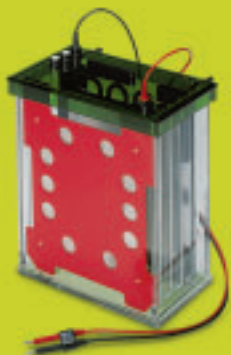# PowerPac Universal™

## power supply

Trans-Blot® Plus Cell

Trans-Blot® SD Cell

PROTEAN® Plus Dodeca™ Cell

**Plug in for great performance.**

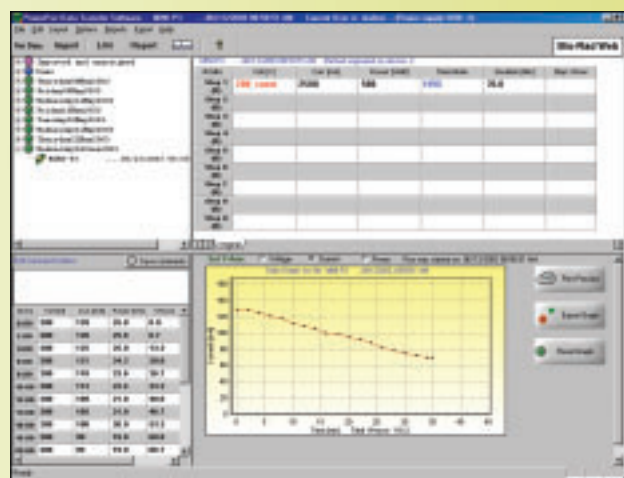BIO-RAD

# Open a World of Powerful Possibilities

**If you've ever wondered** whether there's a power supply that fits virtually all your power requirements, explore the new PowerPac Universal. You'll discover that its specifications encompass a broad range of applications — from mini vertical and high-throughput electrophoresis to blotting — firmly establishing the PowerPac Universal as the most universal power supply on the market today.

## Data Tracking via Innovative Wireless Transfer

With PowerPac data transfer software it's easy to organize, display, print, analyze, export, and annotate run data from the PowerPac Universal power supply. It has built-in wireless infrared (IR) capability so you can place the PowerPac Universal anywhere in your laboratory. Send your run data first to a personal digital assistant (PDA) and then to a PC, or directly to a PC with a peripheral IR receiving device. Once data are collected from the PowerPac Universal, the data transfer software allows you to:

- See and track the programmed method
- See actual method and run conditions (voltage, current, power, method edits, error conditions, run date and time) recorded periodically during the run
- Annotate a run with notes
- Identify the serial number of the unit that generated the data
- Document all run-related information with reports
- Organize your run data into projects
- Customize data presentation

Data from an SDS-PAGE run on a Mini-PROTEAN® 3 cell.

## Move Beyond the Ordinary

In both performance and appearance, the PowerPac Universal is unlike any power supply you've ever seen. With fully adjustable output to 500 V, 2.5 A, and 500 W, it takes you beyond conventional power supplies. Extensive programmability brings new versatility to your electrophoretic separations, and its streamlined design, stackable case, and see-through green cover make the PowerPac Universal stand out in any laboratory.

## Extraordinary User Interface and Programmability

The alphanumeric keypad and graphics display combine for straightforward programming of single- or multi-step methods. The PowerPac Universal user interface provides:

