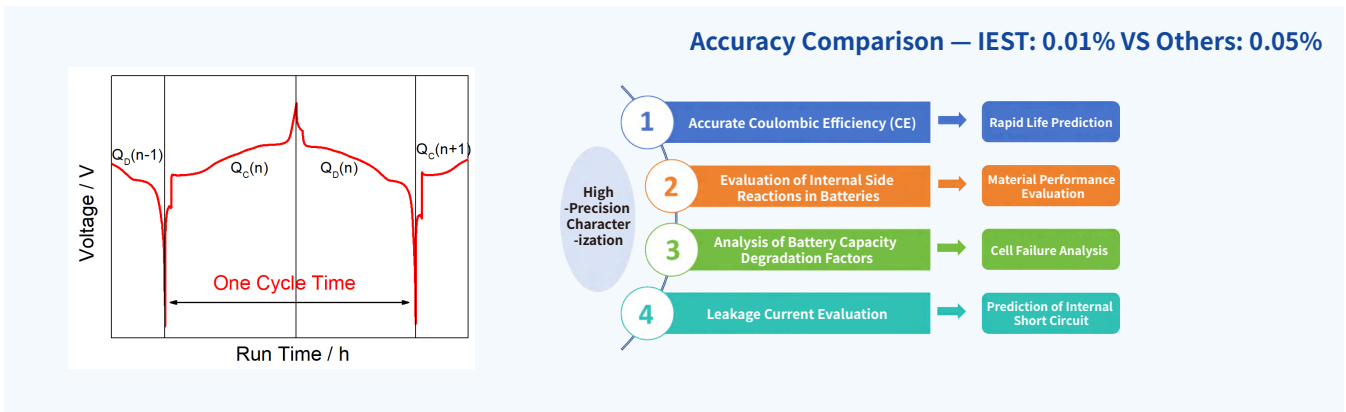


Electrochemical Property Analyzer

● ECT Series ● ERT Series

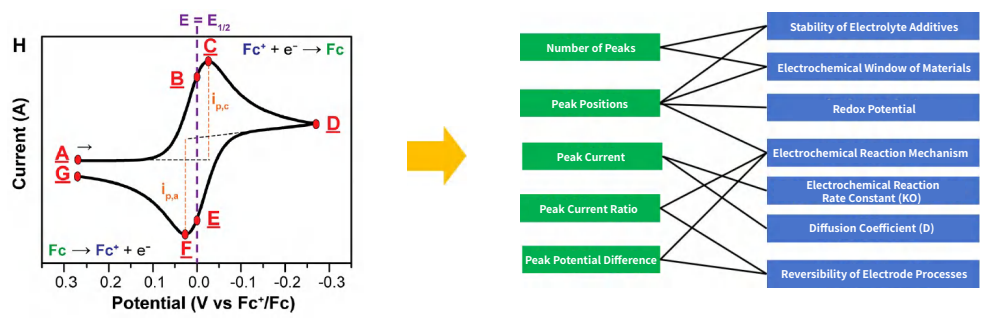


1.High-Precision Current & Voltage Testing

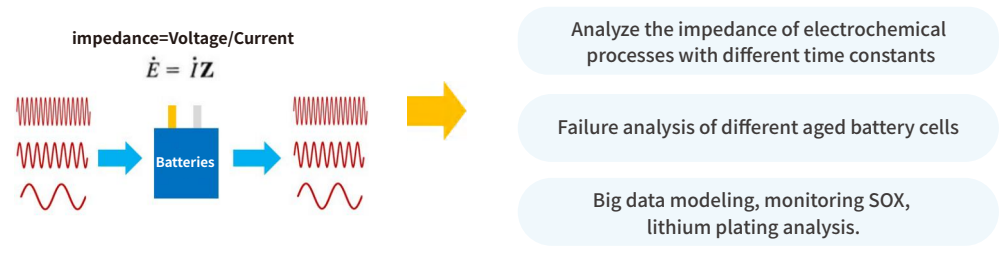


The 0.01% testing accuracy can precisely measure the specific capacity of new materials and detect subtle side reactions during the initial stages of battery cycling. This allows for a comprehensive performance evaluation and lifetime prediction of the battery in a short period.

