SIC/XE Instruction Set Table

SIC Instructions are in blue

Mnemonic	Format	Opcode	Effect	Notes
ADD m	3/4	18	A <-- (A) + (m..m+2)	
ADDF m	3/4	58	F <-- (F) + (m..m+5)	X F
ADDR r1,r2	2	90	r2 <-- (r2) + (r1)	X
AND m	3/4	40	A <-- (A) & (m..m+2)	
CLEAR r1	2	B4	r1 <-- 0	X
COMP m	3/4	28	A : (m..m+2)	
COMPF m	3/4	88	F : (m..m+5)	X F C
COMPR r1,r2	2	A0	(r1) : (r2)	X F C
DIV m	3/4	24	A : (A) / (m..m+2)	
DIVF m	3/4	64	F : (F) / (m..m+5)	X F
DIVR r1,r2	2	9C	(r2) <-- (r2) / (r1)	X
FIX	1	C4	A <-- (F) [convert to integer]	X F
FLOAT	1	C0	F <-- (A) [convert to floating]	X F
HIO	1	F4	Halt I/O channel number (A)	P X
J m	3/4	3C	PC <-- m	
JEQ m	3/4	30	PC <-- m if CC set to =	
JGT m	3/4	34	PC <-- m if CC set to >	
JLT m	3/4	38	PC <-- m if CC set to <	
JSUB m	3/4	48	L <-- (PC); PC <-- m	
LDA m	3/4	00	A <-- (m..m+2)	
LDB m	3/4	68	B <-- (m..m+2)	X
LDCH m	3/4	50	A [rightmost byte] <-- (m)	
LDF m	3/4	70	F <-- (m..m+5)	X F
LDL m	3/4	08	L <-- (m..m+2)	
LDS m	3/4	6C	S <-- (m..m+2)	X
LDT m	3/4	74	T <-- (m..m+2)	X
LDX m	3/4	04	X <-- (m..m+2)	
LPS m	3/4	D0	Load processor status from information beginning at address m (see Section 6.2.1)	P X
MUL m	3/4	20	A <-- (A) * (m..m+2)	
MULF m	3/4	60	F <-- (F) * (m..m+5)	X F
MULR r1,r2	2	98	r2 <-- (r2) * (r1)	X
NORM	1	C8	F <-- (F) [normalized]	X F
OR m	3/4	44	A <-- (A) | (m..m+2)	
RD m	3/4	D8	A [rightmost byte] <-- data from device specified by (m)	P

RMO r1,r2	2	AC	r2 <-- (r1)		X	
RSUB	3/4	4C	PC <-- (L)			
SHIFTL r1,n	2	A4	r1 <-- (r1); left circular shift n bits. {In assembled instruction, r2=n-1}		X	
SHIFTR r1,n	2	A8	r1 <-- (r1); right shift n bits with vacated bit positions set equal to leftmost bit of (r1). {In assembled instruction, r2=n-1}		X	
SIO	1	F0	Start I/O channel number (A); address of channel program is given by (S)	P	X	
SSK m	3/4	EC	Protection key for address m <-- (A) (see Section 6.2.4)	P	X	
STA m	3/4	0C	m..m+2 <-- (A)			
STB m	3/4	78	m..m+2 <-- (B)		X	
STCH m	3/4	54	m <-- (A) [rightmost byte]			
STF m	3/4	80	m..m+5 <-- (F)		X	
STI m	3/4	D4	Interval timer value <-- (m..m+2) (see Section 6.2.1)	P	X	
STL m	3/4	14	m..m+2 <-- (L)			
STS m	3/4	7C	m..m+2 <-- (S)		X	
STSW m	3/4	E8	m..m+2 <-- (SW)	P		
STT m	3/4	84	m..m+2 <-- (T)		X	
STX m	3/4	10	m..m+2 <-- (X)			
SUB m	3/4	1C	A <-- (A) - (m..m+2)			
SUBF m	3/4	5C	F <-- (F) - (m..m+5)		X	F
SUBR r1,r2	2	94	r2 <-- (r2) - (r1)		X	
SVC n	2	B0	Generate SVC interrupt. {In assembled instruction, r1=n}		X	
TD m	3/4	E0	Test device specified by (m)	P		C
TIO	1	F8	Test I/O channel number (A)	P	X	C
TIX m	3/4	2C	X <-- (X) + 1; (X) : (m..m+2)			C
TIXR r1	2	B8	X <-- (X) + 1; (X) : (r1)		X	C
WD m	3/4	DC	Device specified by (m) <-- (A) [rightmost byte]	P		