

ZX SPECTRUM - Z80 Assembler

| Mnemonic | Clck | Siz | SZHPNC | OP-Code | Description | Notes |
|--------------|------|-----|--------|-----------------|-----------------------|------------------------|
| ADC A,r | 4 | 1 | ***V0* | 88+rb | Add with Carry | A=A+s+CY |
| ADC A,N | 7 | 2 | | CE XX | | |
| ADC A,(HL) | 7 | 1 | | 8E | | |
| ADC A,(IX+N) | 19 | 3 | | DD 8E XX | | |
| ADC A,(IY+N) | 19 | 3 | | FD 8E XX | | |
| ADC HL,BC | 15 | 2 | **?V0* | ED 4A | Add with Carry | HL=HL+ss+CY |
| ADC HL,DE | 15 | 2 | | ED 5A | | |
| ADC HL,HL | 15 | 2 | | ED 6A | | |
| ADC HL,SP | 15 | 2 | | ED 7A | | |
| ADD A,r | 4 | 1 | ***V0* | 80+rb | Add (8-bit) | A=A+s |
| ADD A,N | 7 | 2 | | C6 XX | | |
| ADD A,(HL) | 7 | 1 | | 86 | | |
| ADD A,(IX+N) | 19 | 3 | | DD 86 XX | | |
| ADD A,(IY+N) | 19 | 3 | | FD 86 XX | | |
| ADD HL,BC | 11 | 1 | --?-0* | 09 | Add (16-bit) | HL=HL+ss |
| ADD HL,DE | 11 | 1 | | 19 | | |
| ADD HL,HL | 11 | 1 | | 29 | | |
| ADD HL,SP | 11 | 1 | | 39 | | |
| ADD IX,BC | 15 | 2 | --?-0* | DD 09 | Add (IX register) | IX=IX+pp |
| ADD IX,DE | 15 | 2 | | DD 19 | | |
| ADD IX,IX | 15 | 2 | | DD 29 | | |
| ADD IX,SP | 15 | 2 | | DD 39 | | |
| ADD IY,BC | 15 | 2 | --?-0* | FD 09 | Add (IY register) | IY=IY+rr |
| ADD IY,DE | 15 | 2 | | FD 19 | | |
| ADD IY,IX | 15 | 2 | | FD 29 | | |
| ADD IY,SP | 15 | 2 | | FD 39 | | |
| AND r | 4 | 1 | ***P00 | A0+rb | Logical AND | A=A&s |
| AND N | 7 | 2 | | E6 XX | | |
| AND (HL) | 7 | 1 | | A6 | | |
| AND (IX+N) | 19 | 3 | | DD A6 XX | | |
| AND (IY+N) | 19 | 3 | | FD A6 XX | | |
| BIT b,r | 8 | 2 | ?*1?0- | CB 40+8*b+rb | Test Bit | m&{2^b} |
| BIT b,(HL) | 12 | 2 | | CB 46+8*b | | |
| BIT b,(IX+N) | 20 | 4 | | DD CB XX 46+8*b | | |
| BIT b,(IY+N) | 20 | 4 | | FD CB XX 46+8*b | | |
| CALL NN | 17 | 3 | ----- | CD XX XX | Unconditional Call | -(SP)=PC,PC=nn |
| CALL C,NN | 17/1 | 3 | ----- | DC XX XX | Conditional Call | If Carry = 1 |
| CALL NC,NN | 17/1 | 3 | | D4 XX XX | | If carry = 0 |
| CALL M,NN | 17/1 | 3 | | FC XX XX | | If Sign = 1 (negative) |
| CALL P,NN | 17/1 | 3 | | F4 XX XX | | If Sign = 0 (positive) |
| CALL Z,NN | 17/1 | 3 | | CC XX XX | | If Zero = 1 (ans.=0) |
| CALL NZ,NN | 17/1 | 3 | | C4 XX XX | | If Zero = 0 (non-zero) |
| CALL PE,NN | 17/1 | 3 | | EC XX XX | | If Parity = 1 (even) |
| CALL PO,NN | 17/1 | 3 | | E4 XX XX | | If Parity = 0 (odd) |
| CCF | 4 | 1 | --?-0* | 3F | Complement Carry Flag | CY=~CY |
| CP r | 4 | 1 | ***V1* | B8+rb | Compare | Compare A-s |
