

# TOUCHSCREEN OPERATION MANUAL

## Disclaimer

This manual is intended as a resource to provide the operator with instructions on the proper use and maintenance of particular Horizon Scientific, Inc. products.

Failure to adhere to the instructions as herein could result in improper product operation, injury, and potentially void product warranties Horizon Scientific, Inc. accepts no liability or responsibility for results stemming from improper use or maintenance of its products.

The content within this guide is provided for illustrative purposes only and may vary from the actual hardware or software photos, screen shots or illustrations.

Horizon Scientific, Inc.  
125 Varnfield Drive  
Summerville, SC 29483

[www.horizonscientific.com](http://www.horizonscientific.com)

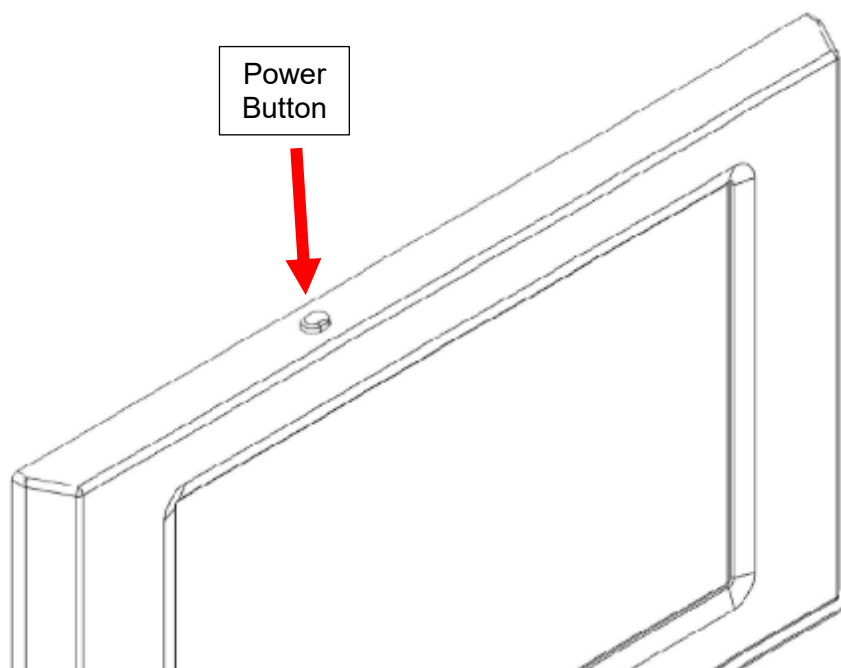
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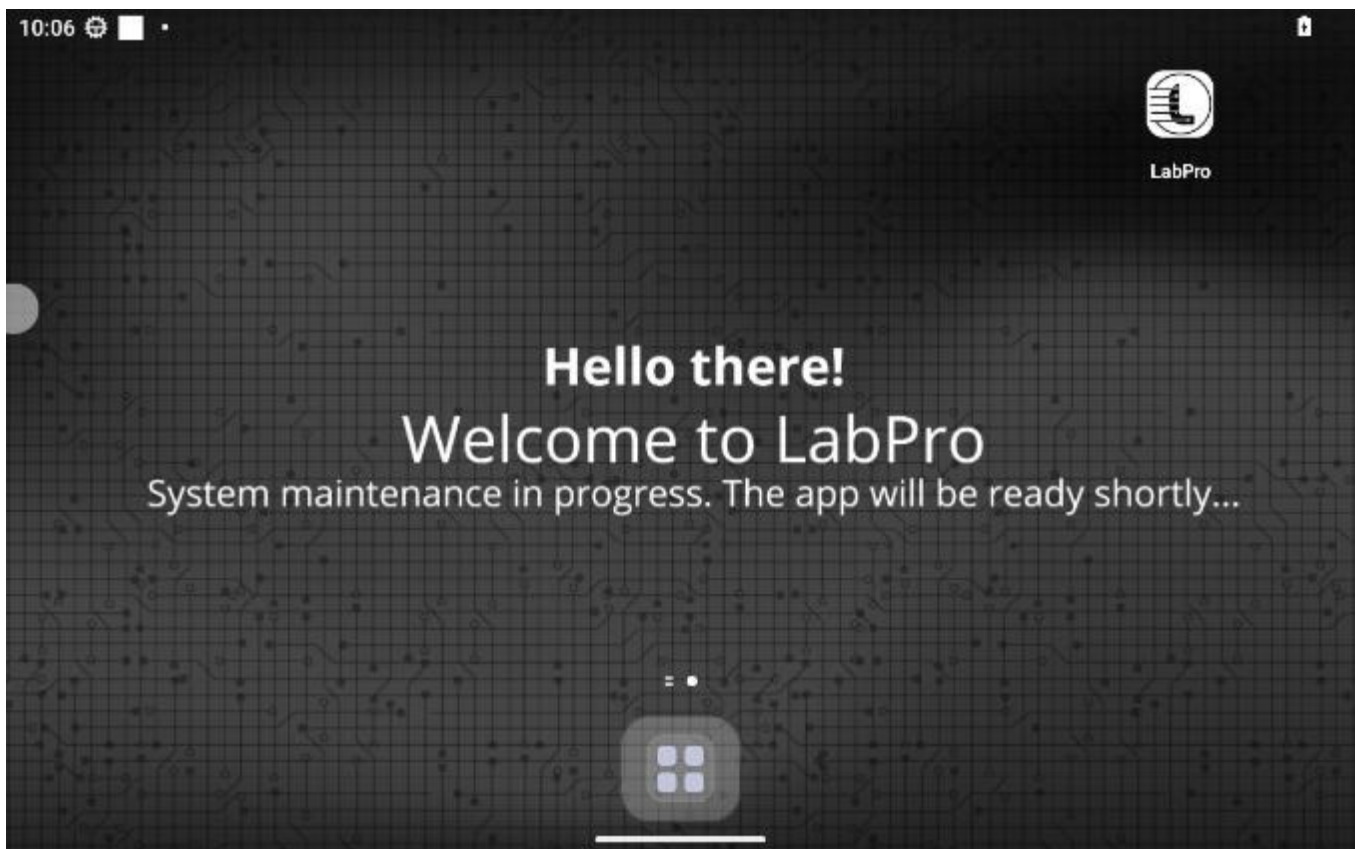
## 1. INITIAL POWER UP AND OPERATION

