

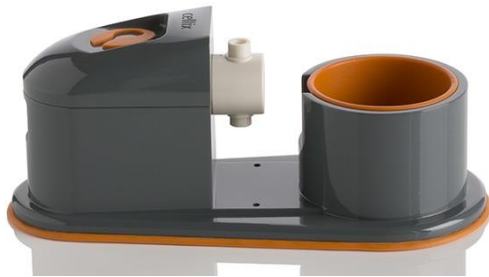


## Quick Start Guide

---

Kima™ Pump

### Kima Pump Box Contents



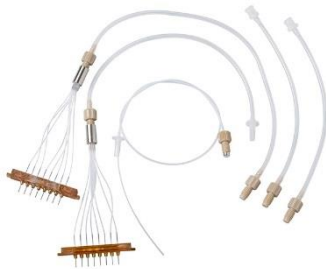
1. Kima pump



2. Kima controller



3. iPod Touch with iKima app



4. Tubing and cables for Kima pump



5. Bottle 100 mL with GL45 cap



6. Velcro strips



- 1. Power socket
- 2. Power switch
- 3. "Ready" indicator
- 4. USB connector
- 5. Power indicator
- 6. Kima pump ports (4 underneath)



1. Bottle holder
2. Pump
3. Kima pump socket

### Connecting Kima controller and Kima pump

- Fix the Kima controller to a wall/incubator using Velcro strips provided.
- Plug in the power cable (110–230 V) and connect the power supply to the power socket of the Kima controller.
- Plug the Kima pump to the Kima controller (port 1) using the Kima cable. The Kima cable can be easily disconnected for ease of use.
- Press the power switch to turn on/off the Kima controller (power indicator displays a red light when power is on).
- The “ready” indicator informs when the Kima controller is ready to be connected to your iPod Touch using a Wi-Fi network.

### Connecting tubing: Kima-connect tubing set contains four different parts

- Kima1-connect: pump priming cable (2 supplied per set)
- Kima2-connect: pump inlet cable
- Kima3-connect: pump outlet cable
- Kima4-connect: biochip outlet cable

#### **Kima1-connect pump priming cable (2 supplied per set) connection**



Connects to inlet and outlet of pump and prime with solution using syringe.

**Kima2-connect pump inlet cable connection**



Connects from bottle into pump.

**Kima3-connect pump outlet cable connection**



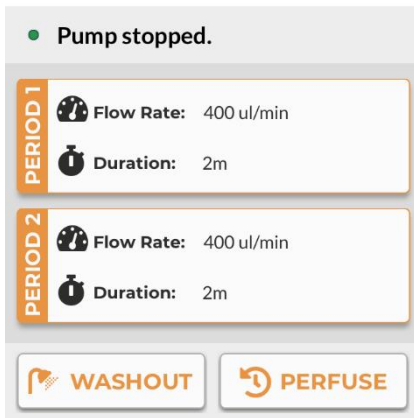
Connects from pump to biochip inlet.

**Kima4-connect biochip outlet cable connection**



Connects from biochip outlet to bottle.

## iKima Application



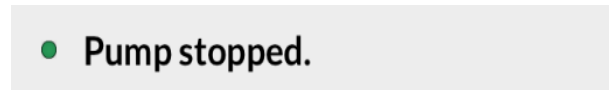
iKima application is available for download on iTunes and the Apple Store. The application provides full control of the pump by connecting to the controller using a Wi-Fi network.

### Wi-Fi Connection

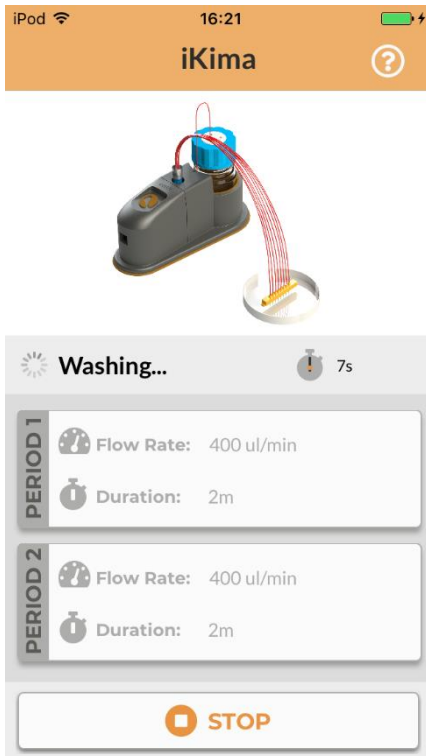
Check that Wi-Fi is enable on the iPod Touch (settings menu — ref to Apple user guide) and is connected to the Kima controller network (Serial number of the Kima controller). Open the iKima app.



