pipetman®

M96

User Guide PIPETMAN® M96 Software

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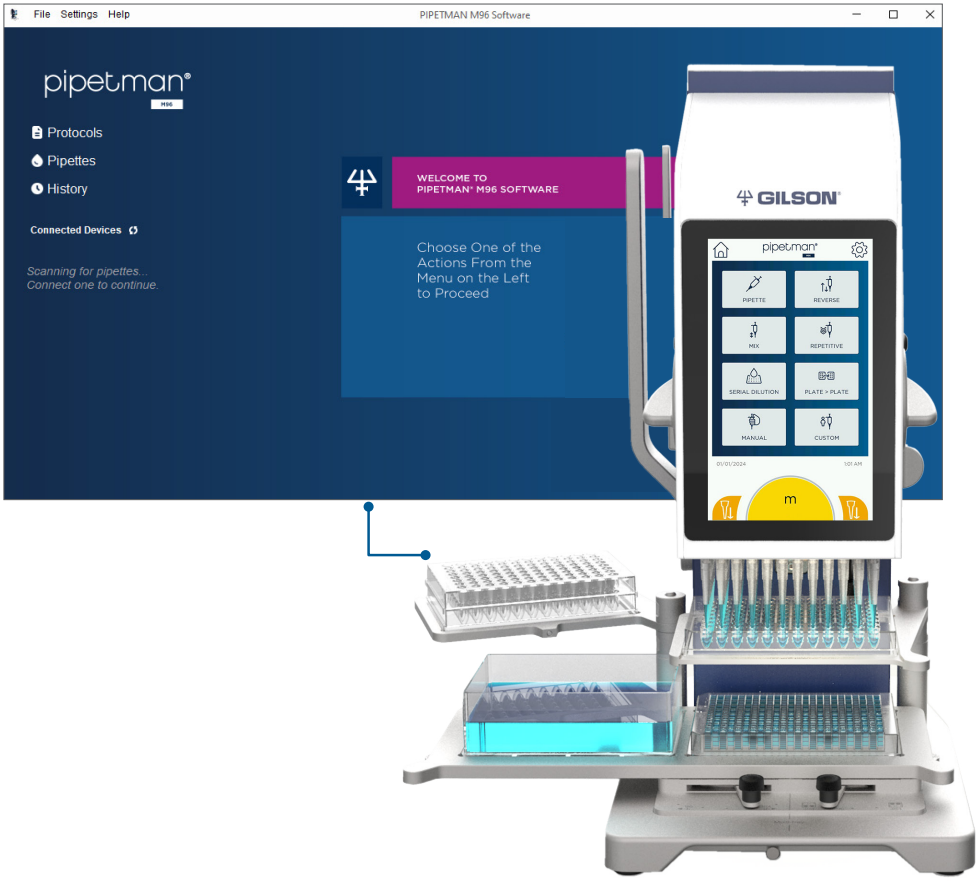

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INTRODUCTION

PIPETMAN® M96 Software Overview

PIPETMAN® M96 Software is a user-friendly application designed for creating custom pipetting protocols for PIPETMAN M96. You can use the software on your PC to create personalized pipetting protocols and then transfer them to your PIPETMAN® M96 in the Custom Mode for execution.

Software Compatibility

- Windows 10
- Windows 11
- Bluetooth® v4.0 or higher

Download the software (Zip file) at https://www.gilson.com/default/pipetman-m96.html.

Set Password (Optional)

When starting the software for the first time, you can set a password by clicking on the icon **Password**.

- Enter and confirm the user password, and then create a security question and type the answer (the security question is used to recover a forgotten password).
- You can start using password anytime by selecting Settings and then Password.

When password protection is enabled, users must enter the password to run the application and to save changes to custom protocols.

NOTE

If the password is forgotten, you must know the recovery password (specified during installation) or the answer to the security question to log in.

Institution/Company Profile (Optional)

You will be prompted to enter your institution or company profile information when starting the software for the first time. Providing this information is optional and can also be done later: select **Settings** and then **Profile**.

Home Screen

After starting PIPETMAN® M96 Software, the **Home** screen appears.

