

GROUNDING FOR EQUIPMENT PERFORMANCE AND NEC 2011 ONE-DAY COURSE

Hosted By: IEEE Central Tennessee Section & The Music City Power Quality Group

Instructor: Tom Shaughnessy

Tom Shaughnessy is Vice President and co-founder (1986) of PowerCET Corporation (www.powercet.com). Past experiences before PowerCET Corporation include ONEAC Corporation (product and engineering manager), Topaz Electronics (international applications/sales engineer), and Burroughs (field engineer/MPS). Tom has conducted in-depth power audits for many Fortune 500 companies, co-authored two books on power and grounding, and regularly publishes articles on power quality, harmonics, and electromagnetic compatibility. He is a graduate of the University of Montana and Casper College, a member of IEEE, and NFPA, and has over 30 years experience in field service, power quality and EMI.

Course Description:

Few topics can elicit as much controversy as that of grounding. Poor grounding practices can cause continual equipment problems in a facility, whereas proper grounding practices can ensure reliable and productive facility operation. Specialized grounding techniques have evolved to meet the perceived grounding requirements of electronic equipment; sometimes grounding implementation not only degrades equipment performance but also violates the NEC. Terms such as single point grounding, multiple point grounding, isolated grounding, and equipotential reference grounding have special meaning and illustrate different approaches to grounding. This Grounding course is an intensive one-day course which examines, in depth, this very controversial topic.

You will learn:

- The difference between floated and grounded electrical systems.
- The adverse effects of voodoo grounding schemes.
- Why isolated ground receptacles work in some cases and not in others.
- How ground plane technology prevents skin effect from defeating equipment grounding.
- Why and how telecommunications and cable TV systems must be grounded.
- The advantages of Faraday cage construction to control effects of radiated interference
- How to preserve NEC (life-safety) grounding compliance and still achieve effective grounding without sacrificing equipment performance.
- NEC requirements pertaining to bonding of gas piping.
- NEC requirements pertaining to bonding of swimming pools.
- To recognize grounding as a simple scientific practice rather than as magic, myth and folklore.

When: Tuesday, August 2, 2011. Registration 8:00AM to 9:00AM, Program 9:00AM to 5:00PM.

Where: Tennessee Engineering Center (At the Adventure Science Center)
800 Fort Negley Blvd., Nashville TN 37203. For directions go to <http://www.adventuresci.com> and click on Visit and then Directions & Maps.

Cost: **\$150 for IEEE Members and \$175 for non IEEE Members.** Cost includes lunch, refreshments, course materials, and PDH certificate. Pre-Pay by credit card at the registration link below or pre-pay by mailing check to IEEE Central TN Section, 104 Journey Drive, Bowling Green, KY 42104. Write checks to "IEEE Central TN Section". **Payment must be received by July 22, 2011.** (Note: Ignore the messaging when registering online that allows payment at the meeting.)

Deadline: Register by Friday, July 22, 2011 at http://meetings.vtools.ieee.org/meeting_view/list_meeting/6453. Seating is limited.

Questions: For questions contact Gerald Johns at gdjohns21@gmail.com or (270) 498-1438.