

Microprocessor - 8085 Logical Instructions

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The following table shows the list of Logical instructions with their meanings.

Opcode	Operand	Meaning	Explanation
CMP	R M	Compare the register or memory with the accumulator	The contents of the operand (register or memory) are M compared with the contents of the accumulator.
CPI	8-bit data	Compare immediate with the accumulator	The second byte data is compared with the contents of the accumulator.
ANA	R M	Logical AND register or memory with the accumulator	The contents of the accumulator are logically AND with M the contents of the register or memory, and the result is placed in the accumulator.
ANI	8-bit data	Logical AND immediate with the accumulator	The contents of the accumulator are logically AND with the 8-bit data and the result is placed in the accumulator.
XRA	R M	Exclusive OR register or memory with the accumulator	The contents of the accumulator are Exclusive OR with M the contents of the register or memory, and the result is placed in the accumulator.
XRI	8-bit data	Exclusive OR immediate with the accumulator	The contents of the accumulator are Exclusive OR with the 8-bit data and the result is placed in the accumulator.
ORA	R M	Logical OR register or memory with the accumulator	The contents of the accumulator are logically OR with M the contents of the register or memory, and result is placed in the accumulator.
ORI	8-bit data	Logical OR immediate with the accumulator	The contents of the accumulator are logically OR with the 8-bit data and the result is placed in the accumulator.
RLC	None	Rotate the accumulator left	Each binary bit of the accumulator is rotated left by one position. Bit D7 is placed in the position of D0 as well as in the Carry flag. CY is modified according to bit D7.
RRC	None	Rotate the accumulator right	Each binary bit of the accumulator is rotated right by one position. Bit D0 is placed in the position of D7 as well as in the Carry flag. CY is modified according to bit D0.
RAL	None	Rotate the accumulator left through carry	Each binary bit of the accumulator is rotated left by one position through the Carry flag. Bit D7 is placed in the Carry flag, and the Carry flag is placed in the least significant position D0. CY is modified according to bit D7.
RAR	None	Rotate the accumulator right through carry	Each binary bit of the accumulator is rotated right by one position through the Carry flag. Bit D0 is placed in the Carry flag, and the Carry flag is placed in the most significant position D7. CY is modified according to bit D0.
CMA	None	Complement accumulator	The contents of the accumulator are complemented. No flags are affected.
CMC	None	Complement carry	The Carry flag is complemented. No other flags are affected.
STC	None	Set Carry	Set Carry

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