SMI FIRMWARE UPDATE

Part ID (Document): 4112030

Revised: June 7, 2021

MODELS COVERED

This procedure covers updating the firmware for SLMx22 SMI Incubators.

- SMI2 (SLM222), SMI2-2 (SLM222-E), GI2, GI2-2

- SMI6 (SLM622), SMI6-2 (SLM622-E), GI6, GI6-2

- SMI7 (SLM722), SMI7-2 (SLM722-E), GI7, GI7-2

- SMI11 (SLM122), SMI11-2 (SLM1122-E), GI11, GI11-2
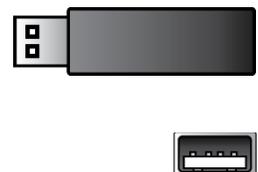
- SMI12 (SLM1222), SMI12-2 (SLM1222-E), GI12, GI12-2

LOG DELETION!

All logged data saved on the incubator are deleted during this procedure. Ensure your data has been copied and stored in a system separate from the incubator.

DOWNLOAD THE FIRMWARE

Before beginning the update, download the new firmware from the product page for your unit on www.sheldonmanufacturing.com.

Load the update onto a USB-A drive.

REQUIRED DOCUMENTS

The following documents are required to successfully implement this procedure.

- 4112022 SMI Controller Reset procedure document
- 4861825 User Manual SMIs (SLMx22s)

PROCEDURE OVERVIEW

In this Document

The following procedures in this document are performed to update the incubator firmware.

1. Record the incubator unit data

2. Install the firmware update

3. Restore factory defaults

4. Reformat the SD Card

Additional Required Procedures

These procedures are covered in the *SMI Controller Reset* procedure document and the *Installation and Operation* user manual and must be performed after the firmware update is complete to restore the unit to operational status.

In the Controller Reset document

1. Input the model information.

   o   This configures the unit as a specific type of SMI incubator

2. Calibrate the Door Sensor(s)

   o   These Hall effect sensors tell the incubator if its outer incubation chamber door(s) is closed.

In the User Manual

3. Set the date and time.

   o   Your local date and time should be entered in the incubator to ensure logged data is correctly interpreted.

4. Calibrate the incubator temperature display

   o   This ensures that the control panel temperature display matches the actual air temperature inside the incubation chamber.

   o   See the user manual.

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RECORD THE INCUBATOR UNIT DATA

The incubator's Model Number, Serial Number, and Part ID will need to be manually re-entered to configure the incubator after the firmware update and setting reset are complete. This is required for the incubator to operate correctly Record these now, prior to installing the firmware update.
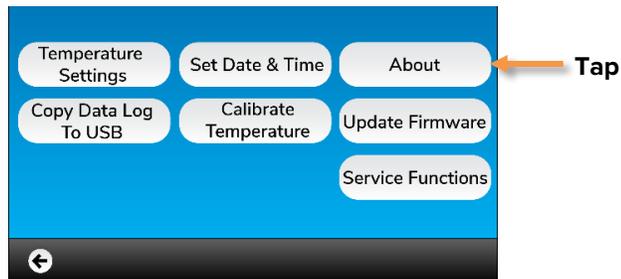
1. Access the Settings menu
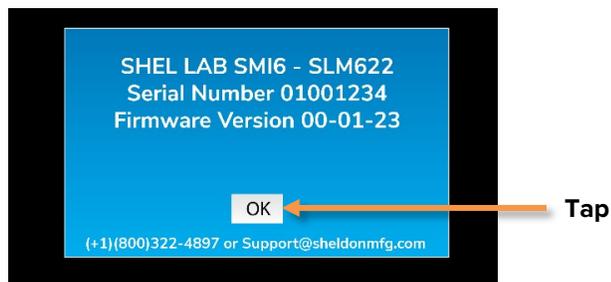
- Tap the Settings button on the Homepage.

2. Access the About menu

- Tap the About button.

3. Return to the Settings menu.

- Record the Model Number, Serial Number, and Part ID Number. You will need these to set up the Controller after the firmware installation.

- Tap the OK button.

