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## Index

### 1. Network Theory

- a) Why in the network protector used in the system?
- b) Purpose of the protector fuse
- c) Purpose of cable limiters
- d) Basic function of the protector relay
- e) What causes reverse current
- f) What created differential voltage across the protector so it will close

### 2. Print Reading

- a) Review Trip and Close sequence for all type protectors.
- b) Identify the parts shown on the diagrams on the protector.
- c) Learn the differences between the GE and WH wiring.

### 3. Relays

- a) ETI MNPR® -- Learn how to program all parameters.
- b) Learn what happens when any parameter is changed.
- c) Learn how to use the MNPR® to help troubleshoot a protector.

### 4. Network Protectors

- a) General Electric MG8/9
  - i. Identify all components on the protector
  - ii. Break the protector down and reassemble.
  - iii. Use the wiring diagrams, schematics and MNPR® to find a problem created by the instructors.
- b) Richards 313NP
  - i. Identify all components on the protector
  - ii. Break the protector down and reassemble.
  - iii. Use the wiring diagrams, schematics and MNPR® to find a problem created by the instructors.

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## Schedule

### Day 1

8:00 – 8:30	Registration, Coffee & Doughnuts
8:30 – 9:00	Introductions, Network history & background information
9:00 – 10:00	Print reading – 137NP (GE MG8/9 protector)
10:00 – 10:15	Break
10:15 – 11:30	Protector overview – start taking apart the protector. Identify the items on the wiring diagrams on the protector.
11:30 – 12:30	Lunch
12:30 – 1:15	Protector overview continued.
1:15 – 1:30	Break
1:30 – 3:00	“Final Exam”. Use all available tools (schematics, MNPR®, multi-meters and anything else available) to find some instructor created problems.

### Day 2

8:00 – 8:30	Brief review.
8:30 – 9:00	Print reading – 313NP (Westinghouse CM22 style protector)
9:00 – 10:00	MNPR® class room training.
10:00 – 10:15	Break
10:15 – 11:30	Protector overview – start taking apart the protector. Identify the items on the wiring diagrams on the protector.
11:30 – 12:30	Lunch
12:30 – 1:15	Protector overview continued with MNPR® hands on training.
1:15 – 1:30	Break
1:30 – 3:00	“Final Exam”. Use all available tools (schematics, MNPR®, multi-meters and anything else available) to find some instructor created problems.