2. CV&EIS



Cyclic Voltammetry (CV) is an electrochemical method that applies a linear voltage sweep to an electrode and records the current response. It analyzes reaction kinetics, measures redox potentials, studies electrode mechanisms, and evaluates material activity. CV provides qualitative and quantitative information, useful for quickly screening and assessing electrode materials.



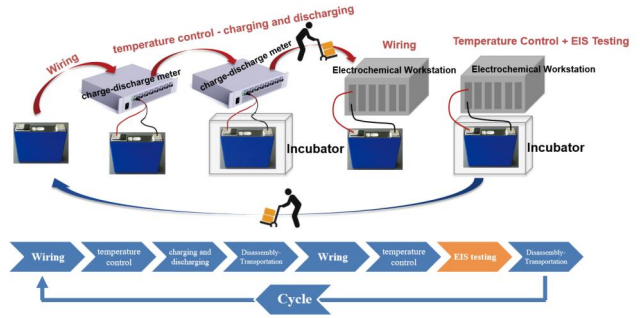
EIS applies a small AC signal to measure a battery's impedance at different frequencies. It studies electrochemical processes, evaluates materials, monitors battery health, and analyzes aging mechanisms, providing detailed system information.

Integrating CV and EIS functions to meet customer needs for electrochemical testing

3. CV&EIS + Battery Cycler

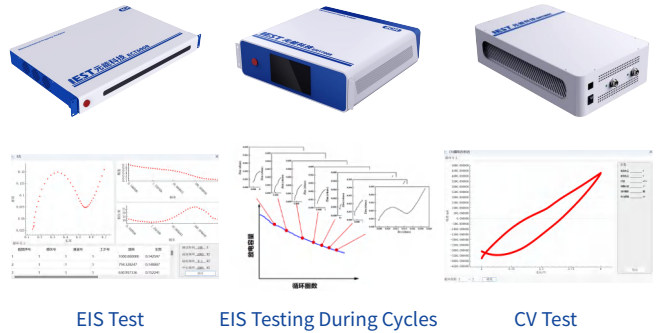
Traditional methode

Disadvantages: Time-consuming handling and excessive human interference.



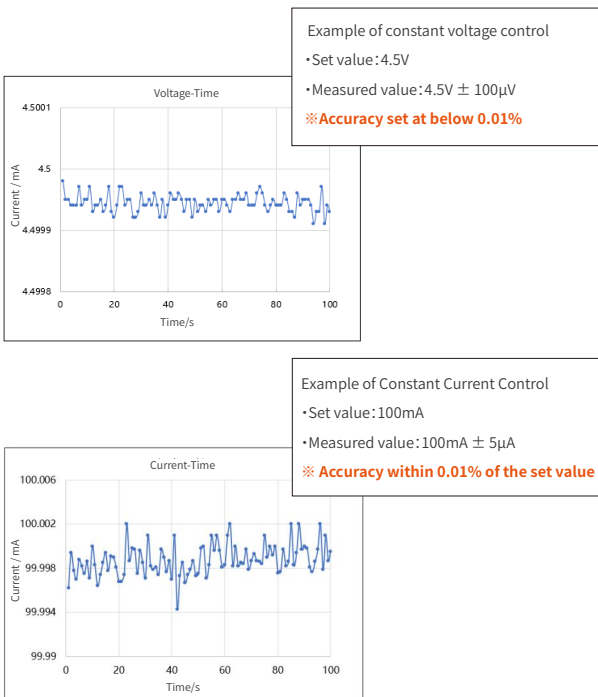
IEST Methode

Advantages: Single wire connection, integrated test-steps setting.