| CP N | 7 | 2 | | FE XX | | |
| CP (HL) | 7 | 1 | | BE | | |
| CP (IX+N) | 19 | 3 | | DD BE XX | | |
| CP (IY+N) | 19 | 3 | | FD BE XX | | |
| CPD | 16 | 2 | ****1- | ED A9 | Compare and Decrement | A=(HL),HL=HL-1,BC=BC-1 |
| CPDR | 21/1 | 2 | ****1- | ED B9 | Compare, Dec., Repeat | CPD till A=(HL)or BC=0 |
| CPI | 16 | 2 | ****1- | ED A1 | Compare and Increment | A=(HL),HL=HL+1,BC=BC-1 |

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LLAMA O ENVÍA WHATSAPP: 689 45 44 70**

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| Mnemonic | Clock | Size | SZHPNC | OP-Code | Description | Notes |
|------------|-------|------|--------|----------|----------------------|----------------------|
| DEC A | 4 | 1 | ***V1- | 3D | Decrement (8-bit) | s=s-1 |
| DEC B | 4 | 1 | | 05 | | |
| DEC C | 4 | 1 | | 0D | | |
| DEC D | 4 | 1 | | 15 | | |
| DEC E | 4 | 1 | | 1D | | |
| DEC H | 4 | 1 | | 25 | | |
| DEC L | 4 | 2 | | 2D | | |
| DEC (HL) | 11 | 1 | | 35 | | |
| DEC (IX+N) | 23 | 3 | | DD 35 XX | | |
| DEC (IY+N) | 23 | 3 | | FD 35 XX | | |
| DEC BC | 6 | 1 | ----- | 0B | Decrement (16-bit) | ss=ss-1 |
| DEC DE | 6 | 1 | | 1B | | |
| DEC HL | 6 | 1 | | 2B | | |
| DEC SP | 6 | 1 | | 3B | | |
| DEC IX | 10 | 2 | ----- | DD 2B | Decrement | xx=xx-1 |
| DEC IY | 10 | 2 | | FD 2B | | |
| DI | 4 | 1 | ----- | F3 | Disable Interrupts | |
| DJNZ \$+2 | 13/8 | 1 | ----- | 10 | Dec., Jump Non-Zero | B=B-1 till B=0 |
| EI | 4 | 1 | ----- | FB | Enable Interrupts | |
| EX (SP),HL | 19 | 1 | ----- | E3 | Exchange | (SP)<->HL |
| EX (SP),IX | 23 | 2 | ----- | DD E3 | | (SP)<->xx |
| EX (SP),IY | 23 | 2 | | FD E3 | | |
| EX AF,AF' | 4 | 1 | ----- | 08 | | AF<->AF' |
| EX DE,HL | 4 | 1 | ----- | EB | | DE<->HL |
| EXX | 4 | 1 | ----- | D9 | Exchange | qq<->qq' (except AF) |
| HALT | 4 | 1 | ----- | 76 | Halt | |
| IM 0 | 8 | 2 | ----- | ED 46 | Interrupt Mode | (n=0,1,2) |
| IM 1 | 8 | 2 | | ED 56 | | |
| IM 2 | 8 | 2 | | ED 5E | | |
| IN A,(N) | 11 | 2 | ----- | DB XX | Input | A=(n) |
| IN (C) | 12 | 2 | ***P0- | ED 70 | Input* | (Unsupported) |
| IN A,(C) | 12 | 2 | ***P0- | ED 78 | Input | r=(C) |
| IN B,(C) | 12 | 2 | | ED 40 | | |
| IN C,(C) | 12 | 2 | | ED 48 | | |
| IN D,(C) | 12 | 2 | | ED 50 | | |
| IN E,(C) | 12 | 2 | | ED 58 | | |
| IN H,(C) | 12 | 2 | | ED 60 | | |
| IN L,(C) | 12 | 2 | | ED 68 | | |
| INC A | 4 | 1 | ***V0- | 3C | Increment (8-bit) | r=r+1 |
| INC B | 4 | 1 | | 04 | | |
| INC C | 4 | 1 | | 0C | | |
