								CO	S0 S1 S2 S3			MDR_MEM/BUS	A寄存器选择	B寄存器选择	\WR	\RD			CP选择	HALT	后继微地址形成
指令	合并的微指令	微指令文字描述	地址	控存内容	23	22	21	20	19	18	17	16	15 14	13 12	11	10	9 8	7	6 5 4	3	2 1 0
取指令	00000000	PC->A, A->ALU->MAR	00	324461	0	0	1	10		01		0	01,A选PC	00	0	1			110	0	001, μPC+1
	00000001	M(MAR)->MDR	01	000451	0	0	0	00		00		0,内存到MDR	00	00	0	1			101	0	001, μPC+1
	00000010	PC+1->PC	02	000031	0	0	0	00		00		0	00	00	0	0			011	0	001, μPC+1
	00000011	MDR->ALU->IR	03	321041	0	0	1	10		01		0	00	01,B选MDR	0	0			100	0	001, μPC+1
	00000100	XJP	04	000004	0	0	0	00		00		0	00	00	0	0			000	0	100,按XJP寻址
	00000101		05	000000																	
	00000110		06	000000																	
	00000111		07	000000																	
01, 存储器直接寻址	00001000	PC->A, A->ALU->MAR	08	324461	0	0	1	10		01		0	01,A选PC	00	0	1			110	0	001, μPC+1
	00001001	M(MAR)->MDR	09	000451	0	0	0	00		00		0,内存到MDR	00	00	0	1			101	0	001, μPC+1
	00001010	MDR->ALU->MAR	0A	321061	0	0	1	10		01		0	00	01,B选MDR	0	0			110	0	001, μPC+1
	00001011	PC+1->PC	0B	000031	0	0	0	00		00		0	00	00	0	0			011	0	001, μPC+1
	00001100	QJP	0C	000003	0	0	0	00		00		0	00	00	0	0			000	0	011.按QJP寻址
	00001101		0D	000000																	
	00001110		0E	000000																	
	00001111		0F	000000																	
10 立即寻址	00010000	PC->A, A->ALU->MAR	10	324461	0	0	1	10		01		0	01,A选PC	00	0	1			110	0	001, μPC+1
	00010001	PC+1->PC	11	000031	0	0	0	00		00		0	00	00	0	0			011	0	001, μPC+1
	00010010	QJP	12	000003	0	0	0	00		00		0	00	00	0	0			000	0	011,按QJP寻址
	00010011		13	000000																	
	00010100		14	000000																	
	00010101		15	000000																	
	00010110		16	000000																	
	00010111		17	000000																	
11 寄存器间接寻址	00011000	R->ALU->MAR	18	322461	0	0	1	10		01		0	00	10, B选R	0	1			110	0	001, μPC+1
	00011001	QJP	19	000003	0	0	0	00		00		0	00	00	0	0			000	0	011, 按QJP寻址
	00011010		1A	000000																	
	00011011		1B	000000																	
	00011100		1C	000000																	
	00011101		1D	000000																	
	00011110		1E	000000																	
	00011111		1F	000000																	
	00100000		20	000000																	
	00100001		21	000000																	
	00100010		22	000000																	
	00100011		23	000000																	
LOAD 01	00100100	M(MAR)->MDR	24	000451	0	0	0	00		00		0,内存到MDR	00	00	0	1			101	0	001, μPC+1
	00100101	MDR->ALU->ACC	25	321411	0	0	1	10		01		0	00	01,B选MDR	0	1			001	0	001, μPC+1
	00100110	JP无条件转移	26	000002	0	0	0	00		00		0	00	00	0	0			000	0	010, 无条件转移
	00100111		27	000000																	
LOAD 10	00101000	M(MAR)->MDR	28	000451	0	0	0	00		00		0,内存到MDR	00	00	0	1			101	0	001, μPC+1
	00101001	MDR->ALU->ACC	29	321411	0	0	1	10		01		0	00	01,B选MDR	0	1			001	0	001, μPC+1
	00101010	JP无条件转移	2A	000002	0	0	0	00		00		0	00	00	0	0			000	0	010, 无条件转移
	00101011		2B	000000																	