Once all elements of the installation and any on-site IQ (Installation Qualification) have been completed, your unit is ready for startup. Plug the unit into a grounded outlet that meets the electrical requirements. After plugging in the unit, long-press the power button on the touchscreen until the touchscreen powers on. You should see a black screen with the Lenovo logo pop up. This is your indicator that the touchscreen is powering on.



**Power Button Location – Top of Touchscreen**

After the boot-up screen, you will briefly see the LabPro System Maintenance screen. This should only last a few seconds then the software will automatically start and connect to your unit. Do **NOT** interrupt this process as it could pose complications.

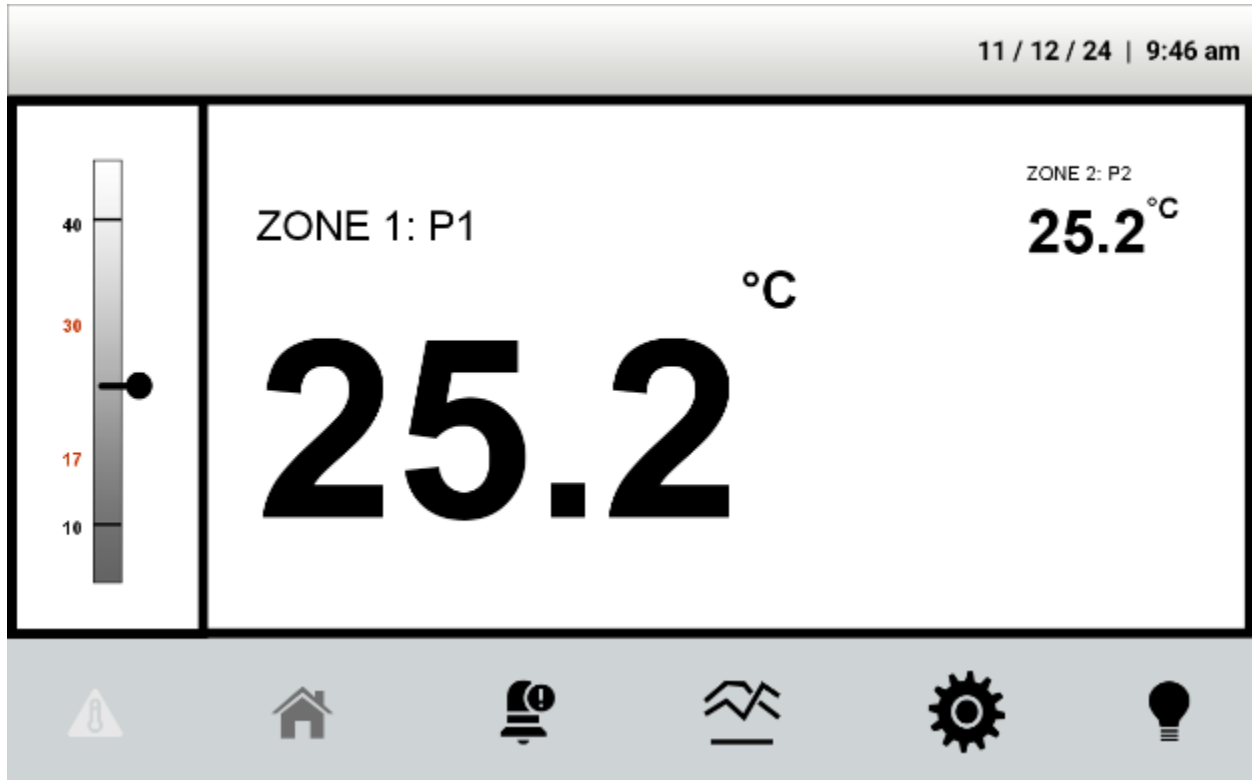


**LabPro System Maintenance screen after initial power up**

## 2. SOFTWARE OVERVIEW



**Important:** The graphics within this manual are for illustration only and do not indicate expected performance, parameter settings, or system response. Some settings, features, or functions described in this section may not apply to your model.



**Touchscreen front view**

\*Temperatures are not representative of a refrigerator or freezer

**Key buttons and features on each screen** *[Button might look different, similar position]*



**ALARM BUTTON:** Flashes red when an alarm is active. Tapping on this will mute active alarms.



Although the red flashing will continue until the condition for turning alarm off has been met.



**HOME BUTTON:** Navigates to the Home Screen, which shows current temperature.



**NOTIFICATIONS BUTTON:** Navigates to the Notifications section, which shows the active alarms. Can also navigate to the Event Log from this page.



**CHART BUTTON:** Navigates to the Chart Screen, which displays a line graph for the present and selected zone temperatures.



