

# MODEL BVS-S4 BATTERY VALIDATION SYSTEM

**BTECH** Battery Validation System BVS - S4



**NO CONDUITS REQUIRED**  
○  
**COLOR-CODED MULTI-WIRE  
CABLE HARNESS**  
○  
**FOLD-DOWN CONTROL PANEL**  
○  
**117VAC POWERED**

The BTECH Model BVS-S4 is designed and manufactured exclusively for cabinet mounted battery systems. The unit incorporates all the same operating characteristics as the BTECH Flagship Model BVS-S3. The BVS-S4 design virtually eliminates any requirements for external battery wiring harnesses and conduit runs.

## ***Model BVS-S4 Designed for Cabinet Batteries***

The BVS-S4 Battery Validation System is designed to mount directly on top of an existing battery cabinet. The control portion of the system will fold-down in front of the battery cabinet for easy access by the operator and fold-up “out-of-the-way” when access to the battery cabinet is required. The wire harness from the S4 for monitoring the individual battery cells/jars is completely inside the cabinet which provides an extremely easy installation procedure.

The S4 offers the same powerful monitoring techniques that the BVS-S3 system with up to 256 individual connections that are provided in increments of 16 and a maximum of 6 cabinets in parallel for a 30-12V jar system and 5 cabinets for a 40-12V jar system. The system will monitor most battery chemistries and they can be flooded or VRLA; 2 to 12 VDC units.

The system will accurately measure individual internal cell impedance and connection resistance, individual cell voltages, system voltage, ambient temperature and pilot cell temperatures. The monitor also captures and monitors battery discharge voltages and currents.

The BVS-S4 features automatic test and data acquisition with user programmable test intervals. Also included are local and remote alarm features for any out-of-limit conditions for unit voltage, impedance, system voltage, temperature, loss of AC power and battery discharge.

The BVS Observer, with the auto-polling capability, and the BVM (Battery Validation Manager) Software captures, archives and reports the measured data. Data reports can be viewed, graphed, printed and auto-analyzed. This data will provide information about the internal health of the battery.

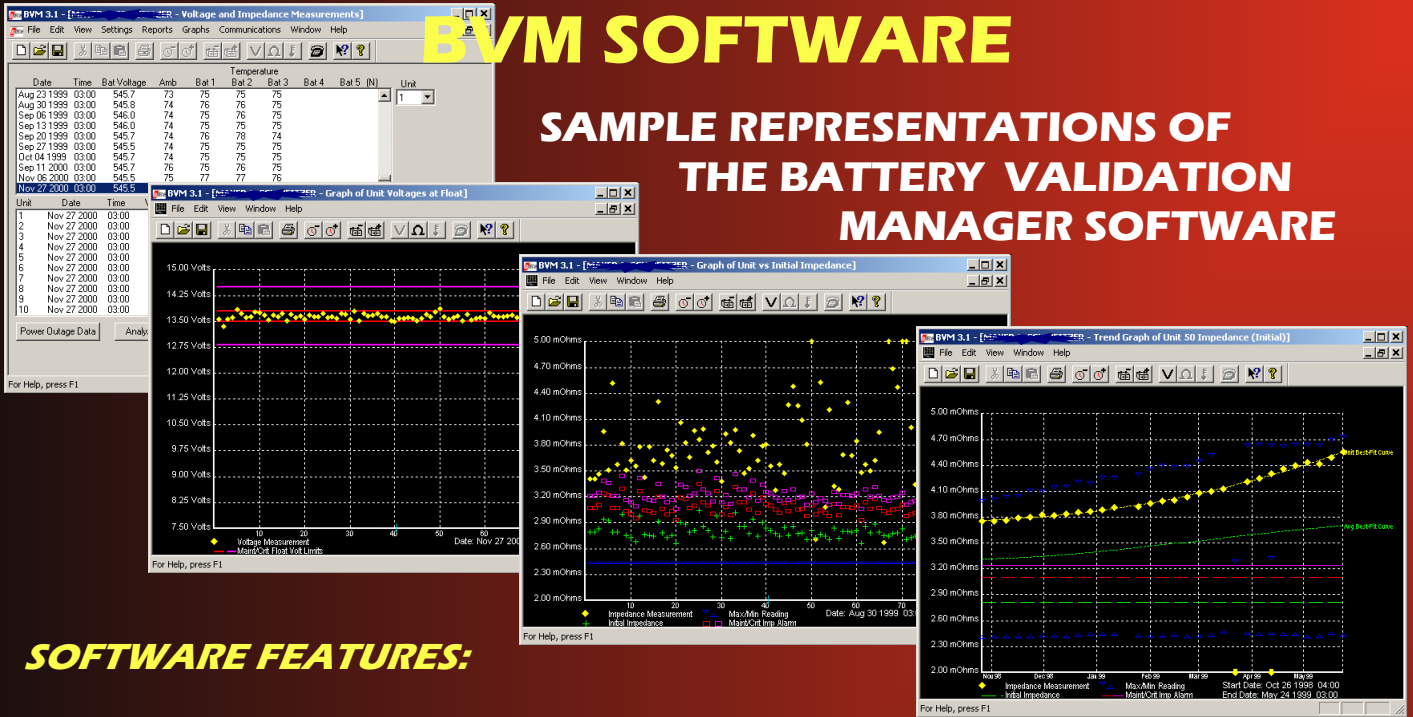
The BVM Software Version 3.x is designed to run on Windows® based systems from 9.x, ME, NT4, 2000 and XP.

