

Zoë Manager

User Guide



Zoë™ Manager

Zoë Manager is a web-based software application that provides users remote access to their Zoë-CM2™ Culture Module. Zoë Manager is not compatible with Zoë-CM1® Culture Module. This application is compatible with most common web browsers.

It is part of the same ecosystem as other Emulate software, such as Study Manager and Data Analysis, allowing users to use the same login credentials.

This product is for research use only.

Zoë Manager

Table of Contents

| | | |
|--------------|------------|---------------------------|
| 1 | 2 | 3 |
| Setup | Use | Help & Support |
| Page 5 | Page 9 | Page 23 |

The diagram illustrates the structure of the Zoë Manager manual. It features three main sections, each marked with a blue circle containing a number. Below each circle is the section title and a vertical line that connects to a page number on a horizontal axis. The sections are: 1. Setup (Page 5), 2. Use (Page 9), and 3. Help & Support (Page 23).

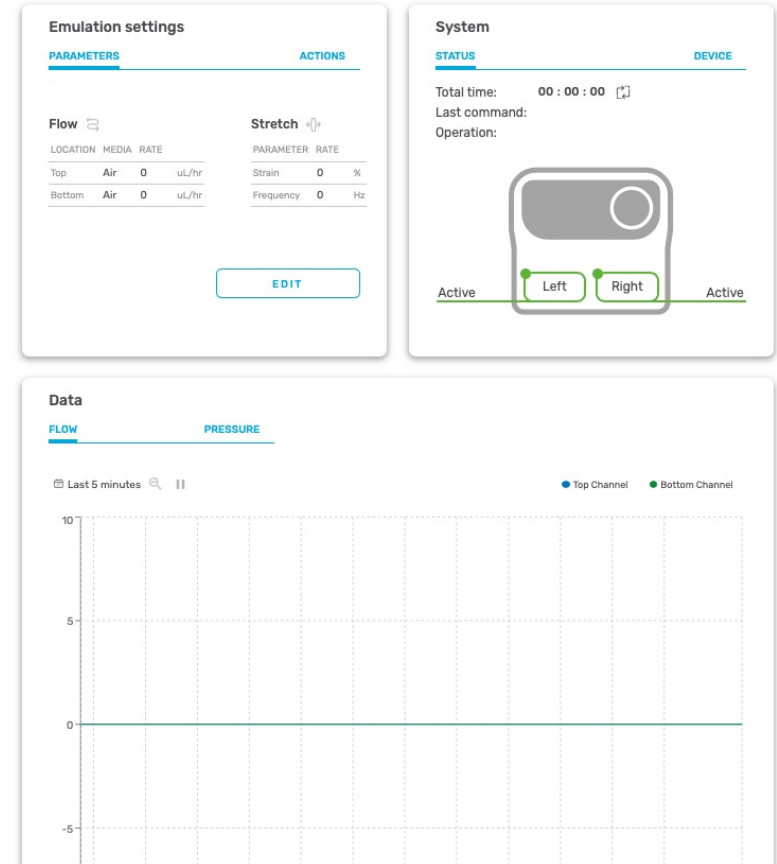
1 Setup

Zoë Manager

Setup

Setting Up a Zoë Manager Account

1. Using a web browser, navigate to zoemanager.emulatebio.com.
 - If you already have an Emulate account, enter your login credentials (these would be the same credentials for access to Study Manager or Data Analysis) and go to Step 3.
 - If you do not have an account, select “Request Access” and follow the instructions to submit an account request. Emulate Support will review your request, configure your account, and send you an email to create a password.
2. Follow the prompts from the email to set up an account and log in to Zoë Manager.
3. Once you have logged in, the Zoë Manager dashboard will appear:



Zoë Manager

Setup

Adding a Zoë-CM2

1. Adding a Zoë-CM2 can be performed by an admin with the Admin application:
admin.studymanager.emulatebio.com/
 - * For more details on admin privileges, contact support at emulatebio.com/contact-support, or at support@emulatebio.com.
2. To add a Zoë, click the “Add New” button under the Zoë menu.
3. Enter the required information for Zoë.
 - a. At this time, the user has the ability to create a unique 10-character Zoë Name.
 - * Make sure Zoë has an active internet connection. Otherwise, the registration process will not work.
4. Click the “Submit” button to finish Zoë registration.
5. Once Zoë has been registered, return to Zoë Manager.

