PSHA   Push A onto Stack   PSHA

Operation: $(SP) - \$0001 \Rightarrow SP$
$(A) \Rightarrow M_{(SP)}$

Description: Stacks the content of accumulator A. The stack pointer is decremented by one. The content of A is then stored at the address the SP points to.

Push instructions are commonly used to save the contents of one or more CPU registers at the start of a subroutine. Complementary pull instructions can be used to restore the saved CPU registers just before returning from the subroutine.

CCR Details:

S	X	H	I	N	Z	V	C
–	–	–	–	–	–	–	–

Source Form	Address Mode	Object Code	Access Detail HCS12	M68HC12
PSHA	INH	36	Os	Os

PSHX   Push Index Register X onto Stack   PSHX

Operation: $(SP) - \$0002 \Rightarrow SP$
$(X_H : X_L) \Rightarrow M_{(SP)} : M_{(SP+1)}$

Description: Stacks the content of index register X. The stack pointer is decremented by two. The content of X is then stored at the address to which the SP points. After PSHX executes, the SP points to the stacked value of the high-order half of X.

Push instructions are commonly used to save the contents of one or more CPU registers at the start of a subroutine. Complementary pull instructions can be used to restore the saved CPU registers just before returning from the subroutine.

CCR Details:

S	X	H	I	N	Z	V	C
–	–	–	–	–	–	–	–

Source Form	Address Mode	Object Code	Access Detail HCS12	M68HC12
PSHX	INH	34	OS	OS

PULA   Pull A from Stack   PULA

Operation: $(M_{(SP)}) \Rightarrow A$
$(SP) + \$0001 \Rightarrow SP$

Description: Accumulator A is loaded from the address indicated by the stack pointer. The SP is then incremented by one.

Pull instructions are commonly used at the end of a subroutine, to restore the contents of CPU registers that were pushed onto the stack before subroutine execution.

CCR Details:

S	X	H	I	N	Z	V	C
–	–	–	–	–	–	–	–

Source Form	Address Mode	Object Code	Access Detail HCS12	M68HC12
PULA	INH	32	ufO	ufO

PULX   Pull Index Register X from Stack   PULX

Operation: $(M_{(SP)} : M_{(SP+1)}) \Rightarrow X_H : X_L$
$(SP) + \$0002 \Rightarrow SP$

Description: Index register X is loaded from the address indicated by the stack pointer. The SP is then incremented by two.

Pull instructions are commonly used at the end of a subroutine to restore the contents of CPU registers that were pushed onto the stack before subroutine execution.

CCR Details:

S	X	H	I	N	Z	V	C
–	–	–	–	–	–	–	–

Source Form	Address Mode	Object Code	Access Detail HCS12	M68HC12
PULX	INH	30	UfO	UfO