



A'n D Newsletter

Cable management done right!

Welcome to Our Premier Issue



"A" as in Alex (left) and "D" as in Dana (center), with Dad Louis, are A'nD Cable: A family owned small business since 1989.

A'n D Cable Products is a premier provider of network cabling solutions. We are committed to providing quality service, products, and solutions to ensure constructive, cost efficient and timely job completion. To achieve this goal, we strive to have ongoing communications with our customers and vendors. This newsletter is part of that relationship and is designed to be an informative and useful communication tool from us to you.

We are here to meet your cabling needs and work with you to solve your cabling challenges. If we don't have it in stock, we will get it for you, and if you need something special, we will custom fabricate it for you. We take great pride in the quality of our work and our made-in-America focus.

The A'n D Newsletter will be published on a quarterly basis, and will include information to inform, educate, and inspire business-building ideas for cable installation professionals at all levels of experience.

We want to hear from you. If you have a comment or question about any article, or have suggestions about topics to cover here, please contact us at sales@andcable.com.

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Tools & Techniques

TESTING COPPER LINES

One of our goals is to help keep you ahead of the competition. To help with that, here is the first part of a short outline of some basic testing requirements.

Testing your premise wiring is an important part of the installation process. First, as a cable installer and maintainer, you need to be sure that your product will meet customers' needs. Second, as a business person, you need competitive advantage in your market. Understanding the basics of testing and documentation will help with both. There are several basic conditions when testing and documenting your job. In this issue, we start with these:

Visual Inspection, Continuity and Wire Mapping. While these are different things, they are the starting points for all tests. You should visually inspect all cabling before testing or certifying your runs. Look at the way the system is grounded and bonded, terminated, labeled, etc. Use a continuity checker to verify end-to-end connections. Finally, at a minimum, use a wire map tester to verify end-to-end, pin-to-pin connectivity and to check for split pairs. Any miswires, breaks, opens, shorts, crossovers, or splits should be detected during this test. Both continuity and wire mapping tests can be performed by basic testers. Example tools: Fluke's MicroMapper™ or MicroScanner Pro™.

Verifying cable length. Maximum lengths for premise cabling vary by category and application. TIA TSB-67 requires that length be measured. Though it may seem easy, length measurement can be tricky. When you measure length with a field test tool, the tool is usually measuring a time delay and converting that information into a length estimate based on the speed of the signal. The accuracy of this measurement is affected by factors which can be very complex and difficult to control. You should treat length measurements from hand held testers only as approximations, not precise values. The goal here is to make sure that you have not accidentally exceeded the maximum allowable length for a run. If that happens, signal degradation can occur, particularly for high-speed networks. The Fluke MicroScanner Pro™ testing tool can perform this test for you.

Attenuation and crosstalk (or speed testing). This is the area that comes with the alphabet soup. Lots of acronyms here: NEXT, PSELFEXT, PSNEXT, on and on they go... What this basically means is that not all cables are created equal, nor are all installers worth

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AROUND AND ABOUT: NEWS IN THE INDUSTRY

The Telecommunications Industry Association (TIA) Subcommittee TR-42.6 (Telecommunications Infrastructure and Equipment Administration) recently published ANSI/TIA/EIA-606-A, a complete re-write of TIA/EIA-606 (1993).

Of key interest to the cable industry is the section of the standard that specifies cable labeling formats. Each component of the telecommunications infrastructure is assigned a unique "label" linking the component to its corresponding record. Records contain information about, or are related to, a specific component. All records contain required information, required linkages, optional information and other linkages. Linkages are considered to be the "logical" connection between identifiers and records as well as linking one record to another.

A'n D Cable Products offers cable labeling solutions that are compliant with ANSI/TIA/EIA-606-A. In keeping with our commitment to ongoing communication with our customers and vendors, we are in the process of preparing an "On the Go" reference sheet that spells out the standard's labeling requirements. If you would like to be notified when this sheet is available, please contact us at sales@andcable.com.

HOW TO MAKE MONEY

Growing by Removing

We consider your success part of our success at A'n D Cable Products, which is why we keep our ears and eyes open for revenue-generating ideas for our clients. Here is a money-making idea that you may not have considered.

When the National Electrical Code mandated removal of abandoned cable in 2002, cabling contractors expected big benefits. NEC 2002 cites seven definitions for abandoned cable that should be removed from buildings to prevent fire hazard (among other reasons). Estimates vary, but the average number of feet of abandoned cable currently sitting in buildings around the U.S. is around 50 billion. Added to a job or used as a foot in the door with a new customer, cable removal presents an opportunity to grow your business.

But in the three years since NEC 2002, cable removal has not become a significant project element in the industry. Building owners can't seem to reconcile the cost of removal to the size of the risk of leaving it in place. Additionally, the removal requirement can be overlooked or ignored by inspectors, which might help justify owners' reluctance to fund the work. After all, if regulators aren't going to enforce the code, why voluntarily incur a sizeable expense for something that doesn't show and won't do significant damage?

The first key to adding cable removal to your job scope is client education. Cables that are abandoned in ceilings, riser systems, and air-handling systems could become a source of liability for building owners, and cabling contractors, because they can release toxic smoke and fumes during a fire. Avoiding liability by following national electrical codes and removing old cable is good business for everyone, including building owners and cable contractors.

