LDOI MARK II instruction set

General remarks

1) All instructions have a 2-byte format (see instruction format)
2) There are 8 general-purpose 8-bit registers (R0 - R7)
3) Flags are updated during all ALU operations

List of instructions

Nr	Mnemonic	Function
0	NOP	no operation
1	RETI	return from interrupt
2	RETC	return from subroutine call
3	CALL	call subroutine
4	JMP	jump to label or address
5	J<flag>	jump to label or address if <flag> is set

8	MOVL	move literal to register
9	MOVR	move register to register
10	LDR	load register from memory
11	STR	store register in memory
12	LDRR	move register to address in register
13	STRR	load register from address in register
14	PUSH	push register to the stack
15	POP	load register from the stack

Nr	Mnemonic	Function
16	NOT	bitwise logical invert of register
17	RR	rotate register 1 bit to the right
18	RL	rotate register 1 bit to the left
19	SWAP	swap nibbles in register

20	ANDL	logical AND of register and literal
21	ANDR	logical AND of 2 registers
22	ORL	logical OR of register and literal
23	ORR	logical OR of 2 registers
24	XORL	logical XOR of register and literal
25	XORR	logical XOR of 2 registers
26	ADDL	addition of register and literal
27	ADDR	addition of 2 registers
28	SUBL	subtraction of register and literal
29	SUBR	subtraction of 2 registers
30	CMPL	comparison of register and literal
31	CMPR	comparison of 2 registers

List of ALU flags

Flag	Condition
Z	zero
C	carry
E	equal
G	greater
S	smaller

"Virtual" instructions

Nr	Mnemonic	Function
32	INC	increment register
32	DEC	decrement register
34	CLR	clear register