Minimize wiring, handling, and temperature adjustments, streamline operations

4. IEST Innovative Solutions

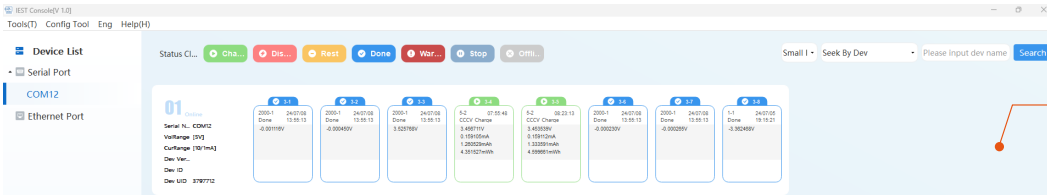


ECT & ERT Series Products

Product	Test Items	Function
ECT/ERT All Series	Constant current, constant voltage, constant power, constant resistance, rate mode, etc.	Conventional charging and discharging functions
ECT/ERT All Series	Capacity-cycle curve, dQ/dV curve, dV/dQ curve, etc.	Study the relationship between the diffusion process of matter and charge transfer
ECT/ERT All Series	PITT, GITT, DCIR	Study the relationship between the diffusion process of matter and charge transfer
ECT/ERT All Series	CA, CP	Record the change of potential/current with time under constant current or constant voltage
ERT All Series	CV, LSV	Apply linear voltage and record current-voltage curve
ERT-6Series/ERT-7Series	EIS	Study the relationship between electrochemical impedance and frequency

Equipped with a 24-bit ADC and 16-bit DAC, achieving high-precision voltage and current control and testing.

5. Rich Software Testing Functions



Real-time data display of each channel

Charge and Discharge Steps

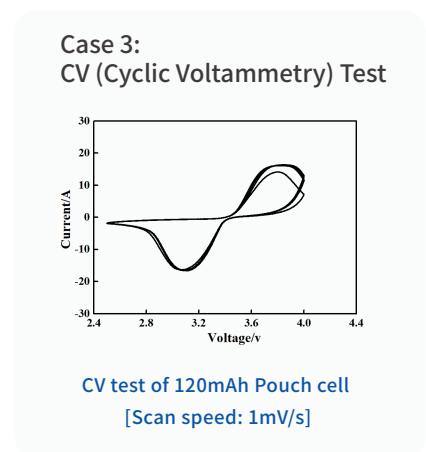
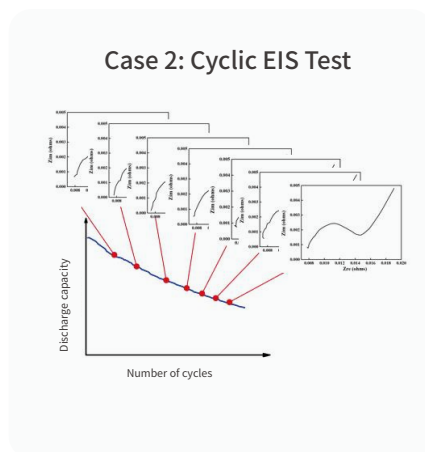
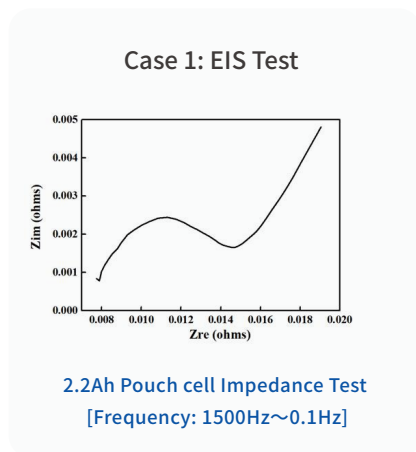
Electrochemical steps

Template-based steps allow easy operations without coding knowledge.

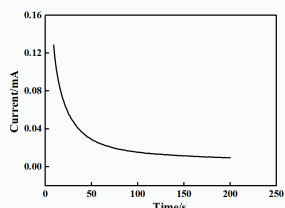
Three-layer software security protection ensures safe testing

6. Offers common functions of an electrochemical workstation

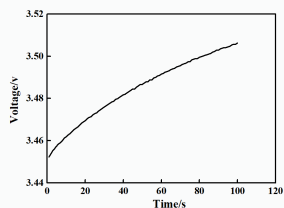
The ERT series includes common electrochemical workstation functions such as CV, LSV, EIS, CA, and CP.



