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Document history

Translation of the original document.


VERSION	DATE	MODIFICATIONS
A	03/05/2013	Creation
B	17/09/2013	Modifications on images
C	16/12/2013	Regulatory modifications following the AES and bioMérieux merger


User manual - Pictograms

	Note
	Equipment optimization tip
	Prohibited action notice
	Noteworthy point warning
	Danger or potential risk warning
	Reminder of the pre-requisites for implementation of the next instructions

AES blue line[™] is one of bioMérieux's registered trademarks.

The information and graphs contained in this manual are not binding. bioMérieux therefore reserves the right to implement changes to the document without prior notice.

 bioMérieux will not approve any modifications whatsoever to the equipment implemented by the user. bioMérieux shall under no circumstance be held liable for any direct or consequential injury or damage whatsoever suffered by the user or by any third party, as a result of modifications to the equipment.

-  • This equipment is for professional use only.
- Users are required to read all the accompanying documents, including the statutory information, before using the equipment.

Equipment conformity

FCC compliance

This equipment has been declared in compliance with FCC regulations, section 15, applicable to class B digital equipments. These regulations are designed to provide adequate protection against harmful interferences in a residential installation. This equipment generates, uses and may emit radio-electric waves. It can generate interferences that may be harmful to radio-communications if it is not installed or used according to the instructions. Using this equipment in a specific installation may generate harmful interferences, in which case the user may need to correct the interference using one or all of the following methods:

- Redirect or move the receiver aerial
- Move the equipment away from the receiver
- Plug the equipment into a different socket from the one used for the receiver
- Contact the distributor or get help from a radio / TV technician.

Industry conformity Canada (IC)

This class B digital equipment complies with Canadian standard NMB- 03.

EC compliance

This equipment complies with the relevant EC directives and standards listed in the accompanying certificate(s).

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Learning about the equipment

Features

✓ **New!**

- Better task traceability is guaranteed by the user account management feature.
- Get detailed explanations thanks to PMI's integrated context-sensitive help. The features are presented in a way that will guide you throughout your use of the equipment.
- Optimize dose dispensing thanks to the diluent and program management feature. You can save time by creating programs and assigning diluents to pumps.

✓ **Ergonomics**

- Thanks to the "i" light indicator, you will quickly see the operation results.
- The design allows for easy maintenance and an excellent resistance to cleaning products.

✓ **Efficiency and accuracy**

- The pump guarantees repeatable dispensing patterns.

✓ **Capacity and adaptability**

- You can connect up to four external pumps and manage up to 5 different diluents with the equipment.

✓ **Advanced features**

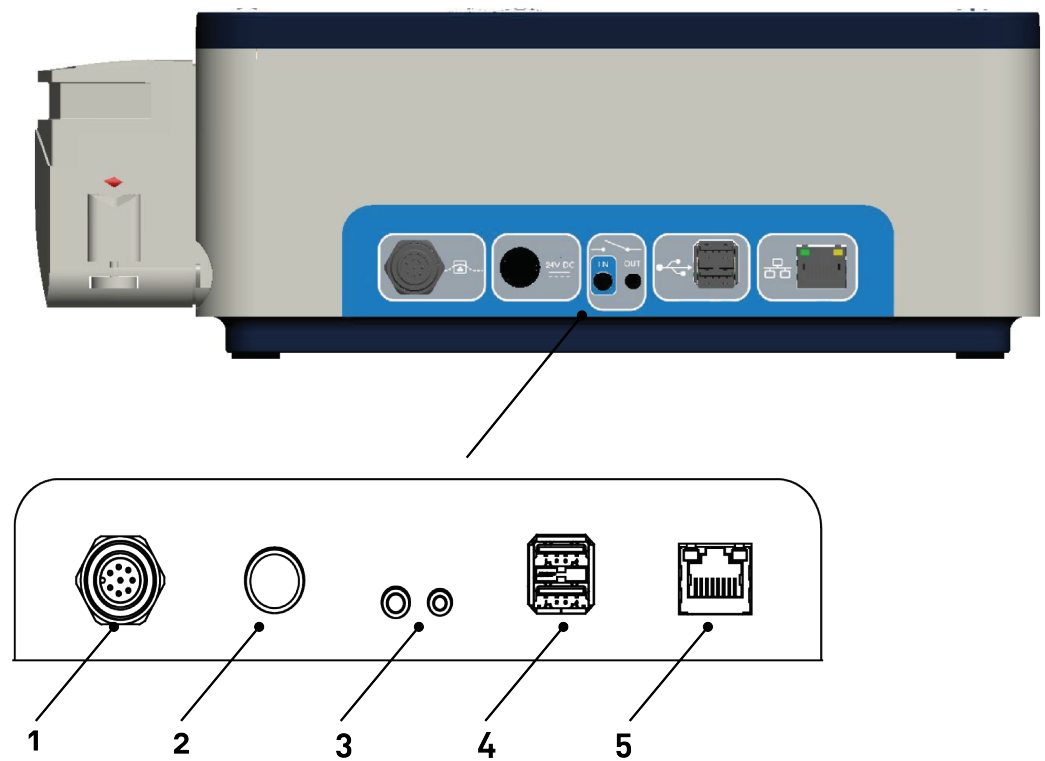
- Traceability is guaranteed thanks to data exports via various peripherals (USB stick, ticket or virtual printer, FTP server, etc.).
- Traceability is easily managed thanks to the embedded RFID reader and the bar code reader.