| INC D | 4 | 1 | | 14 | | |
| INC E | 4 | 1 | | 1C | | |
| INC H | 4 | 1 | | 24 | | |
| INC L | 4 | 1 | | 2C | | |
| INC BC | 6 | 1 | ----- | 03 | Increment (16-bit) | ss=ss+1 |
| INC DE | 6 | 1 | | 13 | | |
| INC HL | 6 | 1 | | 23 | | |
| INC SP | 6 | 1 | | 33 | | |
| INC IX | 10 | 2 | ----- | DD 23 | Increment | xx=xx+1 |
| INC IY | 10 | 2 | | FD 23 | | |
| INC (HL) | 11 | 1 | ***V0- | 34 | Increment (indirect) | (HL)=(HL)+1 |
| INC (IX+N) | 23 | 3 | ***V0- | DD 34 XX | Increment | (xx+d)=(xx+d)+1 |
| INC (IY+N) | 23 | 3 | | FD 34 XX | | |

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| Mnemonic | Clck | Siz | SZHPNC | OP-Code | Description | Notes |
|--------------|------|-----|--------|----------|---------------------|------------------------|
| JP \$NN | 10 | 3 | ----- | C3 XX XX | Unconditional Jump | PC=nn |
| JP (HL) | 4 | 1 | ----- | E9 | Unconditional Jump | PC=(HL) |
| JP (IX) | 8 | 2 | ----- | DD E9 | Unconditional Jump | PC=(xx) |
| JP (IY) | 8 | 2 | ----- | FD E9 | Unconditional Jump | |
| JP C, \$NN | 10/1 | 3 | ----- | DA XX XX | Conditional Jump | If Carry = 1 |
| JP NC, \$NN | 10/1 | 3 | ----- | D2 XX XX | Conditional Jump | If Carry = 0 |
| JP M, \$NN | 10/1 | 3 | ----- | FA XX XX | Conditional Jump | If Sign = 1 (negative) |
| JP P, \$NN | 10/1 | 3 | ----- | F2 XX XX | Conditional Jump | If Sign = 0 (positive) |
| JP Z, \$NN | 10/1 | 3 | ----- | CA XX XX | Conditional Jump | If Zero = 1 (ans.= 0) |
| JP NZ, \$NN | 10/1 | 3 | ----- | C2 XX XX | Conditional Jump | If Zero = 0 (non-zero) |
| JP PE, \$NN | 10/1 | 3 | ----- | EA XX XX | Conditional Jump | If Parity = 1 (even) |
| JP PO, \$NN | 10/1 | 3 | ----- | E2 XX XX | Conditional Jump | If Parity = 0 (odd) |
| JR \$N+2 | 12 | 2 | ----- | 18 XX | Relative Jump | PC=PC+e |
| JR C, \$N+2 | 12/7 | 2 | ----- | 38 XX | Cond. Relative Jump | If cc JR(cc=C,NC,NZ,Z) |
| JR NC, \$N+2 | 12/7 | 2 | ----- | 30 XX | Cond. Relative Jump | |
| JR Z, \$N+2 | 12/7 | 2 | ----- | 28 XX | Cond. Relative Jump | |
| JR NZ, \$N+2 | 12/7 | 2 | ----- | 20 XX | Cond. Relative Jump | |
| LD I, A | 9 | 2 | ----- | ED 47 | Load* | dst=src |
| LD R, A | 9 | 2 | ----- | ED 4F | Load* | dst=src |
| LD A, I | 9 | 2 | **0*0- | ED 57 | Load* | dst=src |
| LD A, R | 9 | 2 | ----- | ED 5F | Load* | dst=src |
| LD A, r | 4 | 1 | ----- | 78+rb | Load (8-bit) | dst=src |
| LD A, N | 7 | 2 | ----- | 3E XX | | |
| LD A, (BC) | 7 | 1 | ----- | 0A | | |
| LD A, (DE) | 7 | 1 | ----- | 1A | | |
