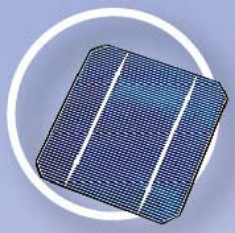
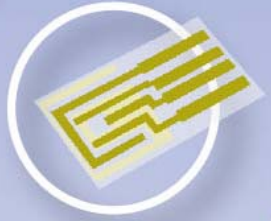
Product Catalog

ZIVE ZCON

Impedance Monitor

Using external Electronic Load
or External Potentiostat/Galvanostat





For
Batteries/Fuel Cells
Super Capacitors/Solar Cells
Corrosion
Material Testing
Sensor/BioElectrochemistry

WonATech

Feature

- For versatile AC impedance experiment using external electronic load or potentiostat/galvanostat
- 2 signal input channel(current and voltage)/1 signal output for sinewave
- A flexible frequency generator/analyzer
- Generate various waveforms (e.g. Sinusoidal etc)
- Designed for spectrum analysis in the electro-chemical field
- Simulation and fitting with ZMAN™
- High current application with external load and/or potentiostat/galvanostat
- Software controlled function
- Graphic-based user-interface
- Dual real time graph (Bode, Nyquist, etc.) during measurement
- Free analysis using ZMAN impedance analysis software without license code

Zcon™ impedance analyzer is a spin off model from Z# multichannel impedance monitor. This model is for single channel application only.

Zcon™ provides all tools for the application of fuel cell stack, battery pack, and general electrochemical study requiring EIS measurement using external electronic load or potentiostat/galvanostat.

By employing electronic load, Zcon™ can be used to determine the efficiency of fuel cell and anodic/cathodic process mechanisms by calculating impedance with the measurements of I and E at given frequency.
The complete system is software-controlled and all functions such as ranging, calibration, and measurements can be automated.

Supporting external load / potentiostat

- TDI dynaload RBL488 series
- WonATech WEL Load
- ED2 potentiostat/galvanostat
- 3rd parties potentiostat/galvanostat

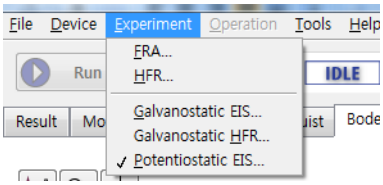
Other models might be needed to set some parameters by manually.
Please contact with your regional distributor about other 3rd parties products' availability with Zcon™

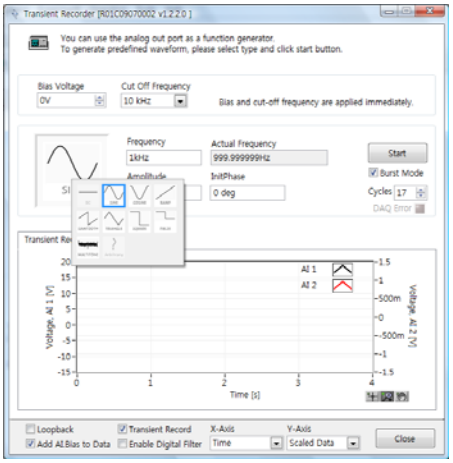
Software (Z100 Navigator)

Z100 navigator is Zcon™ control software. This can be used with external potentiostat/galvanostat or electronic load by setting for impedance measurement or waveform generator.

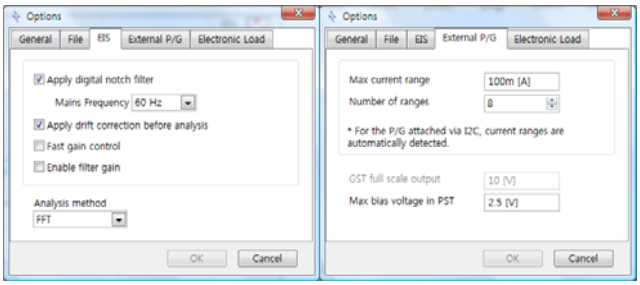
List of impedance techniques with Zcon

- Frequency response analyzer (FRA)
- High frequency resistometry (HFR)
- Galvanostatic electrochemical impedance spectroscopy (GEIS)
- Galvanostatic HFR (GHFR)
- Potentiostatic EIS (PEIS)

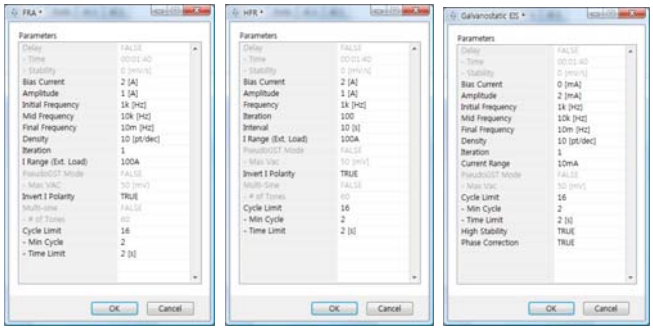




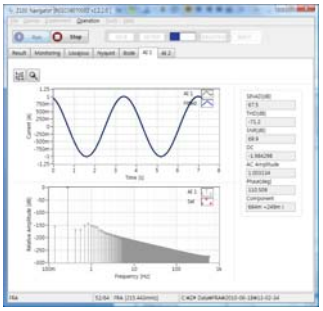
Transient recorder (waveform generator)
DC/Sine/Cosine/Ramp/Sawtooth/Square/Triangular/Pulse/ Multi-tone/ Arbitrary



