

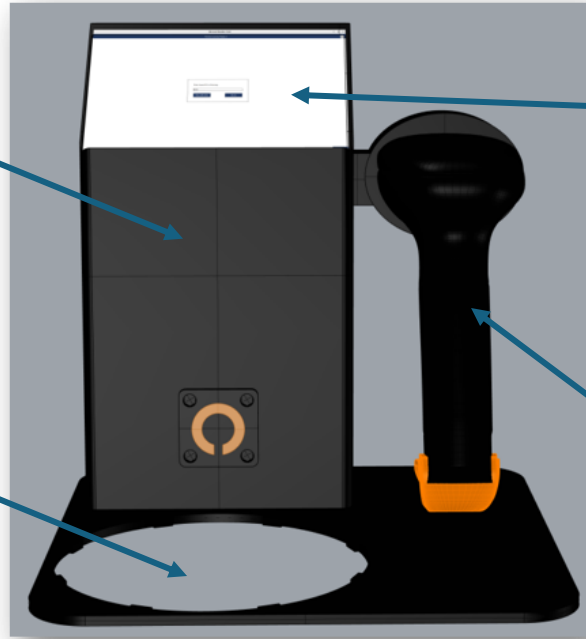
Skroot Benchtop App User Guide

Version: v1.1.15; Updated: 4/16/2025

System Definition

Reader: The system and all its components. The cord that powers the reader powers the entire system.

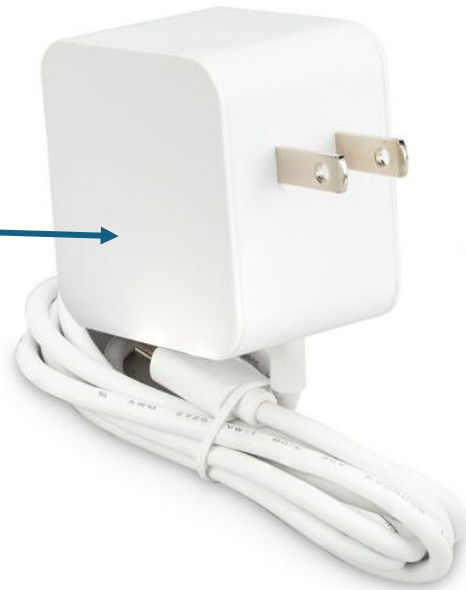
Base Plate: Each vessel SKU has a specific baseplate that screws in to assist in aligning the sensor.



Touchscreen Interface: An LCD touchscreen that displays important information to the user.

Barcode Scanner: A handheld device that scans vessel barcodes, used to track growth conditions over time.

Reader Power Supply: Powers the reader with a 27W, 1.8A power supply. Plugs into the back of the reader at the USB-C port.



System Operation

Initial Setup

Upon powering on the Reader, the touchscreen interface will directly show the kiosk application. As part of the setup process, calibration of the Reader is required. This should be done with no vessel in the base plate to provide accurate results moving forward.



Figure 1: Opening screen displayed immediately after powering on the Reader.

Pressing the “Calibrate Reader” button will prompt you to sign in using your own credentials. Press cancel to return to the “Calibrate Reader” screen. Pressing “Submit” will submit the currently entered credentials for authentication.

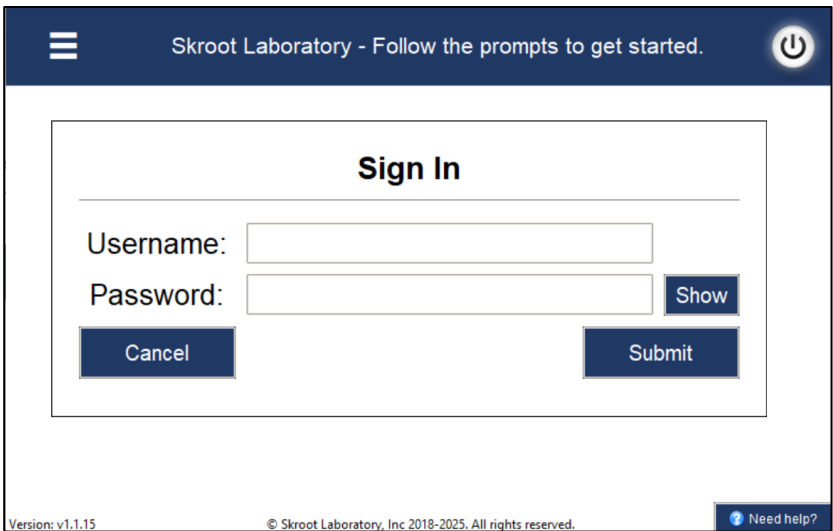


Figure 2: User sign in screen used to authenticate the current user.

