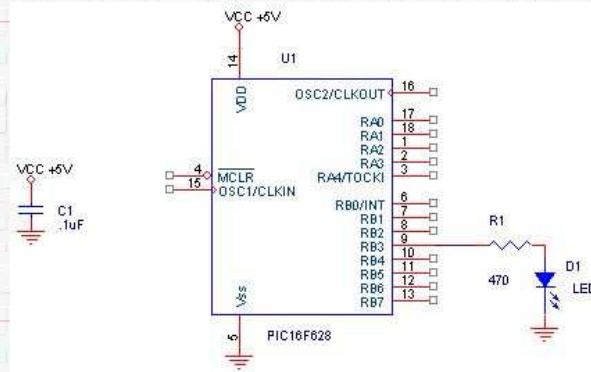


PWM Led fade out with Pic 16f628



I have use this circuit for test the hardware pwm with Pic 16f628, but a pwm signal can be software generated.

Source code for PIC16F628:

```

=====pwm.ASM=====15/11/06==
; standard INTRC_OSC_NOCLKOUT 4MHz
; http://www.module.ro
;-----
; configure programmer
LIST P=16F628;f=inhx8m
#include "P16F628.INC" ; Include header file
__CONFIG _PWRTE_ON & _WDT_OFF & _INTRC_OSC_NOCLKOUT & _BODEN_ON & _LVP_OFF & _CP_OFF & _MCLRE_OFF
;-----
cblock 0x20 ; Beginn General Purpose-Register
;----- counters
count1
count2
count3
;-----
endc
;-----
#DEFINE pwmu PORTB,3
;--- Reset
org h'00'
goto init ; reset -> init
;--- Interrupt
org h'04'
;-----
init clrf PORTA
clrf PORTB
movlw 0x07 ; Turn comparators off and enable pins for I/O
movwf CMCON
bcf STATUS,RP1
call usi ; port settings
call pause
movlw 0xFF
movwf PORTB
call pause ; wait 126ms
call set_timer
;-----
uu
call pause
movlw 0x02 ; set pwm at 2/256
movwf CCP1L
call pause ; wait 126ms
movlw 0x10
movwf CCP1L ; set pwm at 10/256
call pause

```

```

movlw 0x40
movwf CCP1L
call pause
movlw 0x80
movwf CCP1L
call pause
movlw 0xFF ; max. power
movwf CCP1L
call pause
movlw 0x80
movwf CCP1L
call pause
movlw 0x40
movwf CCP1L
call pause
movlw 0x10
movwf CCP1L
goto uu ; repeat

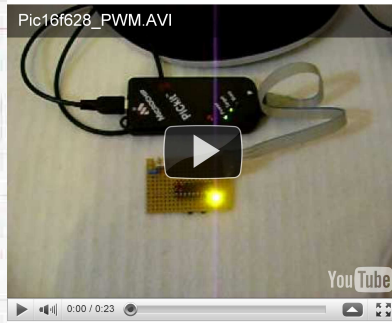
; ~~~~~
set_timer
clrf T2CON
clrf TMR2
clrf INTCON
bsf STATUS,RPO
clrf PIE1
bcf STATUS,RPO
clrf PIR1
bsf STATUS,RPO
movlw 0xFF
movwf PR2 ; compare with 255
bcf STATUS,RPO
movlw 0x02
movwf CCP1L
movlw 0x03
movwf T2CON ; prescaler 1:16 and postscaler 1:1
movlw 0x3C
movwf CCP1CON
bsf T2CON,TMR2ON ; turn on timer, see pic16f628 datasheet
return

; *****
; Delay *
; *****
pause movlw 0x02 ;126 ms
movwf count3
d3 movlw 0x3F ;63 ms
movwf count1
d1 movlw 0xFA ;1ms
movwf count2
d2 nop
decfsz count2,F
goto d2
decfsz count1,F
goto d1
decfsz count3,F
goto d3
retlw 0x00

; ~~~~~
usi bsf STATUS,RPO ; Bank 1
movlw 0xFF ; all input
movwf TRISA
movlw 0x00
movwf TRISB ; all output
bcf STATUS,RPO ; Bank 0
return

; ~~~~~
end
; ~~~~~

```



PWM [application:](#)

Infrared remote lamp with dimmer



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Last updated October, 2006

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