

The following source code is used for configuration and timing details in a sequence where only sequence 0 is used and only run once with a new PWM duty cycle for each period.

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NRF_PWM0->PSEL.OUT[0] = (first_port << PWM_PSEL_OUT_PORT_Pos) |
                         (first_pin << PWM_PSEL_OUT_PIN_Pos) |
                         (PWM_PSEL_OUT_CONNECT_Connected <<
                           PWM_PSEL_OUT_CONNECT_Pos);
NRF_PWM0->ENABLE      = (PWM_ENABLE_ENABLE_Enabled << PWM_ENABLE_ENABLE_Pos);
NRF_PWM0->MODE        = (PWM_MODE_UPDOWN_Up << PWM_MODE_UPDOWN_Pos);
NRF_PWM0->PRESCALER   = (PWM_PRESCALER_PRESCALER_DIV_1 <<
                           PWM_PRESCALER_PRESCALER_Pos);
NRF_PWM0->COUNTERTOP  = (16000 << PWM_COUNTERTOP_COUNTERTOP_Pos); //1 msec
NRF_PWM0->LOOP         = (PWM_LOOP_CNT_Disabled << PWM_LOOP_CNT_Pos);
NRF_PWM0->DECODER     = (PWM_DECODER_LOAD_Common << PWM_DECODER_LOAD_Pos) |
                         (PWM_DECODER_MODE_RefreshCount << PWM_DECODER_MODE_Pos);
NRF_PWM0->DMA.SEQ[0].PTR  = ((uint32_t)(seq0_ram) << PWM_DMA_SEQ_PTR_PTR_Pos);
NRF_PWM0->DMA.SEQ[0].MAXCNT  = (sizeof(seq0_ram) << PWM_DMA_SEQ_MAXCNT_MAXCNT_Pos);
NRF_PWM0->SEQ[0].REFRESH  = 0;
NRF_PWM0->SEQ[0].ENDDELAY = 0;
NRF_PWM0->TASKS_DMA.SEQ[0].START = 1;

```

To completely stop the PWM generation and force the associated pins to a defined state, a STOP task can be triggered at any time. A STOPPED event is generated when the PWM generation has stopped at the end of the currently running PWM period, and the pins go into their idle state as defined by the IDLEOUT register. PWM generation can then only be restarted through a DMA.SEQ[n].START task. DMA.SEQ[n].START will resume PWM generation after having loaded the first value from the RAM buffer defined in the SEQ[n].PTR register.

The following table indicates when specific registers get sampled by the hardware. Care should be taken when updating these registers to avoid that values are applied earlier than expected.