We take your data privacy seriously. Please reference the Data Privacy & Security Policy for Emulate Software Applications for more information.

2 Use

Zoë Manager

Use

Once all Zoë-CM2s have been connected to Zoë Manager, you are ready to begin remote monitoring and control of your equipment.

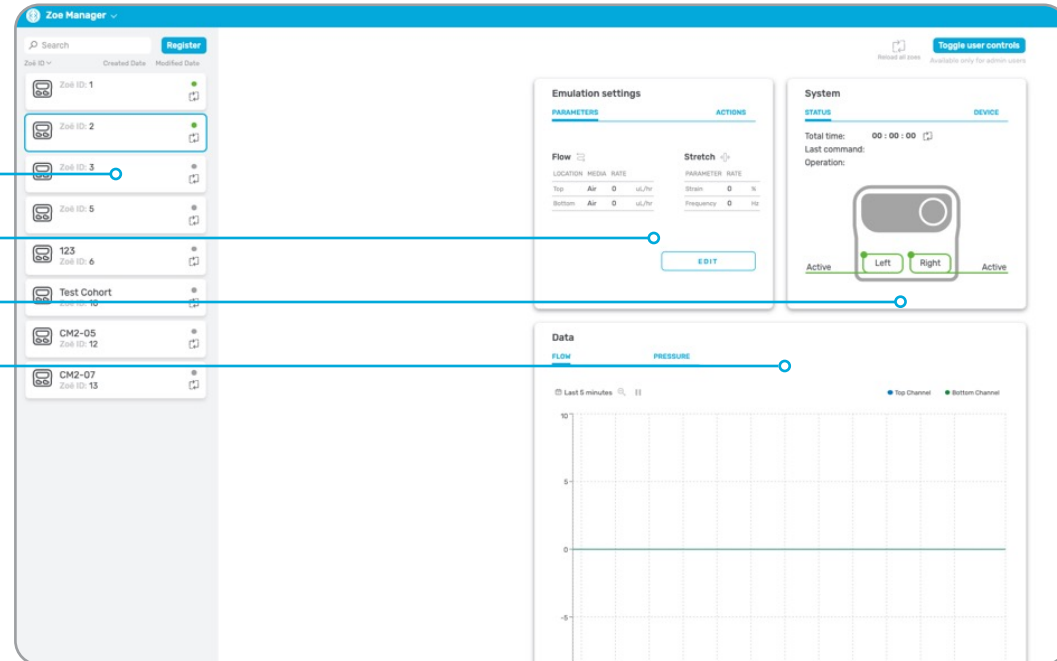
Dashboard Overview

Device Bar

System Settings: Actions

System Status: Device information

Flow Rate Graph / Pressure Graph



Zoë Manager

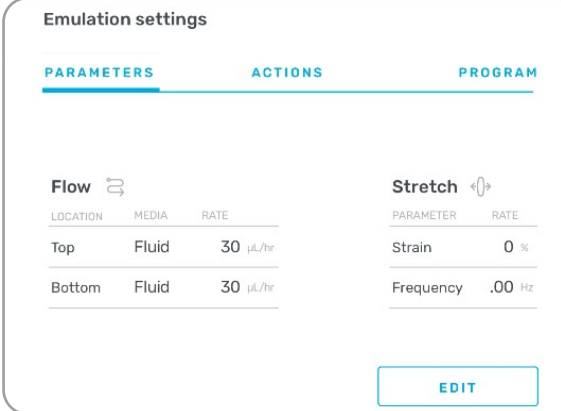
Use

Switching between multiple Zoë-CM2s

The sidebar on the left-hand side shows all connected Zoë-CM2s. If you have multiple Zoës, you can switch between them by selecting the desired Zoë from the sidebar. The selected Zoë's information will display on the dashboard.

