**Трассировка**

START

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Выполняемая команда | | | Содержимое регистров процессора  после выполнения команды | | | | | | | | Измененная ячейка | |
| Адрес | Код | Мнемоника | IP | CR | AR | DR | BR | AC | PS | ZC | Адр. | Знач |
| 01A | AEE5 | LD ADDR\_F | 01B | AEE5 | 000 | 0005 | FFE5 | 0005 | 0 | 00 |  |  |
| 01B | EEE5 | ST ADDR\_C | 01C | EEE5 | 001 | 0005 | FFE5 | 0005 | 0 | 00 | 001 | 0005 |
| 01C | AEE6 | LD READ\_BYTE | 01D | AEE6 | 003 | 0002 | FFE6 | 0002 | 0 | 00 |  |  |
| 01D | 7F02 | CMP #0x2 | 01E | 7F02 | 01D | 0002 | 0002 | 0002 | 5 | 11 |  |  |
| 01E | F004 | BEQ IP+4 | 023 | F004 | 01E | F004 | 0004 | 0002 | 5 | 11 |  |  |

CASE 2

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Адрес | Код | Мнемоника | IP | CR | AR | DR | BR | AC | PS | NC | Адр. | Знач |
| 023 | AF01 | LD #0x1 | 024 | AF01 | 023 | 0001 | 0001 | 0001 | 1 | 01 |  |  |
| 024 | EEDE | ST READ\_BYTE | 025 | EEDE | 003 | 0001 | FFDE | 0001 | 1 | 01 | 003 | 0001 |
| 025 | A8DB | LD (ADDR\_C) | 026 | A8DB | 005 | 009A | FFDB | 009A | 1 | 01 |  |  |
| 026 | 0680 | SWAB | 027 | 0680 | 026 | 0680 | 0026 | 9A00 | 9 | 11 |  |  |

OUTPUT

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Адрес | Код | Мнемоника | IP | CR | AR | DR | BR | AC | PS | NZC | Адр. | Знач |
| 027 | 2EDC | AND MASK | 028 | 2EDC | 004 | 00FF | FFDC | 0000 | 5 | 011 |  |  |
| 028 | 7ED9 | CMP STOP\_SYMB | 029 | 7ED9 | 002 | 000D | FFD9 | 0000 | 8 | 100 |  |  |
| 029 | F002 | BEQ IP+2 | 02A | F002 | 029 | F002 | 0029 | 0000 | 8 | 100 |  |  |
| 02A | 130C | OUT C | 02B | 130C | 02A | 130C | 002A | 0000 | 8 | 100 | #C | 00 |
| 02B | CEF0 | JUMP IP + C | 01C | CEF0 | 02B | 001C | FFF0 | 0000 | 8 | 100 |  |  |

START

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Адрес | Код | Мнемоника | IP | CR | AR | DR | BR | AC | PS | N | Адр. | Знач |
| 01C | AEE6 | LD READ\_BYTE | 01D | AEE6 | 003 | 0001 | FFE6 | 0001 | 0 | 0 |  |  |
| 01D | 7F02 | CMP #0x2 | 01E | 7F02 | 01D | 0002 | 0002 | 0001 | 8 | 1 |  |  |
| 01E | F004 | BEQ IP+4 | 01F | F004 | 01E | F004 | 001E | 0001 | 8 | 1 |  |  |

CASE 1

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Адрес | Код | Мнемоника | IP | CR | AR | DR | BR | AC | PS | ZC | Адр. | Знач |
| 01F | AF02 | LD #0x2 | 020 | AF02 | 01F | 0002 | 0002 | 0002 | 0 | 0 |  |  |
| 020 | EEE2 | ST READ\_BYTE | 021 | EEE2 | 003 | 0002 | FFE2 | 0002 | 0 | 0 | 003 | 0002 |
| 021 | AADF | LD (ADDR\_C)+ | 022 | AADF | 005 | 009A | FFDF | 009A | 0 | 0 |  |  |
| 022 | CE04 | JUMP OUTPUT | 027 | CE04 | 022 | 0027 | 0004 | 009A | 0 | 0 |  |  |

OUTPUT

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Адрес | Код | Мнемоника | IP | CR | AR | DR | BR | AC | PS | ZC | Адр. | Знач |
| 027 | 2EDC | AND MASK | 028 | 2EDC | 004 | 00FF | FFDC | 009A | 0 | 00 |  |  |
| 028 | 7ED9 | CMP STOP\_SYMB | 029 | 7ED9 | 002 | 000D | FFD9 | 009A | 1 | 01 |  |  |
| 029 | F002 | BEQ IP+2 | 02A | F002 | 029 | F002 | 0029 | 009A | 1 | 01 |  |  |
| 02A | 130C | OUT C | 02B | 130C | 02A | 130C | 002A | 009A | 1 | 01 | #C | 9A |
| 02B | CEF0 | JUMP IP + C | 01C | CEF0 | 02B | 001C | FFF0 | 009A | 1 | 01 |  |  |

START

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Адрес | Код | Мнемоника | IP | CR | AR | DR | BR | AC | PS | ZC | Адр. | Знач |
| 01C | AEE6 | LD READ\_BYTE | 01D | AEE6 | 003 | 0002 | FFE6 | 0002 | 1 | 01 |  |  |
| 01D | 7F02 | CMP #0x2 | 01E | 7F02 | 01D | 0002 | 0002 | 0002 | 5 | 11 |  |  |
| 01E | F004 | BEQ IP+4 | 023 | F004 | 01E | F004 | 0004 | 0002 | 5 | 11 |  |  |

CASE 2

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Адрес | Код | Мнемоника | IP | CR | AR | DR | BR | AC | PS | ZC | Адр. | Знач |
| 023 | AF01 | LD #0x1 | 024 | AF01 | 023 | 0001 | 0001 | 0001 | 1 | 01 |  |  |
| 024 | EEDE | ST READ\_BYTE | 025 | EEDE | 003 | 0001 | FFDE | 0001 | 1 | 01 | 003 | 0001 |
| 025 | A8DB | LD (ADDR\_C) | 026 | A8DB | 006 | F3DF | FFDB | F3DF | 9 | NC |  |  |
| 026 | 0680 | SWAB | 027 | 0680 | 026 | 0680 | 0026 | DFF3 | 9 | NC |  |  |

OUTPUT

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Адрес | Код | Мнемоника | IP | CR | AR | DR | BR | AC | PS | ZC | Адр. | Знач |
| 027 | 2EDC | AND MASK | 028 | 2EDC | 004 | 00FF | FFDC | 00F3 | 1 | 01 |  |  |
| 028 | 7ED9 | CMP STOP\_SYMB | 029 | 7ED9 | 002 | 000D | FFD9 | 00F3 | 1 | 01 |  |  |
| 029 | F002 | BEQ IP+2 | 02A | F002 | 029 | F002 | 0029 | 00F3 | 1 | 01 |  |  |
| 02A | 130C | OUT C | 02B | 130C | 02A | 130C | 002A | 00F3 | 1 | 01 | #C | F3 |
| 02B | CEF0 | JUMP IP + C | 01D | CEF0 | 02B | 001C | FFF0 | 009A | 1 | 01 |  |  |

…