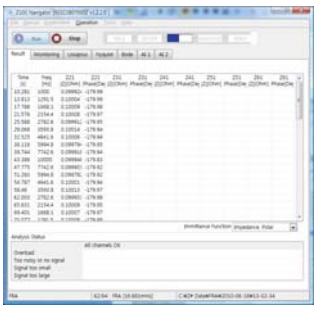
Environment setting menu



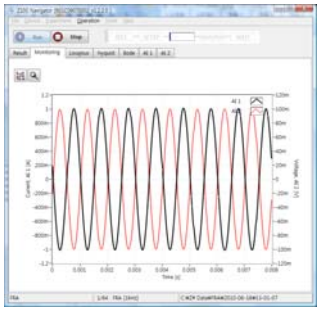
Parameter setting for each techniques



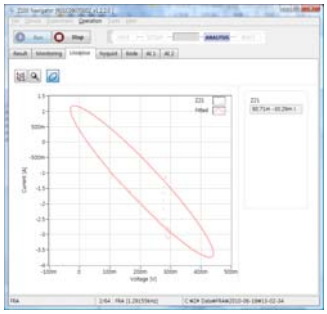
AC Signal Input (power spectrum)



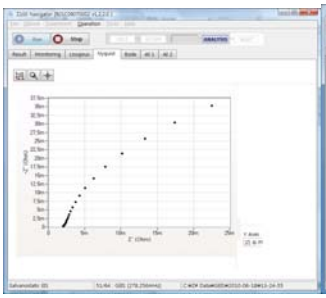
Result



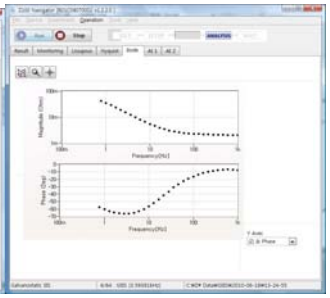
Monitoring



Lassajous plot



Real time Nyquist plot



Real time Bode Plot

- **ZMAN™ will be supplied for analysis of Zcon data at free of charge. Please refer to ZMAN introduction**.

System Configuration

Hardware(controller), software, USB cable, Power adapter

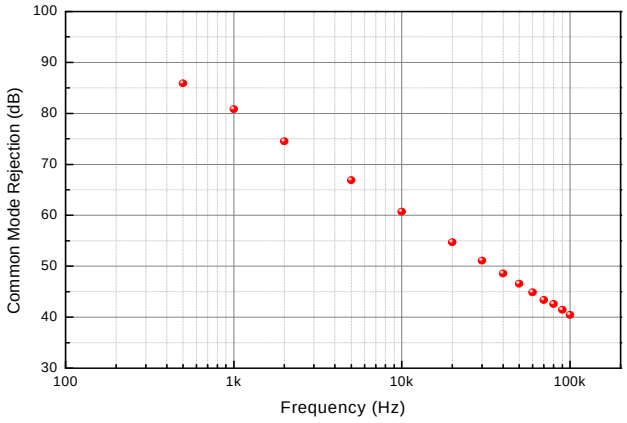
Specification

Analog Out	**as Signal Generator**	
# of channels	1	
configuration	Single-ended	
Maximum output	-11.0 to +11.0 V (DC + AC)	
Voltage offset	< 0.5 mV, software corrected zero	
DC bias	Range	Resolution
	0.0 to 5.0 V	0.076 mV
	0.0 to +10.0 V	0.153 mV
	-5.0 to +5.0 V	0.153 mV
	-10 to +10.0 V	0.305 mV
	-2.5 to +2.5 V	0.076 mV
	-2.5 to +7.5 V	0.153 mV
AC waveform		
Predefined type	DC, Sine, Cosine, Ramp, Sawtooth, Triangle, Square, Pulse, Multi-tone	
Frequency range	1 uHz to 100kHz resolution: 5000 steps/decade	
Frequency accuracy	Typ. 75 ppm, Max ±200 ppm	
Frequency stability	< 2 ppm @ 1 kHz	
	< 20 ppm @ 10 kHz	
	< 200 ppm @ 100 kHz	
	< 2000 ppm(0.2%) @ 1 MHz	
Amplitude	1 mVpp to 2 Vpp	
Post-gain/attenuation	-44 dB to +40 dB with 6 dB step, automatic gain selection	

Reconstruction filter	10 to 150 kHz 8th order low pass filter with 10kHz step or By-Pass
Gain error	< 0.5 %

Analog In as Frequency Analyzer

# of channels	1 for current input and 1 for voltage input
configuration	Differential
Max. common mode voltage	±100 V(ZconH) ±10 V(Zcon)
Voltage offset	< 0.5 mV, software corrected zero
Bandwidth	550 kHz
Input impedance	110 kOhm
Pre-attenuation	-20dB (×0.1)
Post-gain/attenuation	-44 dB to +40 dB (×100) with 6 dB step or ×200, ×400, ×800, ×1600
Anti-aliasing filter	10 to 150 kHz 8th order low pass filter with 10 kHz step or by-Pass
CMRR	> 80 dB @ 1 kHz, > 60 dB @ 10 kHz, > 40 dB @ 100 kHz (refer to the below graph)



Expansion Ports

I2C in & out	Reserved for future

General

Interface	USB 2.0 high speed
Power	External 50W AC-DC adapters, +5/+15/-15VDC with AC Input of 100 to 240V, 2A, 50/60 Hz
Operation condition	0 to 50 °C, 0 to 90% humidity (non-condensing)
Warranty	1 year parts and labor on defects in materials and workmanship

Designed by

ZIVE LAB

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