

65C02 INSTRUCTIONS

Modes							
Ip	Implied						
Ac	Accumulator						
Im	Immediate	#s12					
Z	ZeroPage	\$12					
Zx	ZeroPage,X	\$12,X					
Zy	ZeroPage,Y	\$12,Y					
Ab	Absolute	\$1234					
Ax	Absolute,X	\$1234,X					
Ay	Absolute,Y	\$1234,Y					
R	Relative	LABEL					
Ix	Ind, zp X	(\$12,X)					
Iax	Ind, abs X	(\$1234,X)					
Iy	Ind, zp Y	(\$12,Y)					
Iz	Ind, zp	(\$12)					
Ia	Ind, abs	(\$1234)					
Load & Store							
LDA	NUBDIZC						
Load Accumulator							
		Im ² Z ³ Zx ⁴ Ab ⁴ Ax ⁴⁺					
		Ay ⁴⁺ Ix ⁶ Iy ⁵ Iz ⁵					
LDX	NUBDIZC						
Load X register							
		Im ² Z ³ Zy ⁴ Ab ⁴ Ay ⁴⁺					
LDY	NUBDIZC						
Load Y register							
		Im ² Z ³ Zx ⁴ Ab ⁴ Ay ⁴⁺					
STA	NUBDIZC						
Store Accumulator							
		Z ³ Zx ⁴ Ab ⁴ Ax ⁵⁺ Ay ⁵⁺					
		Ix ⁶ Iy ⁶ Iz ⁵					
STX	NUBDIZC						
Store X register							
		Z ³ Zy ⁴ Ab ⁴					
STY	NUBDIZC						
Store Y register							
		Z ³ Zx ⁴ Ab ⁴					
STZ	NUBDIZC						
Store Zero							
		Z ³ Zx ⁴ Ab ⁴ Ax ⁵⁺					
State							
CLC	NUBDIZC						
Clear Carry							
		Ip ²					
CLD	NUBDIZC						
Clear Decimal							
		Ip ²					
CLI	NUBDIZC						
Clear Interrupt							
		Ip ²					
CLV	NUBDIZC						
Clear oVerflow							
		Ip ²					
SEC	NUBDIZC						
SEt Carry							
		Ip ²					
SED	NUBDIZC						
SEt Decimal							
		Ip ²					
SEI	NUBDIZC						
SEt Interrupt							
		Ip ²					
Bits							
ASL	NUBDIZC						
Arithmetic Shift Left							
		Ac ² Z ⁵ Zx ⁶ Ab ⁶ Ax ⁷⁺					
LSR	NUBDIZC						
Logical Shift Right							
		Ac ² Z ⁵ Zx ⁶ Ab ⁶ Ax ⁷⁺					
ROL	NUBDIZC						
ROtate Left							
		Ac ² Z ⁵ Zx ⁶ Ab ⁶ Ax ⁷⁺					
ROR	NUBDIZC						
ROtate Right							
		Ac ² Z ⁵ Zx ⁶ Ab ⁶ Ax ⁷⁺					
AND	NUBDIZC						
bitwise AND with accumulator							
		Im ² Z ³ Zx ⁴ Ab ⁴ Ax ⁴⁺					
		Ay ⁴⁺ Ix ⁶ Iy ⁵ Iz ⁵					
ORA	NUBDIZC						
bitwise OR with Accumulator							
		Im ² Z ³ Zx ⁴ Ab ⁴ Ax ⁴⁺					
		Ay ⁴⁺ Ix ⁶ Iy ⁵ Iz ⁵					
EOR	NUBDIZC						
bitwise Exclusive OR							
		Im ² Z ³ Zx ⁴ Ab ⁴ Ax ⁴⁺					
		Ay ⁴⁺ Ix ⁶ Iy ⁵ Iz ⁵					
BIT	NUBDIZC						
test BITs							
		Im ² Z ³ Zx ⁴ Ab ⁴ Ax ⁴⁺					
CMP	NUBDIZC						
CoMPare accumulator							
		Im ² Z ³ Zx ⁴ Ab ⁴ Ax ⁴⁺					
		Ay ⁴⁺ Ix ⁶ Iy ⁵ Iz ⁵					
CPX	NUBDIZC						
CoMPare X register							
		Im ² Z ³ Ab ⁴					
CPY	NUBDIZC						
CoMPare Y register							
		Im ² Z ³ Ab ⁴					
TRB	NUBDIZC						
Test and Reset Bits							
		Z ⁵ Ab ⁶					
TSB	NUBDIZC						
Test and Set Bits							
		Z ⁵ Ab ⁶					
RMB	NUBDIZC						
Reset Memory Bit							
		Z ⁵ Ab ⁶					
SMB	NUBDIZC						
Set Memory Bit							
		Z ⁵ Ab ⁶					
Flow							
JMP	NUBDIZC						
JuMP							
		Ab ³ Ia ⁵⁺ IAx ⁶⁺					
JSR	NUBDIZC						
Jump to SubRoutine							
		Ab ⁶					
RTS	NUBDIZC						
ReTurn from Subroutine							
		Ip ⁶					
RTI	NUBDIZC						
ReTurn from Interrupt							
		Ip ⁶					
BRA	NUBDIZC						
BRanch Always							
		R ³					
BEQ	NUBDIZC						
Branch on EQual							
		R ²					
BNE	NUBDIZC						
Branch on Not EQual							
		R ²					
BCC	NUBDIZC						
Branch on Carry Clear							
		R ²					
BCS	NUBDIZC						
Branch on Carry Set							
		R ²					
BUC	NUBDIZC						
Branch on oVerflow Clear							
		R ²					
BUS	NUBDIZC						
Branch on oVerflow Set							
		R ²					
BMI	NUBDIZC						
Branch on MInus							
		R ²					
BPL	NUBDIZC						
Branch on PLus							
		R ²					
BBR<0-7>	NUBDIZC						
Branch on Bit Reset							
		R ²					
BBS<0-7>	NUBDIZC						
Branch on Bit Set							
		R ²					
Stack							
PHA	NUBDIZC						
Push Accumulator							
		Ip ³					
PHX	NUBDIZC						
Push X register							
		Ip ³					
PHY	NUBDIZC						
Push Y register							
		Ip ³					
PHP	NUBDIZC						
Push Processor status							
		Ip ³					
PLA	NUBDIZC						
Pull Accumulator							
		Ip ⁴					
PLP	NUBDIZC						
Pull Processor status							
		Ip ⁴					
PLX	NUBDIZC						
Pull X register							
		Ip ⁴					
PLY	NUBDIZC						
Pull Y register							
		Ip ⁴					
TXS	NUBDIZC						
Transfer X to Stack							
		Ip ²					
TSX	NUBDIZC						
Transfer Stack to X							
		Ip ²					
Transfer							
TAX	NUBDIZC						
Transfer A to X							
		Ip ²					
TAY	NUBDIZC						
Transfer A to Y							
		Ip ²					
TXA	NUBDIZC						
Transfer X to A							
		Ip ²					
TYA	NUBDIZC						
Transfer Y to A							
		Ip ²					
Calc							
INA	NUBDIZC						
INcrement Accumulator							
		Ac ²					
INX	NUBDIZC						
INcrement X							
		Ip ²					
INY	NUBDIZC						
INcrement Y							
		Ip ²					
DEA	NUBDIZC						
DEcrement Accumulator							
		Ac ²					
DEX	NUBDIZC						
DEcrement X							
		Ip ²					
DEY	NUBDIZC						
DEcrement Y							
		Ip ²					
INC	NUBDIZC						
INCrement memory							