Case4: CA·CP Test



120mAh Pouch cell CA Test



120mAh Pouch cell CP Test

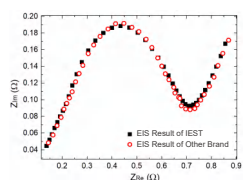


- EIS
- CV
- LSV
- CA
- CP
- GITT

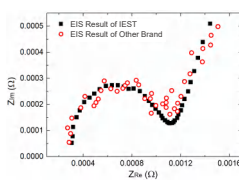
Eliminates switching time between instruments

7. Comparison of EIS results with other electrochemical workstations

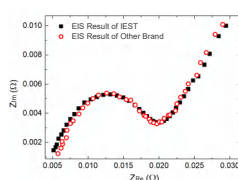
130mAh stacked battery



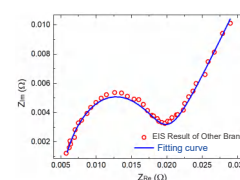
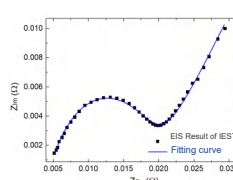
2700mAh consumer battery



40Ah power battery

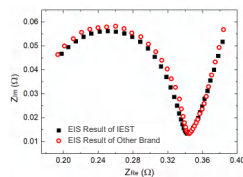


Equivalent circuit fitting (2700mAh cell)

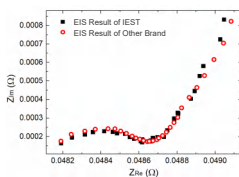


Comparison with well-known foreign brand A electrochemical workstations

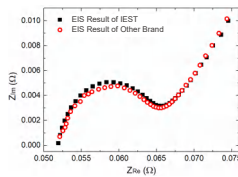
220mAh stacked battery



3300mAh consumer battery



32Ah power battery


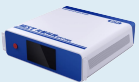


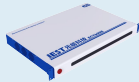



Comparison with well-known foreign brand B electrochemical workstations

Fitting parameters	IEST	Others	COV(%)
Rs	0.00444	0.00426	2.07
Rct	0.0152	0.0147	1.67
CPE-T	0.8725	0.8257	2.76
CPE-P	0.7446	0.7636	1.26
Warburg Coff.	88.27	88.55	0.15

- EIS test results show COV within 2%, ensuring high reproducibility compared to other workstations.
- Better SNR in large cell testing than workstations without current amplifiers.

8. Model Parameter Table

	ECT6008 Series		ERT6002 Series		ERT7008 Series	
Physical picture						
Product model	ECT6008-5V100mA	ECT6008-5V12A	ERT6002-5V12A	ERT6002-10V1.5A	ERT7008-5V100mA	ERT7008-5V12A
★CV&LSV test	/	/	√	√	√	√
★EIS test	/	/	1500 ~ 0.1 Hz	100k ~0.01 Hz	100k ~0.01 Hz	100k ~0.01 Hz
★EIS Applicable battery type	/	/	120mAh~60Ah Battery	Button battery & symmetric battery & pouch cell	Button battery & symmetric battery & pouch cell	Button battery & symmetric battery & pouch cell
Number of channels	8	8	2	2	8	8
Voltage Range	±5V	±5V	±5V	±10V	±5V	±5V
Current range	10mA / 100mA	6A / 12A	6A / 12A	1.5A	10mA / 100mA	6A / 12A
Temperature range	-20~80°C (Temperature chamber)					
Test accuracy	±0.01% F.S (Full scale range)					
Current range	4 measurement range (automatic switching)					
Maximum sampling rate	100 SPS					
Response time	1ms					



Tel: 86-0592-5367060
Mobile: 86-139-5954-7432



info@iesttech.com



4th Floor, No. 2, Xinfeng 2nd Road,
Huli District, Xiamen City, Fujian Province, China

IEST **3** Major Business

- ◆ Special Testing Instruments
- ◆ Third-party Testing Service
- ◆ R&D Solutions



IEST LinkedIn