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#include <avr/io.h>
#include <avr/interrupt.h>

#include "timer2.h"

static volatile uint32_t clock_ticks;

uint32_t get_clock_ticks(void){
    uint32_t return_value;

    /* Disable interrupts so we can be sure that the interrupt
     * doesn't fire when we've copied just a couple of bytes
     * of the value. Interrupts are re-enabled if they were
     * enabled at the start.
     */
    uint8_t interrupts_were_on = bit_is_set(SREG, SREG_I);
    cli();
    return_value = clock_ticks;
    if(interrupts_were_on) {
        sei();
    }
    return return_value;
}

void mil_delay(int milliseconds){
    int start_time;
    start_time = get_clock_ticks();
    while (get_clock_ticks() <= start_time + milliseconds)
    {
        ;
    }
}

// Motor Initialization routine -- this function must be called
// before you use any of the above functions
void timer_init()
{
    //sei();
    //Configure TIMER2
    OCR2A = 249;

    TCCR2A |= (1 << WGM21);
    // Set to CTC Mode

    TIMSK2 |= (1 << OCIE2A);
    //Set interrupt on compare match

    TCCR2B |= (1 << CS21)|(1 << CS20);
    // set prescaler to 32 and starts PWM

    // enable interrupts
    TIFR0 &= (1<<OCF0A);
}

ISR (TIMER2_COMPA_vect)
{
    // action to be done every 250 usec
    //TIFR0 &= ~(1<<OCF0A);
    clock_ticks++;
}

```