

Re: Microchip PIC programming question

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2005-07/msg01253.html>

- *From:* "bruce varley" <bxvarley@xxxxxxxxxxxxxxxxxx>
 - *Date:* Sun, 10 Jul 2005 18:01:43 +0800
-

<liamfoxtrot@xxxxxxxx> wrote in message
news:1120943853.498031.131800@xx

> Hi,
>
>
> I am learning how to program a PIC for fun and creating a project for
> my car. I have downloaded the microchip.com's simulator and am looking
> forward to trying out some code. So I figure start small and build my
> way on up. I am not looking for someone to tell me exactly how to do ,
> just a few pointers and links would be greatly appreciated.
>
>
> I am thinking about getting a PIC16F676 after I know what I am doing a
> little better.
>
>
> The first chunk I want to do is:
>
>
> Input A: 30mv – 75mv
> Input B: 2.5V – 6.0V
> Vref: > 6.0V
>
>
> Calculate: Ratio A/B
>
>
> Output C: PWM % at A/B*32 (would vary from 16% – 96% at extremes)
>
>
> The second chunk I want to do is:
>
>
> Load a 10 point table of min to max ratios and corresponding
> calibration points from 0–100mv
>
>
> Based on the calculated Ratio A/B, calculate the corresponding mv using

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- > a linear extrapolation between the two closest points on the curve.
- >
- >
- > Output D: create another PWM at the calculated mv
- >
- >
- > The third chunk I want to do is:
- >
- >
- > Input E: sensor reading 0–100mv
- >
- >
- > Output F: create another PWM that uses fuzzy logic to get the Input E
- > to match Output D. Increasing Output F will increase Input E.
- >
- >
- > I broke it up into these three pieces since each one had an output that
- > became the input for the next section. I wasn't sure it would all fit
- > on one PIC16F676, but it should all fit on three of them.
- >
- >
- > Thanks in advance for any suggestions, links, tutorials or the like
- > that you think will help me with my project.
- >
- > Thanks
- > Andy

One piece of advice that I still haven't taken to heart seriously. Get familiar with how the C flag is used during subtraction. It's a bit tricky, being the reverse of addition. You can easily get your btfscl instructions the wrong way round and it all gets confusing. Good luck.

- **Follow-Ups:**

- ◆ **[Re: Microchip PIC programming question](#)**

- ◇ *From:* Al Borowski

- **References:**

- ◆ **[Microchip PIC programming question](#)**

- ◇ *From:* liamfoxtrot@xxxxxxxxxx

- Prev by Date: **[Re: AC Induction Motors burning out under no load?](#)**
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