Control bar



Status bar



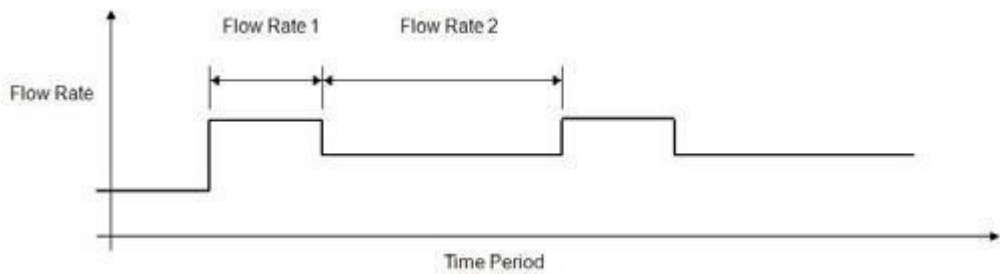
**Washout menu**

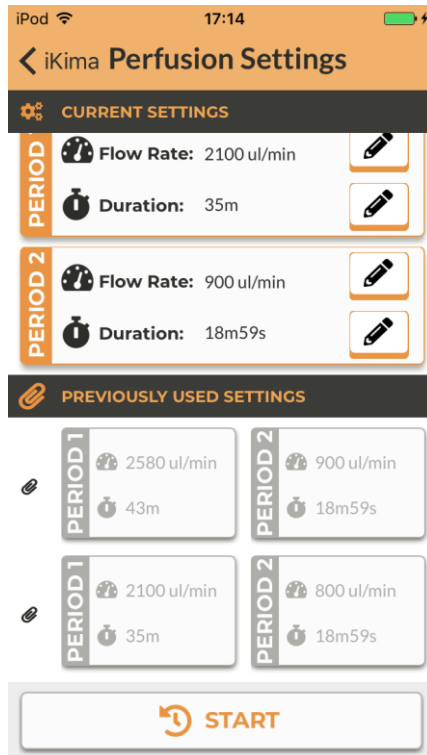
The washout mode is used to wash and prime tubing before and after cells culture experiments.

Press wash to start running the pump and press stop to stop it. While it is running, an animation displays “washing”.

**Perfusion menu**

The perfusion mode is used to run the pump at flow rates determined by the user. The user can select two flow rates for two different time periods. These two flow rates are then continuously looped or cycled until the user stops the device. The Wi-Fi connection of the iPod touch to the Kima pump is not necessarily maintained; i.e. it may fall asleep, but the device will continue to work as programmed.





First select the flow rate.

Set flow rate for each period.

Set time period for each flow rate.

After selecting the flow rate, then select the “duration”. This will bring up the following option, enabling you to set the time in hours, minutes and seconds.

Scroll to select the time in hours, minutes and seconds.

#### Typical settings

- Flow rate 1: 600  $\mu$ L/min for period I = 2 minutes
- Flow rate 2: 0  $\mu$ L/min for a period II = 20 minutes (i.e. flow stops).

**NOTE:** “Made for iPod” and “Made for iPhone” mean that an electronic accessory has been designed to connect specifically to iPod or iPhone and has been certified by the developer to meet Apple’s performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod or iPhone may affect wireless performance.



Pump status:

Stopped — the pump is stopped.

Washing — the pump is washing.

Perfusing — the pump is perfusing

**NOTE:** The Kima pump is only for exchange of culture media to feed the cells (i.e. pulses of fluid / pulsatile flow) rather than a continuous flow.

### Troubleshooting

- The iPod Touch doesn't connect with the Kima controller in Wi-Fi mode
  - Check settings of the iPod Touch.
- Wi-Fi enabled and connected to Cellix network. This is typically the same name as the serial number on the back of the pump. When selected, the IP address should be 192.168.2.30. The Subnet Mask is 255.255.255.0.
  - If the Cellix network doesn't show up in the network list, restart the controller (wait until the controller is ready).
  - If you still get error messages, switch off and on the controller (wait until the controller is ready and plug the iPod Touch again).



- The Kima pump doesn't run
  - Check that cable between the pump and the controller is securely connected to port 1.
  - Check that status shows either "washing" or "perfusing". If so, switch off and on the controller and try again.

For more information on the Kima pump or any other Cellix product or service, please call:

Republic of Ireland: +353-1-4500-155.

This publication is not intended to form any contract for computer software with Cellix Limited or any of its subsidiaries. If you require a particular application or feature, the suitability of the program should be verified.

Every effort has been made to ensure the contents of this and all Cellix publications are accurate and correct. This publication is for information purposes only and is not intended to form the basis of any contract for the sale or purchase of the product being described. No liabilities for errors will be accepted.