

# Gene Pulser MXcell™ ShockPod™ Cuvette Chamber

## Instruction Manual

### Catalog Number 165-2673

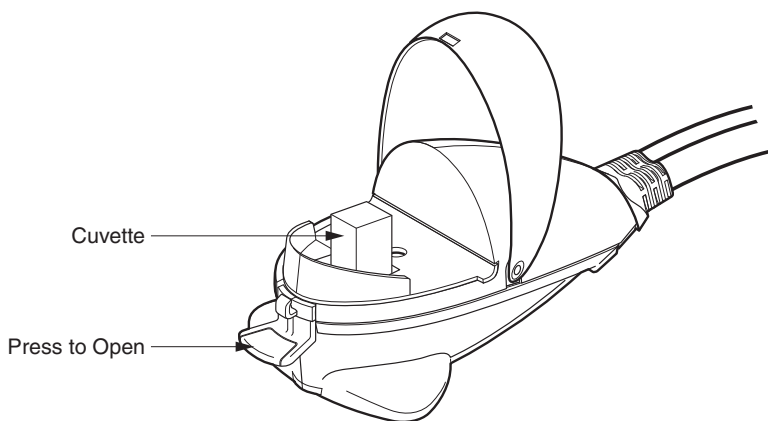


Fig. 1. Image of ShockPod with cuvette.

## Operation

The Gene Pulser MXcell ShockPod is designed for one-hand operation.

1. Connect the MXcell ShockPod to the back of the MXcell power module.
2. Press the tab on the front of the chamber to release the latch and to open the lid.
3. Insert cuvette.

**Note:** Bio-Rad cuvettes are designed with a notch on one of the non-electrode sides so they may be inserted into the cuvette slot only in the proper orientation. The cuvette slot will accept most commercially available cuvettes.

4. Push the lid down gently to close the chamber.

## Protocol Set-Up for Cuvette

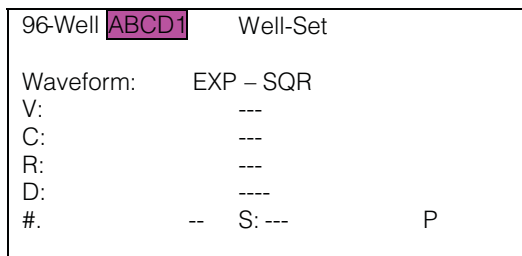
1. Select Protocol Set-Up in the home screen, then press ENTER to accept the selection.
2. Using the arrow keys, select 96 plate format, then press ENTER to accept the selection.
3. Using the arrow keys, select WELL SET, then press ENTER to accept the selection.

Protocol Set-Up Screen

|          |             |          |
|----------|-------------|----------|
| Plate:   | 24          | 12       |
| Program: | WHOLE PLATE | WELL SET |

4. Make sure Well Set ABCD1 is displayed on the screen. If needed, use the up arrow to highlight Well Set and use the arrow keys to select ABCD1.

#### Well Set Programming Screen



5. Using the arrow keys, select a waveform (EXP or SQR).
6. Using the numeric keypad, enter values for each parameter, pressing ENTER after each.

**Note:** When the parameter entry is complete a P will appear in the lower right corner indicating that the PULSE button is ready.

7. Press the PULSE button to electroporate the sample. If electroporating multiple samples, press BACK to return to the pulse screen.

## Programming Note

Whole plate, Pre-Set, and Gradient protocols are designed for use with electroporation plates. Should you pulse one of these protocols it will result in a series pulses that will not affect your data or experiment. To abort the additional pulses, press and hold the PULSE button. When the protocol stops, the screen displays the last pulse. The parameters delivered to the sample are those applied to well set ABCD1 (see "Last Pulse Option" on page 26 in Gene Pulser MXcell instruction manual, bulletin 10010739).

## Conversion Equation

The equation allows simple transition between cuvette and electroporation plate by using the same parameters optimized in either format.

A 0.4cm cuvette will contain four times the volume of a 96 well; and conversely, a 96 well will contain one-fourth of the volume of a 0.4 cm cuvette. Determine the appropriate volume for the format of choice by using the equations in Table 1.

**Table 1. Conversion Equation**

| Format                       | Equation  |
|------------------------------|---|
| 0.4 cm cuvette 96-well plate | Volume per 96-well = $\frac{1}{4}$ x (cuvette volume) |
| 96-well plate 0.4 cm cuvette | Cuvette volume = 4 x (volume per 96-well)             |

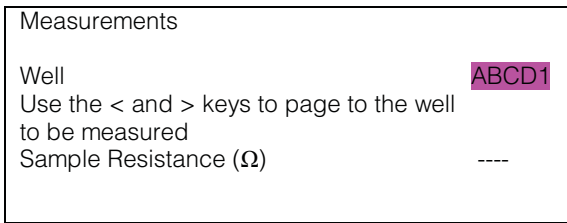
\*A well set is composed of four adjacent wells in a column in a 96-well plate. All 4 wells in a well set must be filled with either sample or sample buffer. In addition, well sets can remain empty if not being used. For additional information regarding the Gene Pulser MXcell, please refer to the Gene Pulser MXcell instruction manual, bulletin 10010739.