End of Procedure

INSTALL THE FIRMWARE UPDATE

Data Log Deletion Reminder: The firmware update will delete log data stored in the incubator.
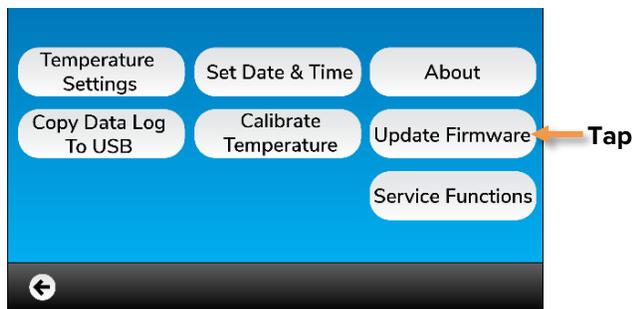
1. Insert the USB A thumb drive with the firmware in the incubator USB Port.

   o **Note:** The Update Firmware page cannot be accessed unless a thumb drive is in the port.
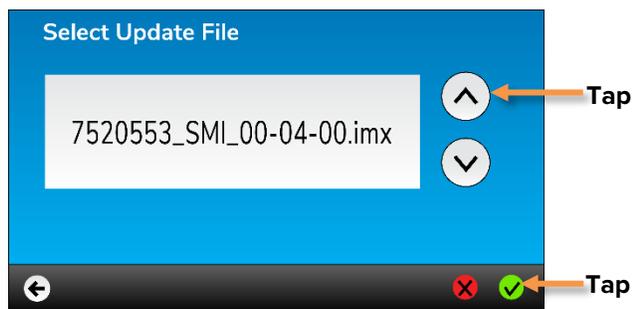
2. Access the Update Firmware Menu.

   • Tap the Update Firmware button.

3. Select the correct firmware version.

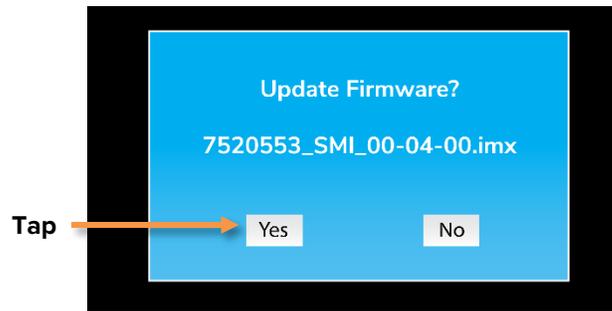   • Use Firmware version 7520553_SMI_00_04_00.imx.
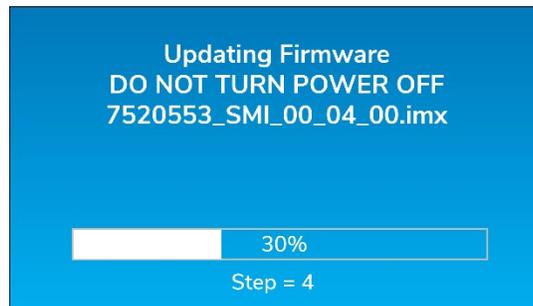
   • Tap the green checkmark.

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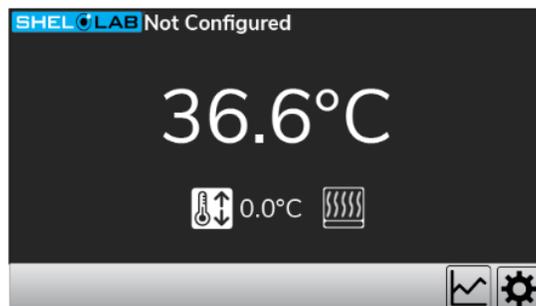## 4. Perform the firmware installation and update.

- Tap Yes.

- o The new firmware will begin installing and then update. This may take several minutes.

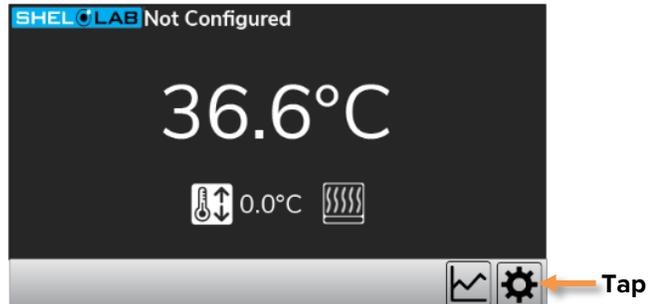- o The incubator will restart with the new homepage when the update is complete.