Editing Experimental Parameters

1. To edit experimental parameters, go to the “Emulation settings” card, select the “Parameters” tab, and click the “Edit” button in the lower right corner.



The screenshot shows the "Emulation settings" interface with three tabs: "PARAMETERS", "ACTIONS", and "PROGRAM". The "PARAMETERS" tab is selected. It is divided into two sections: "Flow" and "Stretch".

Flow (with a refresh icon):

| LOCATION | MEDIA | RATE |
|----------|-------|----------------------------|
| Top | Fluid | 30 $\mu\text{L}/\text{hr}$ |
| Bottom | Fluid | 30 $\mu\text{L}/\text{hr}$ |

Stretch (with a double-headed arrow icon):

| PARAMETER | RATE |
|-----------|--------|
| Strain | 0 % |
| Frequency | .00 Hz |

An "EDIT" button is located in the bottom right corner of the settings card.

Zoë Manager


Use

Editing Experimental Parameters (Continued)


2. Edit the desired flow and stretch parameters and click “Apply.”
 - a. Select “Fluid” as the media type if using media in both channels.
 - b. Select “Air/Gel” for top channel media type if modeling an air-liquid interface (ALI) or filling the top channel with gel. This will default the flow rate to zero.

Emulation settings

PARAMETERS **ACTIONS** **PROGRAM**

Flow 

| LOCATION | MEDIA | RATE |
|----------|-------|----------------------------|
| Top | Fluid | 40 $\mu\text{L}/\text{hr}$ |
| Bottom | Fluid | 40 $\mu\text{L}/\text{hr}$ |

Stretch 

| PARAMETER | RATE |
|-----------|--------|
| Strain | 0 % |
| Frequency | .00 Hz |

CANCEL **APPLY**

Zoë Manager


Use

Editing Experimental Parameters (Continued)


- The updated settings will now take effect.

Emulation settings

PARAMETERS **ACTIONS** **PROGRAM**

Flow 

| LOCATION | MEDIA | RATE |
|----------|-------|---------------------|
| Top | Fluid | 40 $\mu\text{L/hr}$ |
| Bottom | Fluid | 40 $\mu\text{L/hr}$ |

Stretch 

| PARAMETER | RATE |
|-----------|--------|
| Strain | 8 % |
| Frequency | .25 Hz |

[EDIT](#)

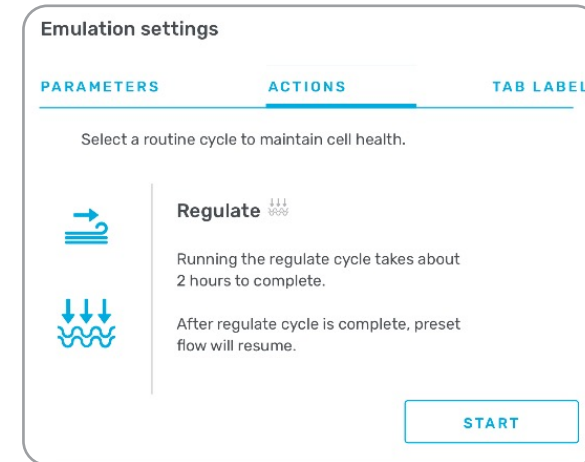
Zoë Manager

Use

Running Regulate™ Cycle

The Regulate Cycle is designed to remove any microbubbles that may have been introduced during the activation and seeding steps.

Note: If modeling ALI or filling the top/bottom channel with gel, be sure to select “Air/Gel” in the emulation setting parameters tab prior to running the Regulate Cycle. Selecting “Air/Gel” for a channel will cause that channel to have a flow rate of 0 to avoid experimental issues.

