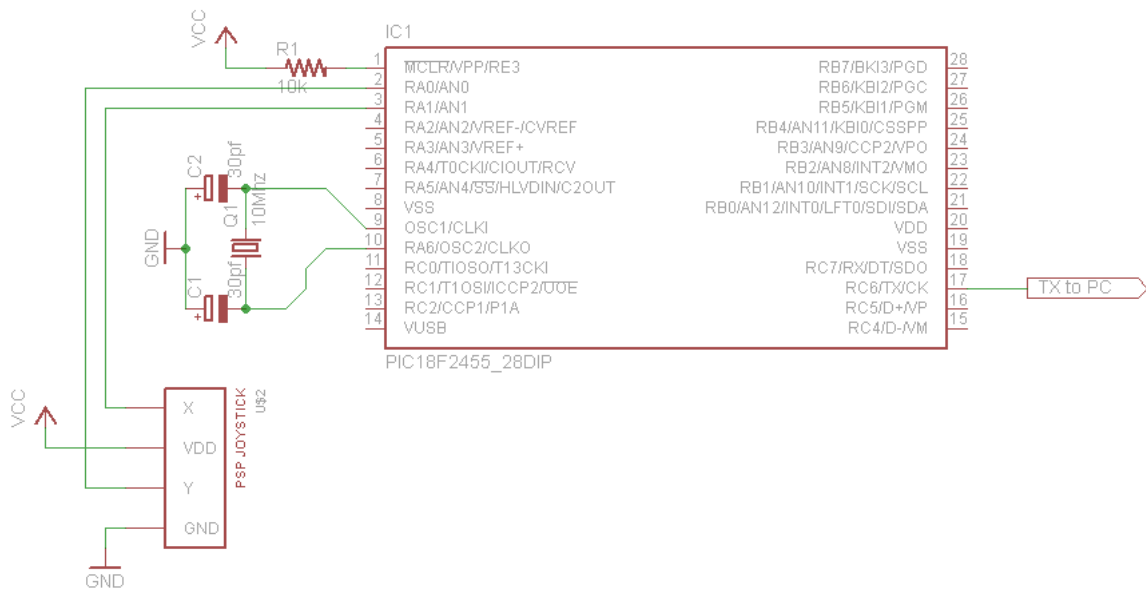


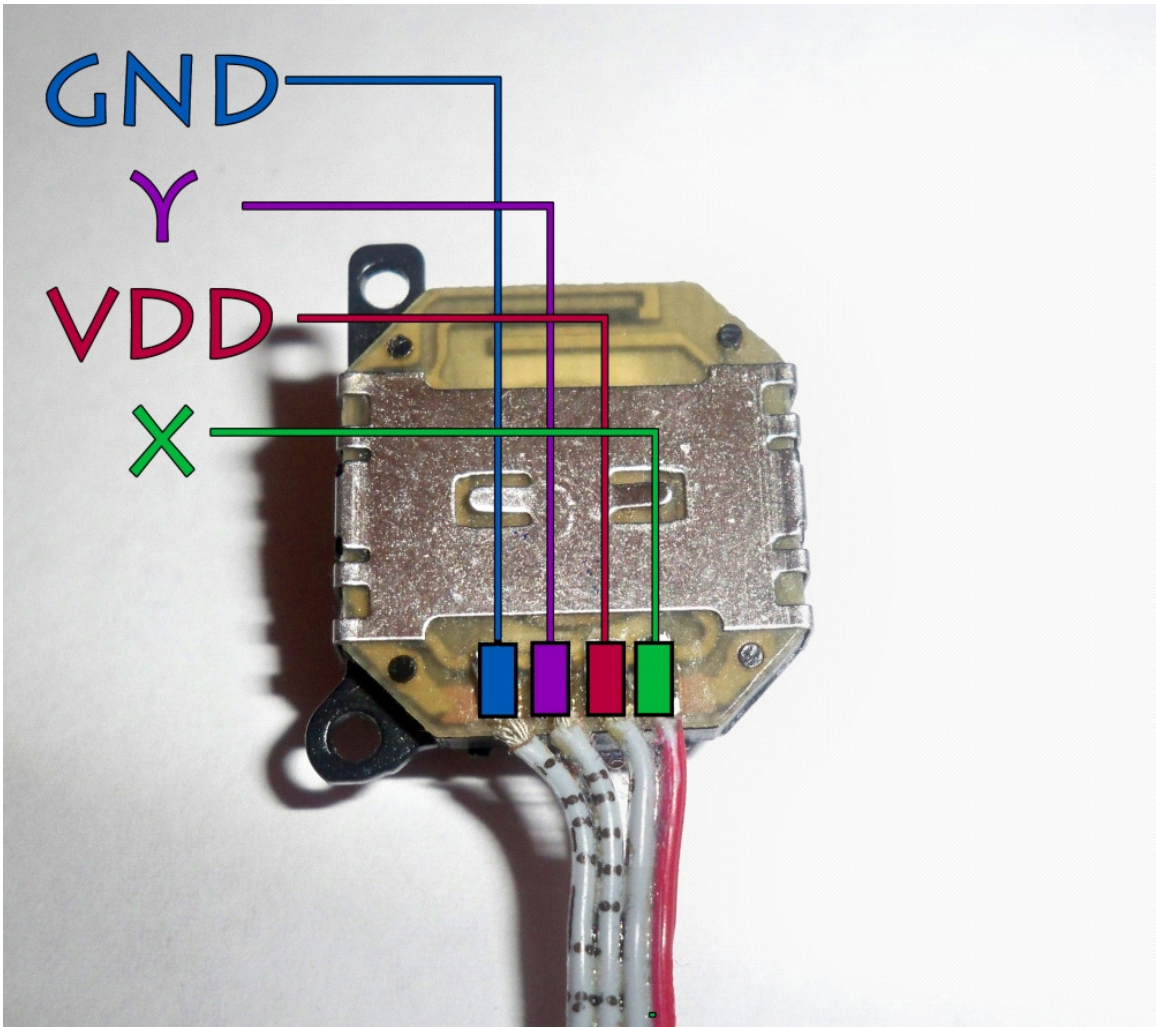
PSP CODE MADE BY Jason Lopez (ATOMSOFT )... This code is free for all to use and play with. If you make any money from