**MAIN MENU BUTTON:** Navigates to the Main Menu Screen, which has a list of menus each of which can be navigated to depending on current log in level.



**BACK BUTTON:** Only visible within any of the Menu screens, navigates back to the Main Menu screen.



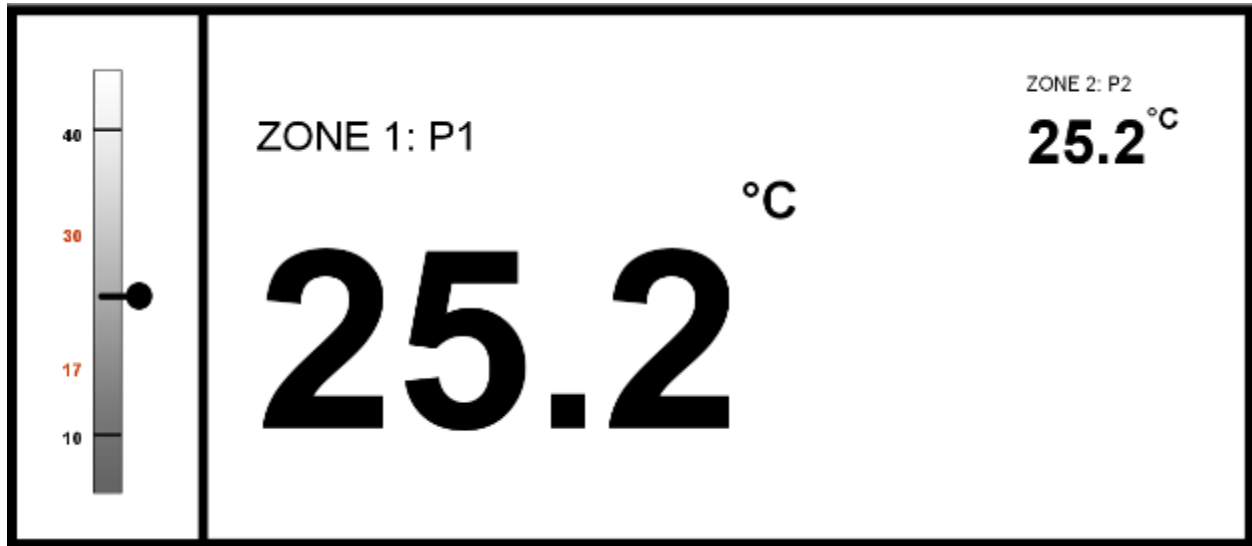
**DIM BUTTON:** Dims the screen to low brightness. Tapping anywhere else on the screen will bring back the original brightness.

**HEADER:** Displays the current date and time in the selected format and time zone. Flashes red when an alarm is active.



### 3. OPERATING THE SOFTWARE

#### HOME SCREEN



- The HomeScreen shown above displays the two zon temperatures along with the corresponding Probe Number; the temperature guage showing the set point limits and the set alarm limits in red.
- The needle on the temperature guage changes positions vertically depending on the Zone 1 temperature.
- The unit for the temperature displayed can be switched between degree Celsius and degree Fahrenheit under *Preferences*.

#### ALARMS/NOTIFICATIONS SCREEN



The Notifications Screen displays the currently active alarms in a list. This list is in reverse chronological order, i.e. the alarm that has become active most recently is at the top of the list. If there are no current alarms, it will show “NO ALARMS”.

Tapping on the floating button on the bottom right of the screen will navigate to the Event Log Screen.

## EVENT LOG SCREEN



1. Door Open	10/21 01:42 PM
2. Main Power Loss	10/21 01:42 PM
3. Main Power Loss	10/21 01:39 PM
4. Door Open	10/21 01:39 PM
5. Main Power Loss	10/21 01:39 PM
6. Door Open	10/21 01:39 PM

The event log screen shows a history of the alarms that have occurred in reverse chronological order, i.e. most recent alarms show on top. Tapping on the floating button on the bottom right of the screen will navigate back to the Notifications Screen.

Each entry will have the following:

1. A **red** or **green** circle indicating whether the alarm turned on or off respectively.
2. A count of each alarm status changes where the most recent alarm would be 1.
3. The alarm description, i.e. Door Open, Temperature Too Low, etc.
4. A time stamp showing the date and time when the entry occurred, in the selected date format and time zone.

## CHART SCREEN



- The Chart Screen displays line graphs for the selected Zones.
- The chart can be zoomed in or out vertically or horizontally using pinch zoom.
- Double tap on the screen will zoom the chart along both axes.
- The top X-axis shows the time stamps in the selected range.
- The left-Y axis shows the temperature markings for the chart.
- The right Y-axis shows the minimum and maximum temperature in the given time range corresponding to the graph.
- The legend on the bottom left corner has the following format: “Date; Time; Max/Min; Average Temperatures; n=Number of Samples in the selected time frame”.

The buttons on the bottom of the chart screen do the following:

1. **ZONE 1:** toggles the visibility of the line graph
2. **ZONE 2:** toggles the visibility of the line graph in Zone 2 (if applicable)
3. **24 HOURS:** Sets the time frame for chart and statistics to last 24 hours. Each data point marker if visible.
4. **7 DAYS:** Sets the time frame for chart and statistics to last 7 days. Markers are not visible in this selection.
5. **DOWNLOAD:** Lets the user download temperature and event log reports if a USB is connected.

### REPORT DOWNLOAD:

Download temperature and event log reports to a connected USB drive.

1. Connect a supported Type-A drive formatted using any Android device to the given slot.
2. Tap on the “DOWNLOAD” button on the Chart Screen.
3. If you get the pop-up saying, “Please insert USB storage”, ensure that the USB is properly connected and is of the correct format.