| LD A, (HL) | 7 | 1 | ----- | 7E | | |
| LD A, (IX+N) | 19 | 3 | ----- | DD 7E XX | | |
| LD A, (IY+N) | 19 | 3 | ----- | FD 7E XX | | |
| LD A, (NN) | 13 | 3 | ----- | 3A XX XX | | |
| LD B, r | 4 | 1 | ----- | 40+rb | | |
| LD B, N | 7 | 2 | ----- | 06 XX | | |
| LD B, (HL) | 7 | 1 | ----- | 46 | | |
| LD B, (IX+N) | 19 | 3 | ----- | DD 46 XX | | |
| LD B, (IY+N) | 19 | 3 | ----- | FD 46 XX | | |
| LD C, r | 4 | 1 | ----- | 48+rb | | |
| LD C, N | 7 | 2 | ----- | 0E XX | | |
| LD C, (HL) | 7 | 1 | ----- | 4E | | |
| LD C, (IX+N) | 19 | 3 | ----- | DD 4E XX | | |
| LD C, (IY+N) | 19 | 3 | ----- | FD 4E XX | | |
| LD D, r | 4 | 1 | ----- | 50+rb | | |
| LD D, N | 7 | 2 | ----- | 16 XX | | |
| LD D, (HL) | 7 | 1 | ----- | 56 | | |
| LD D, (IX+N) | 19 | 3 | ----- | DD 56 XX | | |
| LD D, (IY+N) | 19 | 3 | ----- | FD 56 XX | | |
| LD E, r | 4 | 1 | ----- | 58+rb | | |
| LD E, N | 7 | 2 | ----- | 1E XX | | |
| LD E, (HL) | 7 | 1 | ----- | 5E | | |
| LD E, (IX+N) | 19 | 3 | ----- | DD 5E XX | | |
| LD E, (IY+N) | 19 | 3 | ----- | FD 5E XX | | |
| LD H, r | 4 | 1 | ----- | 60+rb | | |
| LD H, N | 7 | 2 | ----- | 26 XX | | |
| LD H, (HL) | 7 | 1 | ----- | 66 | | |
| LD H, (IX+N) | 19 | 3 | ----- | DD 66 XX | | |
| LD H, (IY+N) | 19 | 3 | ----- | FD 66 XX | | |
| LD L, r | 4 | 1 | ----- | 68+rb | | |
| LD L, N | 7 | 2 | ----- | 2E XX | | |
| LD L, (HL) | 7 | 1 | ----- | 6E | | |
| LD L, (IX+N) | 19 | 3 | ----- | DD 6E XX | | |
| LD L, (IY+N) | 19 | 3 | ----- | FD 6E XX | | |

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|--------------|-------|------|--------|-------------|----------------------|------------------------|
| LD BC, (NN) | 20 | 4 | ----- | ED 4B XX XX | Load (16-bit) | dst=src |
| LD BC, NN | 10 | 3 | | 01 XX XX | | |
| LD DE, (NN) | 20 | 4 | | ED 5B XX XX | | |
| LD DE, NN | 10 | 3 | | 11 XX XX | | |
| LD HL, (NN) | 20 | 3 | | 2A XX XX | | |
| LD HL, NN | 10 | 3 | | 21 XX XX | | |
| LD SP, (NN) | 20 | 4 | | ED 7B XX XX | | |
| LD SP, HL | 6 | 1 | | F9 | | |
| LD SP, IX | 10 | 2 | | DD F9 | | |
| LD SP, IY | 10 | 2 | | FD F9 | | |
| LD SP, NN | 10 | 3 | | 31 XX XX | | |
| LD IX, (NN) | 20 | 4 | | DD 2A XX XX | | |
| LD IX, NN | 14 | 4 | | DD 21 XX XX | | |
| LD IY, (NN) | 20 | 4 | | FD 2A XX XX | | |
| LD IY, NN | 14 | 4 | | FD 21 XX XX | | |
| LD (HL), r | 7 | 1 | ----- | 70+rb | Load (Indirect) | dst=src |
| LD (HL), N | 10 | 2 | | 36 XX | | |
| LD (BC), A | 7 | 1 | | 02 | | |
| LD (DE), A | 7 | 1 | | 12 | | |
