

# Scheduling an Interrupt Service Routine on Timer1

## SEng 5832 Lab2

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Original tables and diagrams from Atmel-8272 8-bit AVR Microcontroller Datasheet

8272E-AVR-04/2013

Figure 16-1. 16-bit Timer/Counter block diagram (Note).

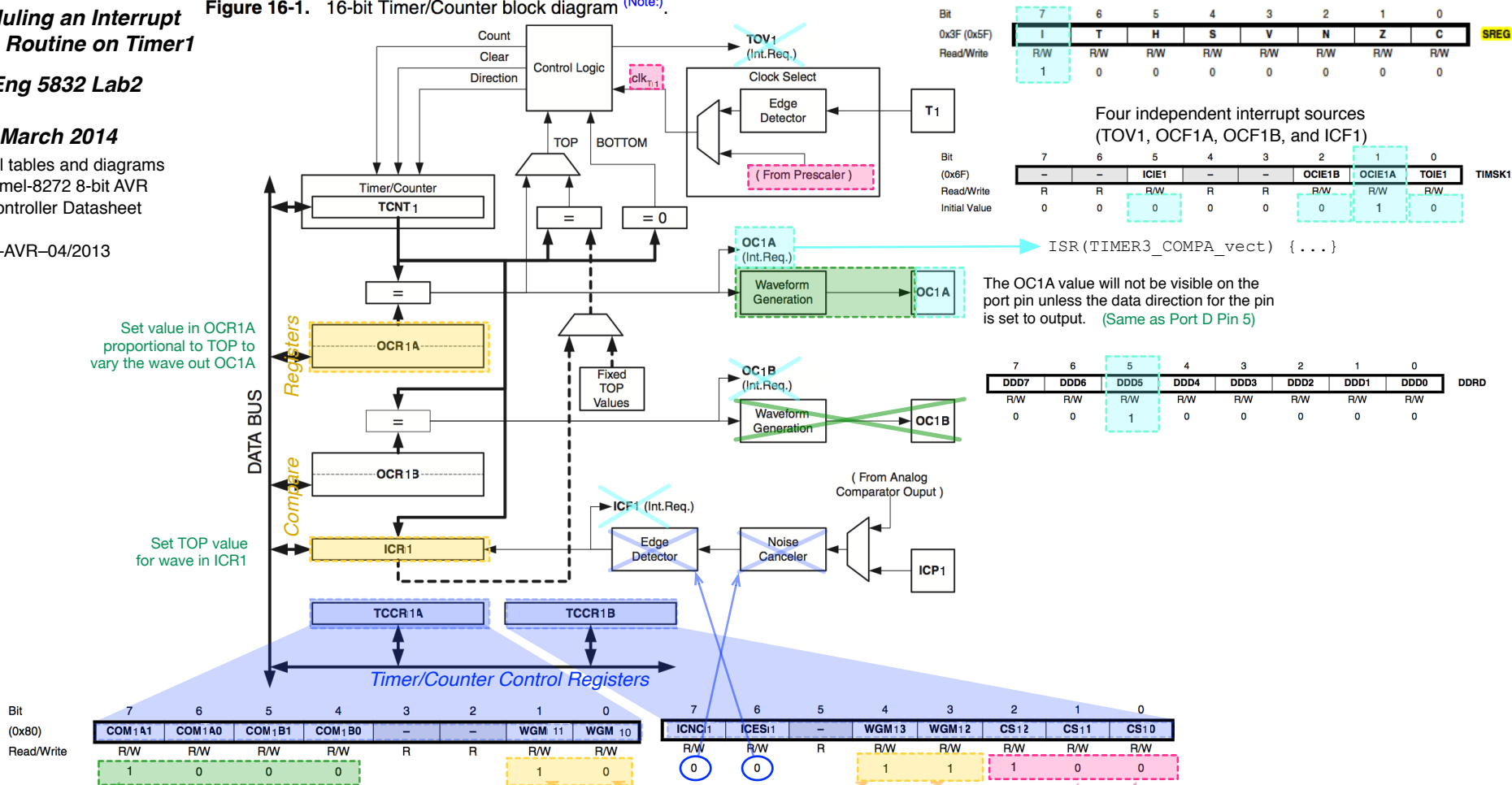


Table 16-3. Compare Output mode, fast PWM (1).

COMnA1/COMnB1	COMnA0/COMnB0	Description
0	0	Normal port operation, <sup>1</sup> OCnB disconnected.
0	1	WGMn3:0 = 14 or 15: Toggle OC1A on Compare Match, OC1B disconnected (normal port operation). For all other WGM1 settings, normal port operation, OC1A/OC1B disconnected.
1	0	Clear OCnA/OCnB on Compare Match, set OCnA/OCnB at BOTTOM (non-inverting mode)
1	1	Set OCnA/OCnB on Compare Match, clear OCnA/OCnB at BOTTOM (inverting mode)

Note: 1. A special case occurs when OCRnA/OCRnB equals TOP and COMnA1/COMnB1 is set. In this case the compare match is ignored, but the set or clear is done at BOTTOM. See Section "16.10.3" on page 125 for more details.

Table 16-5. Waveform Generation mode bit description (1).

Mode	WGMn3	WGMn2 (CTCn)	WGMn1 (PWMn1)	WGMn0 (PWMn0)	Timer/Counter mode of operation	TOP	Update of OCR1x at	TOVn flag set on
14	1	1	1	0	Fast PWM	ICR1	BOTTOM	TOP

Table 16-6. Clock Select bit description.

CSn2	CSn1	CSn0	Description
0	0	0	No clock source (Timer/Counter stopped).
0	0	1	clk <sub>IO</sub> /1 (No prescaling)
0	1	0	clk <sub>IO</sub> /8 (From prescaler)
0	1	1	clk <sub>IO</sub> /64 (From prescaler)
1	0	0	clk <sub>IO</sub> /256 (From prescaler)
1	0	1	clk <sub>IO</sub> /1024 (From prescaler)