Once you have successfully authenticated, it will prompt you to calibrate. To ensure an accurate calibration, ensure there are no vessels secured in the baseplate, then press “OK”.

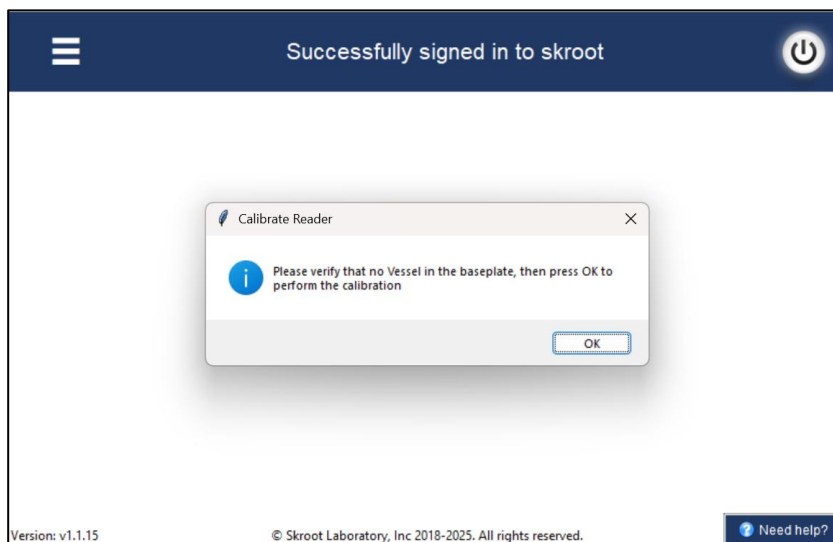


Figure 3: Calibration confirmation screen displayed during setup.

This will bring you to the “Home” screen of the benchtop application. At this point, the barcode scanner can be used to analyze vessels and store the results. Pressing “Recalibrate” will prompt the user to authenticate and then restart the calibration process.

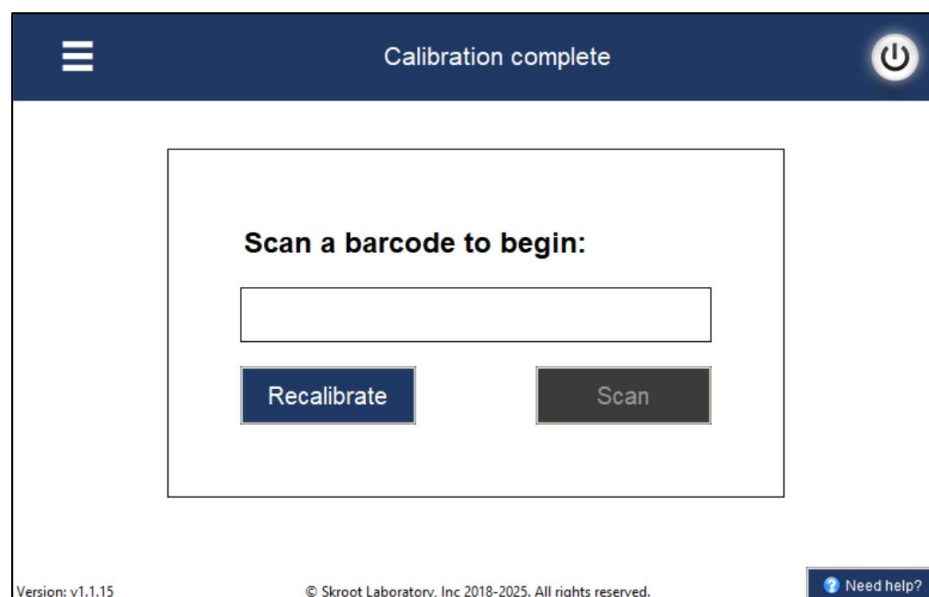


Figure 4: Application homepage used for continuous scanning of vessels.