| LD (NN), A | 13 | 3 | | 32 XX XX | | |
| LD (NN), BC | 20 | 4 | | ED 43 XX XX | | |
| LD (NN), DE | 20 | 4 | | ED 53 XX XX | | |
| LD (NN), HL | 16 | 3 | | 22 XX XX | | |
| LD (NN), IX | 20 | 4 | | DD 22 XX XX | | |
| LD (NN), IY | 20 | 4 | | FD 22 XX XX | | |
| LD (NN), SP | 20 | 4 | | ED 73 XX XX | | |
| LD (IX+N), r | 19 | 3 | | DD 70+rb XX | | |
| LD (IX+N), N | 19 | 4 | | DD 36 XX XX | | |
| LD (IY+N), r | 19 | 3 | | FD 70+rb XX | | |
| LD (IY+N), N | 19 | 4 | | FD 36 XX XX | | |
| LDD | 16 | 2 | --0*0- | ED A8 | Load and Decrement | (DE)=(HL),HL=HL-1,# |
| LDDR | 21/1 | 2 | --000- | ED B8 | Load, Dec., Repeat | LDD till BC=0 |
| LDI | 16 | 2 | --0*0- | ED A0 | Load and Increment | (DE)=(HL),HL=HL+1,# |
| LDIR | 21/1 | 2 | --000- | ED B0 | Load, Inc., Repeat | LDI till BC=0 |
| NEG | 8 | 2 | ***V1* | ED 44 | Negate | A=-A |
| NOP | 4 | 1 | ----- | 00 | No Operation | |
| OR r | 4 | 1 | ***P00 | B0+rb | Logical inclusive OR | A=Avs |
| OR N | 7 | 2 | | F6 XX | | |
| OR (HL) | 7 | 1 | | B6 | | |
| OR (IX+N) | 19 | 3 | | DD B6 XX | | |
| OR (IY+N) | 19 | 3 | | FD B6 XX | | |
| OUT (N), A | 11 | 2 | ----- | D3 XX | Output | (n)=A |
| OUT (C), 0 | 12 | 2 | ----- | ED 71 | Output* | (C)=r |
| OUT (C), A | 12 | 2 | ----- | ED 79 | Output | (C)=r |
| OUT (C), B | 12 | 2 | | ED 41 | | |
| OUT (C), C | 12 | 2 | | ED 49 | | |
| OUT (C), D | 12 | 2 | | ED 51 | | |
| OUT (C), E | 12 | 2 | | ED 59 | | |
| OUT (C), H | 12 | 2 | | ED 61 | | |
| OUT (C), L | 12 | 2 | | ED 69 | | |
| OUTD | 16 | 2 | ?*??1- | ED AB | Output and Decrement | (C)=(HL),HL=HL-1,B=B-1 |
| OTDR | 21/1 | 2 | ?1??1- | ED BB | Output, Dec., Repeat | OUTD till B=0 |
| OUTI | 16 | 2 | ?*??1- | ED A3 | Output and Increment | (C)=(HL),HL=HL+1,B=B-1 |
| OTIR | 21/1 | 2 | ?1??1- | ED B3 | Output, Inc., Repeat | OUTI till B=0 |
| POP AF | 10 | 1 | ----- | F1 | Pop | qq=(SP)+ |
| POP BC | 10 | 1 | | C1 | | |

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| Mnemonic | Clck | Siz | SZHPNC | OP-Code | Description | Notes |
|--------------|------|-----|--------|-----------------|-----------------------|------------------------|
| RES b,r | 8 | 2 | ----- | CB 80+8*b+rb | Reset bit | m=m&{~2^b} |
| RES b,(HL) | 15 | 2 | ----- | CB 86+8*b | | |
| RES b,(IX+N) | 23 | 4 | ----- | DD CB XX 86+8*b | | |
| RES b,(IY+N) | 23 | 4 | ----- | FD CB XX 86+8*b | | |
| RET | 10 | 1 | ----- | C9 | Return | PC=(SP)+ |
| RET C | 11/5 | 1 | ----- | D8 | Conditional Return | If Carry = 1 |