Front view



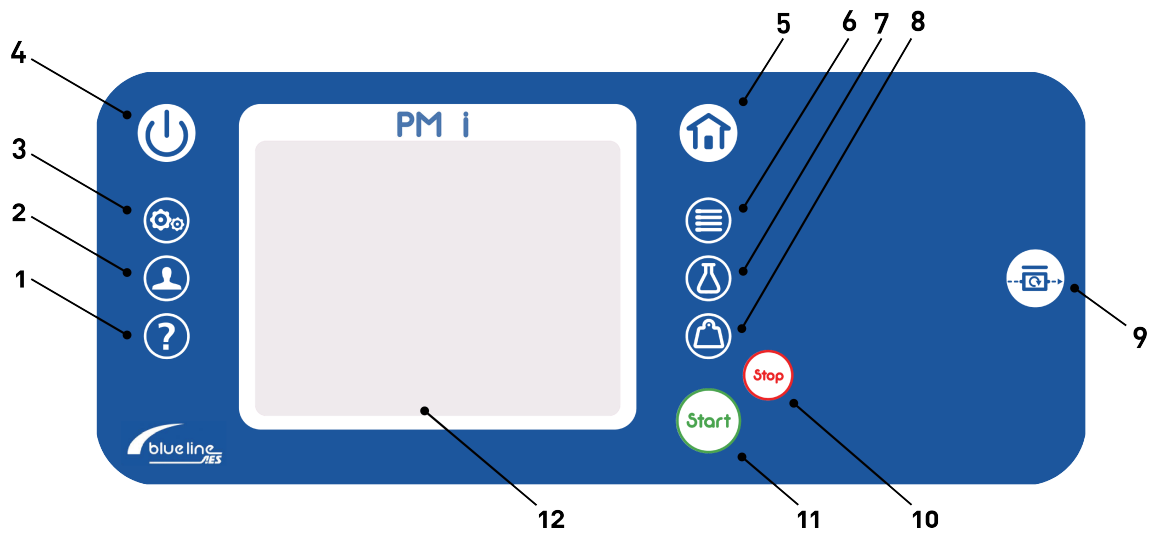
1	Touch panel
2	Pump head
3	"i" light indicator
4	RFID light indicator

Rear view



1	External pump power cord
2	Mains power cord
3	Dry contact input / output
5	USB port x2
5	Ethernet port


Touch panel



1	Help Key
2	User Key
3	Configuration Key
4	On / Off key
5	Home Key
6	Program Key
7	Diluent Key
8	Adjustment Key
9	Priming Key
10	Stop Key
11	Start Key
12	Touch screen

Context-sensitive help

- Use the context-sensitive help available in the touch panel to find the information you need about specific equipment features.
- Read the user manual to find out how to use the equipment and how to access different functions, then get any additional information you need from the context-sensitive help feature.

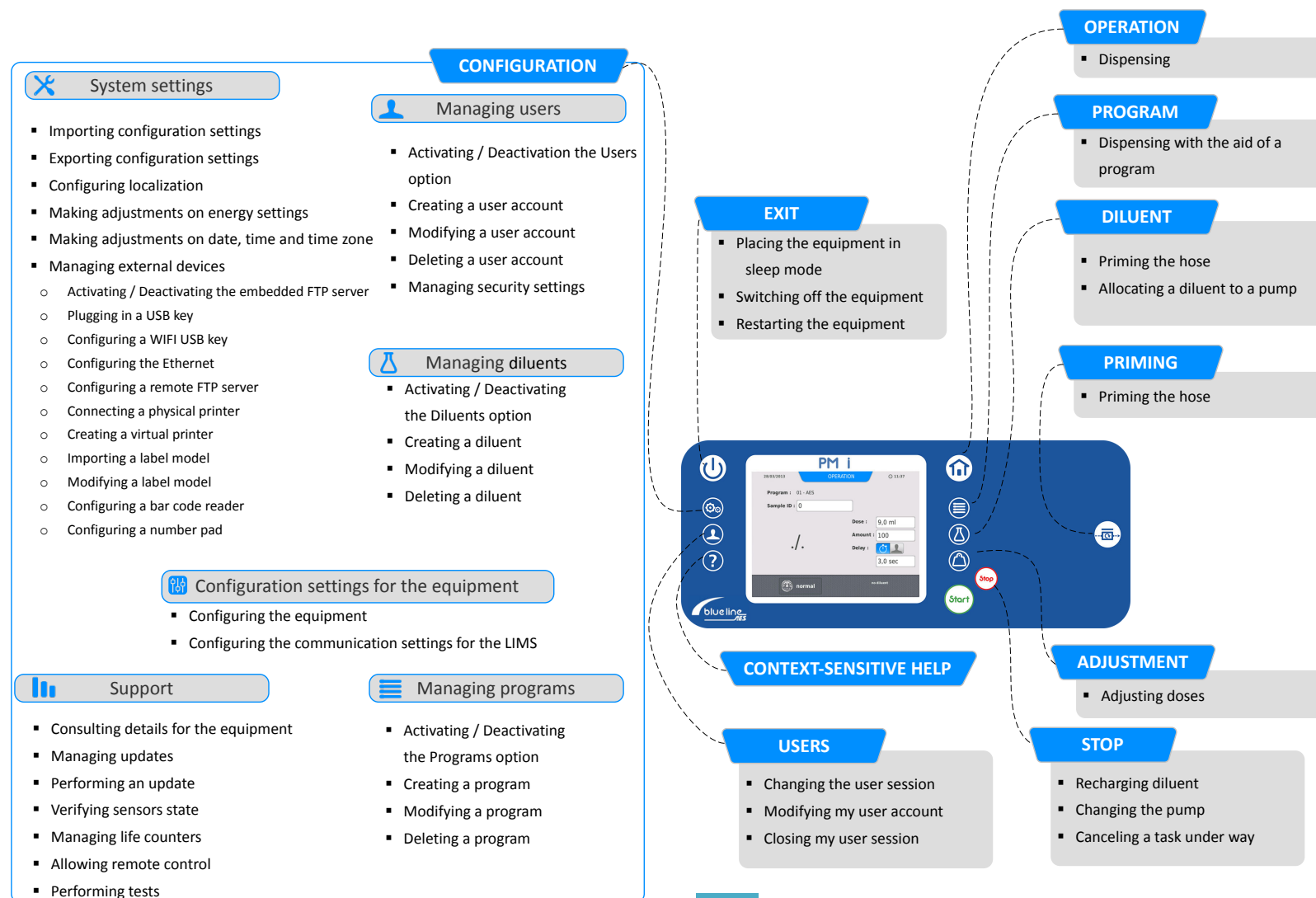
Whichever screen you happen to be working on, just press  to display help information on any particular feature.