LOAD 11	00101100	M(MAR)->MDR	2C	000451	0	0	0	00		00		0,内存到MDR	00	00	0	1			101	0	001, μPC+1
	00101101	MDR->ALU->ACC	2D	321411	0	0	1	10		01		0	00	01, B选MDR	0	1			001	0	001, μPC+1
	00101110	JP无条件转移	2E	000002	0	0	0	00		00		0	00	00	0	0			000	0	010, 无条件转移
	00101111		2F	000000																	
	00110000		30	000000																	
	00110001		31	000000																	
	00110010		32	000000																	
	00110011		33	000000																	
STORE 01	00110100	ACC->ALU->MDR->M(MAR)	34	338851	0	0	1	10		01		1,MDR到内存	10, A选ACC	00	1	0			101	0	001, μPC+1
	00110101	JP无条件转移	35	000002	0	0	0	00		00		0	00	00	0	0			000	0	010, 无条件转移
	00110110		36	000000																	
	00110111		37	000000																	
	00111000		38	000000																	
	00111010		3A	000000																	
	00111011		3B	000000																	
STORE 11	00111100	ACC->ALU->MDR->M(MAR)	3C	338851	0	0	1	10		01		1	10, A选ACC	00	1	0			101	0	001, μPC+1
	00111101	JP无条件转移	3D	000002	0	0	0	00		00		0	00	00	0	0			000	0	010, 无条件转移
	00111110		3E	000000																	
	00111111		3F	000000																	
ADD 00	01000000	ACC+R->ACC	40	32A011	0	0	1	10		01		0	10,A选ACC	10,B选R	0	0			001	0	001, μPC+1
	01000001	JP无条件转移	41	000002	0	0	0	00		00		0	00	00	0	0			000	0	010,无条件转移
	01000010		42	000000																	

	01000011		43	000000																
ADD 01	01000100	M(MAR)->MDR	44	000451	0	0	0	00	00	0,内存到MDR	00	00	0	1			101	0	001, μPC+1
	01000101	MDR+ACC->ACC	45	329011	0	0	1	10	01	0	10,A选ACC	01，B选MDR	0	0			001	0	001, μPC+1
	01000110	JP无条件转移	46	000002	0	0	0	00	00	0	00	00	0	0			000	0	010，无条件转移
	01000111		47	000000																
ADD 10	01001000	M(MAR)->MDR	48	000451	0	0	0	00	00	0,内存到MDR	00	00	0	1			101	0	001, μPC+1
	01001001	MDR+ACC->ACC	49	329011	0	0	1	10	01	0	10，A选ACC	01,B选MDR	0	0			001	0	001, μPC+1
	01001010	JP无条件转移	4A	000002	0	0	0	00	00	0	00	00	0	0			000	0	010，无条件转移
	01001011		4B	000000																
ADD 11	01001100	M(MAR)->MDR	4C	000451	0	0	0	00	00	0，内存到MDR	00	00	0	1			101	0	001, μPC+1
	01001101	MDR+ACC->ACC	4D	329011	0	0	1	10	01	0	10，A选ACC	01，B选MDR	0	0			001	0	001, μPC+1
	01001110	JP无条件转移	4E	000002	0	0	0	00	00	0	00	00	0	0			000	0	010，无条件转移
	01001111		4F	000000																
MOVIN 00	01010000	R->ALU->ACC	50	322411	0	0	1	10	01	0	00	10，B选R	0	1			001	0	001, μPC+1
	01010001	JP无条件转移	51	000002	0	0	0	00	00	0	00	00	0	0			000	0	010,无条件转移
	01010010		52	000000																
	01010011		53	000000																
	01010100		54	000000																
	01010101		55	000000																
	01010110		56	000000																
	01010111		57	000000																
MOVIN 10	01011000	M(MAR)->MDR	58	000451	0	0	0	00	00	0,内存到MDR	00	00	0	1			101	0	001, μPC+1
	01011001	MDR->ALU->ACC	59	321411	0	0	1	10	01	0	00	01，B选MDR	0	1			001	0	001, μPC+1
	01011010	JP无条件转移	5A	000002	0	0	0	00	00	0	00	00	0	0			000	0	010，无条件转移