Continuous Operation

From the homepage displayed in Figure 4, the Reader can now be operated in a continuous fashion. The user can scan a vessel, read the output then reset back to the homepage. To begin, use the barcode scanner to scan a Vessel and populate the Vessel ID box. This will enable the “Scan” button.

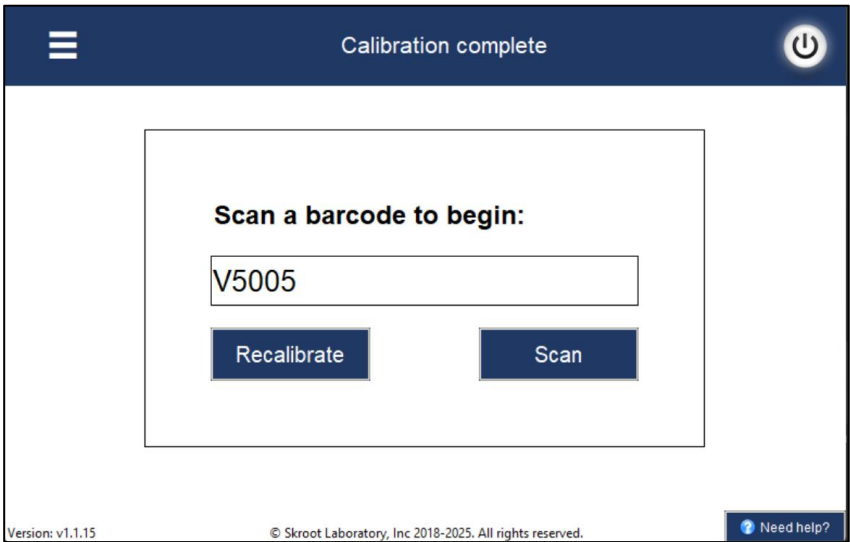


Figure 5: The Barcode Scanner automatically populates the Vessel ID box, enabling the "Scan" button.

Pressing the “Scan” button will perform a scan on the vessel. It will again prompt the user to sign in using their own credentials, shown in Figure 2. The header will then display a message “Scanning... Do not move the Reader” while the Reader performs its scan. This can take up to 30 seconds. Once it is completed it will display the results.

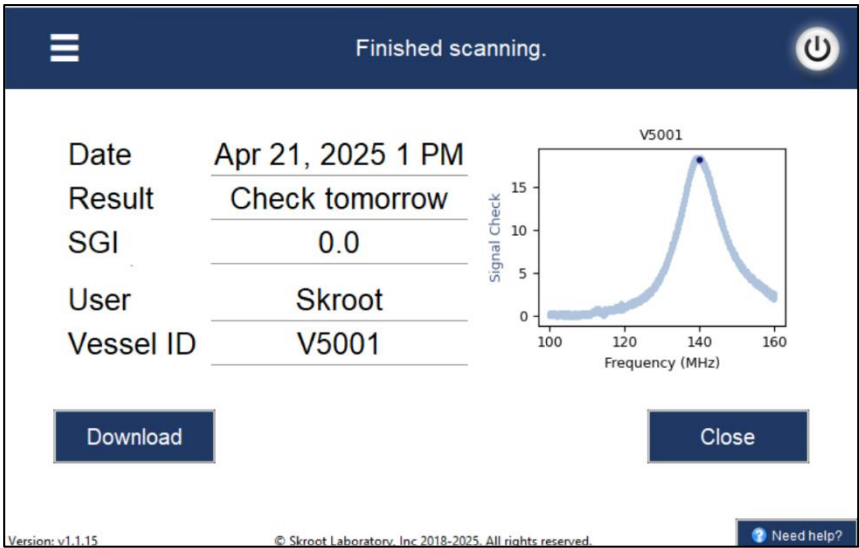




Figure 6: Results screen displayed after performing a scan. In addition to the results of the scan, it also displays the Vessel ID, the user who initiated the scan, and a signal check to ensure proper operation.

