Rotina: PWM_AD_eTimer.c

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```
#include <16F877A.h>
#device adc=8

#FUSES NOWDT                    //No Watch Dog Timer
#FUSES HS                       //High speed Osc (> 4mhz for PCM/PCH) (>10mhz for PCD)
#FUSES NOPUT                    //No Power Up Timer
#FUSES NOPROTECT                //Code not protected from reading
#FUSES NODEBUG                  //No Debug mode for ICD
#FUSES NOBROWNOUT               //No brownout reset
#FUSES NOLVP                 //No low voltage prgming, B3(PIC16) or B5(PIC18) used for I/O
#FUSES NOCPD                    //No EE protection
#FUSES NOWRT                    //Program memory not write protected
#FUSES RESERVED                 //Used to set the reserved FUSE bits

#use delay(clock=20000000)

int1 h_l=0;

unsigned int16 ton=0,toff=0,pwm=40;


#int_TIMER1
void  TIMER1_isr(void)
{
  if(h_l==0){ //Ton
     set_timer1(65536-pwm*50); //(65536-(pwm*10)/0.2)  //63536
     h_l = 1;
     output_high(PIN_D0);
  }else{   // Toff
     set_timer1(65536-(100-pwm)*50); // (65536-((100-pwm)*10)/0.2)   //62536
     h_l = 0;
     output_low(PIN_D0);
  }
}



void main()
{
   unsigned int valor=0;
   float tensao=0;

   setup_adc_ports(AN0); // ajusta a porta A0 para entrada analógica

   setup_adc(ADC_CLOCK_DIV_16);
   setup_psp(PSP_DISABLED);
   setup_spi(SPI_SS_DISABLED);
   setup_timer_0(RTCC_INTERNAL|RTCC_DIV_1);

   setup_timer_1(T1_INTERNAL|T1_DIV_BY_1);
   set_timer1(62536);

   setup_timer_2(T2_DISABLED,0,1);
   setup_comparator(NC_NC_NC_NC);
   setup_vref(FALSE);

   enable_interrupts(INT_TIMER1);
```

```
   enable_interrupts(GLOBAL);

   output_low(PIN_D0);

   set_adc_channel(0);
   delay_us(50);


   while(true){
      valor = read_adc()*0.3922; //    (100/255)=0,3922
      if(valor>99)valor=100;
      if(valor<1)valor=1;
      pwm = valor;
      delay_ms(100);
   }

}
```