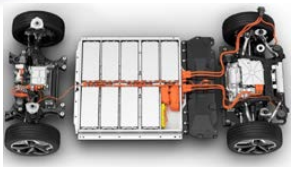
BZA500M

High Voltage Multichannel Battery Impedance Analyzer

- Impedance measurement of battery, battery pack & ESS (energy storage system)
- DC voltage measurement up to max 500V
- Quick diagnosis of batteries
- Impedance analysis software (ZMAN)
- Cell temperature monitoring
- Expandable up to 32 channels

The BZA500M Multichannel Battery Impedance Analyzer is designed to measure battery impedance, dc voltage and battery temperature.

- Max. Voltage : 500V
- Impedance measurement range : 500uΩ ~ 50Ω
- Up to 32CH BZA500M run from one PC
- Application : Battery pack in EV scooter, EV battery pack, ESS battery, Fuel cell stack, Redox Flow Battery(RFB)



Floating

With the multi-channel equipment of floating structure, the impedance can be measured at the same time.
It can be measured in the state of battery module or pack with no necessity of separate disassembly.

Cell Measurement

The each channel can be controlled independently or simultaneously.

Rapid Test

As many cells can be measured at the same time, the impedance measurement time per battery can be reduced.

High Density

The detailed data density measurement, it could be used for both QC and development.

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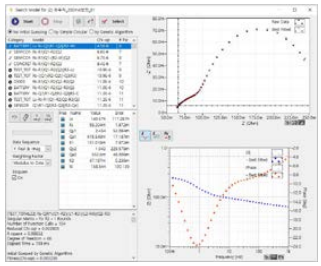
Compact Size

It is compact size as multi-channel system, weight is 9 kg(4ch). Easy USB 2.0 connection to a PC.

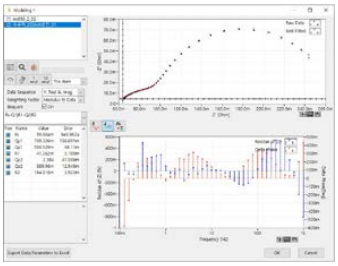
Impedance Analysis Software (ZMAN)

Automatic equivalent circuit searching and various impedance analysis functions are possible using ZMAN impedance analysis software.

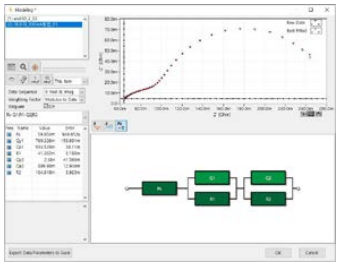
ZMAN™ 2.5 Created by ZIVE LAB



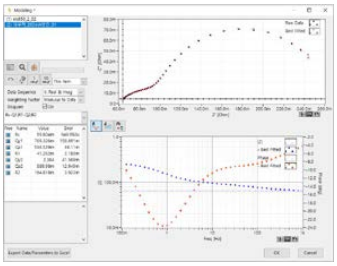
Automatic Model Searching



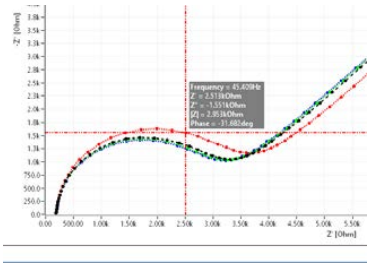
Fitting display



Modelling

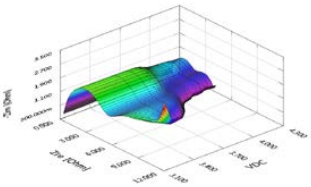


LEVM fitting



Cursor data display

Model editor & model library



3D plot

Cell Cable

The cell cables for the BZA500M have been optimally designed for impedance testing of high voltage.

CATIII 1000Volt cell cable with standard 1000Volt alligator clip

Accessories

The several accessories to help you with your research. The following optional accessories are available.

- Low impedance cable
- Cell cable modification
- Large alligator clip - ①
- Pt100 Temperature sensor
  - wire type - ②
  - tablet type - ③
  - sheet type - ④
- High current cylindrical battery holder - ⑤
- 1 cell universal Jig - ⑥
- 1 cell pouch jig - ⑦
- Kelvin type small alligator clip cable (1M) - ⑧
- Kelvin type large alligator clip cable (1M) - ⑨

① ②

③ ④

⑤ ⑥ ⑦ ⑧ ⑨

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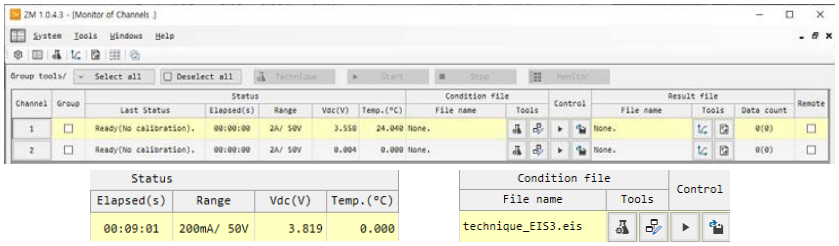
Available Techniques