## Sample Resistance Measurement

The Gene Pulser MXcell will measure sample resistance. The resistance determination is accurate for samples having a resistance between 5 and 1,100 ohms. Samples with a resistance less than 5 ohms will show "5 ohms". Samples with a resistance greater than 1,100 ohms will show ">1,100 ohms".

1. Place a cuvette containing sample buffer into MXcell ShockPod.
2. Using the up and down arrow keys, select Measurements in the home screen, then press ENTER to accept the selection.
3. Using the left and right arrow keys, select well ABCD1, then press ENTER to accept the selection.

## Measurements Screen



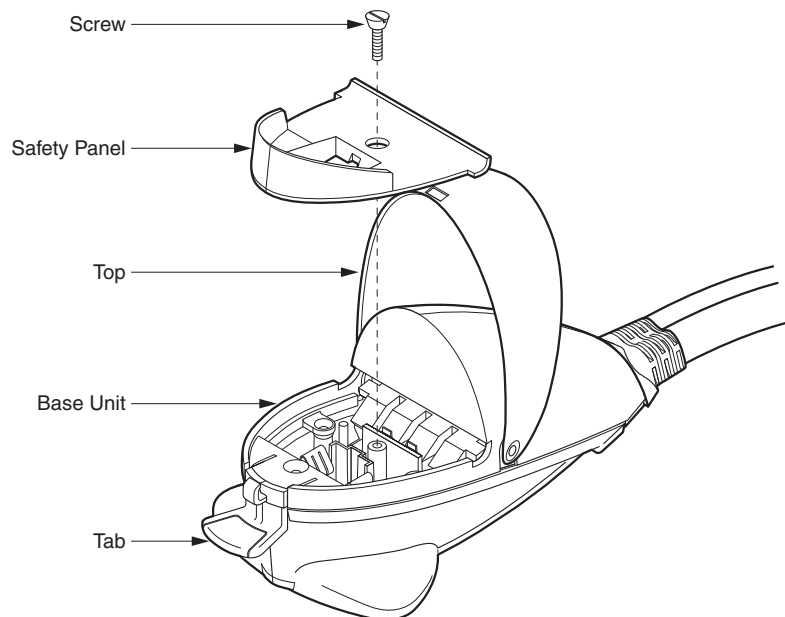
4. Close the top of the ShockPod and press ENTER.
5. The sample resistance is displayed on the LCD screen.

For additional information regarding the Gene Pulser MXcell, please refer to the Gene Pulser MXcell instruction manual, bulletin 10010739.

## Cleaning the ShockPod

The plastic panel covering the electrode may be removed for cleaning should the electrode become dirty. To clean the unit:

1. Disconnect the ShockPod from the Gene Pulser MXcell power module.
2. Press the tab to open the chamber.
3. Using a phillips screwdriver, loosen the screw holding the safety panel (Figure 2). Lift the screw and the safety panel out of the ShockPod by the lip on the front of the panel.
4. The area around the electrodes may be cleaned with a cotton swab and warm, soapy water. Dry the electrodes using a dry cotton swab or Kimwipe.
5. Reassemble the unit by centering the safety panel on the base of the ShockPod and tightening the screw.



**Fig. 2. Exploded view of the Gene Pulser MXcell ShockPod.**

For additional information regarding the Gene Pulser MXcell, please refer to the Gene Pulser MXcell instruction manual, bulletin 10010739.



**Bio-Rad  
Laboratories, Inc.**

*Life Science  
Group*

---

**Web site** [www.bio-rad.com](http://www.bio-rad.com) **USA** 800 4BIORAD **Australia** 61 02 9914 2800 **Austria** 01 877 89 01 **Belgium** 09 385 55 11 **Brazil** 55 21 3237 9400  
**Canada** 905 364 3435 **China** 86 21 6426 0808 **Czech Republic** 420 241 430 532 **Denmark** 44 52 10 00 **Finland** 09 804 22 00 **France** 01 47 95 69 65  
**Germany** 089 318 84 0 **Greece** 30 210 777 4396 **Hong Kong** 852 2789 3300 **Hungary** 36 1 455 8800 **India** 91 124 4029300 **Israel** 03 963 6050  
**Italy** 39 02 216091 **Japan** 03 6361 7000 **Korea** 82 2 3473 4460 **Mexico** 52 555 488 7670 **The Netherlands** 0318 540666 **New Zealand** 0508 805 500  
**Norway** 23 38 41 30 **Poland** 48 22 331 99 99 **Portugal** 351 21 472 7700 **Russia** 7 495 721 14 04 **Singapore** 65 6415 3188 **South Africa** 27 861 246 723  
**Spain** 34 91 590 5200 **Sweden** 08 555 12700 **Switzerland** 061 717 95 55 **Taiwan** 886 2 2578 7189 **United Kingdom** 020 8328 2000

---

Sig 0308

10015547 Rev A