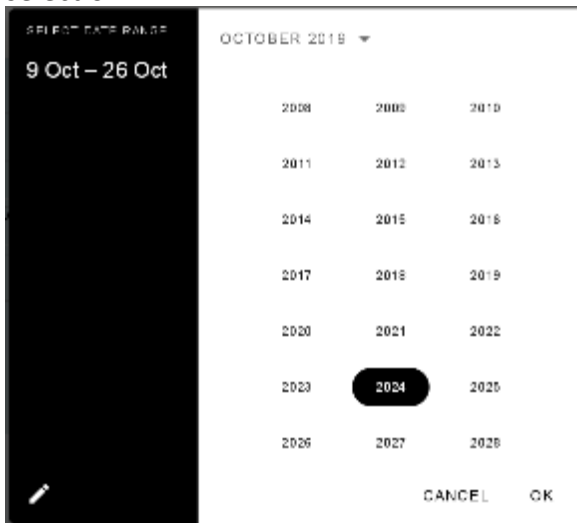
4. If the USB drive is successfully recognized, you will see a pop-up for date range:



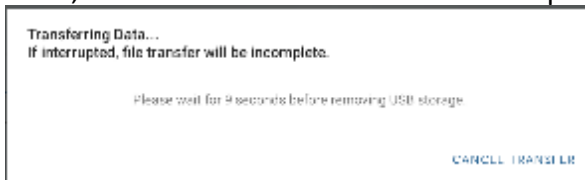
5. Tap on any one of the options – Last 30 Days, Last 90 Days, Last 1 year, or Custom date (Maximum Range is 1 year at a time, but there is no limit to how far back you can retrieve data)
- a. If you select Custom Date, a date picker will show up, letting you select a date range:



- b. You can tap on the year and month above the calendar to open a year picker for quicker selection:



6. After tapping on the date range options of OK on the date picker, you will see a Transfer pop-up as shown below. Please let the timer run and let the pop-up vanish before unplugging the USB drive, or the data transfer could be incomplete:



## VIEWING TRANSFERRED REPORTS

To view the reports after a successful transfer:

1. Connect your USB drive to a computer that will let you view the content.
2. You might get a pop-up on your computer asking you to format the drive before using it. **DO NOT** continue with formatting the drive, otherwise you will lose the reports and any other data you had on the USB drive.
3. Navigate to your File Explorer. Find the USB drive. Double-click to view its contents.
4. Locate and open the "Temperature-Logs" directory.
5. Within this directory, you will find four files for the selected time frame with the timestamp around when you download your reports.
  - a. chardata\_<timestamp>.csv – An editable csv file containing the serial number, date and time, and temperatures for available probes.
  - b. chartdata\_<timestamp>.pdf – A non-editable pdf file for the above.
  - c. eventlog\_<timestamp>.csv – An editable csv file containing the serial number, date and time, status (ON or OFF), and the description of for the event.
  - d. eventlog\_<timestamp>.pdf – A non-editable pdf file for the above.
6. If the reports are empty or show a size of 0KB, please retry the report download and wait a longer time for the transfer to complete successfully.

## MAIN MENU SCREEN

On the Main Menu, you will view and be able to access different menus depending on the logged in Level.



- You can log in to different levels by tapping the LOG IN button and then entering the corresponding PIN for **User [1122]**, **Supervisor [112233]**, or **Admin [112244]** and tapping OK.
- Once logged in, the LOG IN button will be replaced by the LOG OFF button and you can log off using that.
- Each log in has a timeout, and if no interaction is happening for a while, the user will be logged out.

- Each role increasingly grants access to functionalities. The buttons for the menus not accessible at logged in level will be greyed out.
- You can change the PIN for the level you are currently logged in as, and **the CHANGE PIN** button only shows up if you are logged in at any level. Enter the new PIN and tap OK to save.
- As a **User**, you can view the parameters under Status and Alarms Menu but cannot modify them.
- As a **Supervisor**, you can view and edit the parameters under Status, Alarms, Defrost [Freezer Only] Menus, as well as Preferences.
- As an **Admin**, you can additionally view, edit and use the buttons under the Options and Defrost Menu.
- The always greyed-out button in the middle of the Menu buttons displays the current Software Version. Please mention this version when calling tech support to expedite the troubleshooting effort.

