

1, the playback stops after having played SEQ[1] only once, and both SEQEND[1] and LOOPSDONE are generated (their order is not guaranteed in this case).

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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         = (1 << 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  = 1;
NRF_PWM0->SEQ[0].ENDDELAY = 1;
NRF_PWM0->DMA.SEQ[1].PTR  = ((uint32_t)(seq1_ram) << PWM_DMA_SEQ_PTR_PTR_Pos);
NRF_PWM0->DMA.SEQ[1].MAXCNT = (sizeof(seq1_ram) << PWM_DMA_SEQ_MAXCNT_MAXCNT_Pos);
NRF_PWM0->SEQ[1].REFRESH  = 0;
NRF_PWM0->SEQ[1].ENDDELAY = 0;
NRF_PWM0->TASKS_DMA.SEQ[0].START = 1;

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The decoder can also be configured to asynchronously load new PWM duty cycle. If the DECODER.MODE register is set to NextStep, then the NEXTSTEP task will cause an update of internal compare registers on the next PWM period.

The following figures provide an overview of each part of an arbitrary sequence, in various modes (LOOP.CNT=0 and LOOP.CNT>0). In particular, the following are represented:

- Initial and final duty cycle on the PWM output(s)
- Chaining of SEQ[0] and SEQ[1] if LOOP.CNT>0
- Influence of registers on the sequence
- Events generated during a sequence
- DMA activity (loading of next value and applying it to the output(s))