



# ECM™ 830

## Square Wave Electroporation System



The ECM™ 830 is designed for a wide variety of in vitro and in vivo electroporation applications. BTX square wave technology provides the advantages of high transfection efficiency and high cell viability for numerous cell and tissue types. Applications of the versatile ECM 830 for gene, drug and protein delivery include mammalian cells, in vivo and ex vivo tissues, zebrafish tissue and embryos, plant protoplast, and basic bacteria and yeast transformations.

### Multi-Well Electroporation

Transition from standard cuvette work using the safety stand to multi-well electroporation is quick and simple with the addition of a high throughput (HT) plate handler and multi-well plates. High throughput electroporation permits large numbers of samples to be quickly processed. Electroporation conditions are more easily optimized, providing the highest possible efficiency.

### Monitoring Option

The addition of Enhancer 3000 allows the researcher to monitor and track key electrical parameters used in electroporation applications. The electrical pulse data is captured as both a graphic display of the waveform and electrical output values following each experiment. This data can be stored on a memory stick or downloaded to a computer easily by using the USB port for potential analysis, documentation, and validation purposes. For more information, please visit [www.btxonline.com](http://www.btxonline.com).

### Applications

- Mammalian cell transfection
- In vitro, in vivo, ex vivo, and in ovo tissue transfection
- Explant tissue transfection
- Plant protoplast transfection
- High throughput electroporation in 25- and 96-well formats

### Features

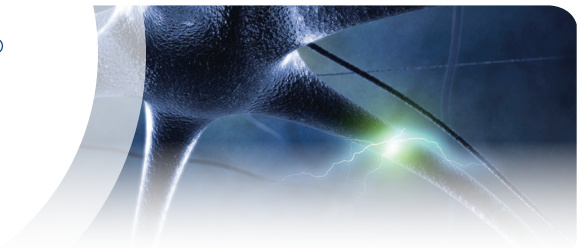
- Wide and accurate square wave voltage, and pulse duration settings
- Multiple pulsing capability and control of pulse intervals
- Preset protocols — including most common mammalian cell lines and tissues, as well as CRISPR applications
- User-defined protocols — unlimited ability to add and modify
- Safety — displays resistance measurements for each pulse with three layers of arc protection
- Data management — stores logs of every pulse delivered for QC and troubleshooting
- Ease of use — touch screen operation
- Can be used in combination with a wide array of BTX specialty electrodes and accessories to enhance your molecular and drug delivery for in vivo and ex vivo experiments.

*The ECM™ 830 is intended For Research Use Only. Not for use in diagnostic, pre-clinical, or clinical procedures.*



# BTX<sup>®</sup>

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ECM™ 830 Specifications	
<b>Operational Status</b>	Internal self-test upon start-up
<b>Interface</b>	Touch screen Interface
<b>Input</b>	100 to 240 VAC
<b>Charge Time</b>	LV <7 s, HV <4 s
<b>Arc Control</b>	Yes
<b>Voltage Range</b>	
<b>LV Mode</b>	5 to 500 V in 1 V steps
<b>HV Mode</b>	505 to 3,000 V in 5 V steps
<b>Pulse Length Range</b>	
<b>LV Mode</b>	10 to 999 $\mu$ s in 1 $\mu$ s steps
<b>LV Mode</b>	1 to 999 ms in 1 ms steps
<b>HV Mode</b>	10 to 600 $\mu$ s in 1 $\mu$ s steps
<b>Multiple Pulsing</b>	1 to 99 (per individual sample) or 1 to 120 (10 per sample, with HT plate handler)
<b>Pulse Interval</b>	100 ms to 10 s
<b>Programmability</b>	Storage over 1,000 Protocols
<b>Safety</b>	Pre-Pulse Sample Resistance Check, Pulse Over-Current Protection

Ordering Information	
Order No.	Description
<b>45-2052</b>	ECM 830 Electroporation System with Safety Dome Includes: ECM 830 Generator, Safety Dome, Cuvettes 1 mm, 2 mm, 4 mm pkg. of 30 (10 each) and Cuvette Rack 660
<b>45-0661</b>	ECM 830 Electroporation System with Safety Stand Includes: ECM 830 Generator, 630B Safety Stand, Cuvettes 1 mm, 2 mm, 4 mm pkg. of 30 (10 each) and Cuvette Rack 660
<b>45-0662</b>	ECM 830 Generator Only
<b>45-0667</b>	ECM 830 System with Monitoring Includes: ECM 830 Generator, 630 B Safety Stand, Cuvettes 1 mm, 2 mm, 4 mm pkg. of 30 (10 each), Cuvette Rack 660, Enhancer 3000 Probe, Enhancer Interface Box, Oscilloscope and Cables
<b>45-0663</b>	ECM 830 High Throughput System, 25-well with HT-100 Includes: ECM 830 Generator, 25-Well Plates (2 mm gap, 6X), Plate Seals, HT-100 Plate Handler and a plate adaptor
<b>45-0664</b>	ECM 830 High Throughput System, 25-well with HT-200 Includes: ECM 830 Generator, 25-Well Plates (2 mm gap, 6X), Plate Seals, HT-200 Plate Handler and a plate adaptor
<b>45-0665</b>	ECM 830 High Throughput System, 96-well with HT-100 Includes: ECM 830 Generator, 96-Well Plates (2 mm gap, 2X), Plate Seals, HT-100 Plate Handler and a plate adaptor
<b>45-0666</b>	ECM 830 High Throughput System, 96-well with HT-200 Includes: ECM 830 Generator, 96-Well Plates (2 mm gap, 2X), Plate Seals, HT-200 Plate Handler and a plate adaptor
<b>45-0668</b>	ECM 830 High Throughput System with Monitoring Includes: ECM 830 Generator, 630B Safety Stand, Cuvettes 1 mm, 2 mm, 4 mm pkg. of 30 (10 each), Cuvette Rack 660, Enhancer 3000 Probe, Enhancer Interface Box, Oscilloscope, Cables, 25-Well Plates (2 mm gap, 6X), HT-200 Plate Handler and a plate adaptor