*	*	*	*			- * * 0 *
ROX[L,R] Dn,Dm	BWL													* * * 0 *
ROX[L,R] #N,Dn	BWL													* * * 0 *
ROX[L,R] <ea>	BWL				*	*	*	*	*	*	*			* * * 0 *
+ RTD #N	Unsized													- - - - -
@ RTE	Unsized													* * * * *
RTR	Unsized													* * * * *
RTS	Unsized													- - - - -
SBCD Dn,Dm	B													* U * U *
SBCD -(An),-(Am)	B													* U * U *
Scc <ea>	B		*		*	*	*	*	*	*	*			- - - - -
@ STOP #N	Unsized													* * * * *
SUB <ea>,Dn	BWL	*	*	*	*	*	*	*	*	*	*	*	*	* * * * *
SUB Dn,<ea>	BWL				*	*	*	*	*	*	*			* * * * *
SUBA <ea>,An	WL	*	*	*	*	*	*	*	*	*	*	*	*	- - - - -
SUBI #N,<ea>	BWL		*		*	*	*	*	*	*	*			* * * * *
SUBQ #N,<ea>	BWL		*	*	*	*	*	*	*	*	*			* * * * *
SUBX Dn,Dm	BWL													* * * * *
SUBX -(An),-(Am)	BWL													* * * * *
SWAP Dn	W													- * * 0 0
TAS <ea>	B		*		*	*	*	*	*	*	*			- * * 0 0
TRAP #N	Unsized													- - - - -
TRAPV	Unsized													- - - - -
TST <ea>	BWL		*		*	*	*	*	*	*	*			- * * 0 0
UNLK An	Unsized													- - - - -