

Re: Microchip PIC programming question

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2005-07/msg01225.html>

- *From:* John Popelish <jpopelish@xxxxxxxx>
 - *Date:* Sat, 09 Jul 2005 22:20:30 -0400
-

liamfoxtrot@xxxxxxxxxxx wrote:

Wow, thanks for the quick suggestions!

Okay, now I know that signal A and B need to be different.

I can replace signal A with one with a different sensor that would read from 1.1v - 2.0v and give 180 steps which should be enough.

Or as John suggested just amplify the signal by 50. Ol' Duffer mentioned a buffer amp. Is there one that could be used as a buffer amp and multiply by 50 (two birds - one stone)?

Sensor B can also be run with a different sensor that would read from 0v- 3.5v so there should be no problem there. Since I am just learning, I didn't realize that Vref had to be less than the supply. How do I know if I need a buffer amp?

A buffer amp just copies the voltage (voltage gain of 1) while providing any current the load requires, without that current having to come from the signal. Any opamp suitable for the input and output voltage range can be used as a buffer or amplifier with a voltage gain higher than 1.
(snip)

I like the MCP6022 dual rail to rail opamp when having to work with a 5 volt supply (but there are lots of others).
<http://rocky.digikey.com/WebLib/Microchip/Web%20Data/MCP6021,2,3,4.pdf>

.