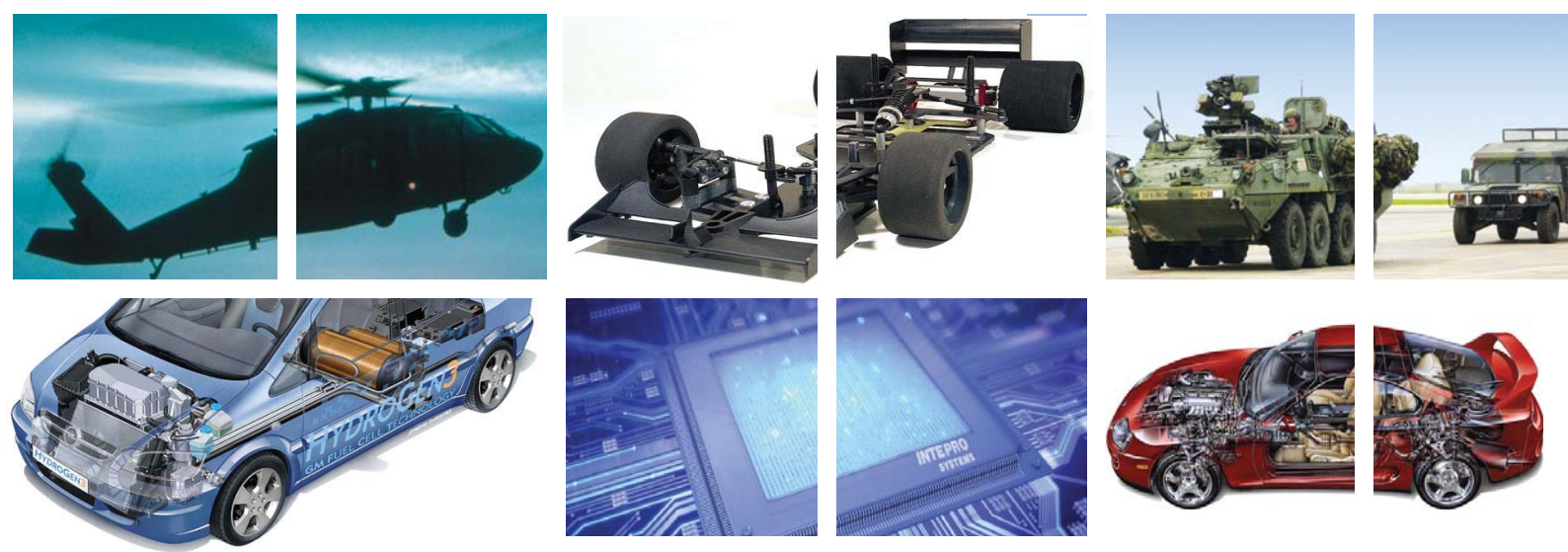


# INTEPRO SYSTEMS

[www.InteproATE.com](http://www.InteproATE.com)

## B2010 Series



**THE POWER TEST EXPERTS**

[www.InteproATE.com](http://www.InteproATE.com)

# Battery Simulator Tester - B2010 Series

- UP TO 60V OPERATION ALLOWS THE SIMULATOR TO BE USED FOR 12V, 24V AND 42V VEHICLE SYSTEMS
- 16KW CONTINUOUS OPERATION WITHOUT ANY EXTERNAL COOLING REQUIRED
- DECAYING BATTERY TESTS
- FAST DIPS AND DROPOUTS
- BATTERY CRANKING TESTS

Intepro Systems are happy to offer a battery simulator solution for use in vehicle battery test environments. The battery simulator can be controlled in a number of ways including manually, using a PC with the PowerStar 5 test executive or remotely using an arbitrary waveform input.

Battery simulators replace the vehicle battery in the test environment. These sources have to fulfil various criteria concerning power rating, voltage, slew-rate, impedance, etc. depending on the particular application.

