

GROUNDING *Versus* BONDING S E M I N A R

February 7, 2007
The Hilton
Columbia, MD

February 8, 2007
The Waterford
Springfield, VA



DON'T MISS THIS ONE!!!

Nationally recognized expert Mike Holt will provide the most current information on grounding versus bonding in this must attend seminar.

For more information and to register visit:
www.capitallighting.com



Do you need to attend this seminar? Take this quiz and find out!

- Q. When electrical current is provided with multiple conductive paths on which to flow, current will always take the path of least resistance?
- Q. Grounding ensures that dangerous voltage on metal parts from a ground fault can be removed or be reduced to a safe level?
- Q. If an electrical system is properly installed, the voltage between the neutral terminal and the ground terminal at a receptacle should be near zero?
- Q. Grounding premises wiring to a low resistive grounding grid can help reduce stray voltage?

If you answered true to any of the above questions, then you need to attend this seminar!



➤ Grounding versus Bonding of electrical systems, sensitive electronic, and communications equipment is the most important and least understood activity in the electrical, data process, and communications industry.

Register
online at:

GROUNDING *Versus* BONDING S E M I N A R

GROUNDING Versus BONDING SEMINAR

Dates & Venues:

Wednesday, February 7, 2007
The Hilton • Columbia, MD

Thursday, February 8, 2007
The Waterford • Springfield, VA

A MUST ATTEND SEMINAR from CLS!

The purpose of the National Electrical Code is the practical safeguarding of persons and property from hazards arising from the use of electricity and it contains provisions that are considered necessary for safety. Compliance with the NEC, combined with proper maintenance, must result in an installation that is essentially free from hazard.

No other article can match Article 250 for misapplication, violation, and misinterpretation. People often insist on completing installations in a manner that results in violations of this Article. Article 250 covers the requirements for providing paths to divert high voltage to the earth, requirements for the low-impedance fault-current path to facilitate the operation of overcurrent protection devices, and how to remove dangerous voltage potentials between conductive parts of building components and electrical systems.

Over the past two Code cycles, this article was extensively revised to make it better organized and easier to implement. It's arranged in a logical manner.

Grounding versus Bonding of electrical systems, sensitive electronic, and communications equipment is the most important and least understood activity in the electrical, data process, and communications industry. Mike, will explain the following topics in an informal and relaxed style using PowerPoint 4-color



graphics and examples that apply to today's electrical installations. Those attending this high-energy program will learn the basics as well as the advance concepts necessary to understand the practical grounding and bonding rules in the NEC for systems not over 600V.

The goal and objective of this program is to help the attendee to understand concepts necessary to design, install, inspect, measure and trouble shoot electrical systems. In addition, this seminar is intended to help clear up confusing and seemingly conflicting or controversial NEC rules. Also tips on proper electrical installations, advice or cautions to possible conflicts

or confusing Code rules, and warnings of dangers related to improper electrical installations will be provided.

Description and Length – Program is designed to cover the technical and practical issues of the 2005 NEC as they relate to Article 250 – Grounding versus Bonding.

Workbook – Each student to receive a copy of Mike's 2005 Grounding versus Bonding book.

Learning Objectives – This training program is designed to cover The 2005 National Electrical Code as it pertains to Article 250 – Grounding versus Bonding in such a way so that the material learned can be applied immediately with increased proficiency, safety and efficiency.

Student Requirements – Not required but each student should come to the seminar with pencils, pens, paper, and a highlighter. A copy of the 2005 National Electrical Code book (not provided) is recommended, but not required.

About Instructor Mike Holt

Mike Holt has worked his way up the trade from Apprentice Electrician, Journeyman Electrician, Master Electrician, Electrical Inspector, Electrical Contractor, Electrical Designer and developer of training programs for the electrical industry. He has taught over 1,000 classes on over 40 different electrical related subjects to over 20,000 students. Mike teaches seminars through out the United States and abroad, for individuals, organizations and Fortune 500 companies, such as IBM, Boeing, Motorola, AT&T, etc. He was formerly a contributing Editor to Electrical Construction and Maintenance Magazine (EC&M) and Construction Editor to Electrical Design and Installation Magazine (edi).

