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/*
 * ATmega162.c
 *
 * Created: 14.10.2016 18:35:33
 * Author: Mathias
 */

#define F_CPU 8000000
#include <avr/io.h>
#include <avr/interrupt.h>

ISR (TIMER1_COMPA_vect)
{
    PORTD ^= (1 << PD0); // PD0 toggeln -> f=2,5Hz
}

int main(void)
{
    ////////////////////////////////////////////////////////////////////
    // I/O's festlegen
    DDRD = 0xFF;
    DDRE = 0x04;

    ////////////////////////////////////////////////////////////////////
    // Timer1 Frequenz 5Hz
    TIMSK |= (1 << TOIE1) | (1 << OCIE1A);
    ICR1 = (uint16_t)25000; // Top => 5Hz
    OCR1A = (uint16_t)12500; // Vergleichswert einstellen
    OCR1B = (uint16_t)12500; // Vergleichswert einstellen

    TCCR1A |= (1 << COM1A1); // non-inverting mode für Pin
    0C1A
    TCCR1A |= (1 << COM1B1) | (1 << COM1B0); // inverting mode für OC1B

    TCCR1A |= (1 << WGM11); // Fast PWM Mode 14 Teil A
    TCCR1B |= (1 << WGM13) | (1 << WGM12); // Fast PWM Mode 14 Teil B
    TCCR1B |= (1 << CS11); // Prescaler: 1/8

    ////////////////////////////////////////////////////////////////////
    // Allgemeine Settings
    sei(); // IRQ's Freigabe

    while(1)
    {
    }
    return(0);
}
```