

Proper Documentation, Engineering Is Lacking

Why are all the floor plan layouts, block diagrams, schematics and equipment rack layouts missing?

By Dave Tkachuk

As high technology continues to advance nonstop, those of us in residential electronics installation need to provide better service and upgrades. That appears especially true in new upscale home electronics and system design. Many installers don't know quite what they're doing as measured against other best professional practices.

So if the system works, what's the problem? As we all know, down the road there will be problems. And without proper design and documentation, the problems may be extremely time-consuming and difficult to find and fix. Problems that should have been prevented from the outset will come back to bite the installation company, in many cases the general contractor and worst of all, the homeowner.

During my years in the industrial field, this was hardly the case. Crews were big enough to have specialists in each area, and specialists in various types of electrical systems quickly understood the need to work together and integrate their plans. Because big money was involved, everyone had to be careful to prevent future system failures.

In the business world, it was assumed that there would be changes in tenants and their electrical and technical requirements over the years. Professionals needed to keep up with the latest advances in technology, systems construction and wiring. Plans had to be carefully drafted and documented so that the details were on the record. Wires had to have specific colors, and each wire and component had to have numbered IDs.

When technical changes and upgrades would be needed, the workforce would be ready to utilize the plans and documentation. And if there were problems at any time and troubleshooting had to be performed, again a professional technician would be ready to solve the problem.

Residential World Lacks Proper Schematics

Today high-tech systems are being built into many upscale homes and becoming far more common in smaller homes. Unlike most industrial installations, however, far too many residential projects are not so engaged in making careful plans, schematics, diagrams and documentation for their fully integrated technical systems. All too often there are no coherent integrated plans or collaboration among those supposedly working together toward the same goals.

To an outsider seeing the inside for the first time and exploring unseen wiring in order to do some troubleshooting on a particular component, all of the wiring with thousands of connections may be a sheer maze.

Because of proper mapping and documentation from the beginning through thoughtful design and careful engineering, these kinds of problems are far more rare in the industrial world. Yes, the systems are probably much larger and more complicated, but the roadmaps are there to point the troubleshooter to the problem and its solution.

We need a similar methodology and work ethic in our residential installation business, as more and more advanced technology is developed for home living. But how do we change the culture in our field?

It's simple... Integrators need to use a proper diagramming and documentation template for all their integrated electronic systems installations.

It is the only viable solution to what is essentially an educational problem among professionals already working and fully skilled in their own residential construction trades. The problem is: How do we move forward to upgrade to professional standards and practices in connecting new and old technologies into integrated systems in the residential arena?

If you are not creating floor plan layouts, block diagrams, schematics and equipment rack layouts, you are doing a disservice to yourself, your clients and the entire custom electronics industry.

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