

INTRODUCTION

- Introductions
- Course outline and objectives.
- Address special interests and requests.
- Determine daily schedule.

UPS OVERVIEW

- One-line diagrams
- Operating modes – normal and emergency

SYSTEM INSPECTIONS

- Identify common components, meters and indicators, and I/O connections.
- Review safety procedures.
- Demonstrate normal and emergency operating conditions

BATTERY CHARGER BLOCK DIAGRAM

- Input transformer
- Bridge rectifier
- Control board

BATTERY CHARGER SCHEMATIC

- Charger theory of operation
- Identify components and their function
- Discuss alarm circuits, possible failure modes, and troubleshooting techniques.

INVERTER/STATIC SWITCH BLOCK DIAGRAM

- Input filter
- Inverter/static switch bridges
- Control boards

INVERTER/STATIC SWITCH SCHEMATIC

- Inverter theory of operation
- Identify components and their function
- Discuss alarm circuits, possible failure modes, troubleshooting techniques.

DOCUMENTATION

- Review charger, inverter, and static switch sections of the manual.
- Identify and discuss system drawings and bill of materials.

HANDS-ON PRACTICAL WORK

- Use test equipment to take measurements and display waveforms.
- Demonstrate troubleshooting techniques.
- Verify printed circuit board alignments.
- Communicate with equipment via PC and system software (where applicable).
- Troubleshoot faults in training systems.

WORKSHOPS

- Semiconductor removal and replacement.
- Circuit board alignment.
- Ferroresonant transformer characteristics.
- System output fault clearing with oscillographs.

CLASS COMPLETION

- Q&A
- Adjournment