

```
//YWH EDITS
//
// hello.mic.45.c
//
// electret microphone hello-world
//   9600 baud FTDI interface
//
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//
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//

#include <avr/io.h>
#include <util/delay.h>

#define output(directions,pin) (directions |= pin) // set port direction for output
#define set(port,pin) (port |= pin) // set port pin
#define clear(port,pin) (port &= (~pin)) // clear port pin
#define pin_test(pins,pin) (pins & pin) // test for port pin
#define bit_test(byte,bit) (byte & (1 << bit)) // test for bit set
#define bit_delay_time 100 // bit delay for 9600 with overhead
#define bit_delay() _delay_us(bit_delay_time) // RS232 bit delay
#define half_bit_delay() _delay_us(bit_delay_time/2) // RS232 half bit delay
#define char_delay() _delay_ms(10) // char delay
#define serial_port PORTB
#define serial_direction DDRB
#define serial_pin_out (1 << PB2)
// Not sure about the directions...
#define pin_port PORTB
#define pin_direction DDRB
#define pin_out (1 << PB0)
//
#define NPTS 100 // points in buffer

void put_char(volatile unsigned char *port, unsigned char pin, char txchar) {
    //
    // send character in txchar on port pin
    //   assumes line driver (inverts bits)
    //
    // start bit
    //
    clear(*port,pin);
    bit_delay();
    //
    // unrolled loop to write data bits
    //
    if bit_test(txchar,0)
        set(*port,pin);
    else
        clear(*port,pin);
    bit_delay();
    if bit_test(txchar,1)
        set(*port,pin);
```