	01011011		5B	000000																
	01011100		5C	000000																
	01011101		5D	000000																
	01011110		5E	000000																
	01011111		5F	000000																
MOVOUT 00	01100000	ACC->ALU->R	60	328421	0	0	1	10	01	0	10,A选ACC	00	0	1			010	0	001, μPC+1
	01100001	JP无条件转移	61	000002	0	0	0	00	00	0	00	00	0	0			000	0	010,无条件转移
	01100010		62	000000																
	01100011		63	000000																
	01100100		64	000000																
	01100101		65	000000																
	01100110		66	000000																
	01100111		67	000000																
	01101000		68	000000																
	01101001		69	000000																
	01101010		6A	000000																
	01101011		6B	000000																
	01101100		6C	000000																
	01101101		6D	000000																
	01101110		6E	000000																
	01101111		6F	000000																
PLUS	01110000	R->ALU->ACC	70	322411	0	0	1	10	01	0	00	10,B选R	0	1			001	0	001, μPC+1
	01110001	ACC->ALU+1->ACC	71	008411	0	0	0	00	00	0	10,A选ACC	00	0	1			001	0	001, μPC+1
	01110010	JP无条件转移	72	000002	0	0	0	00	00	0	00	00	0	0			000	0	010,无条件转移
	01110011		73	000000																
	01110100		74	000000																
	01110101		75	000000																
	01110110		76	000000																
	01110111		77	000000																
	01111000		78	000000																
	01111001		79	000000																
	01111010		7A	000000																
	01111011		7B	000000																
SUB	01111100	M(MAR)->MDR	7C	000451	0	0	0	00	00	0,内存到MDR	00	00	0	1			101	0	001, μPC+1
	01111101	MDR-(ACC)->ACC	7D	0C9011	0	0	0	01	10	0	10，A选ACC	01,B选MDR	0	0			001	0	001, μPC+1
	01111110	JP无条件转移	7E	000002	0	0	0	00	00	0	00	00	0	0			000	0	010,无条件转移
LIST-ADD	10000000	ACC->ALU->MAR	80	328461	0	0	1	10	01	0	10,A选ACC	00	0	1			110	0	001, μPC+1
	10000001	M(MAR)->MDR	81	000451	0	0	0	00	00	0,内存到MDR	00	00	0	1			101	0	001, μPC+1
	10000010	R->ALU->ACC	82	322411	0	0	1	10	01	0	00	10,B选R	0	1			001	0	001, μPC+1
	10000011	(MDR)+(ACC)->(ACC)	83	329011	0	0	1	10	01	0	10，A选ACC	01，B选MDR	0	0			001	0	001, μPC+1
	10000100	ACC->ALU->R	84	328421	0	0	1	10	01	0	10,A选ACC	00	0	1			010	0	001, μPC+1
	10000101	PC+1->PC	85	000031	0	0	0	00	00	0	00	00	0	0			011	0	001, μPC+1
	10000110	PC->A，A->ALU->MAR	86	324461	0	0	1	10	01	0	01,A选PC	00	0	1			110	0	001, μPC+1
	10000111	M(MAR)->MDR	87	000451	0	0	0	00	00	0,内存到MDR	00	00	0	1			101	0	001, μPC+1

	10001000	MDR->ALU->ACC	88	321411	0	0	1	10	01	0	00	01，B选MDR	0	1			001	0	001，μPC+1
	10001001	JP无条件转移	89	000002	0	0	0	00	00	0	00	00	0	0			000	0	010,无条件转移
	10001010		8A	000000															
	10001011		8B	000000															
	10001100		8C	000000															
	10001101		8D	000000															
	10001110		8E	000000															
	10001111		8F	000000															