### ***SYSTEM FEATURES:***

- Individual Internal Cell/jar Impedance Monitoring.
- Connection Resistance Measurement.
- Ambient and up to 3 Pilot Cell Temperature Monitoring.
- Battery Discharge Data Logging.
- Automatic Remote & Local Data Acquisition.
- Operator Programmable Test Intervals and Test Measurement Parameters.
- Out-of-limits Alarms for:
  - Unit Impedance & Voltage*
  - System Voltage*
  - Temperature*
  - Power Outage*
- Internal Battery Backup for Maintaining Monitor Operation During Power Outages.
- Battery Voltage, Current and Cell Voltage Performance During a Discharge.
- Choice of Communication Options.
- An Interactive Battery View that shows an actual battery layout pin-pointing battery health at a glance by utilizing a green, yellow and red color code and the exact location within a battery string.

# BVM SOFTWARE

## SAMPLE REPRESENTATIONS OF THE BATTERY VALIDATION MANAGER SOFTWARE



### SOFTWARE FEATURES:

- Captures, archives, reports and graphically displays data by location, date and unit (cell/jar) number.
- Displays voltage and impedance trends.
- Automatically polls multiple BVS monitors.
- Automatically receives, displays and resets alarms.
- Alarms can be generated on set-point or predictive slope.
- All measured parameters are automatically analyzed.
- Displays discharge events and relative data such as voltage, current and KW performance.
- All BVS settings can be controlled and changes either remotely or locally.
- Provides password protection for changing any setup parameters.
- Provides the ability to import a battery bitmap for observing battery alarm status at a glance.
- On-line help screens will guide the user through the operation of the system and software.

### SPECIFICATIONS:

- Maximum 256 cells and 1 to 6 Paralleled Cabinets
- Maximum String Voltage 600VDC
- Impedance Test Current: 10 Amps RMS (Patented)
- Operating Temperature: 32°F to 130°F (0°C to 55°C)
- AC Power Requirements: 100/240VAC, 50/60 Hz, 0.6A
- Communication Options:
  - Telephone Modem
  - Short-haul Modem
  - Ethernet
- Voltage Sense Lead Fusing: 1/16 Amp
- Impedance Load Lead Fusing: 9 Amp
- Battery Drain During Impedance Test is 0.1 mAh per cell
- Measurement Resolution:
  - Battery Voltage: 0-600VDC +/- 100mV
  - Cell Voltage: 0-16VDC +/- 10mV
  - Impedance: 100μΩ-10mΩ +/- 0.01mΩ
  - Temperature: 32°F to 130°F +/- 1°F
- Programmable Intervals: 1-99 Days between test cycles  
1-30 Min during power outage

### BTECH SERVICES:

BTECH offers a complete system installation and start-up. BTECH also offers a Site Polling Center that provides the customer with weekly and 24x7 surveillance service on their battery sites.



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