Main CPU

OPCODE	INSTRUCTION	OPERAND	DESCRIPTION
00	NOP	-	-
01	STORE	8-bit Address	
02	LOAD (Constant)	8-bit Constant	
03	ADD (Constant)	8-bit Constant	
04	NOT	-	
05	AND (Constant)	8-bit Constant	
06	OR (Constant)	8-bit Constant	
07	BRA	8-bit Constant	pc -> pc + constant
08	PE-LOAD (Constant)	8-bit Constant	
12	LOAD (Address)	8-bit Address	*also adds pe constant – need to fix
13	ADD (Address)	8-bit Address	*also adds pe constant – need to fix
15	AND (Address)	8-bit Address	*also adds pe constant – need to fix
16	OR (Address)	8-bit Address	*also adds pe constant – need to fix
18	PE-AND (Constant)	8-bit Constant	
28	PE-OR (Constant)	8-bit Constant	
30	PE-LESSTHAN (Constant)	8-bit Constant	
38	PE-EQUAL (Constant)	8-bit Constant	
B8	PE-EQUAL (Address)	8-bit Address	
B0	PE-LESSTHAN (Address)	8-bit Address	
A8	PE-OR (Address)	8-bit Address	
98	PE-AND (Address)	8-bit Address	
10	PE-ADD (Constant)	8-bit Constant	
78	PE-SHIFT	00 - right 81 – left 02 – down 03 - up	
40	PE-STORE	8-bit Address	
88	PE-LOAD (Address)	8-bit Address	
20	PE-NOT	-	
90	PE-ADD (Address)	8-bit Address	
E0	PE-SUB (Address)	8-bit Address	
60	PE-SUB (Constant)	8-bit Constant	
58	PE-SET	-	Takes value from ACCU
48	PE-RESET	8-bit Constant	01 – enabled 00 - disabled
50	PE-STATUS INVERT	-	
7A	PE-SHIFT into main CPU ACCU	81	

PE-Instruction Set

OPCODE	INSTRUCTION	OPERAND	DESCRIPTION
00	NOP	-	
01	LOAD	8-bit Address	
02	ADD	8-bit Constant	
03	AND	8-bit Constant	
04	NOT	-	
05	OR	8-bit Constant	
06	LESS THAN	8-bit Constant	
07	EQUAL	8-bit Constant	
08	STORE	8-bit Address	
09	RESET	-	
0A	STATUS INVERT	-	
0B	SET	8-bit Constant	
0C	Subtract	8-bit Constant	
0F	MOVE	8-bit Constant (Two lowest bits used)	00 - MOVE.RIGHT 01 - MOVE.LEFT 10 - MOVE.DOWN 11 - MOVE.UP

Status Register MUX
- NOP   00
- SET   01
- INVERT   02
- RESET   03