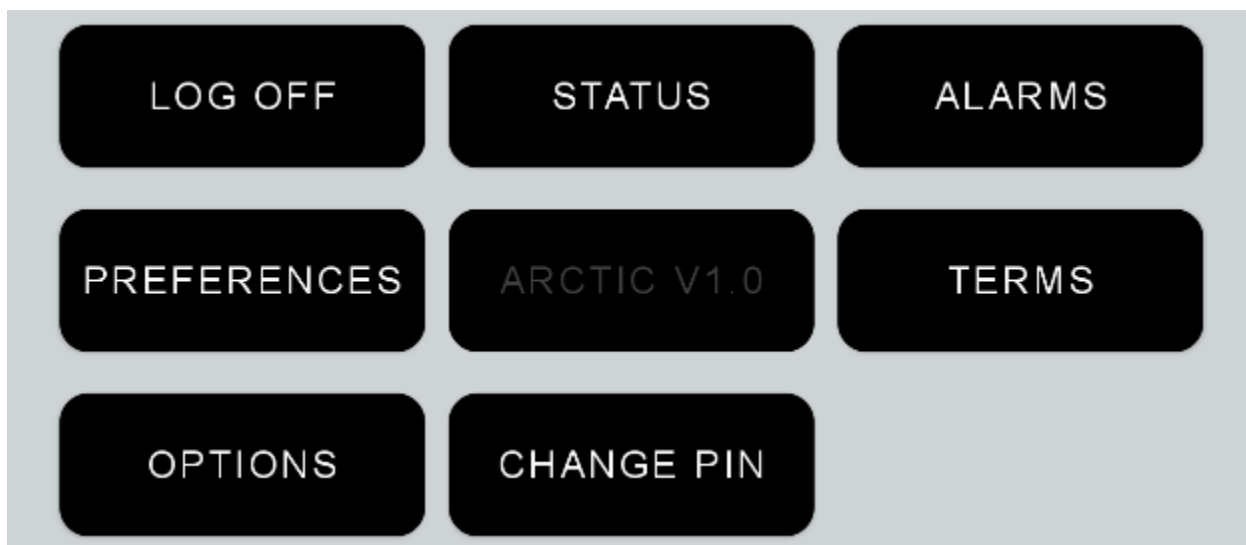
Enter PIN

0 1 2 3 4

5 6 7 8 9

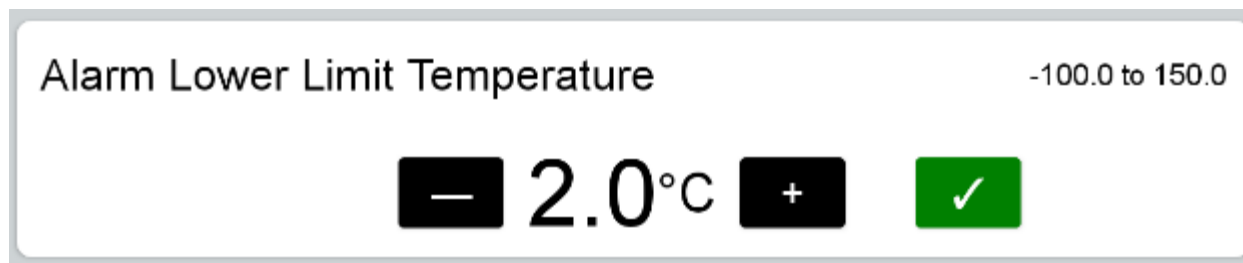
CLEAR

CANCEL OK



## PARAMETERS:

On some of the Menu Screens like Status, Alarms, Options, and Defrost; you will find one or more of these parameter controls:



- The top left text on the parameter is the name of the parameter, and this control will display the value of and let the user modify that value for that parameter.
- The number or value in the center below the name is the value of the parameter along with its unit.
- The *Minus* and *Plus* buttons will change the value by one unit.
- Long pressing the buttons will increase the speed at which the value changes.
- The value will NOT be saved until the green Apply button has been pressed.
- If the *Minus* or *Plus* buttons are not visible for a parameter, it could either mean that the parameter is read-only, or that you do not have access to modify it at your current logged in level.
- The numerical values on the top right corner of the parameter control are the lower and upper limit for the parameter. You will not be able to change the parameter to a value beyond these limits.



**IMPORTANT NOTE:** The list of parameters can be modified without notice. All the parameters mentioned may or may not be present on all units.

### 4-20mA

The unit has a 4-20mA output that is set on the Zone 1 temperature. The scale is set to be between the minimum and maximum set point that the unit has been configured at.

### Status

Probe n Temperature: The read-only display value for the probe temperatures considering any offsets. Probe 1 Temperature would always be available. Probes 2-4 may or may not be available depending on the unit.

- **Latest alarm:** Displays the name of the most recent alarm.
- **Number of Door Openings in the Last 24 Hours**
- **Total duration of Door Openings in the last 24 Hours**
- **Maximum Duration of Door Opening in the Last 24 Hours**

- **Average Duration of Door Openings in the last 24 Hours**
- **Average Temperature in the Last 24 Hours**
- **Minimum Temperature in the Last 24 Hours**
- **Maximum Temperature in the Last 24 Hours**
- **Set Point:** The temperature set point. The limits for this value will be the minimum and maximum available set points for the unit.

### **Alarms**



**NOTE:** *The High and Low Air Temperature Alarms provide an early warning prior to the product temperature alarm. They should be set to allow the normal rise and fall of the air temperature during normal operation. High ambient temperature and heavy door use may require a longer Alarm Delay.*

**Alarm Lower Limit Temperature:** The value in selected unit for the lower limit for the temperature. If the temperature drops to or lower than this value, an alarm will ring after the set Temperature Alarm Delay.

**Alarm Upper Limit Temperature:** The value in selected unit for the upper limit for the temperature. If the temperature increases to or above this value, an alarm will ring after the set Temperature Alarm Delay.

**Temperature Alarm Delay:** The value in minutes for how long to ignore a lower or upper limit temperature anomaly before an alarm starts ringing.

**Door Open Alarm Delay:** The value in seconds for how long to ignore a door opening before an alarm starts ringing.

**Main Power Loss Alarm Delay:** The value in seconds for how long to ignore a main power loss before an alarm starts ringing.

### **Options**



**Caution, cooling offset parameters are critical to the function of the system and should not be altered by a user or a technician without first consulting technical service.**

**Probe n Calibration:** The offset to apply on the nth Probe. Only available probes will be visible.

**Differential:** The set point differential in normal mode.

### **Defrost [Not for Refrigerator Units]**

**Defrost Termination Temperature:** Sets the temperature to be reached by the defrost probe, which causes the end of defrost cycle.