1. Press.
2. Select.
3. Read.

Just press  to disable the Help feature.

Learning about the features




Installing the equipment

Install the equipment in a good working environment for optimal use.




- 1.** Carefully place the equipment on a flat, horizontal, solid surface.
The equipment should be placed on a clean, dry table.
- 2.** Plug the equipment's power cord into an outlet with ground connection.
The equipment will start up.
- 3.** Choose a country that has localization settings that are similar to the settings in your country. You can then customize the localization settings suitable for your country. Check the "Define the localization settings" section in the user manual.
The Task screen is displayed.

Switching the equipment on / off

Switching the equipment on

 The equipment does not have an on / off switch.

Proceed according to the following situations:

Option	Description
Your equipment is off and plugged in.	Press  on the touch panel.  The equipment will start after a few seconds.
Your equipment is in sleep mode.	Touch the screen.
The equipment is not plugged in.	Plug in the equipment.  The equipment will start up after a few seconds.

Placing the equipment in sleep mode

Place the equipment in sleep mode to save energy.

1. Press .
2. Press .

To exit sleep mode, touch the screen.

Restarting the equipment

1. Press .
2. Press .

Switching off the equipment






1. Press .
2. Press .

Understanding the light indicators





There are different light indicators that inform you about the state of the equipment and help you understand how it works.









✓ "i" indicator

Indicator	Color	Explanation
	blue	<ul style="list-style-type: none"> equipment is turned on equipment is ready for a task
	blue (flashing)	<ul style="list-style-type: none"> dispensing currently in progress
	green	<ul style="list-style-type: none"> task was successful
	orange (flashing)	<ul style="list-style-type: none"> task postponed waiting for dispensing to begin
	colorless	<ul style="list-style-type: none"> equipment is off equipment is in standby mode

✓ **RFID Indicator**

Indicator	Color	Explanation
	turns green	<ul style="list-style-type: none"> ticket or RFID card scan was successful
	blue	<ul style="list-style-type: none"> RFID reader is in playback mode
	colorless	<ul style="list-style-type: none"> cannot be scanned
	red	<ul style="list-style-type: none"> scan failed

✓ **RFID Indicator (with LIMS connection)**

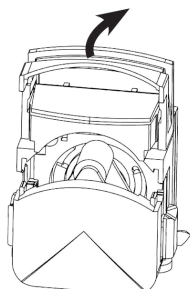
Indicator	Color	Explanation
1.  2.  3. 	1. flashing blue 2. turns green 3. blue	<ul style="list-style-type: none"> RFID ticket or RFID card scan was successful
	blue	<ul style="list-style-type: none"> RFID reader is in playback mode
	red	<ul style="list-style-type: none"> scan failed
	colorless	<ul style="list-style-type: none"> cannot be scanned

Recommendations for use

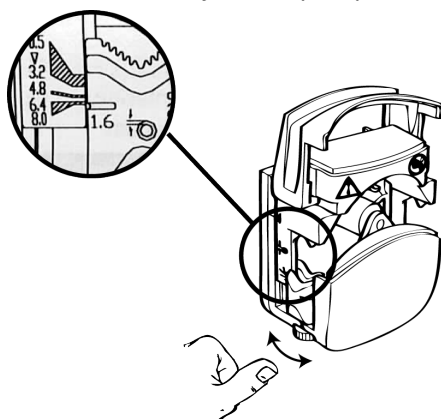
- Use the equipment on a flat, horizontal, solid surface.
- Use the following tubing sets:
 - Set of 1.6 mm tubing with dispensing nozzle: 1 to 5 ml
 - Set of 3.2 mm tubing with dispensing nozzle: 4 to 50 ml
 - Set of 4.8 mm tubing with dispensing nozzle: 20 to 100 ml
 - Set of 6.4 mm tubing with dispensing nozzle: 50 to 300 ml
 - Set of 8 mm tubing with dispensing nozzle: over 300 ml and the diludry.