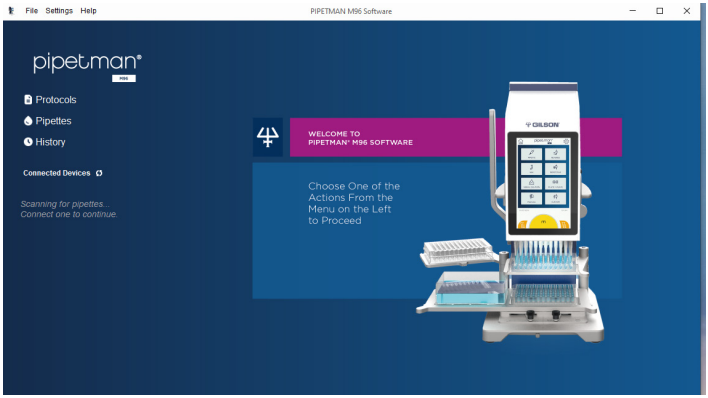

Figure 1
PIPETMAN® M96 Software home screen

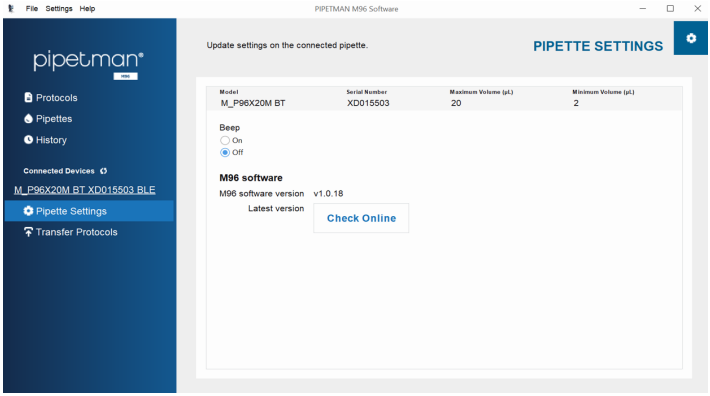

Figure 2
Pipette Settings menu on PIPETMAN® M96 Software

The **Home** screen offers the following options:

- **Top Menu**
  - **File | Exit**
    Close PIPETMAN® M96 Software.
  - **Settings**
    Change your password and modify or add your institution or company profile information.
  - **Help**
    Access the user guide, software version, and licensing information.

- **Action Menu**
  - **Protocols**
    Create, import, edit, and export protocols.
  - **Pipettes**
    View registered pipettes and change the pipette name via USB (or Bluetooth for the connected version).
  - **History**
    View the history of custom protocol uploads.
- **Pipette-Specific Menus (only shown when pipettes are connected to the computer)**
  - **Pipette Settings**
    Turn sound alerts (beep) on or off, and set or reset the maximum volume limit.
  - **Transfer Protocols**
    Transfer a custom protocol to PIPETMAN M96.

Chapter 2

CONNECT PIPETTE

To transfer protocols and update settings on the pipette, the pipette must be connected to a PC via USB or Bluetooth®.

Connect via USB

Connection via USB should occur automatically when you connect a pipette to your PC via a USB cable. If there is any delay in the application making the connection, you can initiate a scan of all connections by pressing the icon.

Connect via Bluetooth

Connection via Bluetooth is only available in select countries.

- Bluetooth can be turned On and Off from the DEVICE CONFIG page.
- When enabled, the Bluetooth logo will appear on the top bar of the screen, near the Parameters logo.

Register the Pipette

When you connect a pipette to the application for the first time, the software will automatically register it.

To view and manage pipettes, select **Pipettes** on the main menu. Refer to Register the Pipette, on page 17.

NOTE Only one device can be connected, even if many are detected.

Chapter 3
CREATE AND MANAGE PROTOCOLS

Select **Protocols** to create, edit, import, or export protocols. PIPETMAN® M96 Software stores information about custom pipetting protocols in specific files with the extension *.pmp.

