

Fire Findings Labs becomes

# ELECTRICITY CENTRAL

for 'Residential Electricity for Fire Investigators' course



Figure 1. What would a seminar about electricity be without utility poles? Fire Findings' laboratory setting allows for full-scale and elaborate displays of a wide variety of components you encounter every day.

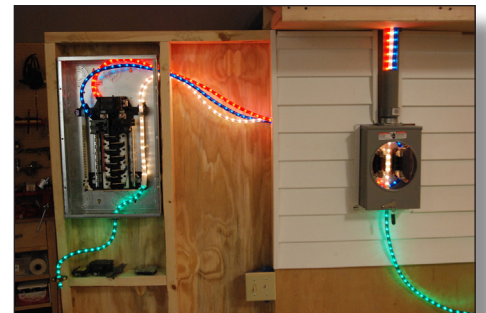
Here are a few photos from our two-day course offering, "Residential Electricity for Fire Investigators."

*Fire Findings'* editor, Jack Sanderson, and Nathan Dwyer, B.S.E.E., are your instructors and spearhead the content and demonstration design work.

***Hurry and sign up for April 7-8 or May 12-13, 2010! These are the only sessions planned for 2010.***



Figure 4. Instructor Jack Sanderson discusses an answer to one of many test questions derived from actual fire-damaged displays.



Figures 2 and 3 (above and left). Components of the electric distribution system are displayed and controlled to provide a better understanding of the route electricity takes in its journey to your home.



Sign up today at [www.firefindings.com](http://www.firefindings.com) or e-mail [info@firefindings.com](mailto:info@firefindings.com) for information about class openings.



Sign up now for our two-day seminar!

## Residential Electricity for Fire Investigators

An in-lab program exploring electrical wiring, distribution systems and fire causation.

**Class size is limited to 45 participants.**

**April 7-8, 2010 or May 12-13, 2010**

Optional testing toward CFI certification available (13 hours)  
along with continuing education credits (1.2 CEUs).

This Spring 2010 training session is intended to provide you with hands-on practical experience with wiring residential systems and a better understanding of how electricity can cause fires.

We'll examine how electricity gets to homes, how it's transformed and distributed through a structure and how electrical fires occur. We'll also discuss circuit protection in a structure, how to use the electrical system to determine the origin of a fire and what to look for to help rule out (or rule in) electrical fire causations.

### Other topics include:

- ✓ How homes are wired and why they're wired in certain ways.
- ✓ The many ways receptacles can be wired and the implications of that wiring to fire investigation.
- ✓ What information to obtain from property owners and occupants.
- ✓ Electrical theory in an easy-to-understand format.
- ✓ Causes of electrical fires –
  - Learn why arcing occurs frequently in fires but seldom causes them and why excessive current could easily cause fires, but seldom does.
  - Gain more knowledge about floating neutrals. Perhaps you've seen floating neutral demonstrations but never really understood the concept. We'll clarify it all with some new demonstrations.
  - Learn about high voltage and how it might be present inside a house. Learn the clues about fires that involve high voltage.
- Achieve a better understanding of high resistance (or glowing) connections. Where and why do they occur? What are the clues after a fire to help you determine if a high resistance connection was involved?
- Review case studies that illustrate all of these electrical failures and others. Learn from seeing the results of actual failures.

### In addition, you'll:

- ✓ Handle burned and unburned electrical components labeled and displayed to help you better understand what you're seeing.
- ✓ Practice with hands-on demonstrations built just for this seminar. Trace circuits, analyze wiring and determine what could happen electrically.
- ✓ Learn to reconstruct electrical distribution systems.
- ✓ Study many new displays aimed at helping you understand how components of an electrical distribution system work and how to instantly spot electrical work that was done wrong.

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“Residential Electricity for Fire Investigators” will be held on-site at Fire Findings Laboratories testing facility, 2026 Plaza Drive, Benton Harbor, Michigan, 49022.

*Just 40 minutes from South Bend (Indiana) or Kalamazoo (Michigan) airports and 2 hours from Chicago airports. St. Joseph/Benton Harbor is located along the southern shores of Lake Michigan — a gorgeous area to visit.*

Tuition is **\$595** per person for the two-day session.

## Course Background

As a participant in “Residential Electricity for Fire Investigators,” you’ll see and learn exactly how electrical power is supplied to a structure. To show how electrical energy is delivered from high-voltage lines to wall switches and outlets, the classroom will become a mini-electrical system, with utility poles, transformers and electrical service entrances in place and unique, simulated electrical conductors strung throughout the room.

The class will provide you with a hands-on practical experience in wiring residential systems, as you learn to trace wiring and analyze the implications of the presence (or absence) of the evidence of electrical activity in various areas of a structure’s wiring.

Nearly every structure has energized electrical wiring, but few fire investigators truly understand how such systems work. You’ll not only be able to see exposed wiring systems, but put common household circuits together and learn why they were (or shouldn’t have been) made that way. Then use the knowledge you gain to test yourself with in-the-lab experiments. The goal of this class is to help you attain more knowledge in your quest to determine whether electrical energy can be ruled in or out as the cause of a fire.