**Defrost Cycle Interval:** Interval between two consecutive defrost cycles in hours (0 to 120 hours). Determines the time interval between the beginning of two defrosting cycles.

**Defrost Cycle Maximum Length:** Maximum length of defrost cycle in minutes (0 to 255 min) sets the maximum length for the defrost cycle.

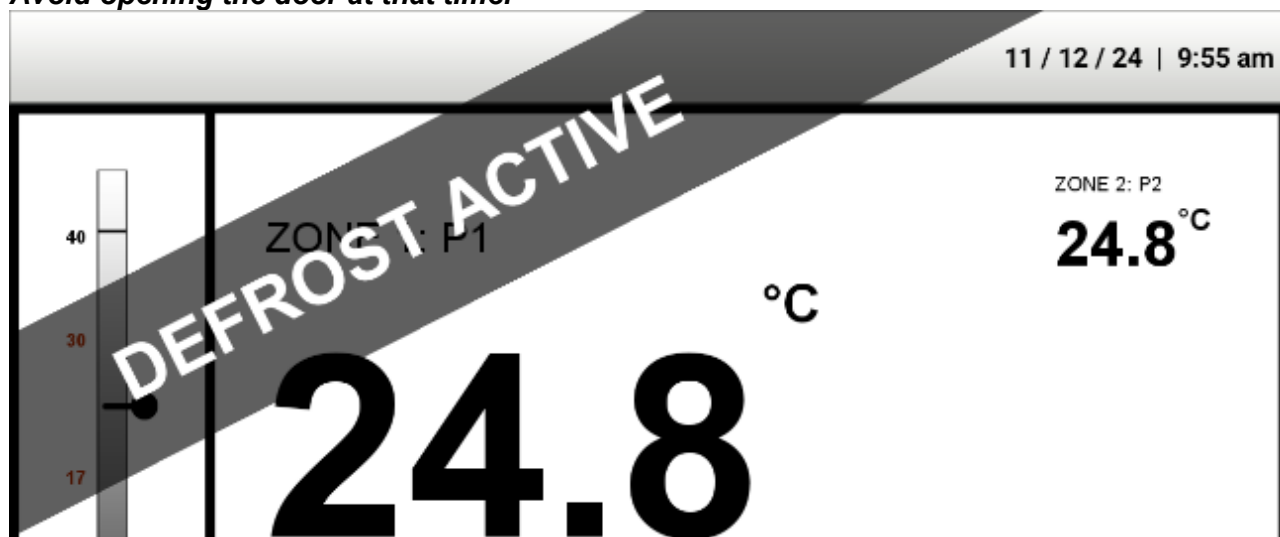
**Evaporator Fan Stop Temperature:** Above this temperature value the evaporator fans are always OFF.

**Evaporator Fan Delay:** Delay in minutes before fan activation after any defrosts.

**Draining Time:** Regulation delay in minutes (0 to 255 min) after finishing a defrost phase.



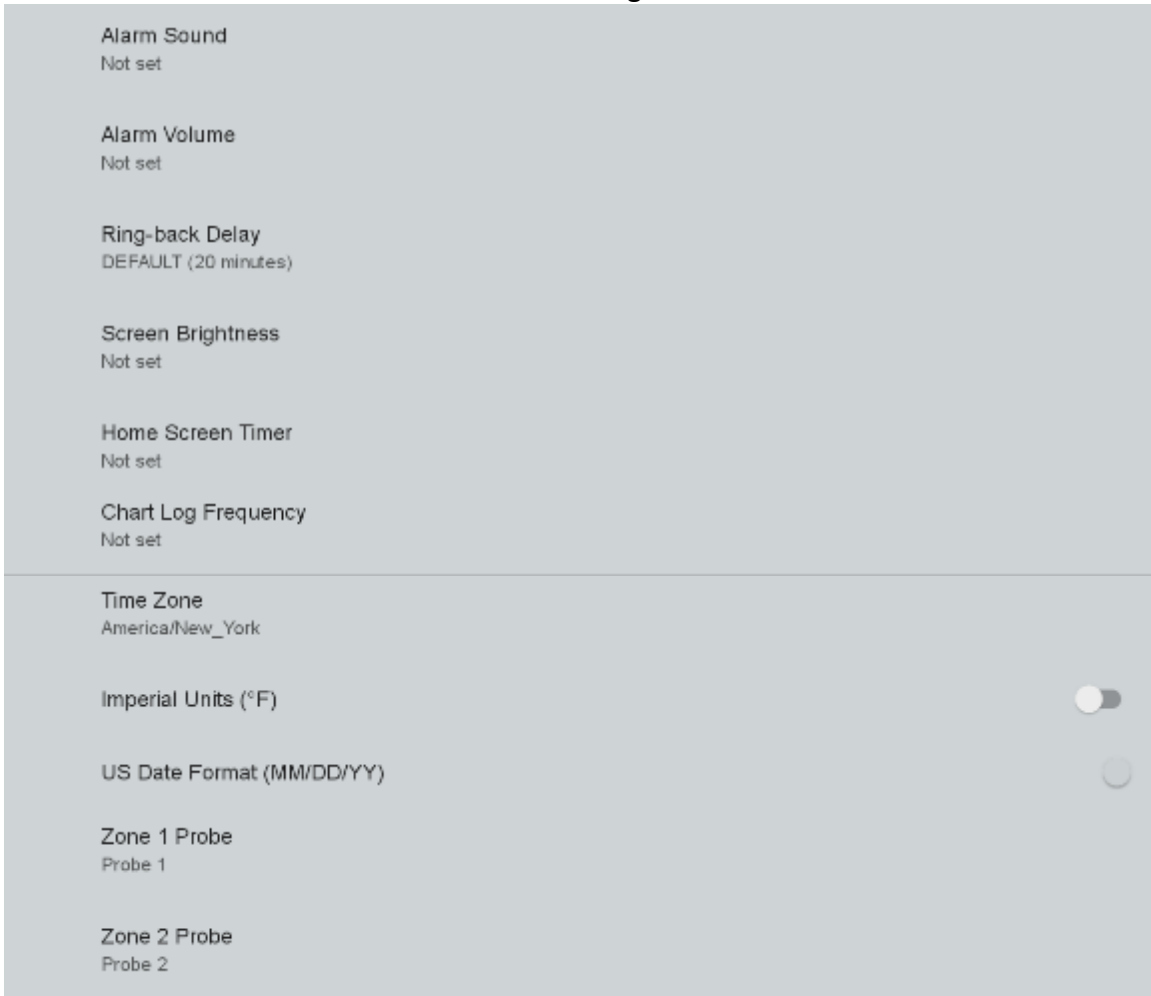
**NOTE:** There will be a “Defrost Active” banner on the screen whenever defrost is active. Avoid opening the door at that time.