New Homepage

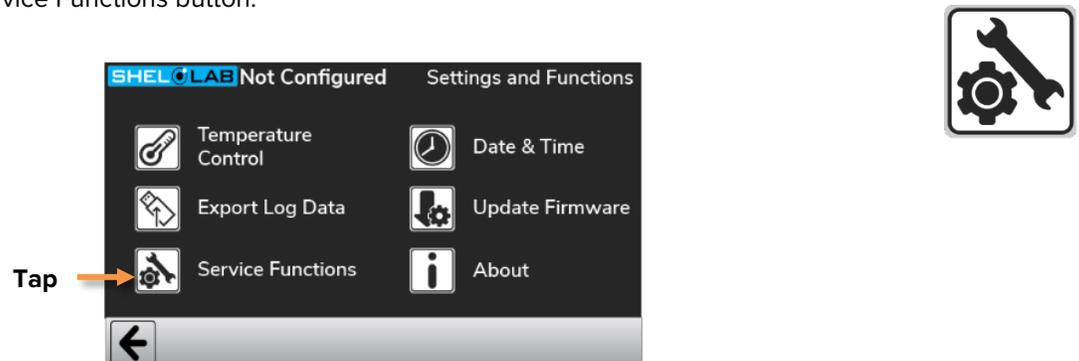## RESET THE INCUBATOR SETTINGS

The old incubator unit type settings are stored and active in the incubator controller. These are not compatible with the updated firmware. The incubator must be restored to a clean state.

1. Access the Service Functions menu.
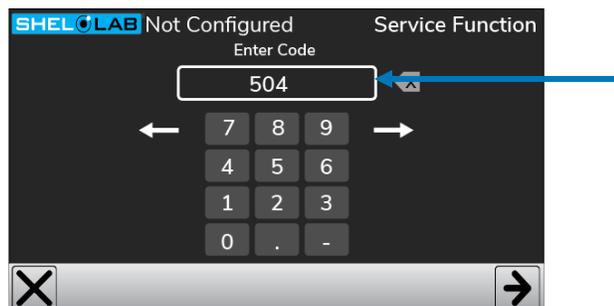
- Tap the Settings button on the homepage.

Tap

- Tap the Service Functions button.

Tap

2. Access the Factory Reset menu.

- Enter 504 in the Service Function Code field.
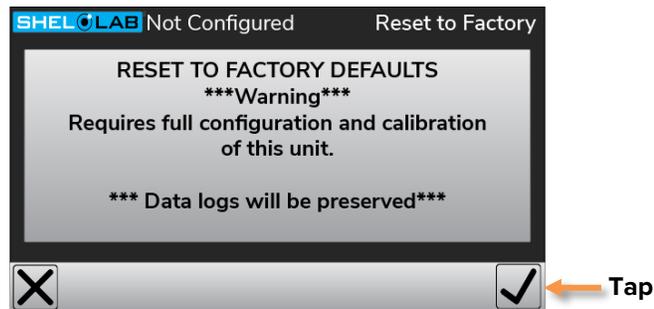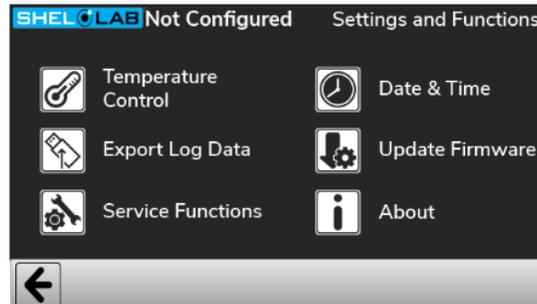
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3. Perform the Reset.

- Tap the checkmark button.

- The display will automatically return to the Settings menu once the Factory Defaults are restored.
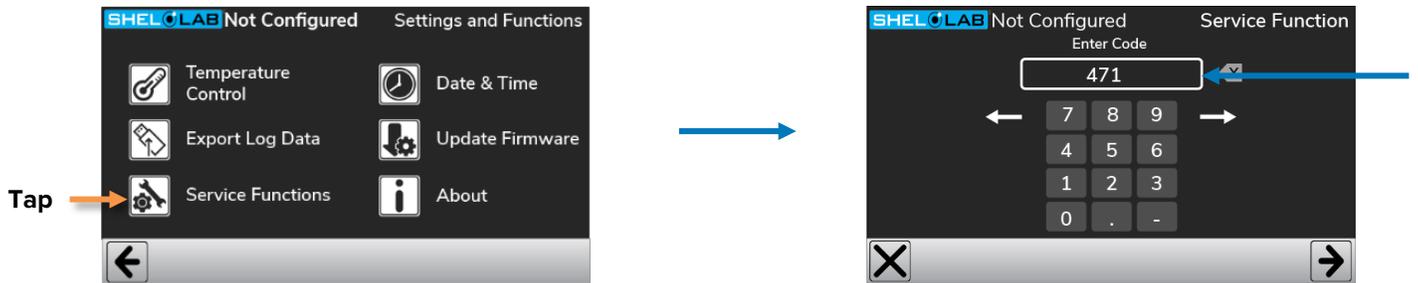

