

TROUBLESHOOTING ELECTRICAL CIRCUITS

Troubleshooting Electrical Circuits (TEC) is the first in our core skills series of simulation-based training modules. In this module, your professionals will be introduced to The Simutech Training System, and learn to diagnose and repair **more than 30 faults** in a simulated electrical circuit consisting of lights, relays, switches, pushbuttons, and circuit protection.

This module is the foundation for learning how to troubleshoot. It is designed to allow professionals to learn and practice the critical skills necessary to troubleshoot electro-mechanical electric circuits, found in industrial and manufacturing settings such as manufacturing production lines, the petrochemical industry, utilities, and mining.

REALISTIC TOOLS AND REACTIONS

Troubleshooting Safety

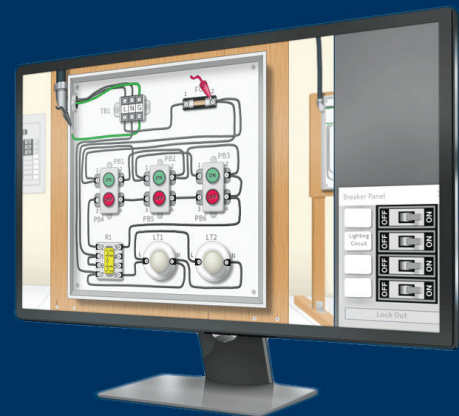
- Shock and Arc Flash hazards

Troubleshooting Techniques

- The Simutech Systematic Approach
- Using a multimeter
- Testing for opens and shorts
- Practice exercises

Troubleshooting the Lighting Circuit

- How it works
- Basic and Advanced faults
- All fault levels include Guided, Practice and Skill Test faults
- Extra and Genius faults available for skill maintenance



LEARNING OBJECTIVES

Your staff will:

- Learn a proven troubleshooting process with Simutech Multimedia's systematic troubleshooting approach
- Master effective testing methods and techniques for safely finding opens and shorts in electrical circuits
- Develop and refine troubleshooting skills with many hours of hands-on learning
- Troubleshoot more than 30 faults of varying difficulties

DESIGNED FOR

- Electrical, maintenance and manufacturing workers
- Skills that are directly transferable to the workplace
- Worldwide use: simulations on resources provided for NEMA standards

ADDED BENEFITS

- Demonstrations, hands-on labs, and continuous performance measurement
- Step-by-step guides help users apply new problem-solving techniques to find and repair faults
- Printable resources including circuit diagrams, schematics, and worksheets

THE SIMULATIONS FEATURES

4 instructional circuit simulations teach students how to find faults using a multimeter and apply these proven techniques.

The main lighting circuit simulation contains components typically found in electrical circuits, including fuses, push buttons, switches, relays, wiring, and lights.

Activities include:

- Lockout/tag-out the circuit
- Take voltage and resistance readings with a multimeter
- Repair and replace electrical components
- Disconnect and ring out wires
- Trace and replace wires

FEATURES

- 5 unique circuit simulations
- Real-time feedback on safe practices and testing methods

Lab exercises	6
Practice faults	4
Guided faults	2
Skill Test faults	12
Extra faults	8
Genius faults	4
Practice	Limitless

EVALUATING SKILLS

Managers can:

- Track skills development with comprehensive evaluations for each fault and overall individual performance
- Measure personal achievements in safety, accuracy, and efficiency
- Access all-inclusive reports that monitor progress, group achievements, and areas in need of improvement
- Print certificates upon conclusion of all skill test faults

TRUSTED BY OVER 500 COMPANIES AND 200 SCHOOLS GLOBALLY