Installing the tubing

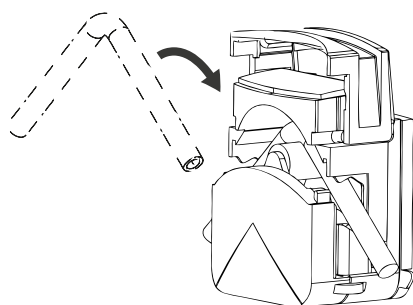
1. Lift up the pump head safeguard.



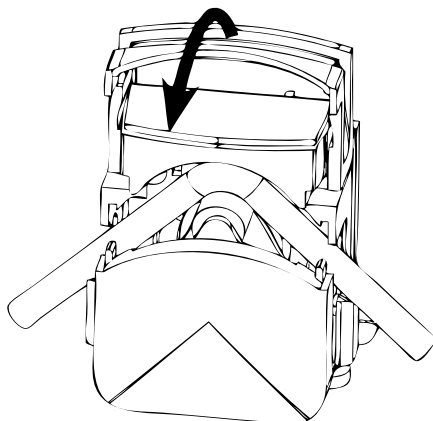
2. Turn the thumb wheels to adjust the pump head to the tubing being used.



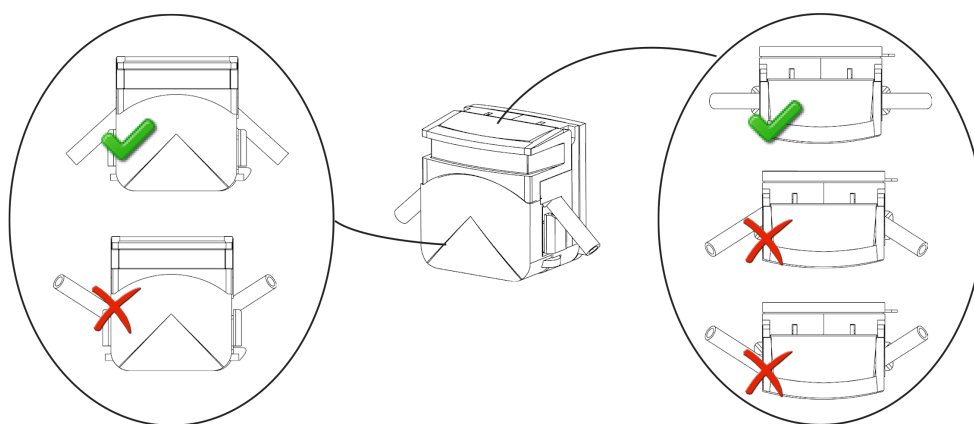
3. Insert the tubing (opaque end) into the pump and make sure it is positioned in the right direction.



4. Close the safeguard, making sure not to trap your fingers.



5. Check that the tubing is properly positioned.





Defining the pump's rotation direction.

Define the rotation direction of the main pump and the external pumps. Each pump can have a different rotation direction.





If you use a program, the pump will turn in the direction defined by the program.

1. Press the  key.

2. Press  or  to define the pump's rotation direction.



Making an adjustment

You can adjust the dose at any time.















1. Press  if you're not already on the Adjustment screen.
2. Enter the tubing diameter used.
3. Enter the **Volume to be dispensed**.
4. Press  or the pedal to start dispensing the first dose for adjustment.














You can stop dispensing and make an adjustment with the volume of the dose that was dispensed.

5. Change the **Dispensed volume** according to the calculated volume of the dose that was dispensed.
6. If you need to check the adjustment, press  or the pedal.
7. Press  to confirm.


Dispensing in automatic mode






1. Press  to go to the Operation screen.
 2. Enter the volume of the dose to be dispensed then press .
 3. Enter the number of doses to be dispensed then press .
 4. Press  to go to automatic mode.
The  icon is replaced by the .
 5. Indicate the break time between the dispensing of each dose then press .
 6. Press  to choose the dispensing speed.
 7. Press  and assign a diluent to the pump if you activated diluent management (check the [Activate-deactivate the Diluent option](#) section).
 8. Complete the **sample ID** field if required and if the field is activated.
 9. Press .
The Adjustment screen is displayed.
 10. Adjust the dose to be dispensed and check the [Make an adjustment](#) section.
 11. Press  or the pedal to start automatic dispensing.
-  You can also dispense the doses manually by pressing the  key or the pedal.
12. Once dispensing of the doses is completed, press the  key to complete the operation.

Dispensing in manual mode


1. Press  to go to the Task screen.
2. Enter the volume of the dose to be dispensed then press .
3. Enter the number of doses to be dispensed then press .
4. Press  to go to manual mode.
The  icon is replaced by the  icon.
5. Press  to choose the dispensing speed.
6. Press  and assign a diluent to the pump if you activated diluent management (check the [Enable-disable the Diluent option](#) section).
7. Complete the **sample ID** field if required and if the field is enabled.
8. Press .
The Adjustment screen is displayed.
9. Adjust the dose to be dispensed and check the [Make an adjustment](#) section.
10. Press  as often as required, to manually dispense the doses.
11. After dispensing all the doses, press  to confirm the task.

Dispensing in automatic mode with a program

-  Ensure that the Programs option is enabled (check the [Enable-disable the Programs option](#) section).