Also, as cabling needs change, different lines will be run alongside defunct cables. Over time, lack of organization and confusion about what is current and what isn't—especially in the absence of a good tagging system—will foster inefficiency and lost productivity as well as creating liability risks for building owners and cable contractors. Looking at the big picture, it is cheaper for an owner to bite the bullet now and keep the cable systems current than to pay extra labor and clean up costs later, when sense needs to be made of the spaghetti inside the walls.

With 50 billion feet (or more) of defunct cable out there, adding its removal to your sources of income should be relatively easy. Make cable removal a standard operating procedure and include it as a task in any job you bid. If challenged, let the customer know about NEC requirements and why removal is best done sooner than later.

Make More Money: Recycle!

You may wonder what to do with all that cable you've removed as a result of adding this task to your services. The answer is simple: Make even more money!

Do not re-use old cable. It has a finite life expectancy, and may hide fractures or moisture entry points. Instead, sell your removed cable to be recycled. There are a number of scrap merchants in the U.S. that handle cables. They burn off the plastic for the copper content—and pay you money!

The various materials that make up a cable are separated in the recycling process. The wires are typically chopped, and the vinyl is then separated from the metal through a process called electrostatic separation. The vinyl is then shredded and recycled into second-generation products such as sound-deadening panels for car doors.

Though a lot of cable scrap is being shipped overseas for processing, there are still companies in the U.S. that purchase old cable for recycling. Here are a few with their contact information. Browse the Internet to find merchants in your area.

Joseph Krash Metals
(jkrashmetals@hotmail.com)

Matejka Cable Recovery
(<http://www.matejka.com>)

Plafkin Recycling
(616-676-0590)

Shine Brothers Corporation
(<http://www.shinebros.com>)

Thomas M. Sullivan & Sons
(<http://tmsullivan.com/>)

Copper Lines, from page 2

their pay. The most important factor here, besides the quality of your components, is maintenance of the twist throughout the cable. When you get to the end and make that final termination, it is very important that you maintain twist in the wires. When you run the battery of tests that come in the alphabet soup testers, you will find out whether your cable is going to stand up to the demands of high-speed networking. A cable that is OK for 100BASE-T (Fast Ethernet) may not be able to handle 1000BASE-T (Gigabit Ethernet). The faster the network, the more important these tests become. Again, Fluke™ offers a tester to help you out here, it's their DTX CableAnalyzer™ series.

Documentation. Last, but certainly not least. Remember that the documentation you leave is going to be the only detailed written record of your work. Procedures for effective documentation depend on the installation. What's the key? Put enough documentation on the site to ensure that your customer, and the installers and maintainers who follow you, will know where all of the cables run. Also, make sure you show the results of your tests. Most of today's testing units can store test results and print them out for you. This is a great way to show your value to the customer, especially those small and medium-sized businesses that haven't had a chance to see a professional at work. For more information, run a Google search to find the documentation rules listed in ANSI/TIA/EIA-606.

If you have questions about any aspect of copper line testing and documentation, we are here to help. Contact us at your convenience by phone at 800-394-3008 or email us at sales@andcable.com. Remember, our very affordable and reusable Unitag™ cable labeling product is ANSI/TIA/EIA compliant, and it comes in several snazzy colors and sizes for the professional look that will get you called back to do more business.

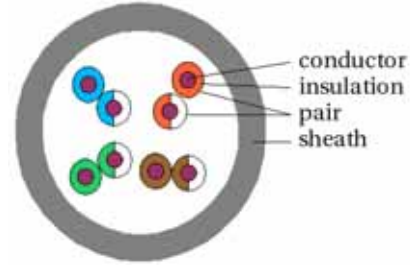
Note: The tools listed here are examples, and are not endorsements. A'n D Cable Products, Inc. does not have a special business relationship with Fluke™. We just know they make good tools. Pretty much any respectable testing equipment company is going to offer similar products.

Do you have a suggestion for future issues of the A'n D Newsletter?

Let us know!

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AT A GLANCE TUTORIAL Unshielded Twisted Pair



Unshielded Twisted Pair (UTP) is by far the most commonly used cable in the industry, and the type most requested by our clients. UTP cable is not surrounded by any shielding. It is the primary wire type for both voice and data communications. Solid-core UTP is usually used within building walls, while more flexible stranded-core UTP is typically used for patch cables and interconnects.

Category 5/5e

Category 5/5e cables, commonly known as Cat 5, are designed for high signal integrity. Cat 5 cable typically has three twists per inch for each of the four pairs of 24 gauge copper wires within the cable. Today, virtually all cables sold as Cat 5 are actually Cat 5e. Cat 5e cable is an enhanced version of Cat 5, and is used for 1000 Base-T Ethernet networks, or for long-distance 100 Base-T links (350 meters, compared with only 100 meters for Cat 5).

Cat 5/5e standard cables are most typically associated with the transmission of computer data using the Fast Ethernet protocol (transmission rate of 100Mbit/s). However, Cat5/5e cables can be used to carry other kinds of signals, like voice. They can also support other protocols, like Token Ring, and for short distances, asynchronous transfer mode, or ATM (transmission rate of 155Mbit/s).

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A Small Business/Veteran/Minority Owned
California Corporation
Established in 1989
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