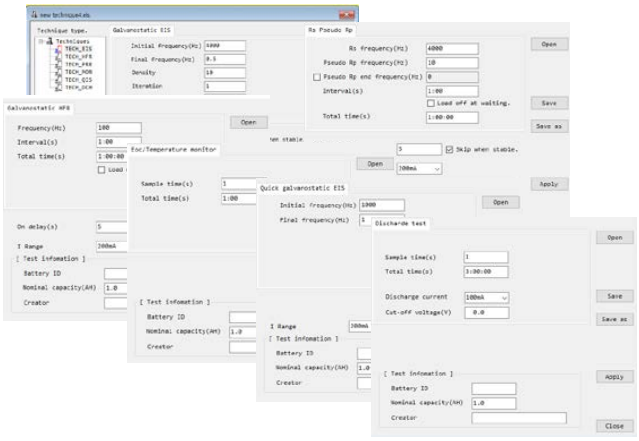
- Galvanostatic Electrochemical Impedance Spectroscopy
- Rs-psuedo Rp measurement
- High Frequency Resistance measurement (HFR)
- Eoc - Temperature monitor
- Quick galvanostatic EIS for screening
- Constant current Discharge test

Software

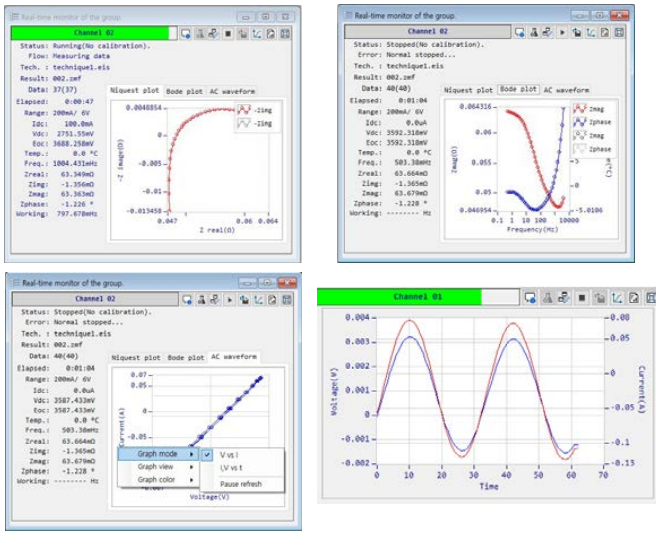
- Independent examination from the PC is available after the test starts.
- A various scope of parameters for the test is adjustable that are used in the test.
- Even if you lose connection of BZA and PC, if the device is powered on, the device will continue experiment.
  Memory can be saved after the connection recovers.
- Data is saved in the form of binary format that is compatible with the ZMAN software thus can be transformed into the text (CSV, TXT).



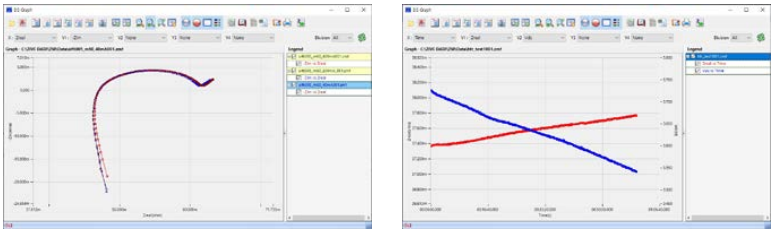
Control Screen



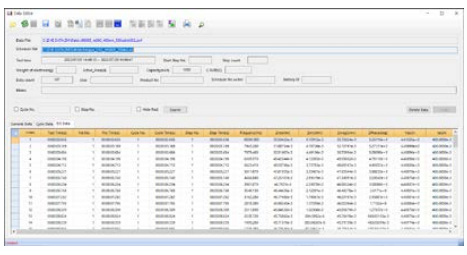
Technique selection & Parameter Input Box



Real time plot and data monitoring



Graph function



Report function

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BZA500M Specifications

* All specifications are subject to change without notice.

Impedance Measurement	
Measurement range	500uΩ ~ 50Ω
Accuracy	±1% magnitude (1mΩ - 50Ω) ±1° phase
Frequency range	0.05Hz ~ 10kHz
Current amplitude (p-p)	400uA ~ 2A
DC Voltage Measurement	
ADC resolution	24 bit
Input range	500V/50V (dual range)
AC Voltage Measurement	
ADC resolution	24 bit
Input range	±250mV
AC Current Measurement	
ADC resolution	24 bit
Current sensing resistors	4ea (2A, 200mA, 20mA,
Sinewave Generator	
Frequency range	0.05Hz ~ 10kHz
Frequency accuracy	< 0.1%
Frequency resolution	65535/decade
DAC resolution	10 bit
Output gain	2ea (x1, x0.2) total 8 current ranges (2A, 400mA, 200mA, 40mA, 20mA, 4mA, 2mA, 400uA)
Temperature Measurement	
Input	RTD probe (PT100)
Accuracy	Max 1°C
Communication	
Interface	LAN communication
Dimensions	
Size	270x309x302mm (WxDxH), 4ch/housing
Weight	9kg

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