| RET NC | 11/5 | 1 | | D0 | | If Carry = 0 |
| RET M | 11/5 | 1 | | F8 | | If Sign = 1 (negative) |
| RET P | 11/5 | 1 | | F0 | | If Sign = 0 (positive) |
| RET Z | 11/5 | 1 | | C8 | | If Zero = 1 (ans.=0) |
| RET NZ | 11/5 | 1 | | C0 | | If Zero = 0 (non-zero) |
| RET PE | 11/5 | 1 | | E8 | | If Parity = 1 (even) |
| RET PO | 11/5 | 1 | | E0 | | If Parity = 0 (odd) |
| RETI | 14 | 2 | ----- | ED 4D | Return from Interrupt | PC=(SP)+ |
| RETN | 14 | 2 | ----- | ED 45 | Return from NMI | PC=(SP)+ |
| RLA | 4 | 1 | --0-0* | 17 | Rotate Left Acc. | A={CY,A}<- |
| RL r | 8 | 2 | **0P0* | CB 10+rb | Rotate Left | m={CY,m}<- |
| RL (HL) | 15 | 2 | | CB 16 | | |
| RL (IX+N) | 23 | 4 | | DD CB XX 16 | | |
| RL (IY+N) | 23 | 4 | | FD CB XX 16 | | |
| RLCA | 4 | 1 | --0-0* | 07 | Rotate Left Cir. Acc. | A=A<- |
| RLC r | 8 | 2 | **0P0* | CB 00+rb | Rotate Left Circular | m=m<- |
| RLC (HL) | 15 | 2 | | CB 06 | | |
| RLC (IX+N) | 23 | 4 | | DD CB XX 06 | | |
| RLC (IY+N) | 23 | 4 | | FD CB XX 06 | | |
| RLD | 18 | 2 | **0P0- | ED 6F | Rotate Left 4 bits | {A,(HL)}={A,(HL)}<- ## |
| RRA | 4 | 1 | --0-0* | 1F | Rotate Right Acc. | A-->{CY,A} |
| RR r | 8 | 2 | **0P0* | CB 18+rb | Rotate Right | m-->{CY,m} |
| RR (HL) | 15 | 2 | | CB 1E | | |
| RR (IX+N) | 23 | 4 | | DD CB XX 1E | | |
| RR (IY+N) | 23 | 4 | | FD CB XX 1E | | |
| RRCA | 4 | 1 | --0-0* | 0F | Rotate Right Cir.Acc. | A-->A |
| RRC r | 8 | 2 | **0P0* | CB 08+rb | Rotate Right Circular | m-->m |
| RRC (HL) | 15 | 2 | | CB 0E | | |
| RRC (IX+N) | 23 | 4 | | DD CB XX 0E | | |
| RRC (IY+N) | 23 | 4 | | FD CB XX 0E | | |
| RRD | 18 | 2 | **0P0- | ED 67 | Rotate Right 4 bits | {A,(HL)}=>{A,(HL)} ## |
| RST 0 | 11 | 1 | ----- | C7 | Restart | (p=0H,8H,10H,...,38H) |
| RST 08H | 11 | 1 | | CF | | |
| RST 10H | 11 | 1 | | D7 | | |
| RST 18H | 11 | 1 | | DF | | |
| RST 20H | 11 | 1 | | E7 | | |
| RST 28H | 11 | 1 | | EF | | |
| RST 30H | 11 | 1 | | F7 | | |
| RST 38H | 11 | 1 | | FF | | |
| SBC r | 4 | 1 | ***V1* | 98+rb | Subtract with Carry | A=A-s-CY |
| SBC A,N | 7 | 2 | | DE XX | | |
| SBC (HL) | 7 | 1 | | 9E | | |
| SBC A,(IX+N) | 19 | 3 | | DD 9E XX | | |
| SBC A,(IY+N) | 19 | 3 | | FD 9E XX | | |
| SBC HL,BC | 15 | 2 | **?V1* | ED 42 | Subtract with Carry | HL=HL-ss-CY |
| SBC HL,DE | 15 | 2 | | ED 52 | | |
| SBC HL,HL | 15 | 2 | | ED 62 | | |
| SBC HL,SP | 15 | 2 | | ED 72 | | |
| SCF | 4 | 1 | --0-01 | 37 | Set Carry Flag | CY=1 |
| SET b,r | 8 | 2 | ----- | CB C0+8*b+rb | Set bit | m=mv{2^b} |