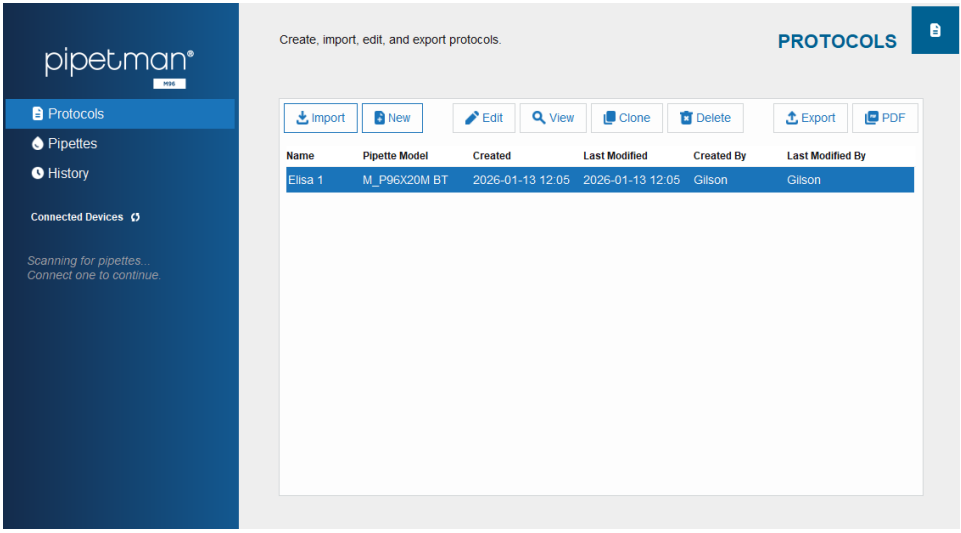

Figure 3
Protocol list screen

Create a Protocol

Select **New.**

Create Protocol Information Screen

On the **Create Protocol** pop-up window, enter basic information about the protocol.

1. Enter the **Protocol name** (e.g., DNA isolation)
2. Select the pipette from a list of supported pipettes models
3. Enter the name of the user creating the protocol (**Created by** field)
4. Optionally, enter any comments.
5. **Save** the information and proceed to **Edit Protocol**.

Edit Protocol

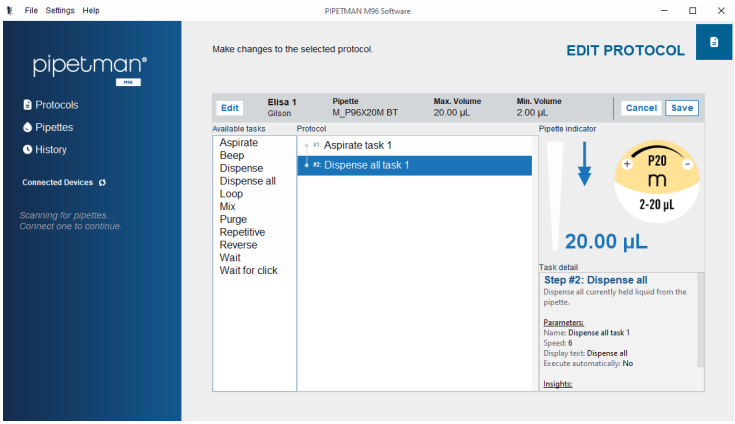

Figure 4
Edit protocol screen

On the **Edit Protocol** screen, build a pipetting protocol by adding tasks from the **Available Tasks** list to the **Protocol** pane and then optionally modifying the task's default parameters:

1. Select a task in the **Available Tasks** list.
2. Access the task parameters in one of these two ways:
   - Drag the task to the **Protocol** pane.
   - Double-click the task name.
3. Enter or change task parameters for your application.
4. Select **Create** to add the task to the protocol (Figure 4).
5. Repeat steps 1-4 to add additional tasks to the protocol, if desired.

6. When the protocol contains all desired tasks, select Save to store the protocol. If you are using password protection, you will be asked to confirm this action by entering your password.

The protocol is now listed in the **Protocol** list.

NOTE

For PIPETMAN M96, protocols can contain up to 99 tasks.

The listed tasks will be executed from top to bottom. You can optionally reorder the tasks by selecting one or more and dragging and dropping them into position.

AVAILABLE TASKS

Aspirate

Aspirates specified volume into the tip.

Beep

Makes pipette produce a beeping sound while selected tasks are executed.

