

Mapping of instruction names

	Schematic name	Code name	Active low		
	RAM_ADDRESS_IN PUT	RaI	Y		
	RAM_INPUT	RI	N		
	RAM_OUTPUT	RO	Y		
	INSTRUCTION_INP UT	II	Y		
	JUMP	J	Y		
	COUNTER_OUTPU T	CO	Y		
	COUNTER_ENABL E	CE	N		
	A_INPUT	AI	Y		
	A_OUTPUT	AO	Y		
	ALU_OUTPUT	AIO	Y		
	SUBTRACT	S	N		
	B_INPUT	BI	Y		
	B_OUTPUT	BO	Y		
	OUTPUT_INPUT	OI	Y		
	FLAGS_INPUT	FI	Y		
	HALT	HLT	N		

Micro code ROM layout

	Instruction code						Step			Flags		Left		Direct		To inverters								Middle		Direct		To inverters								Right		Direct		To inverters																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	A8	A7	A6	A5	A4	A3	A2	A1	A0	A9	A10	A11	A12	D7	D6	Y5	Y4	Y3	Y2	Y1	Y0	A11	A12	D7	D6	Y5	Y4	Y3	Y2	Y1	Y0	A11	A12	D7	D6	Y5	Y4	Y3	Y2	Y1	Y0	A11	A12	D7	D6	Y5	Y4	Y3	Y2	Y1	Y0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
NOP Is also the start of each instruction	0	0	0	0	0	0	0	0	0	X	X	0	0			1				1		0	1										1	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

