

Battery Capacity Test System



*Storage Battery Test Equipment
“for Experts...from the Experts!”*

Albér corp.

Albércorp.

Albércorp invented the first fully automated Battery Capacity Test System in 1974 and has been the leader in this field ever since. Commonly referred to as "The Battery Test Experts," Albércorp's visionary technology continues to set the standards for battery testing. Our customer training programs and battery seminars have trained thousands of people all over the world on how to test batteries. We pride ourselves in "Doing Things Right" and have earned a reputation for quality equipment and excellent service.



Battery Testing

The only guaranteed method for determining a battery's capacity as well as its ability to perform its intended mission is to perform a load test. The recommended load testing intervals and procedures are defined in IEEE standards. The recommended procedure calls for a battery test that simulates the actual load condition present during an emergency outage. While the battery is being loaded, all parameters such as cell voltages, test current and overall voltage must be continuously monitored and recorded.

The Albércorp Test System is the only fully automated system for large storage batteries that can be programmed to simulate constant or varying load conditions, while providing high-speed data logging on all parameters.

For any guidance on how to properly test a battery, please feel free to contact Albércorp's technical staff.

System Description

The BCT-2000 is the most advanced computer-based test system in the world. The hardware has been proven in every conceivable Lead Acid and Nickel Cadmium battery application. The controlling software is a user-friendly Windows based applications program.

The test system can be used to perform the following type of load tests:

- Constant current: Standard capacity test measuring Amp-hrs removed
- Constant power: Standard capacity test measuring Kilowatt-hrs removed
- Load profile: Applies the test load exactly the same way as the real application. User programs load versus time.
- Rundown using actual load: Date-logs battery performance under actual load conditions
- Integrity: Momentary load test to check for conduction path problems and gross cell failures.

During the load test, every cell voltage, overall string voltage, test current and intertier voltage drop is

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measured and compared to user programmed alarm levels. Overall voltage and test current are measured once a second, and the other parameters are updated every four seconds.



Data is stored automatically to the hard drive every time a significant deviation takes place. (See specifications.)



Hardware

The capacity test system, as shown in the above diagram, consists of the following three modules:

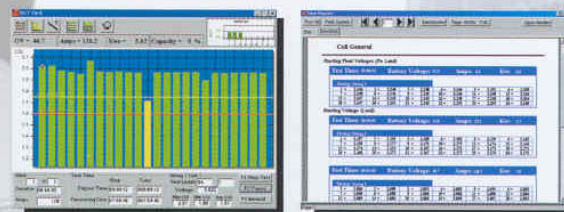
1. Controller: A standard Laptop PC configured and programmed specifically for this application.

2. Data Acquisition: This module, which connects to all the individual cells and the load module, continuously scans and records all the battery parameters.
3. Load Module: The load module is a resistive load bank that is configured for a specific range of voltages and currents. The customer selects an appropriate module from our standard or custom designed units.

Software

Albercorp's fully automated Battery Capacity Test System, with its easy to use software, plus our 30 years of test experience have produced the type of tests and reports you can depend on.

1. A real time display of all cells being tested. A bar graph display readily identifies the status of the cells, making it easy to spot the failing ones.



1. Real Time Display
2. Complete test programming: A simple fill-in-the-blanks setup screen, with online help for each entry.
3. Dual level alarms: Warning level and shut down level.
4. Built-in testing and hardware diagnostics.
5. Data Conversion: Converts older BCT system files to new format.
6. Report Generator: Customer configurable reports, including graphs and failure analysis.
7. Calculates capacity.

Visit www.alber.com for more product information

Specifications

Electrical

Input	Number of Channels	Range	Accuracy
Cells	Up to 256	0 to 20V	0.1% of reading \pm .01V
Overall Volts	1	0 to 600V	0.1% of reading \pm .2V
Current	1	0 to 4000A	0.1% of reading \pm 1AMP
Power Consumption:	BCT-2000/128 – 65 Watts Maximum BCT-2000/256 – 75 Watts Maximum		
Voltage:	120 VAC 60HZ or 220 VAC 50HZ		

Alarms

Alarms	Warning	Shutdown
Cell	0 to 20V	0 to 20V
Overall Volts	0 to 600V	0 to 600V
Current	N/A	Failure to control within 20 seconds
Intertiers	0-2000 mV	N/A
Hardware	N/A	Immediate

Data Logging

Input	Data Points stored at reading changes of
Cell	5 mV
Overall Volts	200 mV for std; 500 mV for charger
Current	200 mA for std; 500 mA for charger
Intertiers	10 mV

Dimensions

	Wide	Deep	High	Weight
BCT-2000/128	12.265"	15.75"	6.54"	27 lbs.
BCT-2000/256	21.020"	17.75"	6.54"	38 lbs.

Warranty

Full one year from date of purchase

*Specifications subject to change without notice
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