- Simple methods programming for starting a run with minimal keystrokes
- Repeat of the previous run with a single keystroke
- Continuous, timed, or volt-hour operation
- A running screen displaying large numbers that can be seen from a distance, as well as helpful run details such as the constant variable, elapsed time, and volt-hours
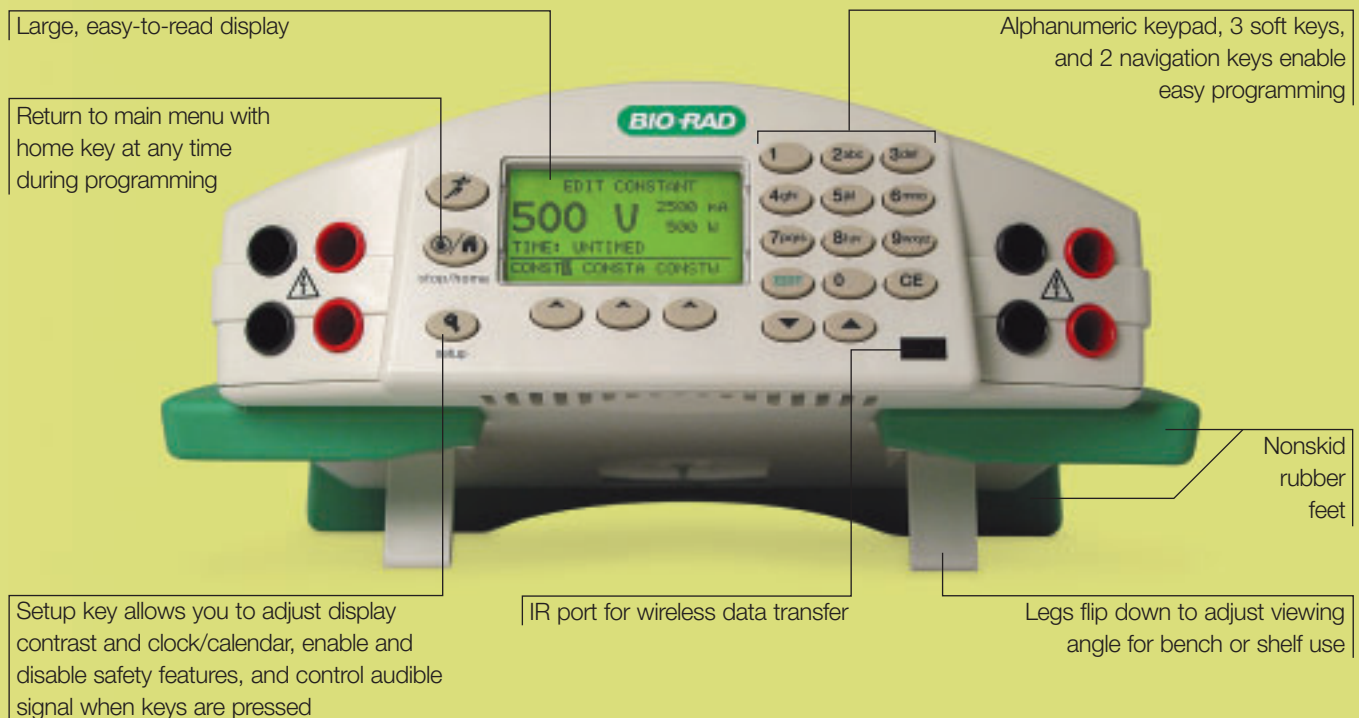
## Built for the Real World

The PowerPac Universal power supply is designed for long-term reliability. Each power supply is manufactured in a state-of-the-art facility utilizing automated testing equipment to ensure that it arrives at your laboratory ready to deliver top performance.

## A Helping Hand With IQ/OQ

To support installation qualification and operational qualification (IQ/OQ) within GLP- and FDA-regulated environments, the PowerPac IQ/OQ protocol and test box are available for use exclusively with the PowerPac Universal power supply. The first part of the user-customizable PowerPac IQ/OQ protocol provides an installation checklist and procedure to check performance of a newly installed PowerPac Universal. The second part of the protocol checks actual performance against specified performance over time. The test box houses a factory-calibrated resistive load. When used with the appropriate meters to monitor output voltage and current, the test box determines the power supply performance against its specifications.

## Bundled With Cells

The PowerPac Universal is available as part of complete systems for electrophoresis and blotting. See the ordering information on the back page for available combinations.