End of Procedure

REFORMAT THE INCUBATOR SD CARD

The internal SD card used to store log data must be reformatted in order for the updated incubator to function correctly.
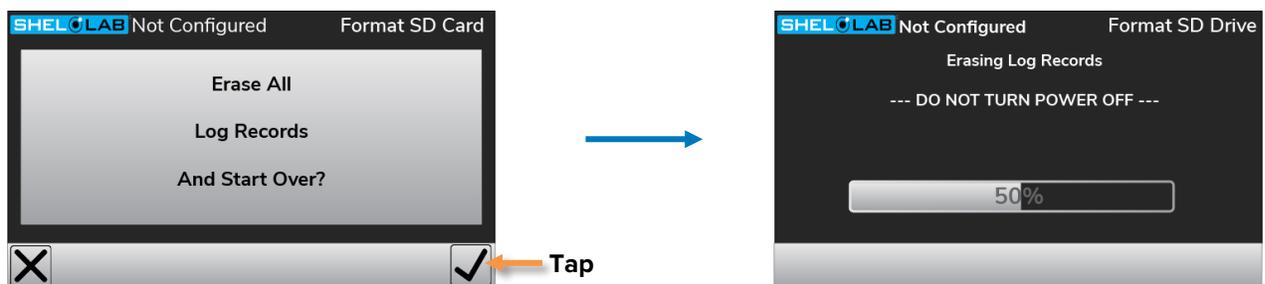
1. Access the Format SD Card menu.

- Tap the Service Functions button.

- Enter 471 in the Service Function Code field.
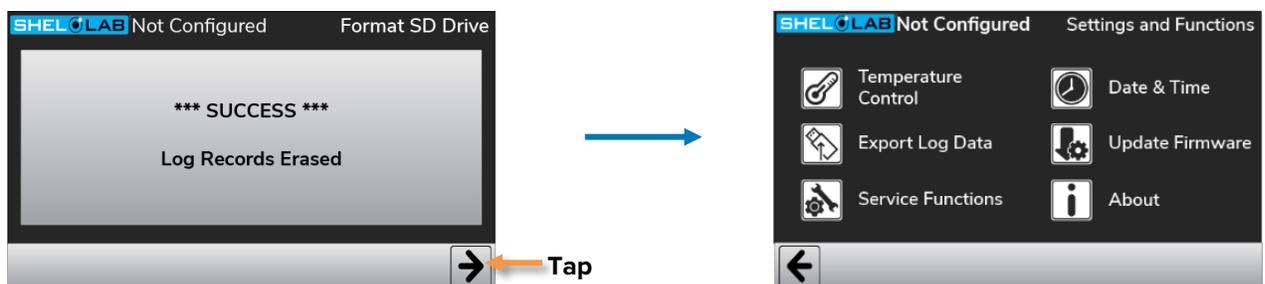
Tap →

2. Initiate the SD Card reformatting.

- Tap the checkmark.

- Reformatting may take several minutes.

Tap ←

3. Return to the Settings Menu.

- Tap the arrow button.

Tap ←

End of Procedure

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INPUT THE UNIT MODEL INFORMATION

Using the unit model data recorded before the firmware installation, perform the following procedures in the SMI Controller Reset document:

- *Enter the Unit Model Number*

- *Enter the Unit Serial Number*

- *Enter the Unit Part ID*

This ensures that the incubator is configured with the accurate identifying information.

CALIBRATE THE DOOR SENSORS

Use the *Calibrate the Unit Doors* procedure in the SMI Controller Reset document to program the incubator for the correct number of doors and recognize when the door is open or closed.

SET THE DATE AND TIME

Use the *Set the Date and Time* procedure in the Installation and Operation user manual to set the unit to the local date and time before putting the unit back into operation. This helps to ensure accuracy in datalogging.

- 4861825 User Manual SMIs (SLMx22s)

CALIBRATE THE TEMPERATURE DISPLAY

Follow the *Calibrating the Temperature Display* procedure in the Installation and Operation user manual to calibrate the new controller before putting the unit back into operation. This helps to match the unit temperature display to the actual air temperature inside the chamber.

The incubator firmware should now be updated and ready for use.

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