1. Press  to go to the Task screen.
2. Press  and select a program.
3. Press  and assign a diluent to the pump if you activated diluent management (check the [Enable-disable the Diluent option](#) section).
4. Complete the **sample ID** field if required and if the field is enabled.
5. Press .
The Adjustment screen is displayed.
6. Adjust the dose to be dispensed and check the [Make an adjustment](#) section.
7. Press  or the pedal to start automatic dispensing.









You can also dispense the doses manually by pressing  or the pedal.

8. Once dispensing of the doses is completed, press  to confirm the task.

Dispensing in manual mode with a program



Ensure that the Programs option is enabled (check the [Enable-disable the Programs option](#) section).

1. Press  to go to the Task screen.
2. Press  and select a program.
3. Press  and assign a diluent to the pump if you enabled diluent management (check the [Enable-disable the Diluent option](#) section).
4. Complete the **sample ID** field if required and if the field is enabled.
5. Press  .
The Adjustment screen is displayed.
6. Adjust the dose to be dispensed and check the [Make an adjustment](#) section.
7. Press  as often as required.
8. After dispensing all the doses, press  to confirm the task.



Stopping a task under way

You may stop a task under way at any time to top up the diluent or change the pump. You can then resume or cancel the task.

Canceling a task under way

You may cancel a task that is under way.



A task is under way.

1. Press  .
The Stop screen is displayed.
2. Press  .

Changing the pump while a task is under way

You may change the pump while a task is under way, without having to cancel the task. This only applies when at least two pumps have been detected by the equipment.




A task is under way.

1. Press  .
The Stop screen is displayed.
2. Select a pump if required.
3. Press  .
The task starts automatically.

Recharging diluent while a task is under way

You may recharge the diluent while a task is under way, without canceling the task. This only applies if the Diluent option is enabled and if a diluent has been allocated to the pump being used for the task.

A task is under way.


1. Press  .
The Stop screen is displayed.
2. Press  to recharge the diluent.
3. Once the diluent has been recharged, press  .

Priming a tubing

Prime the tubing if the pump stalls.



You have positioned the tubing correctly in the pump but the pump stalls when you start a task.

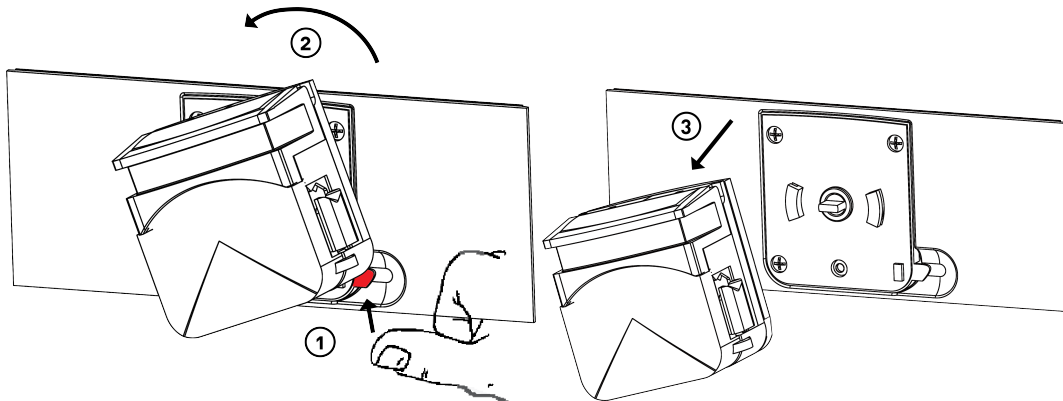
1. Make sure that you check the pump's rotation direction. Check the [Defining the pump's rotation direction](#) section.
2. Press  until the diluent flows out of the pump head.

Cleaning the equipment



- Do not spray directly on the equipment connectors.
- Do not use any aggressive, chlorine-based or acid-based cleaning product.

1. Unplug the equipment's power cord.
2. Remove the equipment's dispensing tubing.
3. If required, remove the pump head. Be careful not to catch your fingers.




4. Clean the equipment and the pump head with a cloth and cleaning product or hot water.
5. Clean the touch panel with a dry or slightly damp cloth.






Managing user accounts

You may create, modify and delete user accounts. Only Administrators are allowed to manage user account security settings.






Enabling-Disabling the User option

1. Press  .
The Configuration screen is displayed.
2. Enable or disable the User option.
When you enable the User option, you are automatically disconnected and you need to open a new session to use the equipment.





Creating a user account

1. Press the  key then the  key.
2. Press  to go to the User screen.
3. Press  .
4. Complete the fields.
5. Press  to confirm.

Modifying a user account






1. Press the  key then the  key.
2. Press  to go to the User screen.
3. Select the account you want to modify
4. Press  .
5. Modify the fields
6. Press  to confirm.

Delete a user account

1. Press the  key then the  key.
2. Press  to go to the User screen.
3. Select the account you want to delete.
4. Press  .





Configuring the security settings

You may configure the security settings for the user accounts. You define whether or not you authorize anonymous sessions and how you manage automatic disconnections.

1. Press the  key then the  key.
2. Press  to go to the User screen.
3. Press .
4. Configure the security settings.
5. Press  to confirm.

Enable / Disable password use

You may use user account passwords or not. You decide whether a user password is optional or mandatory when the user logs on to the equipment.