Your \$595 tuition also includes handouts, worksheets and a one-year subscription to *Fire Findings* newsletter. Optional CFI certification testing is also available, along with continuing education credits.

## About your instructors

**Jack Sanderson**, *Fire Findings*’ newsletter editor, is a nationally known speaker on a wide variety of fire investigation topics. He has written dozens of articles on electrical fire causation and been an instructor for our long-running, “Investigation of Gas and Electric Appliance Fires” course.

Sanderson has more than 30 years of in-the-field experience and brings his working knowledge as a former building inspector to this session. He has also done the electrical wiring of several residential structures. He will discuss wiring receptacles, switches and other parts of a residential electrical system along with the fire-causing implications of that wiring.

*Fire Findings*’ electrical expert, **Nathan Dwyer, B.S.E.E.**, has conducted hundreds of electrical examinations at fire scenes and is intimately familiar with residential wiring and electrical fire causation. Dwyer will address how electrical fires occur and how to interpret evidence of electrical involvement.

## Settle in and make yourself at home

Both days start with a deluxe continental breakfast at 8 a.m. and include snacks and sodas anytime. Lunch is provided the second day. The seminar starts at 8:30 a.m. and ends at 4:30 p.m. both days. Testing and presentation of certificates conclude the session.

### **Who should attend ‘Residential Electricity?’**

- ✓ In-the-field fire investigators.
- ✓ Fire and police department investigators.
- ✓ Those in the industry who need to expand their knowledge of electrical fire causation.

### **Why attend?**

“Residential Electricity for Fire Investigators” will broaden your understanding of electrical systems and further your ability to interpret evidence of electrical fire causation.

In addition, the knowledge you take back to the field is aimed at assisting you with determining whether electrical energy can be ruled in or out as the cause of a fire.

You’ll also see dozens of practical demonstrations, all targeted to enhance your working knowledge of electrical systems.

### What you get

Your \$595 tuition to the *Fire Findings'* seminar, "Residential Electricity," includes:

- ✓ 2 full days of intensive, in-lab, hands-on instruction.
- ✓ Live demonstrations.
- ✓ Hands-on experience wiring basic residential wiring circuits.
- ✓ Practice tracing wiring, diagramming wiring and interpreting the implications of damage to it.
- ✓ 1-year subscription to *Fire Findings* newsletter (a \$53 value).
- ✓ Deluxe continental breakfasts both days; snacks and sodas anytime and lunch the second day.
- ✓ Answers to your questions about electrical wiring and potential failures.
- ✓ A certificate recognizing your participation.
- ✓ Optional CFI testing and CEUs available.

## Easy Registration for 'Residential Electricity' Two sessions only! April 7-8, 2010 or May 12-13, 2010



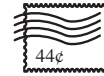
**Fax**

your completed enrollment and credit card or government voucher number to 269-925-2204.



**Phone**

for information and openings, 269-925-2200.



**Mail**

this completed enrollment to: *Fire Findings L.L.C.*  
P.O. Box 8637  
Benton Harbor, MI 49023-8637.

### Who will attend?

Name \_\_\_\_\_

Title \_\_\_\_\_

Organization \_\_\_\_\_

Street \_\_\_\_\_

City/State/ZIP \_\_\_\_\_

Ph \_\_\_\_\_ FAX \_\_\_\_\_ E-mail \_\_\_\_\_

Years of experience in fire investigation \_\_\_\_\_

Number of hours of origin/cause investigation classes \_\_\_\_\_

Brief description of your present career responsibilities \_\_\_\_\_

#### Only two sessions scheduled for 2010.

April 7-8, 2010     May 12-13, 2010

#### How do you prefer to pay your tuition?

Check enclosed     Government voucher or purchase order enclosed  
*Please make payable to Fire Findings, L.L.C. (Fed ID # is 38-328-2454)*

Bill my credit card (*check one*)     MasterCard     Visa     Discover

Card # \_\_\_\_\_ Code \_\_\_\_\_ Exp. date \_\_\_\_\_  
(3-digit security code on the back of your card)

Cardholder name (*please print*) \_\_\_\_\_

Cardholder signature \_\_\_\_\_

#### Hurry! The residential electricity class is limited to 45 registrants.

For more information and seminar openings, call us at (269) 925-2200, e-mail [info@firefindings.com](mailto:info@firefindings.com) or fax (269) 925-2204. **\*\*Note:** Please check seminar availability before making hotel, auto or flight arrangements.

#### Special lodging rates are available.

Call the *Holiday Inn Express - Benton Harbor* at (269) 927-4599 for a special rate of \$74 per night for double or king rooms. King leisure suites with pull-out sofa bed, microwave and refrigerator are \$94 per night. Add 8% tax. Free expanded continental breakfast and indoor pool and spa on site. This is a "first-come, first-serve" special rate, so make your reservations early. To get this rate, mention *Fire Findings* when making a reservation.

For a free visitor information packet and area maps, call the Southwestern Michigan Tourist Council at (269) 925-6301.