

DAW Decimal Adjust W Register

Syntax: [*label*] DAW

Operands: None

Operation: If [W<3:0> >9] or [DC = 1] then
 (W<3:0>) + 6 → W<3:0>;
 else
 (W<3:0>) → W<3:0>;

 If [W<7:4> >9] or [C = 1] then
 (W<7:4>) + 6 → W<7:4>;
 else
 (W<7:4>) → W<7:4>;

Status Affected: C

Encoding:

0000	0000	0000	0111
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Description: DAW adjusts the eight-bit value in W, resulting from the earlier addition of two variables (each in packed BCD format) and produces a correct packed BCD result.

Words: 1

Cycles: 1

Q Cycle Activity:

Q1	Q2	Q3	Q4
Decode	Read register W	Process Data	Write W

Example 1: DAW

Before Instruction

W = 0xA5
 C = 0
 DC = 0

After Instruction

W = 0x05
 C = 1
 DC = 0

Example 2:

Before Instruction

W	=	0xCE
C	=	0
DC	=	0

After Instruction

W	=	0x34
C	=	1
DC	=	0

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