this... all i ask is that i get some recognition by you placing my name and email somewhere in your product documentation...

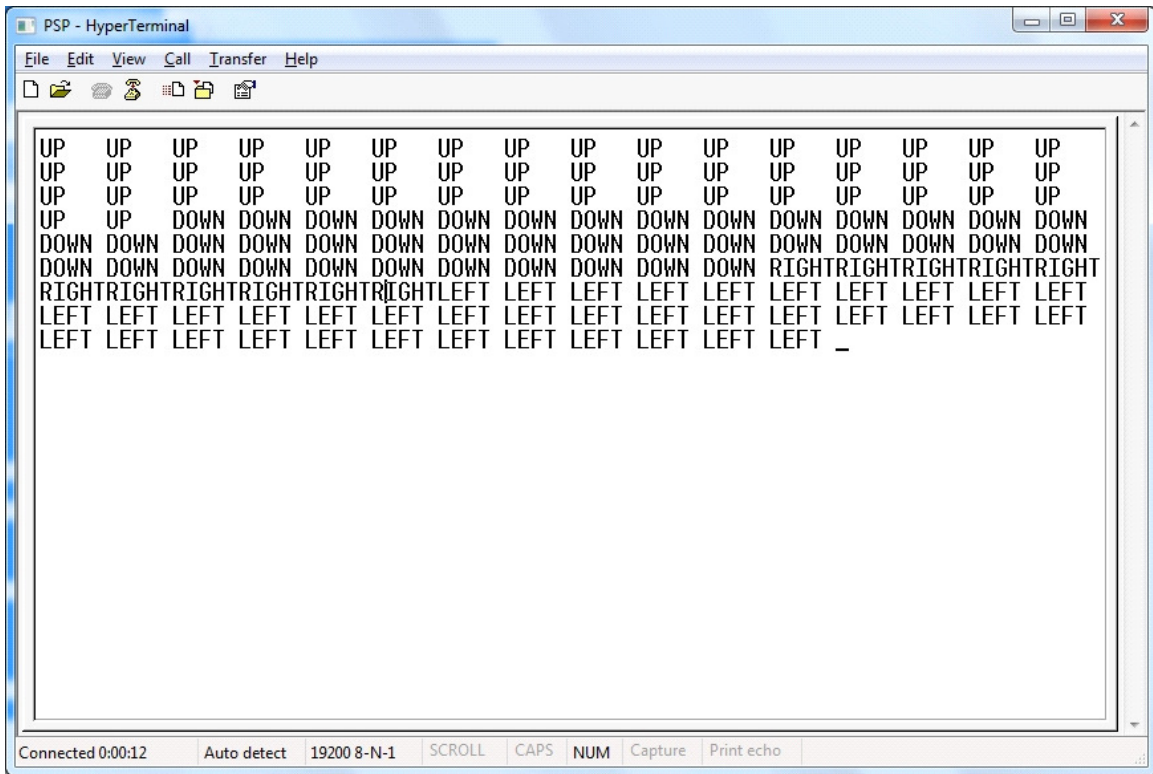
**Jason Lopez**  
**AtomSoft@gmail.com**

