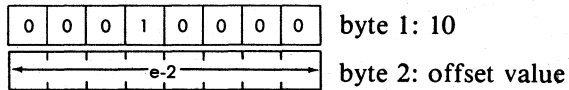


## THE Z80 INSTRUCTION SET

**DJNZ e**                      Decrement B and jump e relative on no zero.

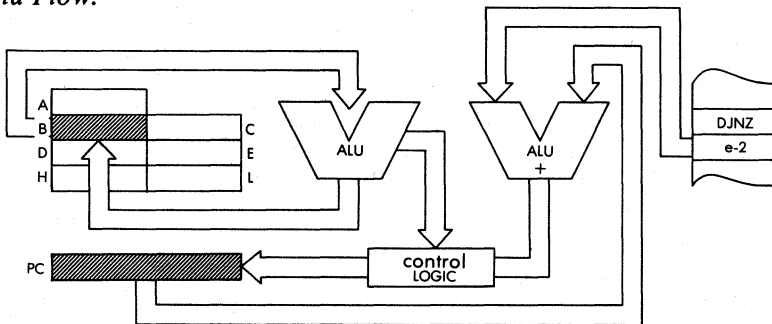
*Function:*                       $B \leftarrow B - 1$ ; if  $B \neq 0$ :  $PC \leftarrow PC + e$

*Format:*



*Description:*                      The B register is decremented. If the result is not zero, the immediate offset value is added to the program counter using two's complement arithmetic so as to enable both forward and backward jumps. The offset value is added to the value of  $PC + 2$  (after the jump). As a result, the effective offset is -126 to +129 bytes. The assembler automatically subtracts from the source offset value to generate the hex code.

*Data Flow:*

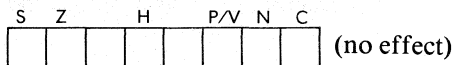


*Timing:*                       $B \neq 0$ : 3 M cycles; 13 T states; 6.5 usec @ 2 MHz.  
 $B = 0$ : 2 M cycles; 8 T states; 4 usec @ 2 MHz

*Addressing Modes:* Immediate.

# PROGRAMMING THE Z80

*Flags:*



*Example:*

DJNZ \$ - 5 (\$ = current PC)

Before:

After:

