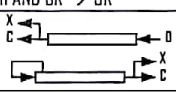
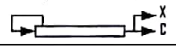
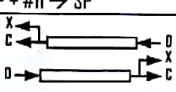
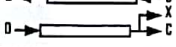


Opcode	Size	Operand	CCR	Effective Address s=source, d=destination, e=either, i=displacement												Operation	Description
		s,d	XNZVC	Dn	An	(An)	(An)+	-(An)	(i,An)	(i,An,Rn)	abs.W	abs.L	(i,PC)	(i,PC,Rn)	#n		
ABCD	B	Dy,Dx -(Ay),-(Ax)	*U*U*	e	-	-	-	-	-	-	-	-	-	-	-	$Dy_{10} + Dx_{10} + X \rightarrow D_{x10}$ $-(Ay)_{10} + -(Ax)_{10} + X \rightarrow -(Ax)_{10}$	Add BCD source and eXtend bit to destination. BCD result
ADD	⁴ BWL	s,Dn Dn,d	*****	e	s	s	s	s	s	s	s	s	s	s	s	$s + Dn \rightarrow Dn$ $Dn + d \rightarrow d$	Add binary (ADDI or ADDQ is used when source is #n. Prevent ADDQ with #n.L)
ADDA	⁴ WL	s,An	-----	s	e	s	s	s	s	s	s	s	s	s	s	$s + An \rightarrow An$	Add address (W sign-extended to .L)
ADDI	⁴ BWL	#n,d	*****	d	-	d	d	d	d	d	d	d	-	-	s	$\#n + d \rightarrow d$	Add immediate to destination
ADDQ	⁴ BWL	#n,d	*****	d	d	d	d	d	d	d	d	d	-	-	s	$\#n + d \rightarrow d$	Add quick immediate (#n range: 1 to 8)
ADDX	BWL	Dy,Dx -(Ay),-(Ax)	*****	e	-	-	-	-	-	-	-	-	-	-	-	$Dy + Dx + X \rightarrow Dx$ $-(Ay) + -(Ax) + X \rightarrow -(Ax)$	Add source and eXtend bit to destination
AND	⁴ BWL	s,Dn Dn,d	---*00	e	-	s	s	s	s	s	s	s	s	s	s	$s \text{ AND } Dn \rightarrow Dn$ $Dn \text{ AND } d \rightarrow d$	Logical AND source to destination (ANDI is used when source is #n)
ANDI	⁴ BWL	#n,d	---*00	d	-	d	d	d	d	d	d	d	-	-	s	$\#n \text{ AND } d \rightarrow d$	Logical AND immediate to destination
ANDI	⁴ B	#n,CCR	=====	-	-	-	-	-	-	-	-	-	-	-	s	$\#n \text{ AND CCR} \rightarrow \text{CCR}$	Logical AND immediate to CCR
ANDI	⁴ W	#n,SR	=====	-	-	-	-	-	-	-	-	-	-	-	s	$\#n \text{ AND SR} \rightarrow \text{SR}$	Logical AND immediate to SR (Privileged)
ASL	BWL	Dx,Dy	*****	e	-	-	-	-	-	-	-	-	-	-	-		Arithmetic shift Dy by Dx bits left/right
ASR	W	#n,Dy		d	-	-	-	-	-	-	-	-	-	-	s		Arithmetic shift Dy #n bits L/R (#n: 1 to 8)
Bcc	BW ³	address ²	-----	-	-	-	-	-	-	-	-	-	-	-	-	if cc true then $\text{address} \rightarrow \text{PC}$	Branch conditionally (cc table on back) (8 or 16-bit ± offset to address)
BCHG	B L	Dn,d #n,d	---*--	e	-	d	d	d	d	d	d	d	-	-	-	$\text{NOT}(\text{bit number of } d) \rightarrow Z$ $\text{NOT}(\text{bit } n \text{ of } d) \rightarrow \text{bit } n \text{ of } d$	Set Z with state of specified bit in d then invert the bit in d
BCLR	B L	Dn,d #n,d	---*--	e	-	d	d	d	d	d	d	d	-	-	-	$\text{NOT}(\text{bit number of } d) \rightarrow Z$ $0 \rightarrow \text{bit number of } d$	Set Z with state of specified bit in d then clear the bit in d
BRA	BW ³	address ²	-----	-	-	-	-	-	-	-	-	-	-	-	-	$\text{address} \rightarrow \text{PC}$	Branch always (8 or 16-bit ± offset to addr)
BSET	B L	Dn,d #n,d	---*--	e	-	d	d	d	d	d	d	d	-	-	-	$\text{NOT}(\text{bit } n \text{ of } d) \rightarrow Z$ $1 \rightarrow \text{bit } n \text{ of } d$	Set Z with state of specified bit in d then set the bit in d
BSR	BW ³	address ²	-----	-	-	-	-	-	-	-	-	-	-	-	-	$\text{PC} \rightarrow \text{-(SP)}; \text{address} \rightarrow \text{PC}$	Branch to subroutine (8 or 16-bit ± offset)
BTST	B L	Dn,d #n,d	---*--	e	-	d	d	d	d	d	d	d	d	d	s	$\text{NOT}(\text{bit } Dn \text{ of } d) \rightarrow Z$ $\text{NOT}(\text{bit } \#n \text{ of } d) \rightarrow Z$	Set Z with state of specified bit in d Leave the bit in d unchanged