Dispense

Dispenses specified volume from the tip.

Dispense all

Dispenses all remaining volume from the tip followed by a purge action.

Loop

Enables repetition of any task once or more.

Tasks between Loop and End Loop will be executed in sequence for the specified number of iterations.

Example

If the Loop contains two tasks: Aspirate 20 µL followed by Dispense 20 µL and the number of iterations is set to 3, the tasks will be executed in the following order:

1. Aspirate 20 µL
2. Dispense 20 µL
3. Aspirate 20 µL
4. Dispense 20 µL
5. Aspirate 20 µL
6. Dispense 20 µL

Mix

Mixes the specified volume in one or more cycles.

Purge

Dispenses all remaining volume from the tip followed by purging extra volume.

Repetitive

Distributes the same volume repeatedly in a pre-defined number of equal aliquots.

Reverse

Reverse pipetting where, during aspiration, additional liquid is added and, after delivery, the excess volume remains in the tip and is discarded.

Wait

Adds a wait for a specified number of seconds.

Wait for Click

Pauses the protocol until the push button is clicked.

DEFAULT TASK PARAMETERS

Each task has modifiable parameters.

NOTE

A pipette can display a limited number of characters on its screen. If you use longer strings of characters in Display text, the task will indicate that the text is too long and require you to reduce the length of the text.

The display text field on the pipette is disabled when Execute automatically is checked.

Aspirate and Dispense

Aspirate and **Dispense** tasks have the following parameters:

- **Task name:** specify the name of the task. If nothing is specified, the software will default to a generic task name.
- **Comments:** enter any comments related to the task.
- **Volume:** specify the volume for the task.
- **Speed:** specify the speed for aspirating and dispensing.
- **Display text:** enter text to display on the pipette's screen when the task is active.

  NOTE **The number of characters for display text is limited.**

- **Execute automatically:** specify whether the task should be executed automatically after completing the previous task.

Beep

The **Beep** task has the following parameters:

- Task name: specify the name of the task. The software will default to a generic task name if nothing is specified.
- **Comments:** enter any comments related to the task.

Example: To produce a beep sound with a duration of 1 second on the pipette before the Aspirate task, position the following set of tasks before the Aspirate task:

  - **Beep task** (creates the beep start and end tasks)
  - **Wait** task (with duration 1 s), which should be placed between the Beep and End beep tasks.

Dispense all

The **Dispense all** task has the following parameters:

- **Task name:** specify the name of the task. The software will default to a generic task name if nothing is specified.
- **Comments:** enter any comments related to the task.
- **Speed:** specify the speed for the dispense.
- **Display text:** enter text to display on the pipette's screen when the task is active.

  NOTE **The number of characters for display text is limited.**

- **Execute automatically:** specify whether the task should be executed automatically after completing the previous task.

Loop

The **Loop** task has the following parameters:

- **Task name:** specify the name of the task. The software will default to a generic task name if nothing is specified.
- **Comments:** enter any comments related to the task.
- **Number of iterations:** specify how many times the pipette will repeat the tasks that are placed inside the **Loop** task.

Mix

The **Mix** task has the following parameters:

- **Task name:** specify the name of the task. The software will default to a generic task name if nothing is specified.
- **Comments:** enter any comments related to the task.
- **Volume:** specify the volume for the task in the pipette's preferred unit.
- **Aspirate speed:** specify the speed for the aspiration.

- **Dispense speed:** specify the speed for the dispense.
- **Number of cycles:** specify how many times to mix the volume.
- **Display text:** enter text to display on the pipette's screen when the task is active.

> **NOTE** The number of characters for display text is limited.

- **Execute automatically:** specify whether the task should be executed automatically after completing the previous task.

Purge

The **Purge** task has the following parameters:

- **Task name:** specify the name of the task. The software will default to a generic task name if nothing is specified.
- **Comments:** enter any comments related to the task.
- **Display text:** enter text to display on the pipette's screen when the task is active.

> **NOTE** The number of characters for display text is limited.

- Execute automatically: specify whether the task should be executed automatically after completing the previous task.