Below you will find IMAGES (SCHEMATIC, PINOUT,TEST) and CODE of it all. Thanks for taking interest in my work...

The below PSP Part was made by **Mark Higgins**. I just did a name modification to the part. Many thanks go to him.







**Code:**

```

/* *****
;
; Filename: PSP JOYSTICK CONTROL (PIC18F2525)(40MHZ)(10MHZ x 4PLL) *
; Date: FEB, 20 - 2010
; File Version: 001
;
; Author: Jason Lopez
; Company: AtomSoft
;
; *****
;
#include <p18f2525.h>
#include <delays.h>
#include <string.h>

#pragma config WDT = OFF, LVP = OFF, OSC = HSPLL

#define PSPY TRISAbits.TRISA0
#define PSPX TRISAbits.TRISA1

#define YPIN 0
#define XPIN 1

/* *****
Prototypes
*****

void main(void);
void SetupADC(char PIN);
unsigned int GetADC(char PIN);
void SendToPC(unsigned rom char *string);

```

```

void SetupUART(void);

/*****
Variables and Defines
*****/

unsigned int XMAIN = 0;
unsigned int YMAIN = 0;

/*****
Main
*****/

void main(void){
volatile unsigned int YDATA = 0;
volatile unsigned int XDATA = 0;

    SetupUART();

    PSPY = 1;
    PSPX = 1;

    Delay10KTCYx(100);
    XMAIN = GetADC(XPIN);

    Delay10KTCYx(100);
    YMAIN = GetADC(YPIN);

    while(1){
        XDATA = GetADC(XPIN);
        YDATA = GetADC(YPIN);

        if(XDATA < (XMAIN - 230)) {
            SendToPC((unsigned rom char*)"RIGHT");
        }

        if(XDATA > (XMAIN + 257)) {
            SendToPC((unsigned rom char*)"LEFT ");
        }
        if(YDATA < (YMAIN - 257)) {
            SendToPC((unsigned rom char*)"UP ");
        }
        if(YDATA > (YMAIN + 257)) {
            SendToPC((unsigned rom char*)"DOWN ");
        }
    }
}

void SetupADC(char PIN){
    ADCON0 = PIN<<2;
    ADCON1 = 0x0D;
    ADCON2 = 0b10001101;
    ADCON0bits.ADON = 1;
}

unsigned int GetADC(char PIN){
    SetupADC(PIN);
    Delay10TCYx(100);
    ADCON0bits.GO = 1; //Start the conversion
    while(ADCON0bits.DONE); //Wait until it's done
    return ADRES;
}

void SendToPC(unsigned rom char *string){
    Delay10TCYx(100);

    while(*string){
        while(!PIR1bits.TXIF) //wait until TXIF is high
            continue;
        TXREG = *string++; //put byte into Transmit Register
    }
}

```

```
void SetupUART(void){
  TRISC = 0b10000000;
  TXSTAbits.SYNC = 0;
  BAUDCTLbits.BRG16 = 0;
  TXSTAbits.BRGH = 1;
  SPBRG = 129; //19200bps for 40 Mhz

  RCONbits.IPEN = 1;

  TXSTAbits.TXEN = 1; //ENABLE TX
  RCSTAbits.CREN = 1; //ENABLE RX
  RCSTAbits.SPEN = 1; //ENABLE SERIAL PORT and PIN Config

  PIR1 = 0b00000000;
  IPR1 = 0b00101000;
  Delay10TCYx(100);
}
```