HALT	10010000	HALT	90	000009	0	0	0	00	00	0	00	00	0	0			000	1	001
	10010001		91	000000															
	10010010		92	000000															
	10010011		93	000000															
	10010100		94	000000															
	10010101		95	000000															
	10010110		96	000000															
	10010111		97	000000															
	10011000		98	000000															
	10011001		99	000000															
	10011010		9A	000000															
	10011011		9B	000000															
	10011100		9C	000000															
	10011101		9D	000000															
	10011110		9E	000000															
	10011111		9F	000000															
	10100000		A0	000000															
	10100001		A1	000000															
	10100010		A2	000000															
	10100011		A3	000000															
	10100100		A4	000000															
	10100101		A5	000000															
	10100110		A6	000000															
	10100111		A7	000000															
	10101000		A8	000000															
	10101001		A9	000000															
	10101010		AA	000000															
	10101011		AB	000000															
	10101100		AC	000000															
	10101101		AD	000000															
	10101110		AE	000000															
	10101111		AF	000000															
	10110000	R->ALU->MAR	B0	322461	0	0	1	10	01	0	00	10，B选R	0	1			110	0	001，μPC+1
	10110001	M(MAR)->MDR	B1	000451	0	0	0	00	00	0，内存到MDR	00	00	0	1			101	0	001，μPC+1
	10110010	MDR->ALU->ACC	B2	321411	0	0	1	10	01	0	00	01，B选MDR	0	1			001	0	001，μPC+1
	10110011	R->ALU->MAR	B3	322461	0	0	1	10	01	0	00	10，B选R	0	1			110	0	001，μPC+1
	10110100	M(MAR)->MDR	B4	000451	0	0	0	00	00	0，内存到MDR	00	00	0	1			101	0	001，μPC+1
SWAP	10110101	R->ALU->MAR	B5	322461	0	0	1	10	01	0	00	10，B选R	0	1			110	0	001，μPC+1
	10110110	MDR->ALU->R	B6	321421	0	0	1	10	01	0	00	01，B选MDR	0	1			010	0	001，μPC+1
	10110111	R->M(MAR)	B7	332801	0	0	1	10	01	1	00	10，B选R	1	0			000	0	001，μPC+1
	10111000	R->ALU->MAR	B8	322461	0	0	1	10	01	0	00	10，B选R	0	1			110	0	001，μPC+1
	10111001	ACC->ALU->M(MAR)	B9	338851	0	0	1	10	01	1	10，A选ACC	00	1	0			101	0	001，μPC+1
	10111010	JP无条件转移	BA	000002	0	0	0	00	00	0	00	00	0	0			000	0	010，无条件转移
	10111011		BB	000000															
	10111100		BC	000000															
	10111101		BD	000000															
	10111110		BE	000000															
	10111111		BF	000000															
	11000000	PC->A，A->ALU->MAR	C0	324461	0	0	1	10	01	0	01，A选PC	00	0	1			110	0	001，μPC+1
	11000001	M(MAR)->MDR	C1	000451	0	0	0	00	00	0,内存到MDR	00	00	0	1			101	0	001，μPC+1
JMP	11000010	MJP	C2	321035	0	0	1	10	01	0	00	01,B选MDR	0	0			011	0	101
	11000011	JP无条件转移	C3	000002	0	0	0	00	00	0	00	00	0	0			000	0	010,无条件转移
	11000100		C4	000000															
	11000101		C5	000000															
	11000110		C6	000000															
	11000111		C7	000000															
	11001000		C8	000000															
	11001001		C9	000000															
	11001010		CA	000000															