Repetitive

The **Repetitive** task has the following parameters:

- **Task name:** specify the name of the task. The software will default to a generic task name if nothing is specified.
- **Comments:** enter any comments related to the task.
- **Aliquot volume:** enter the requested volume for each aliquot.
- **Number of aliquots:** enter the desired number of aliquots.

> **NOTE** The software automatically calculates the number of aliquots possible and will only allow you to enter a valid value.

- **Aspirate speed:** specify the speed for the aspiration.
- **Dispense speed:** specify the speed for the dispense.
- **Display text:** enter text to display on the pipette's screen when the task is active.

> **NOTE** The number of characters for display text is limited.

Reverse

The **Reverse** task has the following parameters:

- **Task name:** specify the name of the task. The software will default to a generic task name if nothing is specified.
- **Comments**: enter any comments related to the task.
- **Volume:** specify the volume for the task in the pipette's preferred unit.
- **Aspirate speed:** specify the speed for the aspiration.
- **Dispense speed:** specify the speed for the dispense.
- **Display text:** enter text to display on the pipette's screen when the task is active.

> **NOTE** The number of characters for display text is limited.

- **Execute automatically:** specify whether the task should be executed automatically after completing the previous task.

Wait

The **Wait** task has the following parameters:

- **Task name:** specify the name of the task. The software will default to a generic task name if nothing is specified.
- **Comments:** enter any comments related to the task.
- **Duration (s):** specify the duration of the pause in seconds.
- **Display text:** enter text to display on the pipette's screen when the task is active.

> **NOTE** The number of characters for display text is limited.

Wait for Click

The **Wait for click** task has the following parameters:

- **Task name:** specify the name of the task. The software will default to a generic task name if nothing is specified.
- **Comments:** enter any comments related to the task.
- **Display text:** enter text to display on the pipette's screen when the task is active.

> **NOTE** The number of characters for display text is limited.

EDIT TASKS

To edit the parameters of a task in a protocol, do any of the following:

- Double-click the task name in the protocol.
- Right-click on the task and select **Edit** from the menu.
- Select the task and then press **Enter**.

The **Edit** task window opens, where you can modify and store the task's parameters.

DUPLICATE TASKS

To clone (make a copy) of a task in a protocol

1. Select the task.
2. Do any of the following:
   - Right-click, and then select **Duplicate**.
   - Type **Ctrl-D**
3. Edit the created duplicate as desired.

DELETE TASKS

To delete a task from a protocol:

1. Select the task.
2. Do any of the following:
   - Right-click, and then select **Delete**.
   - Type **Delete**.

PIPETTE VOLUME INDICATOR

While creating a protocol, the pipette volume indicator will display how much of the pipette's maximum volume is holding liquid after the protocol. By clicking on a particular task, the volume indicator will reflect the volume in the tip at the end of the highlighted task.

Warning and Error Messages

After adding or modifying each task, PIPETMAN M96 Software verifies the protocol and determines whether the volume in the tip is still within the volume specifications for the selected PIPETMAN M96 model. If the volume exceeds the pipette model specifications or would leave volume in the tip, an error sign ⛔ will appear next to the task. More details about the error are available both in the **Edit** task window and the Task detail pane. Protocols that contain one or more ⚠ signs can be saved. If a protocol's only problem is that liquid is left in the tip at the end, the error is downgraded to a warning. Protocols that have other error-level problems cannot be exported.

Manage Protocols

The Protocol screen lists all created protocols, including information on the pipette model, date of creation, date of last modification, the person who created the protocol, and the person who last modified it. An icon is displayed if the protocol contains an error or warning .

For each of the protocols listed, you can perform the following actions. Simply select the protocol and then select one of the buttons:

- **Edit:** edit a protocol (change the PIPETMAN M96 model, rename protocol, add/edit/remove tasks).
- **View:** view a protocol. No parameters can be changed in the "View" mode.
- **Clone:** clone a protocol. If you are creating a similar protocol, cloning will save time.
- **Delete:** delete a protocol.
- **Export:** export a protocol to a *.pmp file and store it on the PC.
- **PDF:** create a summary of the protocol as a print-ready PDF document.

Edit a Protocol

To edit a protocol, select the protocol and select **Edit**. The **Edit Protocol** screen opens.