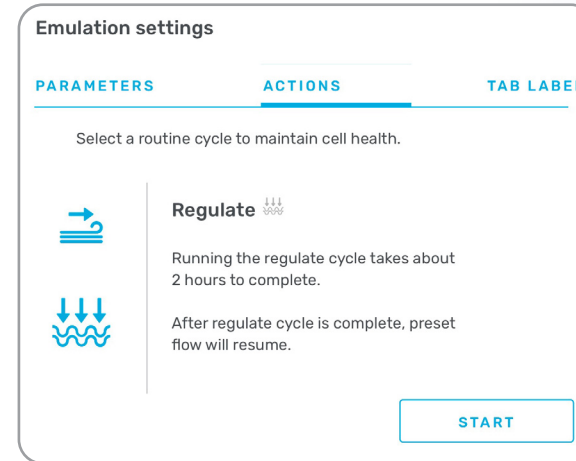


Zoë Manager

Use

Running Regulate™ Cycle (Continued)

1. From the Actions menu, select the “Regulate” icon from the menu on the left of the card.
2. Press the “Start” button to initiate the Regulate Cycle.



Note: Contact Emulate for guidance on user-provided equipment.

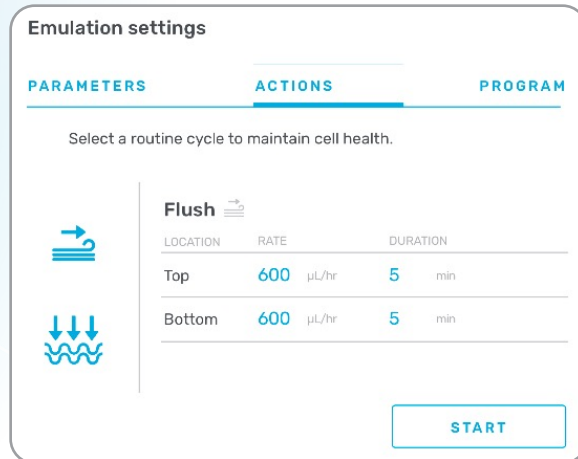
Zoë Manager

Use

Running Flush Cycle

The Flush Cycle allows the user to introduce a higher flow rate for a set duration.

1. To run the Flush Cycle, go to the “Emulation settings” card and select the “Actions” tab, which will bring up the Actions menu.
2. From the Actions menu, select the “Flush” icon from the menu on the left of the card.
3. The flush settings will appear on the right of the card. The flush parameters are preset at 600 $\mu\text{L/hr}$ for 5 minutes and cannot be changed.
4. To begin the Flush Cycle, press the “Start” button. When the cycle is complete, the system will pause flow.



Zoë Manager

Use

Running Program Flow Cycle

The Program Flow Cycle allows the user to set flow and stretch rates for a set duration.

1. To run the Program Flow Cycle, go to the “Emulation settings” card and select the “Program” tab, which will bring up the Program Flow settings.

The screenshot shows the 'Emulation settings' interface with three tabs: 'PARAMETERS', 'ACTIONS', and 'PROGRAM'. The 'PROGRAM' tab is selected. Below the tabs, there is a sub-header 'Program emulation parameters to run for a set time'. The interface is divided into three main sections: 'Flow', 'Stretch', and 'Duration'. Each section has a table of parameters. The 'Flow' section has two rows: 'Top' and 'Bottom', both with a rate of 1000 µL/hr. The 'Stretch' section has two rows: 'Strain' at 10% and 'Frequency' at 0.4 Hz. The 'Duration' section shows 100 hr and 59 m. At the bottom, there is a toggle switch for 'Stop flow at the end of the program cycle.' which is currently turned on, and a 'START' button.

| Flow | | | Stretch | | Duration |
|----------|------------|--|-----------|--------|-------------|
| LOCATION | RATE | | PARAMETER | RATE | |
| Top | 1000 µL/hr | | Strain | 10 % | 100 hr 59 m |
| Bottom | 1000 µL/hr | | Frequency | 0.4 Hz | |

Stop flow at the end of the program cycle.

