
PowerPac™ JR II

Power Supply

Instruction

Manual

Catalog Number
165-5048

For Technical Service
Call Your Local Bio-Rad Office or
in the U.S. Call **1-800-4BIORAD**
(1-800-424-6723)



Safety



Caution/Warning



PowerPac power supplies use high output voltages that are electrically grounded to minimize the risk of electrical shock to the user. The following guidelines should be followed when using the power supply.

PowerPac JR II is intended for laboratory use only.

This product conforms to the “Class A” standards for electromagnetic emissions intended for laboratory equipment applications. Emissions from this product may interfere with some sensitive appliances when placed nearby or in the same circuit as those appliances. The user should be aware of this potential and take appropriate measures to avoid interference.

PowerPac power supplies have passed tests for operation at temperatures between 4 and 40°C, with relative humidity between 0 and 98% noncondensing. Operating the power supply outside these conditions is not recommended by Bio-Rad and will void the warranty.

This instrument should not be modified, altered, or serviced by the user in any way. User modification, alteration or service of this instrument will void the manufacturer’s warranty and compliance with EN61010-1, and create a potential safety hazard for the user. Bio-Rad is not responsible for any consequent injury or damages.

PowerPac JR II complies with EN61010-1 safety standards when used in accordance with the instruction manual, and when used with EN61010-1 compliant electrophoresis cells and accessories.

1. Always connect the power supply to an appropriate grounded AC outlet, using the 3-prong AC power cord provided with the power supply.

2. Bio-Rad electrophoresis cells have molded two-prong plugs, which are inserted into the power supply's high-voltage output jacks. These plugs have been IEC 1010 certified for safety compliance for use with PowerPac power supplies. Use of other plugs or banana jacks, including the PowerPac adaptor, is done at the user's own risk and is not recommended by Bio-Rad. When inserting and removing the molded two-prong plug, always grasp the plug by the molded support at the rear of the plug. Do not grasp the individual prong ends.

Table of Contents

Section 1	Introduction	1
1.1	Overview.....	1
1.2	Unpacking.....	1
Section 2	Setup and Operation	2
Section 3	Maintenance and Troubleshooting	3
3.1	Maintenance.....	3
3.2	Troubleshooting	3
Section 4	Specifications	4
Section 5	Product Information	4

Section 1 Introduction

1.1 Overview

The PowerPac JR II power supply provides constant voltage to instruments used in electrophoresis applications. It is capable of supplying either 100 V (± 10 V) or 200 V (± 20 V) output. One or two cells can be connected in parallel to the power supply. **Note:** Do not stack PowerPac JR II power supplies. To insure adequate cooling of the power supply, be sure that there is at least 10 cm clearance around the power supply.

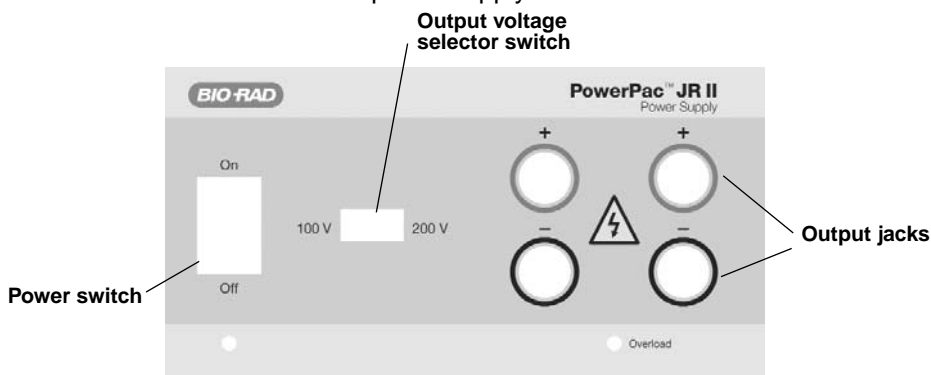


Fig. 1. Front panel.

1.2 Unpacking

When you receive the power supply, carefully inspect the container for any damage that may have occurred during shipping. Severe damage to the container may indicate damage to the power supply itself. If you suspect damage to the unit, immediately file a claim with the carrier in accordance with their instructions before contacting Bio-Rad Laboratories.

Unpack the power supply. The PowerPac JR II power supply is shipped with the following:

- Power supply unit
- AC power cord
- User manual

If any part is missing or damaged, contact Bio-Rad Laboratories immediately.

Section 2

Setup and Operation

Step	Procedure	Description
1.	Connect the power cord to an appropriate outlet and the electrophoresis cell(s) to the power supply.	The power leads are color-coordinated with the power supply output terminals. ⚠ indicates high voltages may be present.
2.	Select the output voltage.	Move the selector switch on the front panel to either 100 V or 200 V position.
3.	Turn on the power.	Press the power switch on the front of the unit to the on position. The LED indicator light will be lit green.
4.	Turn off the power.	At the end of the run, press the power supply switch to the off position.

Note: For 220 V outlets, select 220 V option on back panel of power supply before connecting power supply.

Section 3

Maintenance and Troubleshooting

3.1 Maintenance

The PowerPac JR II power supply requires very little maintenance to ensure reliable operation. To clean the case, first unplug the power supply. Use a damp cloth to wipe down the outer case. Avoid wetting the connectors on the front panel and on the rear of the unit.

3.2 Troubleshooting

The front panel LED indicates the presence of voltage at the output jacks. The following chart will aid with troubleshooting.

Problem	What to check	Resolution
Green LED blinks or is off.	Verify that power supply is connected to appropriate outlet, that the power switch is ON.	If the electrophoresis cell is connected, disconnect the cell. If the LED stays on, the cell or cable is causing excessive current draw. Verify that the gel and buffers are made properly and that the cables are in good condition. If the electrophoresis cell is not connected, the unit is defective and should be replaced.
	Fuse may be blown.	Disconnect the power cord from the electrical outlet. Unscrew fuse container located on back of power supply. Remove fuse from the fuse holder. Replace with 250 mA, 250 V, 5 mm OD x 20 mm (length) fuse. Reinsert the fuse holder into its original position and screw back on.

Problem	What to check	Resolution
Run times are longer or shorter than expected.	Verify that the gel and running buffers are made properly.	Run times will vary with different gel types and buffer systems. Prepare fresh materials and rerun if necessary.
	Output voltage may be outside the specification.	Contact Bio-Rad Laboratories for suggestions on verifying output voltage.
Red LED blinks	Over current (load greater than 250 mA)	Verify that the gel and buffer are made properly. If problem persists, contact Bio-Rad Technical Support.

Note: PowerPac JR II has no repairable or replaceable parts other than the fuse.

Section 4 Specifications

Input power	90–264 VAC, 47–63 Hz, 60 W max.
Input power connector	IEC-320 appliance inlet
Output voltage	100 or 200 V (DC)
Output current	200 mA (max.)
Output power	40 W (max.)
Terminals	2-pair recessed female banana jacks
Operating temperature	4–40°C
Humidity	0–98% noncondensing
Dimensions (W x D x L)	13 x 10 x 7 cm
Regulatory compliance	EN61010-1 (safety); see Declaration of Conformity for details

Section 5 Product Information

Catalog #	Description
165-5048	PowerPac JR II Power Supply , 100/120/220/240 V, includes power cord



**Bio-Rad
Laboratories, Inc.**

Life Science
Group

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