Vendor: Arbin Instruments  
Instrument: Battery Tester – Model BT2000

BT2000 has multiple, independently controlled, potentiostat/galvanostat channels, so different tests can be run on different channels simultaneously. The software package MITS-PRO uses a distributed system control and DAQ for automatic or manual maintenance and calibration, and also mathematic filters to reduce the fluctuation of current and voltage.

The BT2000 model at CNSE currently has 12 channels with a voltage range of -2V to 5V. Eight channels can provide a maximum charge/discharge of 1A, current ranges of 1A/1mA/1μA and a maximum channel power of 5W. Four channels can provide a maximum charge/discharge of 10A, current ranges of 10A/1A/0.1A and a maximum channel power of 50W. Up to four channels may be added if required to provide additional functionality or enhance existing capabilities.

Scanning Techniques Available
- Battery cycling
- Electrochemical experiments ranging from cyclic voltammetry to corrosion testing
- Voltaic testing such as general electrochemistry R&D techniques, industrial R&D, production and quality control

Property Determination
The equipment has all types of necessary control functions to test all types of battery chemistry for performance characteristics in terms of constant current/voltage, current/voltage ramps, current/voltage staircases, current/voltage pulse, current/voltage simulation, internal resistance/impedance, capacity rate, power, load and any other profile based on current/voltage through the “function” feature.

Example Data
Graphical and spreadsheet view of test data for different control types including: current, voltage, ramps, staircases, C-rate.

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