

# Gene Pulser MXcell™ Electroporation System

## Quick Guide

### Whole Plate Programming

From the Home screen:

1. Press ENTER to select protocol setup.
2. Select the plate size using the arrow keys.
3. Press ENTER or the down arrow key to confirm the selection.
4. Select WHOLE PLATE using the left and right arrow key.
5. Press ENTER and the waveform and parameter screen opens.
6. Select waveform, SQR or EXP, using the left and right arrow keys and press ENTER.
7. Press the up and down arrow keys to select each parameter. When a parameter value is highlighted, use the alpha-numeric keypad to enter a value. Use the CLEAR key to correct values.
8. Press ENTER to accept the value.  
TIP: When the necessary parameter values have been entered, the letter “P” will appear, signaling the PULSE button is active.
9. Press the PULSE button to electroporate the sample.

### Well Set Programming

From the Home screen:

1. Press ENTER to select protocol setup.
2. Select the plate size using the arrow keys.
3. Press ENTER or the down arrow key to confirm the selection.
4. Select WELL-SET using the left and right arrow key.
5. Press ENTER and the waveform and parameter screen opens.
6. Use the arrow keys to select parameters within the well set. Press and hold an arrow key to jump from one well set to the next.
7. Enter each parameter and press ENTER to confirm the entry.
8. Press the PULSE button to electroporate the sample.

### Gradient Protocol

From the Home screen:

1. Press the down arrow key to select gradient protocol.
2. Press ENTER or the down arrow key to confirm the selection.
3. Press left and right arrow keys to select plate type (96- or 24-well).
4. Press ENTER or the down arrow key to confirm your selection.
5. Press left and right arrow keys to select gradient program.
6. Press ENTER and the waveform and parameter screen opens.
7. Enter the median voltage.  
NOTE: The median voltage is applied to well set EFGH 1 for both 96- and 24-well plates (see manual for detailed explanation).
8. Enter the percentage change for this voltage.
9. Enter capacitance and parallel resistance (kept constant).
10. Press the PULSE button to electroporate the sample.

## Quadrant programming

From the Home screen:

1. Press the down arrow key to select gradient protocol.
2. Press ENTER or the down arrow key to confirm the selection.
3. Press left and right arrow keys to select plate type (96- or 24-well).
4. Press left and right arrow keys to select quadrant program.
5. Press ENTER and the waveform and parameter screen opens.
6. Use the arrow keys to select parameters within the quadrant. Press and hold an arrow key to jump from one quadrant to the next.
7. Enter the median voltage.

NOTE: The median voltage is applied to well sets ABCD 4 and ABCD 10, EFGH 4, or EFGH 10 — one for each respective quadrant in the plate (see instruction manual for detailed explanation).

8. Enter percentage change for voltage to be applied to each quadrant.
9. Enter capacitance and parallel resistance (kept constant).
10. Press the PULSE button to electroporate the sample.

## User Protocols

From the Home screen:

1. Press the down arrow key to select user protocols and press ENTER.
2. The user directory window opens.
3. Press the up or down arrow keys to select user protocols.
4. Press the up and down arrow keys to highlight the desired name.
5. Press ENTER to select the name and the first user protocol screen.
6. Press the up and down arrow keys to highlight the desired protocol name.
7. Press ENTER to select the protocol and the protocol detail screen appears. The PULSE button is now active.
8. Press the PULSE button to electroporate the sample. After the pulse is completed the data screen appears.
9. Press the BACK key to return to the protocol screen.

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