

Dear Reader,

I had to endure seven trials and tribulations to acquire my electronics knowledge. I would like to tell the tale of this bumpy ride, because it was the main reason I started to work on this curriculum.

After many years of tinkering at home (the first trial) I decided as a 9th grader in 2002, that I want to build circuits (the second trial). Without any idea about what I was doing I searched the internet and found the schematics of a metal detector on a blog. After reading the few controversial comments I walked into Pedro's electronics supply store in Szombathely to shop. "Pedro, I would like five 10 μ F, 25V capacitors please!" I said. "I'm out of 25V ones, but I have some 50V ones, is that okay?" he asked. That was only the first of a series of questions he had about my list of parts and it made me very uncomfortable that I couldn't answer any of them. Needless to say, the metal detector didn't work, and I couldn't figure out why.

Later I bought a multimeter on the market (third trial). After switching it on I thought it was faulty because the display showed "666" constantly. It took me days to realize the "HOLD" button, the one that locks a reading on the display was pressed.

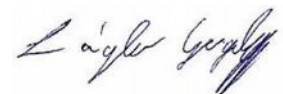
When I finally got to university, I couldn't wait to design gadgets and devices, but during the first few years we hardly ever got around do touching a component amidst the countless classes of theory (the fourth trial).

In the dormitory we have built our own electronics lab (fifth trial) with a few friends, and we have built our first circuits while helping each other. It was there we learned to design and manufacture basic PCB-s, and program microcontrollers.

In the later years we started having more and more practical classes, and individual laboratory work. Many of us started to join groups of students designing and building some project and competing in engineering competitions. This is how I was trusted with designing the battery management system of the first Hungarian 120 HP electric race car in my senior year (the sixth trial). We had no idea how an electric vehicle worked, and even though the battery system was working properly, we still had to complete many other parts of the car (the seventh trial). By that time, we had so much theory and practical experience crammed in us, that through hard work and a miserable failure from time to time we could overcome the obstacle.

As the winners of a student competition we have founded Xtalin Engineering, where I experienced a whole new world of challenges, and with my excellent coworkers we have designed many things from ECG-devices to greenhouse controllers. We have become experts in electric vehicles, but we did not lose our education centric view either.

When I asked my friends, I have made throughout my journey to make this curriculum together, everyone was eager to share their knowledge and experience so that your ride of learning electronics will be faster and less bumpy than mine was. I wish a pleasant time learning from this curriculum, and nothing but successes when making circuits to you, the expert of the future!



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