CHK	W	s,Dn	-*UUU	e	-	s	s	s	s	s	s	s	s	s	s	if $Dn < 0$ or $Dn > s$ then TRAP	Compare Dn with 0 and upper bound [s]
CLR	BWL	d	-0100	d	-	d	d	d	d	d	d	d	-	-	-	$0 \rightarrow d$	Clear destination to zero
CMP	⁴ BWL	s,Dn	-----	e	s	s	s	s	s	s	s	s	s	s	s	set CCR with $Dn - s$	Compare Dn to source
CMPA	⁴ WL	s,An	-----	s	e	s	s	s	s	s	s	s	s	s	s	set CCR with $An - s$	Compare An to source
CMPI	⁴ BWL	#n,d	-----	d	-	d	d	d	d	d	d	d	-	-	s	set CCR with $d - \#n$	Compare destination to #n
CMPI	⁴ BWL	(Ay),-(Ax)+	-----	-	-	-	e	-	-	-	-	-	-	-	-	set CCR with $(Ax) - (Ay)$	Compare (Ax) to (Ay); Increment Ax and Ay
DBcc	W	Dn,address ²	-----	-	-	-	-	-	-	-	-	-	-	-	-	if cc false then { $Dn - 1 \rightarrow Dn$ if $Dn < -1$ then $\text{addr} \rightarrow \text{PC}$ }	Test condition, decrement and branch (16-bit ± offset to address)
DIVS	W	s,Dn	-----	e	-	s	s	s	s	s	s	s	s	s	s	$\pm 32\text{bit } Dn / \pm 16\text{bit } s \rightarrow \pm Dn$	$Dn = [16\text{-bit remainder}, 16\text{-bit quotient}]$
DIVU	W	s,Dn	-----	e	-	s	s	s	s	s	s	s	s	s	s	$32\text{bit } Dn / 16\text{bit } s \rightarrow Dn$	$Dn = [16\text{-bit remainder}, 16\text{-bit quotient}]$
EOR	⁴ BWL	Dn,d	---*00	e	-	d	d	d	d	d	d	d	-	-	s	$Dn \text{ XOR } d \rightarrow d$	Logical exclusive OR Dn to destination
EORI	⁴ BWL	#n,d	---*00	d	-	d	d	d	d	d	d	d	-	-	s	$\#n \text{ XOR } d \rightarrow d$	Logical exclusive OR #n to destination
EORI	⁴ B	#n,CCR	=====	-	-	-	-	-	-	-	-	-	-	-	s	$\#n \text{ XOR CCR} \rightarrow \text{CCR}$	Logical exclusive OR #n to CCR
EORI	⁴ W	#n,SR	=====	-	-	-	-	-	-	-	-	-	-	-	s	$\#n \text{ XOR SR} \rightarrow \text{SR}$	Logical exclusive OR #n to SR (Privileged)
EXT	L	Rx,Ry	-----	e	e	-	-	-	-	-	-	-	-	-	-	register \leftrightarrow register	Exchange registers (32-bit only)
EXT	WL	Dn	---*00	d	-	-	-	-	-	-	-	-	-	-	-	$Dn.B \rightarrow Dn.W Dn.W \rightarrow Dn.L$	Sign extend (change .B to .W or .W to .L)
ILLEGAL			-----	-	-	-	-	-	-	-	-	-	-	-	-	$\text{PC} \rightarrow \text{-(SSP)}; \text{SR} \rightarrow \text{-(SSP)}$	Generate Illegal Instruction exception
JMP		d	-----	-	-	d	-	-	d	d	d	d	d	d	-	$\uparrow d \rightarrow \text{PC}$	Jump to effective address of destination
JSR		d	-----	-	-	d	-	-	d	d	d	d	d	d	-	$\text{PC} \rightarrow \text{-(SP)}; \uparrow d \rightarrow \text{PC}$	push PC, jump to subroutine at address d
LEA	L	s,An	-----	-	e	s	-	-	s	s	s	s	s	s	-	$\uparrow s \rightarrow An$	Load effective address of s to An
LINK		An,#n	-----	-	-	-	-	-	-	-	-	-	-	-	-	$An \rightarrow \text{-(SP)}; \text{SP} \rightarrow An;$ $\text{SP} + \#n \rightarrow \text{SP}$	Create local workspace on stack (negative n to allocate space)
LSL	BWL	Dx,Dy	***0*	e	-	-	-	-	-	-	-	-	-	-	-		Logical shift Dy, Dx bits left/right
LSR	W	#n,Dy		d	-	-	-	-	-	-	-	-	-	-	s		Logical shift Dy, #n bits L/R (#n: 1 to 8)
MOVE	⁴ BWL	s,d	---*00	e	s	e	e	e	e	e	e	e	s	s	s	$s \rightarrow d$	Move data from source to destination
MOVE	W	s,CCR	=====	s	-	s	s	s	s	s	s	s	s	s	s	$s \rightarrow \text{CCR}$	Move source to Condition Code Register
MOVE	W	s,SR	=====	s	-	s	s	s	s	s	s	s	s	s	s	$s \rightarrow \text{SR}$	Move source to Status Register (Privileged)
MOVE	W	SR,d	-----	d	-	d	d	d	d	d	d	d	-	-	-	$\text{SR} \rightarrow d$	Move Status Register to destination
MOVE	L	USP,An	-----	-	d	-	-	-	-	-	-	-	-	-	-	$\text{USP} \rightarrow An$	Move User Stack Pointer to An (Privileged)
	BWL	s,d	XNZVC	Dn	An	(An)	(An)+	-(An)	(i,An)	(i,An,Rn)	abs.W	abs.L	(i,PC)	(i,PC,Rn)	#n	$An \rightarrow \text{USP}$	Move An to User Stack Pointer (Privileged)