1. Press the  key then the  key.
2. Press  to go to the User screen.
3. Press .
4. Select your password strategy (none, optional, mandatory).



If you choose to use passwords, you can allocate a temporary password for new user accounts. Users can then change the password via their user account. See the [Modify my user account](#) section.

5. Press  to confirm.

Changing the user session




1. Press  .
The open session is selected by default.
2. Select another user session.
3. Press  to confirm. enter a password if required.

Managing my user account

You may modify your account and disconnect from the system.

Modifying my user account

Modify your name and identifier, allocate an access badge or change your password. Only Administrators and Managers may modify their access rights.

1. Press .
2. Select your account.
3. Press .
4. Modify your details.
5. Press  to confirm.

Closing my user session

Close your session so that other users can use the equipment.



1. Press .
 2. Press .
- Your session has now been closed.

Managing diluents






You may create, modify and delete diluents, concentrates or additives.

Enabling-Disabling the Diluent option






You may enable or disable the diluent management option to create diluents for better traceability.

1. Press the  key then the  key.
The Configuration screen is displayed.
2. Enable or disable the Diluents option.





Creating a diluent, a concentrate or an additive

1. Press the  key then the  key.
2. Press  to go to the Diluents screen.
3. Press .
4. Complete the fields.
5. Press  to confirm.

Modify a diluent, concentrate or additive

1. Press the  key then the  key.
2. Press  to go to the Diluents screen.
3. Select the diluent, the concentrate or the additive you want to modify.
4. Press .
5. Modify the fields
6. Press  to confirm.

Delete a diluent, concentrate or additive

1. Press the  key then the  key.
2. Press  to go to the Diluents screen.
3. Select the diluent, the concentrate or the additive you want to delete.
4. Press .


Allocating a diluent, concentrate or additive to a pump

You may allocate a diluent, a concentrate and additives to specific pumps for better traceability.

1. Press .

2. Select a pump.

3. Select a diluent, a concentrate or an additive in the list of diluents, concentrates or additives.

 When you allocate a concentrate to a pump, you must also allocate an additive to another pump.

4. If required, complete the relevant fields for the diluent, concentrate or additive you have allocated.


5. Press  to confirm.

Managing programs






You may create, modify and delete programs.

Enabling-Disabling the Program option






You may enable or disable the program management option.

1. Press  .
The Configuration screen is displayed.
2. Enable or disable the Programs option.





Creating a program

1. Press the  key then the  key.
2. Press  to go to the Programs screen.
3. Press  .
4. Complete the fields.
5. Press  to confirm.

Modifying a program

1. Press the  key then the  key.
2. Press  to go to the Programs screen.
3. Select the program you want to modify
4. Press  .
5. Modify the fields.
6. Press  to confirm.

Delete a program





1. Press the  key then the  key.
2. Press  to go to the Programs screen.
3. Select the program you want to delete.
4. Press  .

Managing the external devices

Access more features (data management, updates, etc.) by adding physical or virtual external devices (USB stick, Wifi stick, Ethernet, printer, virtual printer, number pad, bar code reader, embedded FTP, remote FTP).

Enabling-disabling the embedded FTP server

You may enable or disable the embedded FTP server to store your data.

1. Press the  key then the  key.
2. Press .
3. Press .
4. Select the embedded FTP in the list of external devices.
5. Press the on / off button to enable or disable the embedded FTP server.







You may connect to the embedded FTP server via an anonymous session by using the 35170 password.

Connecting a USB stick

You may use a USB stick to store your data.



You can connect your USB stick from any screen.

1. Press the  key then the  key.
2. Press .
3. Press .
4. Plug your USB stick into the rear panel on the equipment.
The USB stick is automatically detected and displayed in the list of external devices.








Disable the USB stick before removing it to avoid data loss.

Configuring a Wifi stick

Use a Wifi stick to access a network and to manage your data.



Disable the Ethernet before enabling the Wifi stick.






1. Press the  key then the  key.
2. Press .
3. Press .
4. Plug your Wifi stick into the rear panel on the equipment.
The Wifi stick is automatically detected and displayed in the list of external devices.
5. Press the on / off button to enable the Wifi stick.
6. Press  to configure the Wifi stick.

Configuring the Ethernet

You may use the Ethernet to access a network and to manage your data.










Disable the Wifi stick before enabling the Ethernet.

1. Press the  key then the  key.
2. Press .
3. Press .
4. Plug your Ethernet cable into the rear panel on the equipment.
The Ethernet is automatically detected and displayed in the list of external devices.
5. Press the on / off button to enable the Ethernet.
The equipment connects to the network.
6. Press  to display the IP settings.
By default, the equipment is configured in DHCP mode.







Configure a remote FTP server

You may configure a remote FTP server to store your data.

1. Press the  key then the  key.
2. Press .
3. Press .
4. Press .
5. Select **remote FTP server** then press .
6. Complete the fields, then press  to confirm.
The remote FTP server is included in the list of external devices.










Connecting a physical printer

You may use a physical printer to print your labels.

1. Press the  key then the  key.
 2. Press .
 3. Press .
 4. Plug your printer into the rear panel on the equipment.
The printer is automatically detected and displayed in the list of external devices.
-  The virtual printer is configured by default.
5. Press  to modify its configuration.

Creating a virtual printer

You may use a virtual printer to store your data on a USB stick, an embedded FTP server or a remote FTP server.







