

Ye Hardware Engineer on Quest for Firmware

Screaming Circuits

I've been spending some time with the mbed here and I'm convinced that there are a lot of good uses for this little thing. One in particular popped in to my head with a lot of vigor.

Back in December of 2008, I listed ten (Octal) things to do to help get through a lousy economy ([read #3](#) [1]). If you're pretty much a pure hardware engineer, now might just be a good time to develop some firmware skills.

In my mind, one of the biggest problems going from hardware to firmware isn't the programming it's self. That's not really as tough to pick up as you might think. But it's the environment. The tool chains. The configurations. Make files, environment variables, linked libraries, boot loaders, ICSP, flag bits... There's a load of ancillary junk that gets in the way. Some micros require purchased proprietary compilers. Some use open source. Should you use C or C++ or ASM? Too many choices.

Well, here's something that gets rid of all of that extra junk. Plug in an mbed and in minutes you can be experimenting with C programming on an embedded micro controller. Use the onboard LEDs and sample programs to get instant gratification. Plug in some external LEDs or a sensor of some type ([maybe from sparkfun](#) [2]) as you get a little more versed in the language. Save the data to the FLASH and graph it in Excel or something.

My personal feeling is that a hardware engineer is much more employable these days with the ability to write firmware. I haven't found a better way to get started then with an mbed. You can worry about all of the other details later, but use this little guy to teach yourself to code.

Duane Benson

It's been a soft day's night, and I've been coding like a frog

[SOURCE](#) [3]

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[1] <http://blog.screamingcircuits.com/2008/12/top-ten-.html>

[2] <http://www.sparkfun.com/commerce/categories.php?c=139>

[3] <http://blog.screamingcircuits.com/2009/12/more-thoughts-on-the-mbed.html>