TIMING DIAGRAM SUMMARY

Instruction	Op-code	Operand	Bytes	MC	T	Detail
ACI 24	ACI	8 bit data	2	2	7	Add immediate to Accumulator with Carry
ADC B **ADC M**	ADC	Reg., Mem.	1,1	1,2	4,7	Add register to accumulator with carry
ADD B **ADD M**	ADD	Reg., Mem.	1,1	1,2	4,7	Add register to Accumulator
ADI 24	ADI	8-bit, data	2	2	7	Add immediate to accumulator
ANA	ANA	Reg., mem.	1,1	1,2	4,7	Logical AND with Accumulator
ANI	ANI	8-bit, data	2	2	7	AND immediate with accumulator
CALL	CALL	16-bit address	3	5	18	Unconditional Subroutine call
CMA	CMA	None	1	1	4	Complement Accumulator
CMC	CMC	None	1	1	4	Complement Carry
CMP	CMP	Reg., Mem.	1,1	1,2	4,7	Compare with accumulator
CPI	CPI	8-bit	2	2	7	Compare Immediate with accumulator
DAA	DAA	None	1	1	4	Decimal Adjust Accumulator
DAD	DAD	Reg.Pair	1	3	10	Add register pair to H and L registers
DCR	DCR	Reg., Mem.	1,1	1,3	4,10	Decrement source by 1
DCX	DCX	Reg. Pair	1	1	6	Decrement register pair by 1
DI	DI	None	1	1	4	Disable Interrupts
EI	EI	None	1	1	4	Enable Interrupts

HLT	HLT	None	1	2 or more	5 or more	Halt and enter wait state
IN	IN	8-bit port address	2	3	10	Input data to accumulator from a port with 8-bit address
INR	INR	Reg.,Mem.	1,1	1,3	4,10	Increment contents of register/Memory by 1
INX	INX	Reg. Pair	1	1	6	Increment register pair by 1
JMP	JMP	16 bit	3	3	10	Jump unconditionally
LDA	LDA	16 bit address	3	4	13	Load accumulator direct
LDAX	LDAX	B/D reg. Pair	1	2	7	Load accumulator indirect
LHLD	LHLD	16 bit address	3	5	16	Load H and L registers direct
LXI	LXI	Reg. Pair, 16 bit data	3	3	10	Load Register Pair Immediate
MOV	MOV MOV MOV	Rd,Rs M,Rs Rd,M	1	1 2	4 7	Move-copy from source to destination
MVI	MVI	Reg., Data Mem., Data	2 2	2 3	7 10	Move immediate 8 bit
NOP	NOP	None	1	1	4	No Operation
ORA	ORA	Reg., Mem.	1,1	1,2	4,7	Logically OR with Accumulator
ORI	ORI	8 bit data	2	2	7	Logically OR Immediate
OUT	OUT	8-bit port address	2	3	10	Output Data from Accumulator to a port with 8 bit address
PCHL	PCHL	None	1	1	6	Load program counter with HL contents
POP	POP	Reg. pair	1	3	10	POP OFF Stack to register pair
PUSH	PUSH	Reg. pair	1	3	12	Push register pair into stack

RAL	RAL	None	1	1	4	Rotate accumulator left through carry
RAR	RAR	None	1	1	4	Rotate accumulator right through carry
RLC	RLC	None	1	1	4	Rotate Accumulator Left
RRC	RRC	None	1	1	4	Rotate Accumulator Right
RET	RET	None	1	3	10	Return from subroutine unconditionally
RIM	RIM	None	1	1	4	Read Interrupt Mask
SBB	SBB	Reg., Mem.	1,1	1,2	4,7	Substract source and borrow from accumulator
SBI	SBI	8 bit data	2	2	7	Aubstract immediate with borrow
SHLD	SHLD	16 bit address	3	5	16	Store H and L registers direct
SIM	SIM	None	1	1	4	Set Interrupt Mask
SPHL	SPHL	None	1	1	6 (in 8085), 5(in 8080)	Copy H and L registers to the Stack pointer(SP)
STA	STA	16 bit	3	4	13	Store Accumulator Direct
STAX	STAX	B/D reg. pair	1	2	7	Store Accumulator Indirect
STC	STC	None	1	1	4	Set Carry
SUB	SUB	Reg. , Mem.	1,1	1,2	4,7	Substract register or memory from Accumulator
SUI	SUI	8 bit data	2	2	7	Substract immediate from accumulator
XCHG	XCHG	None	1	1	4	Exchange H and L with D and E
XRA	XRA	Reg., Mem.	1,1	1,2	4,7	Exclusive OR with accumulator

XRI	XRI	8 bit data	2	2	7	Exclusive OR immediate with accumulator
XTHL	XTHL	None	1	5	16	Exchange H and L with top of stack