Output Example—Timer in Up Mode

The OUTn signal is changed when the timer *counts* up to the TAxCCRn value and rolls from TAxCCR0 to zero, depending on the output mode. An example is shown in Figure 17-12 using TAxCCR0 and TAxCCR1.
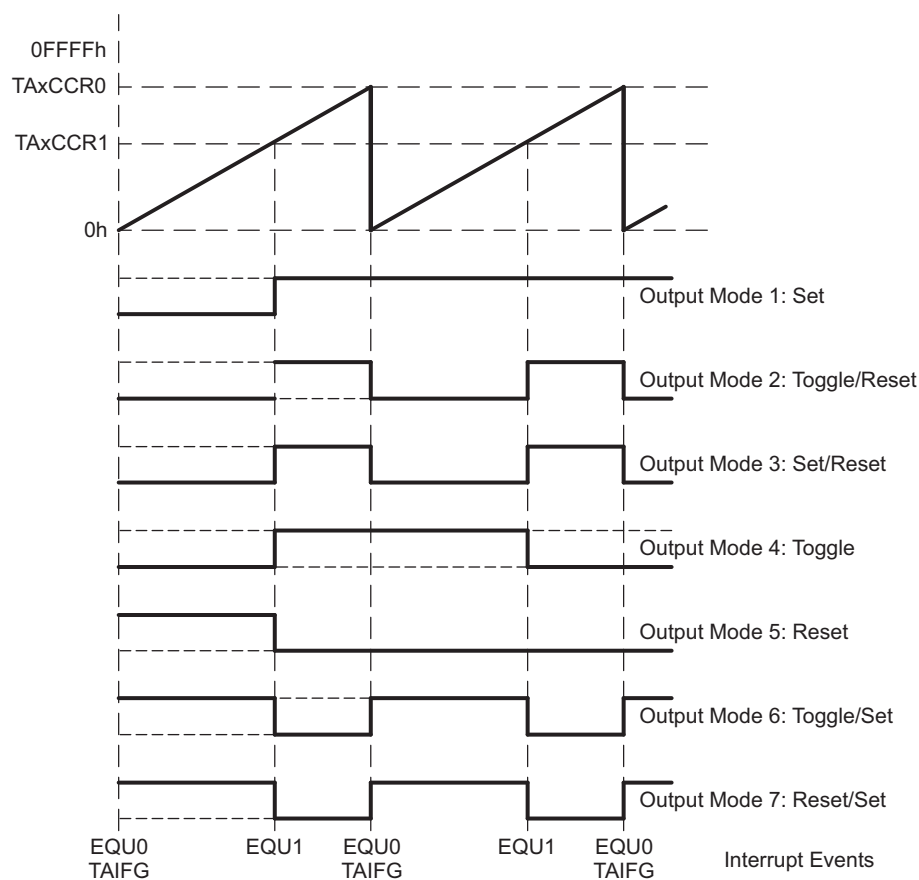

Figure 17-12. Output Example – Timer in Up Mode

Output Example – Timer in Continuous Mode

The OUTn signal is changed when the timer reaches the TAxCCRn and TAxCCR0 values, depending on the output mode. An example is shown in Figure 17-13 using TAxCCR0 and TAxCCR1.
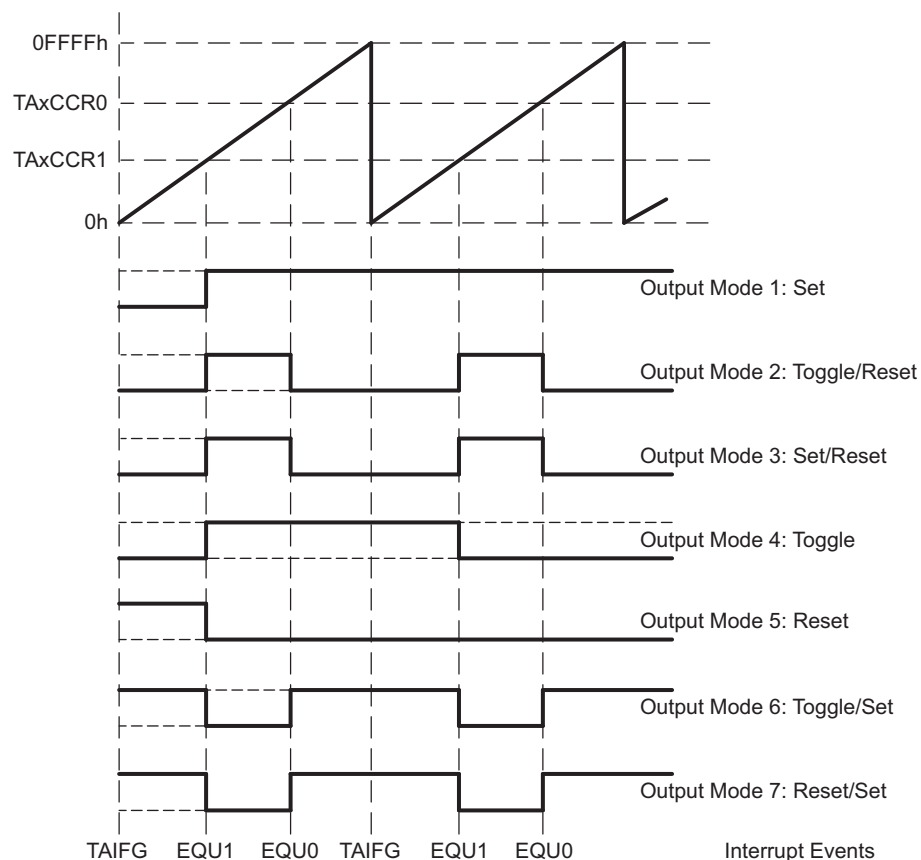