1. Press the  key then the  key.
 2. Press .
 3. Press .
 4. Press .
 5. Select **virtual printer** then press .
 6. Complete the fields, then press  to confirm.
The virtual printer is displayed in the list of external devices.
-  The virtual printer is configured by default.
7. Press  to modify its configuration.

Modifying a label model

You may modify the default label models for the equipment.



Your printer is on or you have set up a virtual printer.







1. Press the  key then the  key.
2. Press .
3. Press .
4. Select a printer and press .
5. Select the type of label you want to modify.
6. Choose another label model.
7. Press  to confirm.

Importing a label model

You may customize the label models by importing your own models.









- Your printer is on or you have set up a virtual printer.
- You have stored your label model file on an external storage device (USB stick, embedded FTP server or remote FTP server).


1. Press the  key then the  key.
2. Press .
3. Press .
4. Select a printer and press .
5. Select the type of label you want to customize.
6. Press .
7. Select and import your label model file from the external storage device.

Configuring the bar code reader

You may use a bar code reader to scan your labels.







1. Press the  key then the  key.
2. Press .
3. Press .
4. Plug your bar code reader into the rear panel on the equipment.
The bar code reader is automatically detected and is included in the list of external devices.
5. Press  to configure the bar code reader.

 A bar code reader is configured like a keyboard, according to the country's language. For example in France (fr), keyboards are configured in AZERTY and in QWERTY in English speaking countries. It is the same for bar code readers. Be sure to select the country code corresponding to your bar code reader localization settings. Otherwise, the reader will not be able to read correctly your bar codes. Run a test on a bar code on which you can see the content in order to check that your reader has been correctly configured.

6. Select your country's language
7. Press  to confirm.

Configuring a number pad







You may use a number pad.

1. Press the  key then the  key.
2. Press .
3. Press .
4. Plug your number pad into the rear panel on the equipment.
The number pad is automatically detected and is included in the list of external devices.
5. Press  to configure the number pad.
A number pad is configured like a keyboard, according to the country's language.
6. Press  to confirm.

Configuring the system settings







Importing the configuration settings

You may import your configuration settings for the equipment from your external devices.

1. Press the  key then the  key.
2. Press .
3. Press  to access the Import/Export screen.
4. Press .
5. Select your chosen external device in the import File screen.
6. In the right-hand column, choose the configuration you want to import by selecting a folder, then a file.
7. Press  to confirm.
The equipment will restart.

Exporting the configuration settings for the equipment

You may export your configuration settings for the equipment via your external devices.





1. Press the  key then the  key.
2. Press .
3. Press  to access the Import / Export screen.
4. Press .
5. Press  to confirm.

Managing updates

You may enable and disable the automatic firmware installation and search feature and update the firmware.






1. Press the  key then the  key.
2. Press  then  to access the Update screen.
3. Configure the settings.
4. Press  to confirm.

Configuring the localization settings

1. Press the  key then the  key.
2. Press .
3. Press  to access the Localization screen.






Adjusting the energy settings

You may adjust the energy settings for greater readability and configure the sleep feature to save energy.

1. Press the  key then the  key.
2. Press .
3. Press  to access the Energy screen.
4. Configure the settings.
5. Press  to confirm.

Adjusting the date, time and time zone






You may adjust the date, time and time zone You may also enable / disable the automatic date / time and time zone synchronization feature.

1. Press the  key then the  key.
2. Press .
3. Press  to access the Date & Time screen.
4. Complete the fields
5. Press  to confirm.

Configuring the settings for the equipment

Configuring the dispensing settings

You can configure different dispensing settings, such as customized pump speed, pump rotation direction, time lag before dispensing the first dose and sample ID activation / deactivation.






1. Press the  key then the  key.
2. Press .
3. Press .
4. Configure the settings.
5. Press  to confirm.

Configuring the communication settings for the LIMS

You may configure the settings to allow communication with your LIMS.





Contact bioMérieux customer service to configure the LIMS.

1. Press the  key then the  key.
2. Press .
3. Press .
4. Configure the settings.
5. Press  to confirm.

Managing messages



Displaying a message

A flashing envelope indicates you have a new message, no matter which screen you are working on.

1. Press .
The Message screen is displayed.
2. Select the message you want to read, then press .
 - The message is marked as read.
 - It remains in your inbox.
 - The envelope stops flashing.



Deleting a message

Delete your messages from the message list once you have read them.

1. Press , no matter which screen you are working on.
The Message screen is displayed.
2. Select the message you want to delete, then press .

Displaying help

Each feature is explained, to help you understand how the equipment works.

1. Press  on any screen to enable the Help feature.
Help zones are displayed on the screen.
2. Press the help zone you want to access.
A help window displays the relevant information.
3. Press the help window to close it.
4. Press  to disable the Help function.





Errors

Before calling the After-sales Service, check the troubleshooting section to find out if you can solve the problem.

