

## Re: PIC USART troubles

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- *From:* "Anthony Fremont" <[spam-not@xxxxxxxxxxxxx](mailto:spam-not@xxxxxxxxxxxxx)>
  - *Date:* Sat, 3 Mar 2007 13:31:42 -0600
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hybrid\_snyper wrote:

Hello all,

Im in a bit of a desperate situation. I am trying to get my PIC 16f876 to talk to a Ericsson T28. The T28 has both TX/RX pins and I have connected them directly to the TX/RX pins on my PIC. I measured the voltage across the VDD and GND on the phone and I am running my PIC at the same voltage. I have written a simple program that should send the AT command AT+CFUN=0 this should turn the phone off. However this is not the case, I am not sure if i am understanding the USART spec, people have mentioned something about inversion but i thought this would only apply when wishing to reach RS232 levels.

Unfortunately, the internal USART outputs the signal using reversed polarity so that a level converter (like a MAX232) will work with it. If your T28 outputs a signal that an ordinary PC serial port can read, then you will need to invert the output of the PIC so that it can talk to the T28. When the phone is sitting idle, what is the voltage on the TX and RX pins? Compare those with the PIC.

I have connected the phone to my PC and ran hyper-terminal with the spec baud 9600, 8bits, 1 stop bit and no parity, i believe that i have set the PIC up correctly however the phone just isnt responding.

That answers that. You need to invert the output of the PIC. Use an inverter, logic gate (NAND, XOR, or NOT) or whatever you wish to flip it over. Or you could bit-bang it. AFAIK, the PIC has no ability to invert the output of the USART, stupid as that sounds.

Could any one give any tips, also it may be worth looking at an older post of mine that will over a bit of background at what I have been up to.

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[http://groups.google.co.uk/group/sci.electronics.basics/browse\\_thread/thread/b7de71f84dcb6d5b/560a3368450](http://groups.google.co.uk/group/sci.electronics.basics/browse_thread/thread/b7de71f84dcb6d5b/560a3368450)

Kind regards

Wayne