Clone a Protocol

To clone (make a copy) of a protocol, select the protocol, and then select **Clone**. Change the name or any parameters as desired and then select **Clone**.

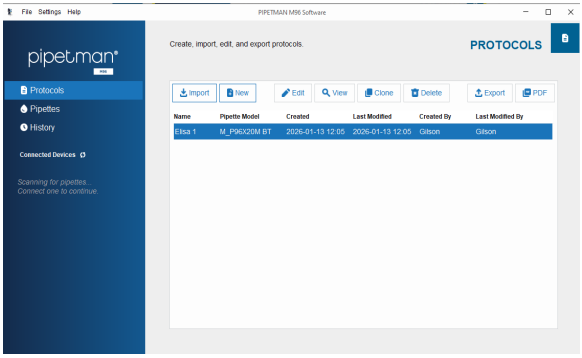

Figure 5
Protocols list screen

Import a Protocol

To import a protocol:

1. Select **Import**.
2. Browse for and then select a PIPETMAN M96 protocol file (*.pmp)
3. If prompted, enter a new protocol name.
4. Select **Open**.

The protocol is now accessible on the **Protocol** screen.

NOTE

If the imported file exactly matches other protocols already in the Protocols screen, no action will be taken by the software.

Export a Protocol

To export a protocol:

1. Select a protocol from the list.
2. Select **Export**.
3. Navigate to the export location and select **Save**.

Chapter 4
TRANSFER PROTOCOLS TO PIPETTE

To transfer a protocol to a PIPETMAN M96 pipette:

1. Connect the pipette to the PC (via USB or by Bluetooth).
2. Select the pipette from the list of **Connected Devices**.
3. For the selected pipette, select **Transfer Protocols (Figure 6)**.
4. By default, the protocols for the PIPETMAN M96 model are listed.
5. Optionally, select **Mute beeps** if you want to disable any pipette sounds during beep tasks.
6. Select a protocol in the list and then click on the › icon. The protocol is added to the list of protocols currently on the pipette.

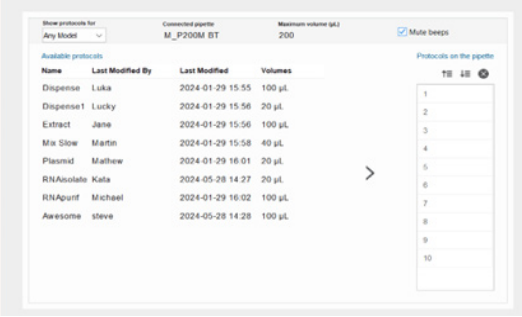

Figure 6
Transfer to protocols list

NOTE

Protocols that have validation errors or volumes outside the model range will not be shown on this screen. When a protocol is otherwise valid but contains a volume larger than the pipette's current maximum volume setting, it will be shown with an error icon ⛔ to indicate that it can't be transferred. Protocols that end with volume in the tip are shown with a warning icon ⚠ but can still be transferred.

Chapter 5

UPDATE FIRMWARE

The PIPETMAN® M96 Software allows users to update the firmware of the PIPETMAN M96 pipette directly from the application interface. Keeping your pipette firmware up to date ensures optimal performance and access to the latest features and improvements. The following steps guide you through the firmware update process.

Step 1 - Access Pipette Settings

1. Launch the PIPETMAN M96 Software on your PC.
2. Connect your PIPETMAN M96 pipette to the computer via USB cable.
3. Navigate to the **Pipette Settings** menu from the sidebar.
4. Confirm that your device is listed under **Connected Devices.** The software will display the model, serial number, and volume settings for the connected pipette.

Step 2 - Check for Firmware Updates

In the **PIPETMAN M96 Software** section, review the current software version installed on your pipette.