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|------------|------|-----|--------|-------------|----------------------|------------------------------------|
| SLL r | 8 | 2 | **0P0* | CB 30+rb | Shift Left Logical* | m={0,m,CY}<- |
| SLL (HL) | 15 | 2 | | CB 36 | | (SLL instructions are Unsupported) |
| SLL (IX+N) | 23 | 4 | | DD CB XX 36 | | |
| SLL (IY+N) | 23 | 4 | | FD CB XX 36 | | |
| SRL r | 8 | 2 | **0P0* | CB 38+rb | Shift Right Logical | m=->{0,m,CY} |
| SRL (HL) | 15 | 2 | | CB 3E | | |
| SRL (IX+N) | 23 | 4 | | DD CB XX 3E | | |
| SRL (IY+N) | 23 | 4 | | FD CB XX 3E | | |
| SUB r | 4 | 1 | ***V1* | 90+rb | Subtract | A=A-s |
| SUB N | 7 | 2 | | D6 XX | | |
| SUB (HL) | 7 | 1 | | 96 | | |
| SUB (IX+N) | 19 | 3 | | DD 96 XX | | |
| SUB (IY+N) | 19 | 3 | | FD 96 XX | | |
| XOR r | 4 | 1 | ***P00 | A8+rb | Logical Exclusive OR | A=Axs |
| XOR N | 7 | 2 | | EE XX | | |
| XOR (HL) | 7 | 1 | | AE | | |
| XOR (IX+N) | 19 | 3 | | DD AE XX | | |
| XOR (IY+N) | 19 | 3 | | FD AE XX | | |

| | |
|-------------|--|
| n | Immediate addressing |
| nn | Immediate extended addressing |
| e | Relative addressing (PC=PC+2+offset) |
| (nn) | Extended addressing |
| (xx+d) | Indexed addressing |
| r | Register addressing |
| (rr) | Register indirect addressing |
| | Implied addressing |
| b | Bit addressing |
| p | Modified page zero addressing (see RST) |
| * | Undocumented opcode |
| A B C D E | Registers (8-bit) |
| AF BC DE HL | Register pairs (16-bit) |
| F | Flag register (8-bit) |
| I | Interrupt page address register (8-bit) |
| IX IY | Index registers (16-bit) |
| PC | Program Counter register (16-bit) |
| R | Memory Refresh register |
| SP | Stack Pointer register (16-bit) |
| b | One bit (0 to 7) |
| cc | Condition (C,M,NC,NZ,P,PE,PO,Z) |
| d | One-byte expression (-128 to +127) |
| dst | Destination s, ss, (BC), (DE), (HL), (nn) |
| e | One-byte expression (-126 to +129) |
| m | Any register r, (HL) or (xx+d) |
| n | One-byte expression (0 to 255) |
| nn | Two-byte expression (0 to 65535) |
| pp | Register pair BC, DE, IX or SP |
| qq | Register pair AF, BC, DE or HL |
| qq' | Alternative register pair AF, BC, DE or HL |
| r | Register A, B, C, D, E, H or L |
| rr | Register pair BC, DE, IY or SP |
| s | Any register r, value n, (HL) or (xx+d) |
| src | Source s, ss, (BC), (DE), (HL), nn, (nn) |
| ss | Register pair BC, DE, HL or SP |

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