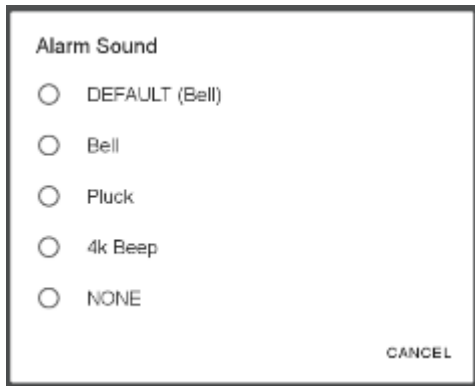
\*Refrigerator shown, Freezer temperatures will be different

# PREFERENCES

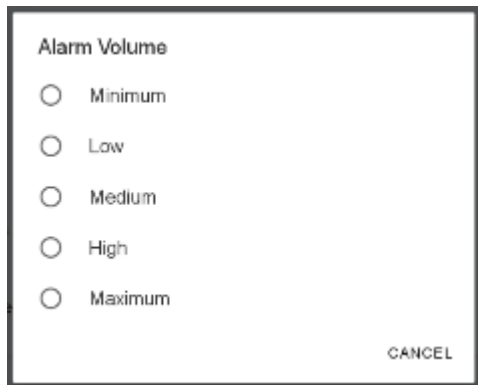
Preferences can be found under the Main Menu buttons. These settings let the user control the non-essential features of the app. These settings apply throughout the app and can be set by Supervisor or Admin. Shown below are the available settings under Preferences:



1. **Alarm Sound:** Choose between the available sounds for the alarm. Default is Bell.

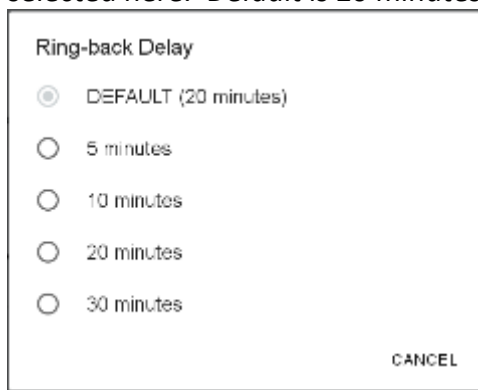


2. **Alarm Volume:** Choose between five available alarm volumes. Default is Maximum.



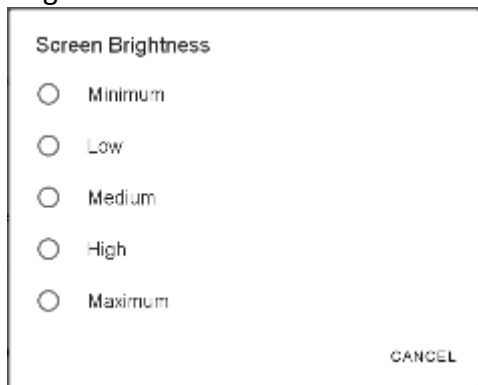
The screenshot shows a dialog box titled "Alarm Volume". It contains five radio button options: "Minimum", "Low", "Medium", "High", and "Maximum". The "Maximum" option is selected. A "CANCEL" button is located in the bottom right corner of the dialog box.

3. **Ring-back Delay:** When an ongoing alarm is muted, it will start ringing again after the delay selected here. Default is 20 minutes.



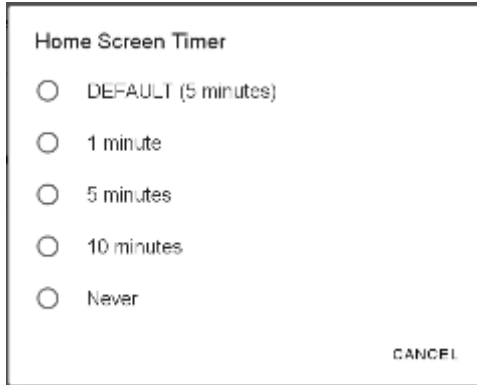
The screenshot shows a dialog box titled "Ring-back Delay". It contains five radio button options: "DEFAULT (20 minutes)", "5 minutes", "10 minutes", "20 minutes", and "30 minutes". The "DEFAULT (20 minutes)" option is selected. A "CANCEL" button is located in the bottom right corner of the dialog box.

4. **Screen Brightness:** Select the brightness for the app. Helpful to be used according to room brightness levels. Default is Maximum.



