

# Re: Trying to send RS232 with PIC sends incorrect data in TeraTerm

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*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.design/2007-04/msg01815.html>

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  - *Date:* Mon, 9 Apr 2007 19:08:02 -0500
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jbitz34@xxxxxxxxxx wrote:

I am trying to work out RS232 using a PIC, so I created a simple program to send a string message which would appear in the TeraTerm window. Here is the code snippet:

```
#if defined(__PCM__)
#include <16F877.h>
#fuses HS,NOWDT,NOPROTECT,NOLVP
#use delay(clock=20000000)
```

Are you using a 20MHz clock?

```
#use rs232(baud=9600, xmit=PIN_C6, rcv=PIN_C7)
#endif
```

```
void main() {
```

```
    output_high(PIN_A0);
    delay_ms(1000);
    output_low(PIN_A0);
    delay_ms(1000);
```

```
    while(TRUE){
        output_high(PIN_B4);
        delay_ms(500);
        output_low(PIN_B4);
```

Are you getting what you expect here? Is the time delay coming out correctly?

```
        printf("Please work\n");
        delay_ms(1000);
    }
```

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}

So 12 characters from the PIC turns into 6 characters on the display.....sounds like a baud rate issue to me. Have you tried changing the baud in the windos program? Do you have a scope? If so, just look at the width of the data bits to see what the PIC is sending.

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I have a Max232 converter in configuration according to the diagram on page 7 of this datasheet:

<http://www.ortodoxism.ro/datasheets/texasinstruments/max232.pdf>

I am also using a device which transforms RS232 to USB and then has drivers to emulate a COM port on the PC, since my computer has no serial port. It is this piece:

[http://www.sparkfun.com/commerce/product\\_info.php?products\\_id=198](http://www.sparkfun.com/commerce/product_info.php?products_id=198)

My settings in both my device manager for COM1 (the emulated com port) and in Tera Term are

9600 baud

8 data bits  
no parity  
1 stop  
no flow control

When I run this program, I get the following in Tera Term:

<http://bitzphoto.com/ECE445/teraterm.png>

That is, a repeating sequence of incorrect characters.

I'm lost at any other settings that might need to be changed to make the data appear correctly; any thoughts would be greatly appreciated.

Oddly, it worked correctly one time only, and it was not on the first try; but previous and subsequent attempts have repeatedly displayed this gibberish sequence.

Try different baud rates in teraterm to see if it suddenly starts coming in clearly. Make sure you are really using a 20MHz clock on the PIC. Looks like you are almost there.

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