

# GOTO

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## GOTO Unconditional Branch

Syntax: `[label] GOTO k`

Operands:  $0 \leq k \leq 1048575$

Operation:  $k \rightarrow PC<20:1>$

Status Affected: None

|                       |      |             |          |          |
|-----------------------|------|-------------|----------|----------|
| Encoding:             |      |             |          |          |
| 1st word ( $k<7:0>$ ) | 1110 | 1111        | $k_7kkk$ | $kkkk_0$ |
| 2nd word( $k<19:8>$ ) | 1111 | $k_{19}kkk$ | $kkkk$   | $kkkk_8$ |

Description: GOTO allows an unconditional branch anywhere within entire 2 Mbyte memory range. The 20-bit value 'k' is loaded into PC<20:1>. GOTO is always a two-cycle instruction.

Words: 2

Cycles: 2

Q Cycle Activity:

| Q1           | Q2                     | Q3           | Q4                                     |
|--------------|------------------------|--------------|--|
| Decode       | Read literal 'k'<7:0>, | No operation | Read literal 'k'<19:8>,<br>Write to PC |
| No operation | No operation           | No operation | No operation                           |

Example: `GOTO THERE`

After Instruction

PC = Address (THERE)

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