He has developed nearly 50 different electrical homestudy training and business management programs which have been in use since 1978 by electrical apprenticeship training programs, contractors, inspectors, electricians, engineers and plant personnel. Mike is committed to the electrical industry and is recognized, as one of America's most knowledgeable and dynamic Electrical Educators.

Nationally recognized as one of the nations leading expert on electrical training, Mike has been an active member of the International Association of Electrical Inspectors, National Board of Electrical Examiners, National Fire Protection Association, National Association of Licensing Boards, Florida Association of Electrical Contractors, and the Electrical Council of Florida. He has been certified as an Electrical Inspector, Journeyman Electrician, Master Electrician, Certified Electrical Contractor and Instructor.

Earn CEUs

TOPICS COVERED:

Grounding Fundamentals

Purpose of Grounding and Electrical Fundamentals
Lightning Protection and TVSS Protection
Earth Grounding versus Equipment Grounding
Effective Fault-Current Path
Proper Neutral-to-Ground connections
Ground Loops
Objectionable Currents (Net Current)
EMI and RF Interference

System Grounding

Services Equipment - Section 250.24
Transformers - 250.30
Generators - Section 250.30

Separate Buildings and Structures - Section 250.32
Portable and Vehicle Generators - Section 250.34

The Grounding Electrode System

Ufer Ground

Grounding Sensitive Electronic Equipment

(Isolated and Signal Reference Ground)

Grounding of Communications Systems

(Telephone, CATV, Satellite Dishes, Antennas)

Grounding Data and Instrumentation Cables'

www.capitalighting.com

Register for Capital Lighting & Supply's Grounding Versus Bonding Seminar

Feb. 7, 2007
The Hilton
Columbia, MD

Feb. 8, 2007
The Waterford
Springfield, VA

Three ways to sign up:

1. Online at www.capitalighting.com
2. By Fax: (707) 220-2528
3. By Mail: Complete and mail registration form to: Capital Lighting & Supply c/o EPIC Meetings, 21279 Victorias Cross Terrace, Ashburn, VA 20147

Cost of seminar: Register by December 31, 2006 and pay only \$349. Regular price is \$399 after that date until 1/31/2007. After 1/31/2007 including on-site registration is \$449 and is based on space availability

Payment methods: Check (payable to EPIC Meetings), credit card or charged to your CLS Account.

If you have a question: Call (804) 254-5825 or e-mail: events@capitalighting.com.

Complete and mail this registration form to: Capital Lighting & Supply c/o EPIC Meetings, 21279 Victorias Cross Terrace, Ashburn, VA 20147

COMPANY NAME _____ Are you a member of: IBEW IEC ABC BOMA

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4. NAME _____ TITLE/POSITION _____

5. NAME _____ TITLE/POSITION _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PH (____) _____ FAX (____) _____ E-MAIL _____

Electrician's License Number _____ STATE/COUNTY _____

All above information must be completed in order to receive confirmation.

Billing address if different from above address:

ADDRESS _____ CITY _____ STATE _____ ZIP _____

Please check which seminar you will be attending: February 7, 2007 Columbia, MD February 8, 2007 Springfield, VA

Please check here if you would like to earn CEUs (available in certain geographies only)*

Do you have any special needs at the seminar? _____ May we send you items of interest via e-mail? Yes No

Seminar fee:

By Dec. 31, 2006 and pay only \$349 Regular price is \$399 after that date until 1/31/2007

After 1/31/2007 including on-site registration is \$449 and is based on space availability Registering 3 or more: 10% discount applies if you register 3 or more

Registration: 7:00 AM Seminar: 8:00 AM - 5:00 PM Includes a continental breakfast and lunch

Please check which form of payment you will be using:

Check enclosed (payable to EPIC Meetings) Credit card (Mastercard / Visa / American Express)

Capital Lighting & Supply account _____

Credit card number _____ Security Code From Back of Credit Card _____ Expiration date _____ Signature _____

Total amount of payment: \$ _____

This form may be copied to register additional attendees.

Cancellation Policy: Cancellations must be received by January 15, 2007 (a \$50 cancellation fee applies). After that date no refunds will be available.

Registration: Space is limited - register early. Confirmation will be sent via e-mail upon receipt of your completed registration and payment.



SEMINAR SERIES



Capital Lighting & Supply