Large, easy-to-read display

Alphanumeric keypad, 3 soft keys, and 2 navigation keys enable easy programming

Return to main menu with home key at any time during programming

Nonskid rubber feet

Setup key allows you to adjust display contrast and clock/calendar, enable and disable safety features, and control audible signal when keys are pressed

IR port for wireless data transfer

Legs flip down to adjust viewing angle for bench or shelf use

# PowerPac Universal power supply

## Specifications

| | |
|---|---|
| Output specifications | 500 V, 2.5 A, 500 W |
| Output range (programmable) | 10–500 V, fully adjustable in 1 V steps<br>0.01–2.5 A, fully adjustable in 0.001 A steps<br>1–500 W, fully adjustable in 1 W steps |
| Type of output | Constant voltage, constant current, or constant power with automatic crossover |
| Output terminals | 4 pair recessed banana jacks floating in parallel |
| Timer control | 1 min–99 hr, 59 min, fully adjustable |
| Volt-hour control | 99,000 V-hr |
| Pause/resume function | Yes |
| Programmable methods | Stores 9 methods, each with up to 9 steps |
| Real-time clock | Yes |
| Automatic recovery after power failure | Yes |
| Display | 128 x 64 pixel, backlit, graphics LCD |
| Safety compliance | EN61010 |
| EMI | Conforms to CE standards for Emissions and Immunity class A, tested at 120/230 V. TÜV EMC certification |
| Safety features | No-load detection, sudden load change detection, ground leak detection, overload/short circuit protection, overvoltage detection, input line protection, auto power-up after power failure |
| Input power (nominal) | 100–120/220–240 VAC, 50 or 60 Hz, autoswitching |
| Operating conditions | 0–40°C; 0–95% humidity in the absence of condensation |
| Dimensions (W x D x H) | 27.5 x 34 x 10 cm |
| Weight | 2.5 kg |

## Minimum Hardware Requirements for PowerPac Data Transfer Software

| | |
|---|---|
| **PC requirements** | Windows XP or 2000 operating system |
| | 400 MHz processor |
| | 256 MB RAM minimum, 512 MB recommended |
| | 1,024 x 768 pixel screen resolution with true color mode (24 or 32 bits) |
| | 6 GB hard drive |
| | CD-ROM drive |
| | IR port |
| **PDA requirements** | Palm OS software version 4.0 or 5.0 |
| | 16 MB memory |

## Ordering Information

| Catalog # | Description |
|---|---|
| **PowerPac Universal Power Supply, 100–120/220–240 V** | |
| 164-5070 | PowerPac Universal Power Supply, includes PowerPac Universal, power cord, instructions |
| 164-5067 | PowerPac Data Transfer Software |
| 164-5069 | PowerPac IQ/OQ Protocol and Test Box |
| **PowerPac Accessories** | |
| 165-5061 | PowerPac Adaptor, 1 each |
| 165-5066 | PowerPac Adaptor, 2 each |
| **High-Throughput Electrophoresis Systems, 100–120/220–240 V** | |
| 165-4142 | PROTEAN Plus Dodeca Cell (100/120 V) and PowerPac Universal Power Supply |
| 165-4143 | PROTEAN Plus Dodeca Cell (220/240 V) and PowerPac Universal Power Supply |
| 165-4144 | PROTEAN Plus Dodeca Cell (100/120 V), Trans-Blot Plus Cell, and PowerPac Universal Power Supply |
| 165-4145 | PROTEAN Plus Dodeca Cell (220/240 V), Trans-Blot Plus Cell, and PowerPac Universal Power Supply |
| 165-4139 | Criterion™ Dodeca Cell and PowerPac Universal Power Supply |
| **Blotting Systems, 100–120/220–240 V** | |
| 170-3992 | Trans-Blot Plus Cell and PowerPac Universal Power Supply |
| 170-3873 | Criterion Blotter With Plate Electrodes and PowerPac Universal Power Supply |
| 170-3849 | Trans-Blot SD Cell and PowerPac Universal Power Supply |

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