1. Click **Check Online** to verify if a newer firmware version is available.

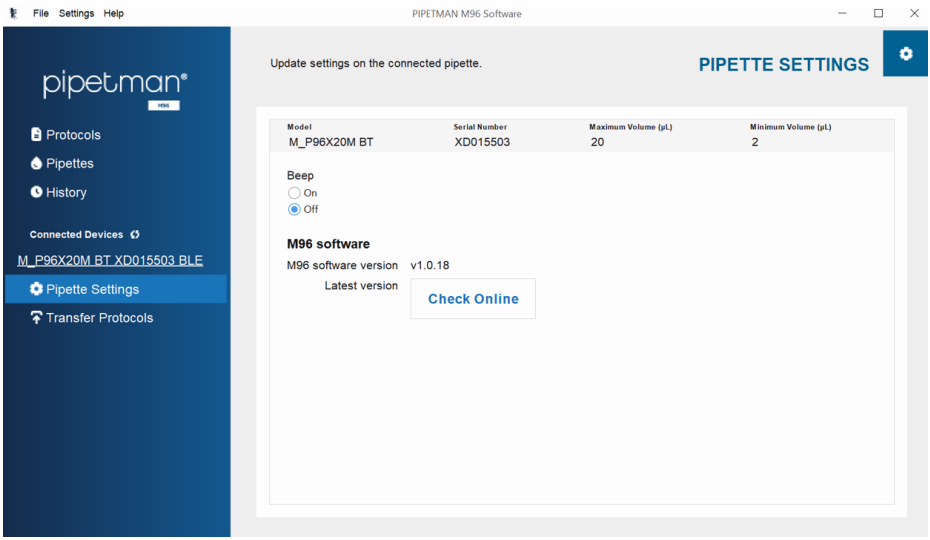

Figure 8
Acces pipette settings

Step 3 - Download the Firmware

If an update is available, the software will prompt you to download the latest version.

1. Select **Update Software**

NOTICE

Ensure your pipette remains connected via USB throughout the process.

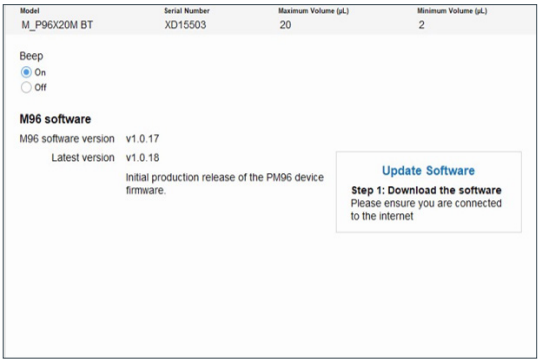

Figure 9
Download the firmware

Step 4 - Install the Firmware

1. Select **Update Software**

⚠CAUTION

Do not unplug the pipette or close the application window until the update is complete; otherwise, it could impair the pipette's functionality.

Figure 10
Install the firmware

Step 5 - Confirmation

Once the update is successful, a confirmation message will appear.

The pipette will now operate with the latest firmware version.

Figure 11
Update confirmation screen

Chapter 6

OTHER ADMINISTRATION

Additional administrative tasks can be performed within the software.

- **Pipette management:** manage the inventory of the PIPETMAN M96 pipettes that have been connected to this software.
- **View history:** view the history of protocol modifications and uploads by user.
- **Change password:** change the password to access the PIPETMAN® M96 Software.
- **Institution or Company profile:** manage the information related to your Institution or Company.

Pipette Management

Register the Pipette

When you connect a pipette to the application for the first time, the software will automatically register it. A list of registered pipettes can be seen from the **Pipettes** screen.

Rename Pipette

You can rename a pipette from the **Pipettes** screen.

1. Select the pipette from the list of pipettes.
2. Select **Edit**.
3. Enter a new name and select **Save**.

Delete Pipette

You can delete a pipette in the Pipettes screen by selecting the pipette and then selecting **Delete**. After deletion, no information is kept about the pipette; the next time it is selected, it will be re-registered with its default name.

View History

View the history of protocol modifications and uploads from the **History** screen.

To display the history of protocol uploads, select **Uploads** from the **Type** pull-down. Adjust the time interval as required. The protocols that have been uploaded to any pipette within the selected time interval will be listed in the table, displaying the following information for each protocol: Protocol (name), Pipette Name, Pipette Model, Serial Number, Upload Date, and Result.

To display the history of protocol modifications, select **Modifications** from the **Type** pull-down. The protocols that have been modified within the selected time interval will be listed in the table, displaying the following information for each protocol: ID (of the database record), Protocol (current name), Original Name, Date, Action, and Modified By.

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