The B2010 is a programmable DC Source similar to a power amplifier which has been designed generally for use within the automotive industry. With its very low output impedance it is an ideal battery simulator. The voltage sensing circuitry within the amplifier helps to regulate the voltage, thus keeping the apparent output impedance even lower.

The simulator can be programmed manually or driven by an arbitrary signal to simulate real-life battery conditions. A 0 - 6v differential input signal can control the 0 - 60v output voltage.



*B2010 Tester*

## Functional Description

A differential voltage at the input is converted to a single ended value and used to drive the output stage. The output of the amplifier is isolated from the input. Voltage sensing circuitry adjusts the amplifier output to compensate for any voltage drops incurred along the DUT path. The sensing operates on both the positive and negative outputs. It is recommended that the senses are always connected to the outputs at some point for correct operation. The source operates from 0v to 60v with a resolution which only depends upon the input voltage source. Due to the gain of +10 the voltage resolution will be about 10 times higher than that of the input source.

The simulator has built-in protection including programmable OCP and OVP. The OVP setting can be displayed at the front panel and is accurate to 0.2v thus allowing tight control of the DC output. There is also a TTL front panel control which allows remote on/off control. There are two monitors available at the front panel namely a 1:10 voltage monitor & a 1:100 current monitor (both isolated). There is an isolated CAL input function which allows the user to calibrate the output voltage (via the output voltage monitor) with respect to the control signal while isolating the actual output voltage from the load. The simulator comes with an integrated active Down Programming Unit as standard which is built into the device to facilitate dips/dropouts testing. There is also a large cap bank available that can be switched into circuit to facilitate large load switching while minimising any transients.

# Technical Specifications

## Battery Simulator Tester

1.	DC 16KW 0-60V, 0-308A (330A overload capability)
	5°C to 40°C
2.	Integrated active Down Programming Unit (up to 25V 125A range)
	20% to 80% RH ( non condensing)
3.	Large reservoir capacitor bank to facilitate minimal voltage undershoot and fast recovery from high current load switching (typically 100us to recover to $V_{nom} \pm 1\%$ for 20-100A step (resistive))
4.	Programmable OCP (current clamp) and OVP (output disable requiring reset)
5.	Manual / Remote voltage control via the front panel
6.	Multi-turn pots on the front panel with large 7-segment displays facilitate easy setting (display resolution:10mV & 100mA)
7.	Isolated remote voltage control drive capability (1:10 scaled input) for arbitrary waveform generation
8.	Set-point / actual voltage and current displays to facilitate safe parameter setting before enabling the output
9.	OVP set point display (typically accurate to within 0.2V of set point)
10.	EPO switch mounted on the front panel which requires a key to reset
11.	Protective covers over cable exits prevents accidental contact with the outputs
12.	TTL Remote enable signal at front panel to enable / disable the output
13.	Housed in an 9U 19" industry standard cabinet on wheels with lockable rear door
14.	Cabinet size: 65 x 74 x 84 cm (H x W x D) allows for storage / use from under a test bench

## Safety

Meets the safety requirements laid down in the following standard: IEC 1010

## Ordering Information

Part Number	B2010
Description	Battery Simulator Tester

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SYSTEMS

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### INTEPRO SYSTEMS EU/IRELAND

1530 S. Lyon Street  
Santa Ana, CA 92705  
USA  
Tel: +1.714.679.9749  
Fax: +1.714.953.3150

### EU/IRELAND

Intepro Systems  
Lonsdale Road,  
National Technology Park  
Limerick / Ireland  
Tel: +353.61.33.22.33  
Fax: +353.61.33.25.84

### UNITED KINGDOM

Intepro Systems  
1 Lakeside Business Park  
Swan Lane, Sandhurst  
Berkshire GU47 9DN / UK  
Tel/Fax: +44.1252.875.600

### CHINA

No.2405, Block D  
Shahe Century Holiday Plaza  
Nanshan District  
Shenzhen, China 518053  
Tel: +86 755 86398564  
Fax: +86 755 86398567