# Battery Charge/Discharge System

# **HJ Series**





Battery Charge/Discharge System HJ Series offers various function-specific models applicable to various measurements for Battery basic research, Life test and Evaluation test.

HJ-SD8/SD8Y Series can provide the half-cell measurement by 3-electrode-method using the reference electrode and can provide the each characteristics evaluation test on positive and negative material (on independent four terminals and realizing the high input impedance)

## **HJ-SD8 Series**

#### Features

- 1. Independent 8-channel charge and discharge control.
- 2. Minimum data sampling time interval is 10 ms.
- **3.** Equipped with transient recorder function that collects the transient data at 10 ms. (at a moment of switching to discharge mode from charge mode during long-hour measurement.)
- 4. Equipped with CC-CV operation which has digital control for minimum overshoot.
- 5. Auto-select for current range.
- **6.** The digital filter reduces noise. (It can function at the setting of more than 500ms data saving time interval.)
- 7. Equipped with Constant Power Control mode and Constant Resistance Control mode.
- 8. The system status, measurement progress and pre-set measurement conditions can see on one screen.
- 9. Capability to program maximum 20steps and 50patterns.
- 10. Equipped with jump function which repeats the continuous few patterns.
- 11. Equipped with High speed multi-step function:1step-20stages(max) and 1stage can set at 10ms(minimum)
- **12.** Capability to control the maximum 16 units (128 channels) by using the client PC.





Minimum Discharge Voltage can be set till -2V and can conduct the complete discharge test.

The PC connected to HJ series, it can perform the multi-channel simultaneous test and various battery characteristics data analysis.

## HJ0610SD8Y

#### Features

- 1. 48ch system is able to store in a 19-inch rack.
- **2.** This model is useing discharge energy for the charge energy of other channels by regenerative function of this system. (running cost is reduced greatly.)
- 3. 1PC System can control maximum 6 units (48 channels).
- 4. The software is same as HJ-SD8 series.



#### Specification

Type		HJ0610SD8Y	
Channel	Number	8ch	
	Setting	Independent setting every each channel	
Setting range	Voltage	-2~6V	
	Current	±10A	
	Step time	0.1 sec $\sim$ 100 days (resolution 0.1sec)	
Current range		10A、1A、100mA	
Control mode		CC, CC-CV, CP	
Communication		Ethernet	
Control accuracy	Voltage	±0.1%F.S.	
	Current	±0.1%F.S.	
Measurement accuracy	Voltage	±0.1%F.S.	
	Current	±0.1%F.S.	
Power voltage*		Single_phase	
		AC200V,50/60Hz	
Dimmension (W×H×D mm)*		436×263×632	
Weight (one unit)*		25kg	
Rack size (W×H×D mm)		$600\times1930\times823$ (without bolt)	
Control PC		OS : Windows10 Professional 64bit	

8 Schannels/1 unit

### Software Function Specifications

#### Control and Monitoring Screen

All the basic operations can be performed from this screen.

The screen consists of:

- · Environment of each Monitor, Unit, Channel details: Showing the operating condition of each charge and discharge unit.
- · Environment of each Sequence and Pattern:

Showing the measuring conditions pre-set to each channel.

The trend graph indication, graph/dump, and measurement conditions setup are performed by clicking the button in a screen.





#### Measuring Condition Setting Function

The step and pattern include change conditions are created. The step-finalizing conditions, pattern-finalizing conditions, and measurement-finalizing conditions are included in the changeover conditions.

The created conditions can be collectively copied to other channels by the copy&paste operation.

#### Trend Graph

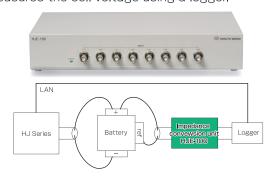
The trend graph of voltage/current/ electric-power can be displayed at intervals of 1 second.

#### Dump Indication

It can do the 'dump indication' showing the selected items from the saved data. All measured data can be outputted in a text file.

#### Impedance conversion unit HJE-100

Impedance conversion unit HJE-100 is a unit to reduce the influence caused by the leak electric current when It measures the cell voltage using a logger.



#### Impedance conversion unit specification

	Items	HJE-100
	Number of channels	8ch
l <sub>-</sub>	Voltage Range	±10V
Input	Input inpedance	1011Ω
	The insulation between the channel	DC100V 108Ω
	Connector	BNC receptacle
Power voltage		AC100V±10%
Power consumption		10VA
	Dimensions (W×H×D mm)	330×62×171
	Weight	2.5kg

Contents are subject to change without notice

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