From the results screen, a user can press “Cancel” to return to the homepage. A user can also download the batch log for the Vessel. To do this, insert a USB drive into the Reader, and press “Download”. It is recommended that this is only performed after harvesting the vessel, to retrieve all relevant data at once.

Finished scanning.

Export a Batch Log

Vessel ID

V5005

Cancel

Download

Version: v1.1.15

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 Need help?

Figure 7: Export a batch log for a Vessel screen. It is recommended only to perform this once a vessel is harvested.

Advanced Options

Upon pressing the hamburger icon (≡) in the top left corner of the screen, a sidebar with appear with more advanced options. This is always available during the operation of the application.

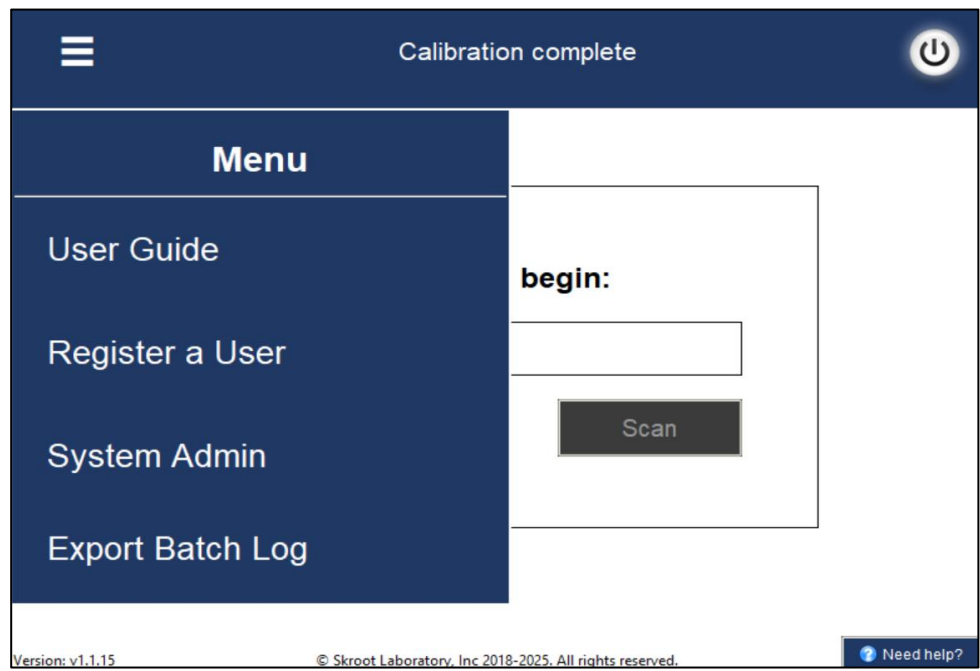


Figure 8: Sidebar menu options listed within the application. These are not needed in normal operation, but to access advanced settings.

User Guide

This will bring up this guide along with all troubleshooting steps to assist the user in correct operation of the Reader.

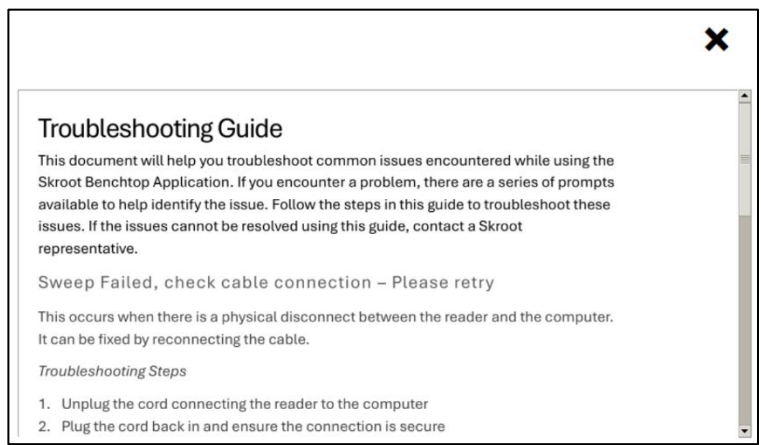
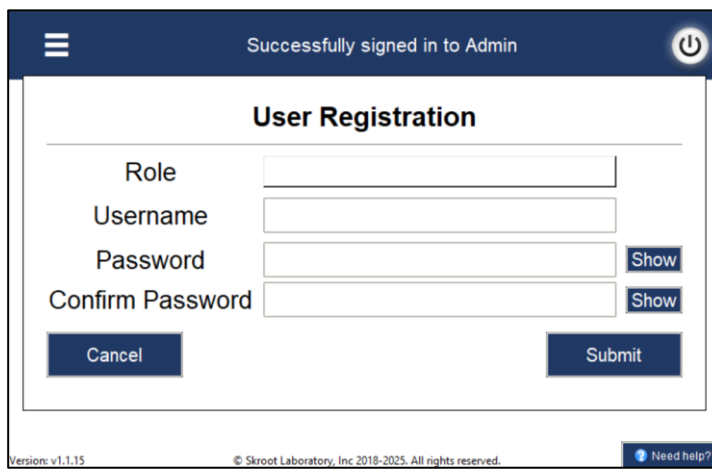