Figure 17-13. Output Example – Timer in Continuous Mode

Output Example – Timer in Up/Down Mode

The OUTn signal changes when the timer equals TAxCCRn in either count direction and when the timer equals TAxCCR0, depending on the output mode. An example is shown in Figure 17-14 using TAxCCR0 and TAxCCR2.
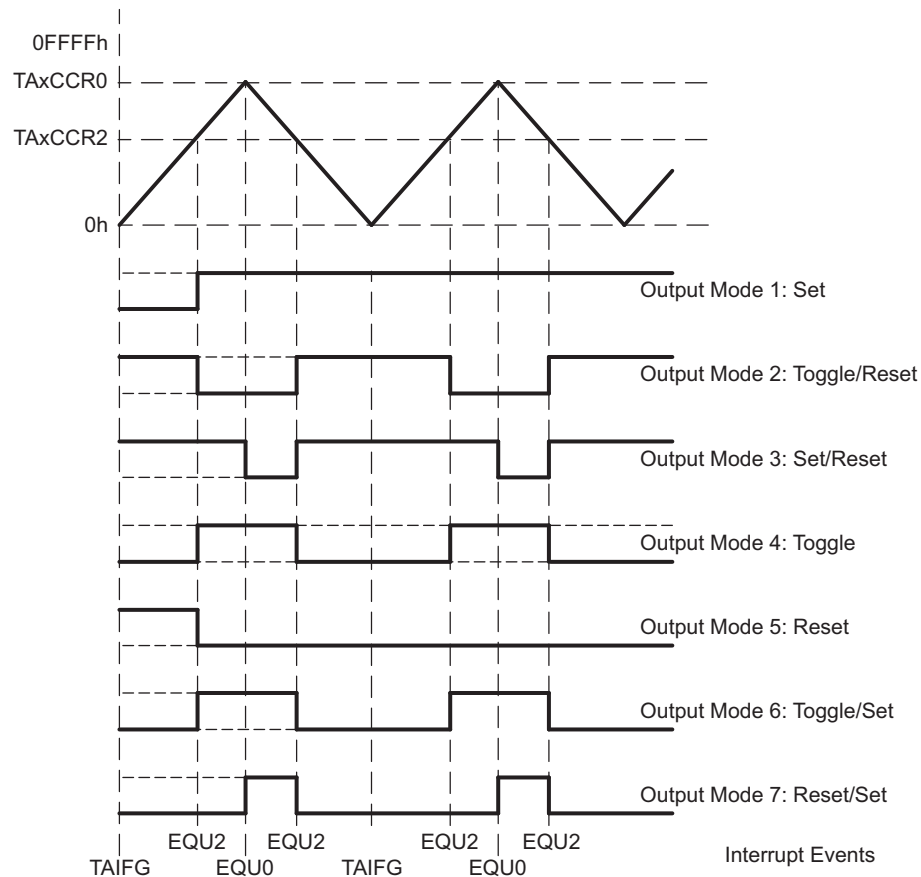

Figure 17-14. Output Example – Timer in Up/Down Mode

NOTE: **Switching between output modes**

When switching between output modes, one of the OUTMOD bits should remain set during the transition, unless switching to mode 0. Otherwise, output glitching can occur, because a NOR gate decodes output mode 0. A safe method for switching between output modes is to use output mode 7 as a transition state:

```
BIS    #OUTMOD_7,&TA0CCTL1    ; Set output mode=7
BIC    #OUTMOD,&TA0CCTL1      ; Clear unwanted bits
```