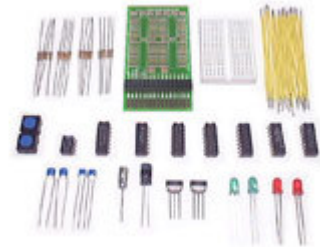


The
DIGITAL LOGIC EXPLORATION KIT
By Josh Hintze

MORE THEN JUST BLINKING LEDS

Review by: Richard Carmel (ickno)

When I had heard that the XGS Micro addition had finally been released, I rushed to website to place my order. On the products page I quickly located the XGS and was about to proceed to checkout when something else caught my eye. **The Digital Logic Exploration Kit (DLEK)**. I remember the feeling of intrigue as I gazed over the pictures of small *electronic components, integrated circuits* and the like. Being a complete n00b to digital electronics (or any electronics for that matter), I often wondered what mysteries lay inside those little black chips.

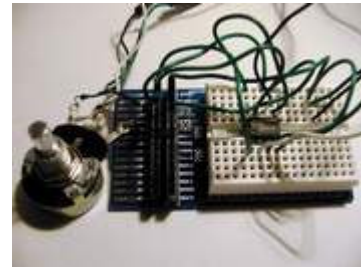


When my XGS finally arrived I went straight for the DLEK and I was not disappointed. The contents of the Kit looked amazing, in particular, the *breadboard* that was connected directly to an *XGS expansion card*. Finally loading up the CD, I proceeded to read the PDF. The first chapter begins with a simple introduction to digital logic. I was pleased to find that the theory was light, and the concepts simple to digest. The next chapters to follow moved directly into the labs. Each demonstration was well explained, with every component explained thoroughly. I particularly enjoyed the attention given to the pin outs of each component. By the third and fourth lab I was beginning to feel at home reading *timing diagrams, schematics* and *logic tables*. Several of the labs had accompanying source code that interacted with the circuits. It's amazing the sense of satisfaction that comes from constructing a circuit, and then writing the code to drive it!

With eleven labs, there was plenty to do, and it took me some time to fully construct each project. I liked the fact that some of the circuits were directly applicable to the XGS, for example: using parallel shift registers (XGS Joystick Port, XGS SRAM access). Being serious about one day building my own video console, I felt that these circuits were obvious stepping-stones that I would need.



Finally after finishing the labs, I was eager to strut my stuff. I took the simple idea of building a custom a game paddle for the XGS breakout clone I was writing. I purchased an analog to digital converter and a



potentiometer. The rest of the components I used from the DLEK. I spent some time reading the data sheet for my new IC, and within no time I had it wired up to the XGS expansion slot. Some more time spent reading the timing diagrams and I soon had a code routine to interface with my new creation. The results were fantastic!

I bought the XGS because I was serious about learning hardware. I found the subject to be vast, and difficult to break into. The DLEK was the perfect primer.

-- Richard Carmel (ickno)