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CONTROLLING INFLUENCE

How Crestron Founder George Feldstein Converts An Infinite Interest In Electronics Into A Wide Array Of Technology Offerings

by Kirsten Nelson

SCN: From an early age, you felt you were destined for a career in engineering, but what specifically drew you to the world of electronics?

George Feldstein: My first experience with electricity came at the age of seven on a visit to my uncle in Elkhart, IN who owned a general store. I was left alone with a dry-cell battery some flashlight bulbs and wire. After the success of a few self-conceived experiments I was hooked on the magic of electric.

Perhaps my sense of innovation came from my totally unsupervised activities. Being the only person in my near or distant family with mechanical or electrical interest, there was no one to turn to that would moderate my experimental failures, and my goal-oriented personality would not allow failure. In my family I may be considered a genetic mutation being like no other member. Therefore, innovation and perseverance were the only tools available to pursue my interests. The idea that I could go to engineering school and earn a living doing things I would gladly do for free only came in my junior year of high school.

SCN: You went on to obtain a master's degree in electrical engineering, and in your 30s, carrying your Simpson volt meter door to door and offering to fix anything you could, you went into business for yourself. How did you eventually make the leap into the AV business?

GF: In an effort to earn money to feed my family I used many techniques, one of those being reading the classified advertisements and looking for small companies who were advertising for electronic engineers. I would respond and offer my design and manufacturing services at a very attractive price, the benefit of low overhead and a work force that included the older two of my four young children.

One of the companies that I was successful with was a small commercial AV company that was looking for an RF-based AV control system that they could market under their own brand. I had successfully designed and manufactured a number of different models in considerable quantities when, much to my surprise the company went bankrupt, leaving me with several hundred undelivered units that had not been paid for. I immediately placed Crestron labels on the products and searched out AV dealers that I could sell the products to under the Crestron name. These were the first products that were manufactured and marketed under the Crestron brand. This was hardly a leap into the AV industry. Because of limited funds to market and manufacture products, it was more of a stealth entry. And as they say, the rest is history.

SCN: Crestron's first product was a radio control system that closed relays for the remote operation of projectors, motorized screens, and other early presentation products. Indeed, you have pointed out that Crestron created the first lighting control system for the

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The humble beginnings of the Crestron office have grown into an operation that boasts nearly 2,500 employees worldwide.

QUICK BIO

NAME: George Feldstein
COMPANY: Crestron Electronics
TITLE: Founder, President, and CEO
OVERTIME: Feldstein is well known for his pinpoint accuracy in predicting the future. Four years ago at a manufacturer's forum, he discussed the coming of a totally digital AV environment, which is now becoming a reality with digital television and HDMI with HDCP transmission of content.

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AV market. How has the industry changed since the days of these early hardware configurations?

GF: In the beginning a relay closure was the gold standard for AV control. And I was very good at relay closures. The first major change came with the introduction of infrared control. The next major change came with the availability of AV devices with RS-232 inputs that allowed control with positive feedback. This was the beginning of the incorporation of computer technology in AV control systems.

Crestron introduced the first user-programmable system for relay control. However, programming now became a lot more complicated with string parsing check sums and other data manipulation. But there was more to come.

When Crestron introduced the first control system with an ethernet port the AV industry had no idea why we needed it and the abuse was fast in coming. Obviously this was a good decision and gave us a head start over other manufactures. Ethernet was soon followed by connectivity to the internet making system set-up and programming even more complicated. Now, most installations make use of ethernet and internet technologies.

From an early age, Feldstein felt he was destined for a career in engineering.

Four years ago at a manufacturer's forum I discussed the coming of a totally digital AV environment. This is now becoming a reality with digital television and HDMI with HDCP transmission of content. Crestron has achieved a significant lead in technology by starting development of transmission products as much as four years ago.

Today the AV dealer requires highly trained hardware engineers, software engineers, and technicians to implement an AV installation. Therefore, training has become an important part of the services Crestron supplies to our dealers.

SCN: Crestron's new 100,000-square-foot research center features an FCC-approved RF chamber and houses software and hardware engineers, model makers, and an in-house patent attorney. With so many areas of expertise informing AV product development today, what skill sets would you encourage future engineers to acquire?

GF: It is important for engineers to have a solid knowledge of engineering fundamentals—do not forget all the things you have learned in school. In school 75 percent is passing, but at Crestron only 110 percent is acceptable. When we interview engineers we look for these qualities, but that is not enough. There must be passion and enthusiasm for creating new products and concepts. Because schools do not teach the latest AV technologies an engineer must be willing to spend a substantial amount of time studying on their own. Therefore reading would be a definite skill set; you must learn to read to be an AV engineer. ■