

Devices like iPods are expensive. They do too many things and there to complicated for high school students for ordinary learning, and individual use. So I will build a better device that teachers can buy for students and do electronics.

High schoolers want to learn about electronics but they have classes now that just talk about math and physics and lose the interest of students who want something more exciting, and more interesting assignments. They use things that students aren't ready for, with too many knobs and features and that cost a lot. Only one at a time can use them. In one catalog a power supply is \$300. That's too much. Students want to be involved too. They don't want to just watch the teacher doing experiments.

This problem is solved by a new circuit. The 10-bit A/D channel has enough bits for 3 digits of accuracy. The CR032 supplies 3V. The display is 128 x 32 with a 30 mA white-LED backlight. Unless the display works with serial bits, the processor will have to have a lot of outputs though. There will also be books for the students and protoboards with parts later on. The circuit will measure voltage and probably current and AC waveforms for circuits using different kinds of math. Everything might fit on one board.

The measuring circuit will be low cost. I will work hard on it during the summer and have it done before fall semester starts. High school students will learn a lot from it. It will open doors in schools everywhere for engineers who want to improve the world.