

## Training and Education Department Training Course Description



### Course Name

Cellcorder CRT-300/400 Training

### Course Length

1 Day

### Delivery Options

Customer site

### Course Description

This course provides the student with a brief lesson on the background of cell resistance measurement technology and compares Alber's method to other measurement technologies to illustrate the superior measurement accuracy and repeatability of the instrument. The instructor provides the class with an introduction to the instrument, its specific functions, battery connection and measurement procedures for various battery types the user may encounter. Discussions focus on specific attendee situations they experience with their own make and model battery systems.

Hands-on lab exercises are performed by all students that reinforce knowledge the knowledge the student acquired in the classroom environment. Upon completion of all lab exercises, students return to the classroom, where they will learn the process and procedures required to successfully transfer the readings taking with the Cellcorder to a personal computer. A lesson on the use of the Battery Analysis System software is also provided so the student may begin using the instrument and software together upon return to their facility. Each student is provided with a complete set of handout materials. Electronic certificates of completion are provided to all students completing the course.

**Training and Education Department  
Training Course Description**

**CRT-300/400 Cellcorder Training Outline  
Course Time – 1 day**

**Lead-Acid Battery Ohmic Resistance Background**

1. Understanding cell resistance
2. Measurement methods
3. DC load test methods
4. Detection of cell problems
5. How resistance affects cell performance
6. Evaluating problems
7. Industry recommended practices

**Hardware**

1. Product Overview and Description
  - a. Instrument purpose
  - b. Features and benefits
  - c. Limitations
2. User Screens
  - a. Setup
  - b. Configuration
  - c. Thresholds
3. Test probes description and use
  - a. Two lead probe sets
  - b. Three lead probe sets
4. Loading site data to the Smart media or USB memory devices
  - a. Via CRT-300
  - b. Via Configuration editor
5. Making Measurements
  - a. Cell resistance
  - b. Connection resistance
  - c. Cell voltage
6. Analyzing Data on the Cellcorder
  - a. Min., Max., Avg. analysis function
7. Downloading Data
  - a. Smart Media card/USB memory stick use

## Training and Education Department Training Course Description

### **CRT-300/400 Cellcorder Training Outline (continued)**

- 8. Cellcorder Care
  - a. Battery charging
  - b. Cleaning
  - c. Calibration requirements
  
- 9. Bluetooth Communication Option
  - a. Pairing a BT device with the CRT-400
  - b. Using a BT earpiece
  - c. Using BT with an enabled PC for data transfer

#### **Battery Analysis Software**

- 1. Primary Functions of the Software
- 2. Software Overview – Data Storage
- 3. Software Overview – Report Files
- 4. Downloading Data from the Cellcorder to a PC
- 5. Details-Downloading Data
- 6. Saving the Downloaded Data
- 7. Creating the Folder Tree on a PC
- 8. Saving the Downloaded Data
- 9. Downloading Data from the Hydrometer
- 10. Identifying the Battery
- 11. Navigating Through the Battery Analysis Software
- 12. Viewing Data
- 13. Trending Data
- 14. Comparing Data
- 15. Thresholds and Alarms
- 16. Generating and Printing Reports