

"Current" Events

Lewis Electric Update



News for Lewis Electric Customers Vol. 2 No. 4/ October, 1998

It's getting worse !!!

The Dade County Dept. of

Planning & Regulation Nightmare !!!

A typical Agricultural Electrical Service permit to hook up a field pump required no drawings and took about 1/2 - 3/4 hour to procure even though you had to go down town (which I still think is ridiculous when you could do the same thing at Cutler Ridge and they're complaining they do not have enough work to keep those people busy). The new requirements entail professional 1/2" scale drawings and a site plan of your lot. The plans have to go through Zoning, Plumbing and Electrical. Keep in mind different Processors for the same plan might have two different opinions. There are no uniform standards. The procedure for this simple permit is that at 7:15 AM first you go to the 10th floor and get in line, you get a process number (1/2 to 3/4 hour). Then it's off to the 12th floor to go through zoning (if the zoning people are there, another 1/2 hour), but if you have a problem it's off to the 8th Floor to correct the problem (1/2 to 3/4 hour). Back to the 12th floor and get in line to get plans processed (another 1/2 hour)

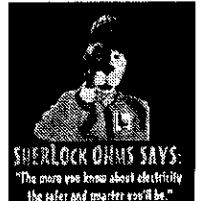
All this has to be done before 10:00AM for same day processing and permit issuance. You leave your beep number with them so they can let you know when your plans are ready (by the way no one has ever called to let me know my plans are ready). At this point you check on your other problem plans to see if they can be found or retrieved. This entails another trip in line (1 to 2 hrs.) Example: it took me nine hours to get two simple Ag. Service permits that we used to charge about \$100.00 for, including the permit fee. This same process now costs the end user \$300.00 to \$400.00 for the same permit.

SLM

Surges, Spikes, Zaps Grounding your Electronics !!!

Theoretically, the power coming into your house is a perfect AC sine wave. It is usually quite close. But occasionally, it won't be. Lightning strikes and other events will affect the power. These usually fall into two general categories: very high voltage spikes (often into 1000's of volts, but usually only a few microseconds in length) or surges (longer duration but usually much lower voltage).

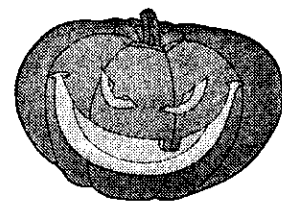
Most of your electrical equipment, motors, transformer-operated



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**Happy
Halloween**



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electronics, lights, etc., won't even notice these one shot events. However, certain types of solid state electronics, particular computers with switching power supplies and MOS semiconductors, can be damaged by these occurrences. For example, a spike can punch a hole through an insulating layer in a MOS device (such as that a costly CPU can be destroyed).

The traditional approach to protecting your electronics is to use surge suppressors or line filters. These are usually devices that you plug in between the outlet and your electronics.

Roughly speaking, surge suppressors work by detecting overvoltages, and shorting them out. Think of them as voltage limiters, Line filters usually use frequency dependent circuits (inductors, capacitors etc.) to tune out undesirable spikes thus preventing them from reaching your electronics. So, you should consider using suppressors or filters on your sensitive equipment,

These devices come in a very wide price range. From a couple of dollars to several hundred dollars.

A word about grounding: most surge suppressors and EFI filters require real grounds and any that don't are next to worthless.

For example, most surge suppressors use MOVs (metal oxide varistors) to clamp overvoltages. Yes, you can have a suppressor that only has a MOV between neutral and hot to combat differential mode voltage excursions, but that isn't enough.

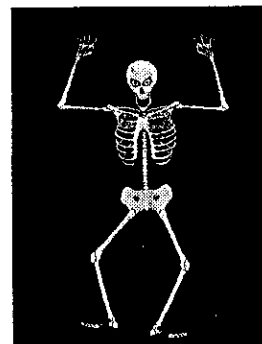
You need common mode protection too. Good suppressors should have three MOV's, one between each pair of wires. Which means you should have good solid grounding.

Without a ground, a surge or spike is free to lift your entire electronics system well away from ground. Which is ideal for blowing out interface electronics for printer ports, etc.

Secondly, static electricity is one of the major enemies of electronics. Having good frame grounds is one way of protecting against zaps.

If you are in a situation of wanting to install electronic equipment on a two wire groundless circuit take note: adding a GFCI outlet to the circuit makes the circuit safe for you. But it does not make it safe for your equipment. You need a ground to make surge suppressors or line filters effective.

One final note regarding Surge Suppression. You usually get what you pay for. I agree that there are expensive rip off's out there but they are usually easy to spot. With a good company that carries a good product you usually can't go wrong. *SLM*



Happy Halloween !!!