START

Note: Contact Emulate for guidance on user-provided equipment.

Zoë Manager

Use

Running Program Flow Cycle (Continued)

2. The Program Flow settings will appear on the card and can be adjusted to the desired values.

If needed, the toggle button can be adjusted to either stop flow at the end of the Program Flow Cycle or resume the previous flow settings from the “Parameters” screen.

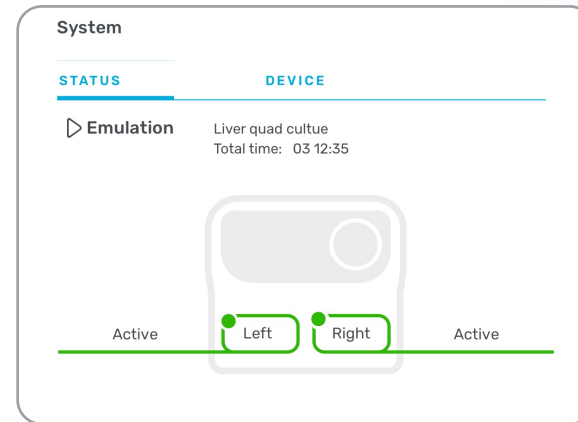
3. To begin the Program Flow Cycle, press the “Start” button.

Zoë Manager

Use

System Card

1. **Status Tab:** This gives the user the current status of Zoë-CM2 and information about the device itself. To get the System status, use the “Status” tab on the card to display the:
 - a. Run Timer
 - b. Current System Action (e.g. flow, Flush, Regulate, etc.)
 - c. Bay Status
 - i. Active
 - ii. Paused



Zoë Manager

Use

System Card (Continued)

2. **Device Tab:** This tab gives the user information about the Zoë instrument itself, including:
 - a. Zoë Name
 - b. Hardware ID
 - c. Serial Number
 - d. Model Number
 - e. Firmware Version
 - d. Model Number
 - e. Firmware Version

Zoë Manager

Use

Data Card

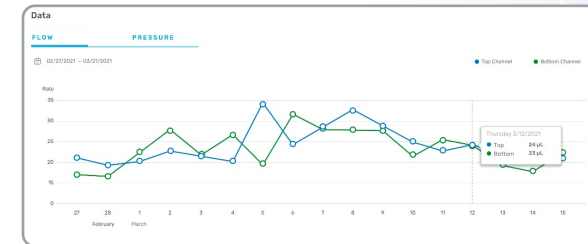
There are individual graphs that show records of the Zoë flow rate and pressure.

The **Flow Rate Graph** shows the simulated flow rate calculated from the measured pressure applied to the Pods by Zoë.

The **Pressure Graph** shows the pressure output of the four regulators that apply pressure to the Pod reservoirs (the top inlet reservoir, the top outlet reservoir, the bottom inlet reservoir, and the bottom outlet reservoir).

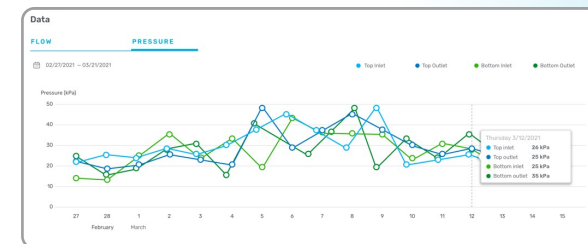
1. Flow Rate Graph

- a. To view the Flow Rate graph, select the “Flow” tab in the top of the Data card:



2. Pressure Graph

- a. To view the Pressure graph, select the “Pressure” tab in the top of the Data card:



3 Help & Support

For help and support, please reach out at:
emulatebio.com/contact-support, or at support@emulatebio.com



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