Figure 9: User guide which opens in full screen and includes steps for operation and troubleshooting.

Register a User

This option allows an administrator to register new administrators or users to the system. First it will prompt the user to sign in with a valid administrator, as shown in Figure 2. Once the system verifies the user is an admin, it opens the “User Registration” page to create a new user or administrator.



The screenshot shows a web application interface for user registration. At the top, a dark blue header bar contains a hamburger menu icon on the left, the text "Successfully signed in to Admin" in the center, and a power icon on the right. Below the header, the main content area has a title "User Registration" centered at the top. The form consists of four input fields: "Role", "Username", "Password", and "Confirm Password". The "Password" and "Confirm Password" fields have a "Show" button to their right. At the bottom of the form are two buttons: "Cancel" on the left and "Submit" on the right. A footer bar at the very bottom contains the text "Version: v1.1.15" on the left, "© Skroot Laboratory, Inc 2018-2025. All rights reserved." in the center, and a "Need help?" link with a question mark icon on the right.

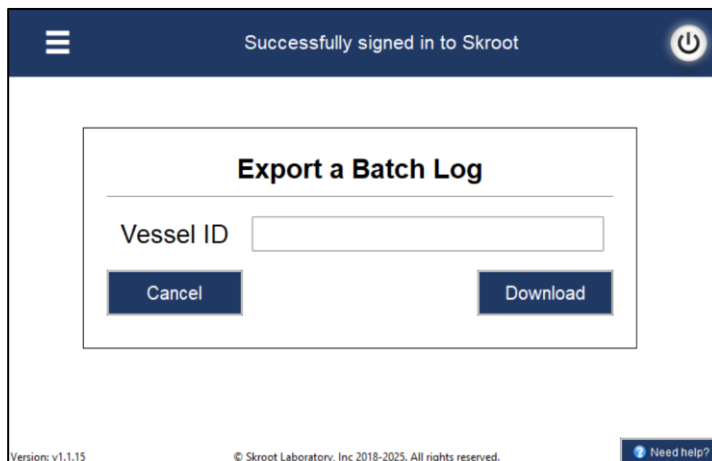
Figure 10: User registration page for administrators to create more users or administrators.

System Admin

Every Reader will have exactly one System Administrator. This option allows them to sign in and perform more advanced operations on the system, in addition to auditing the system for integrity.

Export Batch Log

The batch log for any vessel can be downloaded when it is scanned. As an alternative to this, users can download any vessel from the sidebar using this option and authenticating.



The screenshot shows a web application interface for exporting a batch log. At the top, a dark blue header bar contains a hamburger menu icon on the left, the text "Successfully signed in to Skroot" in the center, and a power icon on the right. Below the header, the main content area has a title "Export a Batch Log" centered at the top. The form consists of a single input field labeled "Vessel ID". Below the input field are two buttons: "Cancel" on the left and "Download" on the right. A footer bar at the very bottom contains the text "Version: v1.1.15" on the left, "© Skroot Laboratory, Inc 2018-2025. All rights reserved." in the center, and a "Need help?" link with a question mark icon on the right.

Figure 11: The sidebar can be utilized to export a batch log for any run in the last 90 days.