

| Mnemonic | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|----------|----|----|----|----|----|------------|---|-----------|-----------|---|---------|------|---|-----|---|---|
| *ADD | 0 | 0 | 0 | 1 | DR | | | SR1 | | | 0 | 0 | 0 | SR2 | | |
| *ADD | 0 | 0 | 0 | 1 | DR | | | SR1 | | | 1 | imm5 | | | | |
| *AND | 0 | 1 | 0 | 1 | DR | | | SR1 | | | 0 | 0 | 0 | SR2 | | |
| *AND | 0 | 1 | 0 | 1 | DR | | | SR1 | | | 1 | imm5 | | | | |
| BR | 0 | 0 | 0 | 0 | n | z | p | PCOffset9 | | | | | | | | |
| JMP | 1 | 1 | 0 | 0 | 0 | 0 | 0 | BaseR | | | 0 | 0 | 0 | 0 | 0 | 0 |
| JSR | 0 | 1 | 0 | 0 | 1 | PCOffset11 | | | | | | | | | | |
| JSRR | 0 | 1 | 0 | 0 | 0 | 0 | 0 | BaseR | | | 0 | 0 | 0 | 0 | 0 | 0 |
| *LD | 0 | 0 | 1 | 0 | DR | | | PCOffset9 | | | | | | | | |
| *LDI | 1 | 0 | 1 | 0 | DR | | | PCOffset9 | | | | | | | | |
| *LDR | 0 | 1 | 1 | 0 | DR | | | BaseR | | | offset6 | | | | | |
| LEA | 1 | 1 | 1 | 0 | DR | | | PCOffset9 | | | | | | | | |
| *NOT | 1 | 0 | 0 | 1 | DR | | | SR | | | 1 | 1 | 1 | 1 | 1 | 1 |
| reserved | 1 | 1 | 0 | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| RTI | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ST | 0 | 0 | 1 | 1 | SR | | | PCOffset9 | | | | | | | | |
| STI | 1 | 0 | 1 | 1 | SR | | | PCOffset9 | | | | | | | | |
| STR | 0 | 1 | 1 | 1 | SR | | | BaseR | | | offset6 | | | | | |
| TRAP | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | trapvect8 | | | | | | | |

* modifies condition codes NZP