

[illegible]

Pneumonic	Bits	Operation	Data Bits		Immediate Bits
JMP	0bX XX00	PC <- Ra, Rb	Rb	Ra	
JMP (with immediate)	0bX XX00	PC <- k			k
CALL	0bX XX01	[LR <- PC] : [PC <- Ra, Rb]	Rb	Ra	
CALL (with immediate)	0bX XX01	[LR <- PC] : [PC <- k]			k
RJMP	0bX XX10	PC <- PC + Ra, Rb	Rb	Ra	
RJMP (with immediate)	0bX XX10	PC <- PC + k			k
RCALL	0bX XX11	[LR <- PC] : [PC <- PC + Ra, Rb]	Rb	Ra	
RCALL (with immediate)	0bX XX11	[LR <- PC] : [PC <- PC + k]			k

The least significant 2 bits of the Condition Codes correspond to an ALU flag
 IE: 0b1001XX would only be executed if the flag 'C' (Carry) is set

The most significant bit of the Condition Code can be set high to check if a ALU flag is clear
 IE: 0b1101XX would only be executed if the flag 'C' (Carry) is NOT set

Hello											
	ALU Op Codes	0b XXXX XXXX X01X XXXX									
Bits			Pneumonic	Bits	Operation	Sets Flags					
4	Mod Bit		CLR	0b00000	b <- 0x00		reserved		Output is always stored into register B		
3			SER	0b10000	b <- 0xFF		broken				
2			NOT	0b00001	b <- !a						
1			TWO	0b10001	b <- !(a + 1)						
0			AND	0b00010	b <- (a & b)						
			NND	0b10010	b <- !(a & b)						
			ORR	0b00011	b <- (a b)						
			NOR	0b10011	b <- !(a b)						
Bits	ALU Flags										
	Variable	Full Name	XOR	0b00100	b <- (a ^ b)						
7			XNR	0b10100	b <- !(a ^ b)						
6			ADD	0b00101	b <- (a + b)						
5			ADC	0b10101	b <- (a + b + C)						
4			SUB	0b00110	b <- (a - b)						
3			SBC	0b10110	b <- (a - (b + C))						
2	T	Two's Compliment Overflow	INC	0b00111	b <- (a + 1)						
1	C	Carry Flag	DEC	0b10111	b <- (a - 1)						
0	Z	Zero Flag	MOV	0b01000	b <- a						
			MVN	0b11000	b <- !a						
			SET	0b01001	b <- b						
	Instruction Bits		STN	0b11001	b <- !b						
Bits	Description		CMP	0b01010	a - b						
b0:b4	ALU Op										
b5	Always High (ALU Flag)			0b01011							
b6	Always Low			0b11011							
b7	Use Immediate for B			0b01100							
b8:b11	Register A			0b11100							
b12:b15	Register B			0b01101							
(if b7 == High)				0b11101							
b16:b23	Immediate Value			0b01110							
				0b11110							
				0b01111							
				0b11111							

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