

**Document Number: SASoM/EQUIP/032.v2****Title: Use and Maintenance of the Biorad '200', '300', '1000' and '3000' Power-Packs****Version: v2****Author: Peter Mullen**

Effective from:	01/01/2018
Valid to:	31/12/2022

SOP History		
Number	Date	Reason for Change
v1	01/01/2013	Original
V2	01/01/2018	Update

1.0 Purpose –

The purpose of this SOP is to outline the principles of the routine use and maintenance of the power supplies used for electrophoresis in Laboratory 248 at the St Andrews School of Medicine (SASoM).

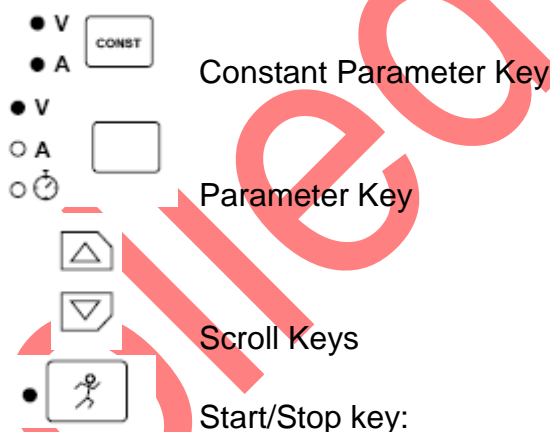
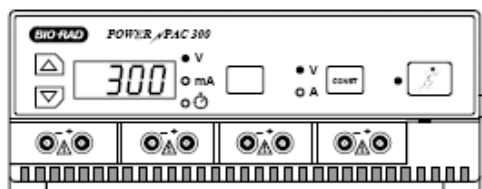
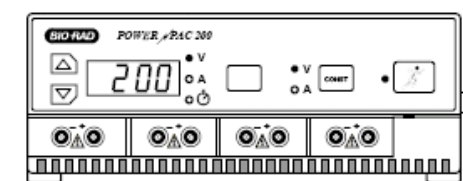
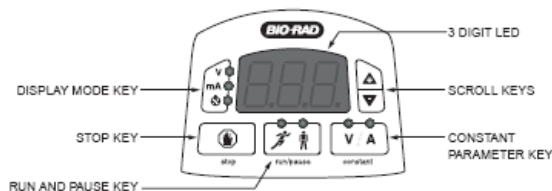
2.0 Scope –

This SOP applies to routine use and maintenance of the power supplies within the SASoM.

3.0 Responsibilities –

It is the responsibility of all users of the power supplies within the SASoM to comply with this SOP.

4.0 Procedure – Powerpac Basic, 300 & 200 BioRad:



Press the power switch located on the right side of the unit to the 'on' position.

Connect the electrophoresis cell(s) to the power supply.

Press the Constant Parameter key to select the constant parameter, either voltage (V) or current (A). Select by Scroll keys $\uparrow\downarrow$. Holding down scroll keys will increase/decrease values in increments of 10 to reach the desired value faster

Press the parameter key to select the limit, the maximum default value, 300V or 400mA, is displayed.

Press the parameter key to select time. Use the scroll key to enter the desired time up to 999 minutes.

Press the run/pause key to start the run. The run LED is lit.

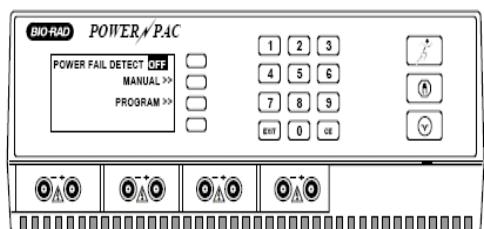
When a run is completed the timer is reset to zero and neither the run nor the pause LED is lit, indicating that no power is supplied to the output jacks.

Press the stop key to terminate a timed run.

Press the stop key before turning the power switch to the off position.

Equipment Operation Procedure

Powerpac 1000 BioRad:



Start key

Stop key

Pause key

Exit key

Clear Entry key

Connect the electrophoresis cell(s) to the power supply.

Press the power switch, located on the side of the unit.

The main menu is displayed.

Select Manual.

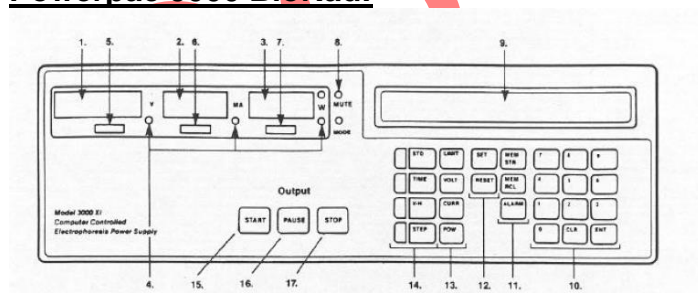
Select the constant parameter, either voltage (V), current (A) or constant power (W). Use the numeric keypad to enter a value.

Select TIME/V-HOUR. To specify automatic time control, enter a time from 1 min to 99 hours and 59 mins.

To specify automatic volt-hour control for the run, enter a value from 1 to 99,999 volt-hours.

Press the start button.

Powerpac 3000 BioRad:



Turn on power.

Connect the electrophoresis cell(s) to the power supply.

Press STD



Equipment Operation Procedure

Press LIMIT then SET, press VOLT and input numeric value.

Press CURR and input numeric value.

Press POW and input numeric value.

Press ENT and the values are now set.

Press START

Press STOP to end the run.

Consort E323:

Turn on power.

Connect the electrophoresis cell(s) to the power supply

If the timer is still running, the power supply will automatically proceed with the experiment for the remaining time. Press SET if you wish to program new parameters or want to go in standby during the run.

The display shows V, while the constant voltage indicator is blinking. Enter the desired voltage limit with ▲ or ▼ and press SET.

The display shows mA, while the constant current indicator is blinking. Enter the desired current limit with ▲ or ▼ and press SET.

The display shows [HrS](h) or [Min']. Select the desired time-units with ▲ or ▼ and press SET.

The display shows h, while the time-indicator is blinking. Enter the desired time with ▲ or ▼ and press SET. Pre-set to zero if no timing is required.

Press SET to start run.

All Power Supplies:

When taking a power supply in to the cold room, the unit can be used immediately. However, when removing the unit from the cold room, let the unit equilibrate to room temperature for a minimum of 2 hours before using it.

It is imperative that all wiring is checked before you use the power supplies.

Do not exceed the maximum operating voltage or current.



Equipment Operation Procedure

Never handle gel apparatus or power supply units with wet hands.

While the power supply is on, handle the high voltage leads one at a time to prevent accidental shock.

Always turn off the power prior to disconnecting the power cords from the apparatus. Disconnect power cords from the source first and then from the apparatus.

Use care when opening the electrophoresis unit, ENSURE that the current is switched off BEFORE opening the electrophoresis

5.0 Personal protection -

Howie coat must be worn at all times.

6.0 General maintenance -

Keep clean and dry as per any electrical equipment.

7.0 Training -

All users have to be trained before using the Instrument by a designated person.

8.0 Related documents –

- 8.1 Equipment manual
- 8.2 Equipment Maintenance Information sheet
- 8.3 Risk assessments – RA/GEN/037



9.0 Approval and sign off –

Author:

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Signature: Date:

Management Approval:

Name: Mary Wilson

Position: Laboratory Manager

Signature: Date:

QA release by:

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Position: QA Manager

Signature: Date:

Control