Problem description	Possible causes	Problem solutions
The pump stalls at start-up.	<ul style="list-style-type: none"> Hose not positioned properly in the pump Priming not completed 	<ul style="list-style-type: none"> Position the tubing correctly in the pump. Prime the tubing.
Dispensing is inconsistent.	<ul style="list-style-type: none"> The adjusting flange for the tubing is incorrectly positioned for the tubing diameter in use. 	<ul style="list-style-type: none"> Adjust the tubing flange so as to make sure the tubing is not constricted.
The dispensing process starts up but the liquid is not dispensed.	<ul style="list-style-type: none"> The tubing is constricted The tubing is not positioned in the right direction 	<ul style="list-style-type: none"> Position the tubing so that it is not constricted or bent. Check the pump rotation direction selected.
Problem with the bar code reader.	<ul style="list-style-type: none"> Unsuitable bar code reader configuration 	<ul style="list-style-type: none"> Configure your bar code reader when connecting to the device.
The interface does not detect the external pump and none of the indicator lights are turned on.	<ul style="list-style-type: none"> Incorrect connection 	<ul style="list-style-type: none"> Check that the external pump is properly connected to your device.
Pedal is not working.	<ul style="list-style-type: none"> Incorrect connection 	<ul style="list-style-type: none"> Check that the pedal is properly connected to your equipment then check the state of the pedal's input sensor, and see the Check the state of the sensors section.





Displaying the details for the equipment

Change the equipment name, display the equipment specifications and program release.

1. Press the  key then the  key.
2. Press .
3. Press .
4. If required, change the equipment name and display the available information.

Checking sensor state

Check that equipment sensors are operating correctly.






1. Press the  key then the  key.
2. Press  then .
3. Follow context-sensitive help to check state of sensors.
When state is **on**, the sensor is operational.

Implementing functional tests

You may implement simple tests (light indicators, pumps, sound, etc.) and sequential tests on the equipment to check for malfunction.

1. Press the  key then the  key.
2. Press  then .

Managing the life counters






1. Press the  key then the  key.
2. Press  then .
3. You can either:
 - Display the life counters
 - Enable / disable the sending of regular anonymous reports to bioMérieux.
4. Press  to confirm.

Authorizing remote maintenance

Authorize remote maintenance in the event of equipment failure to allow the After-sales service to take control of your equipment remotely to deal with the problem.



To authorize remote maintenance, you need to be in contact with the After-sales service.

1. Press the  key then the  key.
2. Press  then .
3. Press .
4. Follow the After-sales service instructions.

Technical data

Environmental conditions	Altitude	up to 2000 m	
	Temperature	from 0 to 45°C max.	
	Relative humidity (RH)	from 10 to 80%	
	Mains supply voltage	100-240 CAV, 50/60 Hz, 2 A	
	Machine supply voltage	24 V DC, 3,75 A	
	Degree of pollution	2	
Atmospheric pressure		700 hPa to 1100 hPa	
Power rating		90 W	
Installation Category		Type II according to CEI664 directive	
Noise level		62 db	
Dimensions of the equipment (W x H x D)		Equipment alone: 334 x 115 x 120 mm	Packaged equipment: 400 x 190 x 390 mm
Weight of the equipment		Equipment alone: 4.4 kg	Packaged equipment: 7 kg
Dispensing speed		up to 600 rpm	
Accuracy		2 % starting from 2 ml	
TFT resistive touchscreen		Size: 12.70 cm (5 inches)	Resolution: 640 x 480 px
Keypad		11 physical keys	
External pump	Number of external pumps allowed	4	
	Rotation direction	can be configured	

e-pump



✓ **New**

You can now connect external pumps to your compatible AES blue line™ equipment.

✓ **Capacity**

You can connect up to four external pumps according to the way your equipment is configured.

✓ **User-friendly design**

Different colored light indicators make the system easy to use. Thanks to its compact, robust design, the system allows you to stack the pumps on top of each other.

Technical specifications

Environmental conditions for external pump use and technical specifications.

Environmental conditions

Name	Values
Altitude	up to 2,000 m
Temperature	0°C to 45°C max.
Relative humidity (RH)	10% to 80%
Can be interconnected with:	compatible AES blue line [™] equipment
Pollution level	2

Name	Values
Atmospheric pressure	700 hPa to 1100 hPa
Equipment category	Type II ECI664 directive compliant
Noise level	63 db
Dispensing speed	up to 600 rpm

Dimensions and weight

Name	Values
Equipment dimensions (unpacked) (W x H x D)	120 x 115 x 195 mm
Equipment dimensions (packed) (W x H x D)	285 x 340 x 127 mm
Power cable length	400 mm
Power cable extension length	700 mm max.
Equipment weight (unpacked)	3.4 kg
Equipment weight (packed)	3.7 kg

Installing an e-pump



1. Place the pump on a flat, stable surface next to the equipment you want to connect it to.
The pump must be placed on a clean, dry work surface.
2. Switch the equipment off and unplug the mains power supply for the equipment you want to connect the external pump to.
3. Connect the power supply cable for the external pump to the equipment.
Connect the second external pump to the pump already connected to the equipment.
4. Plug in the equipment.
 - A blue light indicator will display the number of the external pump according to the order in which they are connected.
 - The green light indicator shows that the external pump has been selected for a task via the equipment.



Recommendations for use

- Only use the pump with a single pump head only.
- Total length of power supply cables for external pumps must not exceed 3 m.

Diludry

Bag containing the powder to be reconstituted with water in order to make a diluent.

LIMS

LIMS (Laboratory Information Management System), is an integrated management software package used in laboratories.

RFID

RFID (Radio Frequency Identification), is a method for storing and remotely retrieving data by using devices called "RFID tags" or "RFID transponders".

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