The screenshot shows a dialog box titled "Screen Brightness". It contains five radio button options: "Minimum", "Low", "Medium", "High", and "Maximum". The "Maximum" option is selected. A "CANCEL" button is located in the bottom right corner of the dialog box.

5. **Home Screen Timer:** Timer for the app to go back to the Home Screen after selected minutes of inactivity. Default is 5 minutes.



Home Screen Timer

DEFAULT (5 minutes)

1 minute

5 minutes

10 minutes

Never

CANCEL

6. **Chart Log Frequency:** Lets the user select how often a temperature reading get recorded to the charts and reports. Default is 5 Minutes.

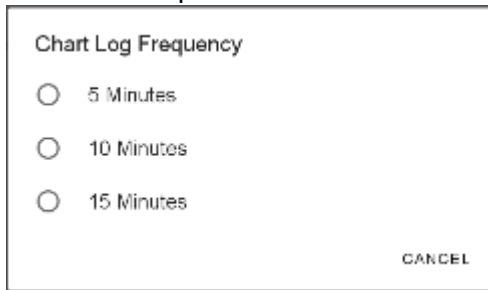


Chart Log Frequency

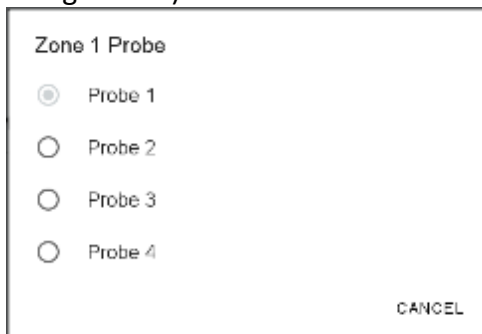
5 Minutes

10 Minutes

15 Minutes

CANCEL

7. **Time Zone:** Lets the user select their preferred time zone from a vast variety of available options. Tap on Time Zone and then scroll to find the correct one, then tap to select. This will change the time zone throughout the app and in the downloaded reports.
8. **Imperial Units (°F):** Can be toggled ON (Fahrenheit) or OFF (Celsius) to change units throughout the app and in the downloaded reports.
9. **US Date Format (MM/DD/YY):** Can be toggled ON (MM/DD/YY) or OFF (DD/MM/YY) to change the date format throughout the app and in the downloaded reports.
10. **Probe Selection:** The Probes for temperature visible on Zones 1 and 2 on the Home Screen and the Chart can be selected here. The Probe for Defrost can also be selected (not available for refrigerators).



Zone 1 Probe

Probe 1

Probe 2

Probe 3

Probe 4

CANCEL

## 4. TROUBLESHOOTING

Here are some common issues and what steps you can take to solve them:

- 1) **Seeing “---” on the home screen instead of temperature?**
  - a) Check if the Refrigerator or Freezer has power (power cord connected; cooling, fans, or lights working)
  - b) Check the last-read timestamp on the Chart page at the bottom right corner
  - c) If the timestamp was less than 5 minutes ago, please give the unit another 5 minutes to recover by itself
  - d) If the timestamp was more than 5 minutes ago, please log in as Admin and click on the “RESTART APP” button under the Options menu.
  - e) If it does not change from “---” to temperature values within 5 minutes after restarting the app, please contact technical support
- 2) **Not seeing the previous alarms list on the notifications page?**
  - a) Please locate the clock icon on the bottom right corner of the Notifications screen to go to the Event Log page
- 3) **Seeing the wrong time zone and/or date format?**
  - a) Please go to Preferences after logging in as Supervisor or above and select from available time zones and toggle date format to desired options
- 4) **No temperature graph available on the Chart page?**
  - a) Please wait for up to one minute for the chart to load
  - b) Please check that Zone 1, Zone 2, or both buttons below the chart area are selected
  - c) Please check the Preferences menu to confirm Zone 1 Probe (and Zone 2 Probe, if applicable) have probe selections. If the selected probe is not connected, the home screen should show “No Prb” for a particular zone.
  - d) Please confirm with the person(s) that have Admin password access that all the data was not recently deleted using the “DELETE ALL DATA” button under the Options menu
- 5) **Too much data on the 7 Day chart that distinct data is not visible?**
  - a) Please use double tap or pinch to zoom to your desired date ranges by looking at the date markers on the top of the chart
- 6) **Seeing “Please insert USB storage” even after inserting a USB drive?**
  - a) Please make sure that the USB drive being used is in the Android format
  - b) Please use the one provided to you, or use any Android device to format the new USB drive, and then reconnect to the unit
  - c) If you do not have an Android device for formatting, please contact tech support to order a replacement
- 7) **Report downloaded but some files empty or not transferred?**
  - a) It is possible that the transfer was not able to complete. Please try again and wait at least a 10% longer than the recommended time and check again
- 8) **Cannot log in with the PIN you remember last using?**
  - a) Please ask your colleagues if anyone has changed the PIN for that level
  - b) Please log in as Admin to tap the “RESET PASSWORDS” button under Options to reset passwords for all the levels to default – User [1122], Supervisor [112233], and Admin [112244]
  - c) If you have trouble logging in to Admin and cannot reset the passwords, please contact technical support
- 9) **See the notification “LabPro is not responding?”**
  - a) Click on the “Close App” on the notification. Reopen the app by tapping the LabPro icon.

## **CONTACT US**

Technical Support: 1-800-648-4041 x5  
Customer Support: 1-800-648-4041 x3  
[technicalservice@horizonscientific.com](mailto:technicalservice@horizonscientific.com)