FARRAR®

FARRAR® CYCLONE™ SERIES

ULTRA LOW TEMPERATURE FREEZER

INSTRUCTIONS FOR USE MANUAL

Document History

Revision	Date	CO	Supersession	Revision Description
A	JAN 10 2025*	27488	n/a	Initial release.
B	JULY 16 2025*	29980	B supersedes A	• Added note statement and updated instruction in Section 3.1 Initial Start Up • Added Appendix A to provide list of default User Names and Passwords • Corrected entries in table 2 of Section 3.4
C	OCT 21 2025*	30063	C supersedes B	• Updated Set Point screen shot in Section 3.3

** Date submitted for Change Order review. Actual release date may vary.*

Document Updates

This document is furnished for information use only. Its contents and the product it describes are subject to change without notice. FARRAR® assumes no responsibility or liability for any errors or inaccuracies that may appear in the informational content contained in this material. For the purpose of clarity, FARRAR considers only the most recent revision of this document to be valid. FARRAR makes no representations or warranties with respect to this manual.

Notices and Disclaimers

Confidential / Proprietary Notices

Use of any portion(s) of this document to copy, translate, disassemble or decompile, or create or attempt to create by reverse engineering or otherwise the information from FARRAR products is expressly prohibited.

Copyright and Trademark

Disclaimer

This manual is intended as a guide to provide the operator with necessary instructions on the proper use and maintenance of a specific FARRAR product.

Any failure to follow the instructions as described could result in impaired product function, injury to the operator or others, or void applicable product warranties. In no event shall FARRAR be held liable for any damages, direct or incidental, arising out of or related to the use of this manual.

The images appearing in this guide are provided for illustrative purposes only, and may vary slightly from the actual product components.

Contents

1 About this Manual

1.1 Intended Audience

This manual provides information on how to use the CYCLONE™ SERIES freezer. It is intended for use by end users of the freezer and authorized service technicians.

1.2 Model Reference

The FARRAR CYCLONE 900 series model has over 900 liters of storage space. A distinguishing model number corresponds to the type, volume in cubic feet and voltage. For example, FCF-133 refers to a FARRAR CYCLONE Freezer with one door and a total volume of 33 cu. ft.

1.3 Intended Use

FARRAR® CYLCONE™, a purpose-built freezer for life science applications, addresses the needs and requirements of the fast-changing biopharmaceutical, biorepository, and research industries. This unit provides manufacturers and companies charged with housing drug products and reagents a solution that meets their -20°C to -80°C pre-clinical to production scale needs.

1.4 Safety Precautions and Symbols

Symbols found in this document

The following symbols are used in this manual to emphasize certain details for the user:

Task Indicates procedures which need to be followed.

Note Provides useful information regarding a procedure or operating technique when using FARRAR products.

NOTICE Advises the user against initiating an action or creating a situation which could result in damage to equipment; personal injury is unlikely.

Symbols found on the units

The following symbols may be found on the freezer or freezer packaging.

Caution: Risk of damage to equipment or danger to operator

Caution: Shock / electrical hazard

Caution: Hot surface

Warning: Low temperature / freezing conditions, frostbite

Warning: Flammable material

Refer to documentation

Earth / ground terminal

1.5 Avoiding Injury

- Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
- Do not damage the refrigerant circuit.
- Ensure unit is powered off and unplugged prior to performing service or maintenance to prevent an electrocution hazard.

Review safety instructions before installing, using, or maintaining the equipment.

- Before moving unit, remove contents from the chamber.
- Before moving unit, ensure door is closed and latched, and casters are unlocked and free of debris.
- Before moving unit, disconnect the AC power cord and secure the cord.
- When moving unit, use assistance from a second person.
- Never physically restrict any moving component.
- Avoid risk of ignition by using only manufacturer supplied components and authorized personnel when servicing the unit.
- Avoid removing access panels unless so instructed.
- Use appropriate gloves when handling cold internal components and stored inventory.
- Keep hands away from pinch points when closing the door.
- Avoid sharp edges when working inside the refrigeration compartment.
- Proceed with caution when adding and removing product from the freezer.
- Always dissipate extreme temperatures, especially inside the control space before performing any maintenance on the unit.
- Use manufacturer supplied power cord only.
- Using the equipment in a manner not specified by FARRAR may impair the protection provided by the equipment.
- Ensure product is stored safely, in accordance with all applicable organizational, regulatory, and legal requirements.
- The freezer is not considered to be a storage cabinet for flammable or hazardous materials.

REQUIRED: Decontaminate parts prior to sending for service or repair. Contact FARRAR or your distributor for decontamination instructions and a Return Authorization Number.

1.6 General Recommendations

General Use

Allow freezer to come to room temperature before switching power on.
During initial startup, the high temperature alarm may sound while the freezer reaches operating temperature.

Initial Loading

Allow chamber temperature to stabilize at the set point before storing product.

Product Loading Guidelines

Note
This unit is designed for quick temperature recovery. Freezing large quantities of liquid, or high-water content items, will temporarily increase compressor speed to compensate for the increased load in the chamber.

NOTICE

- Extended door openings (> 1 min.) may cause evaporator icing. Manual defrost may be necessary to recover full system performance *(refer to the HMI User Guide for manual defrost instruction)*.
- Items stored beyond the shelf surface may impede airflow and diminish product performance.

When loading your freezer, take care to observe the following guidelines:

- Never load freezers beyond capacity.
- Always store items within shelves and do not extend beyond the shelf edge to allow for proper airflow.

2 Installation

2.1 Location

- Has a grounded outlet on a dedicated circuit meeting the electrical requirements listed on the product specification label.
- Is clear of direct sunlight, high temperature sources, and heating and air conditioning vents.
- Meets limits specified for ambient temperature and relative humidity as stated in the Product Specifications section of this manual.
- Minimum 12” (305 mm) above, and minimum 4” (102 mm) behind for proper ventilation, clearance and feature access.
- Minimum 4.5” (115 mm) on sides.
- Overall minimum height of location, floor-to-ceiling 89.5” (2274 mm).

2.2 Placement and Leveling

NOTICE

- To prevent tipping, ensure door is closed and latched, and casters are unlocked and free of debris before moving freezer.
- The freezer is extremely heavy. FARRAR recommends two people work together to move the freezer.
- To avoid damaging refrigerant tubing or risking refrigerant leak, use caution when moving or operating the unit.
- Do not position freezer where it prevents access to the power cord disconnect at the wall receptacle.
- Do not position the freezer in a way that obstructs ventilation openings.

Place Freezer

1. Ensure all casters are unlocked and door is closed and latched.
2. Roll freezer into place and lock casters ensuring minimum space requirements are met.
3. If rear stand-offs are installed, freezer may be pushed against a wall so stand-offs make contact.
4. Set leveling feet to ensure freezer is level.

Set Leveling Feet

1. Hand-thread leveling feet downward to contact floor.
2. Using a 5/8” open-end wrench, adjust legs to achieve a flat reading (front to back) from a bubble level.
3. Check leveling legs and rear casters to ensure freezer contacts floor at four points. Adjust leveling legs as necessary.
4. Hand-thread jam nuts upward until they meet weld nut.
5. While holding leveling foot with a 5/8” open-end wrench, use a 9/16” open-end wrench to snug jam nut against bottom of freezer.

2.3 Rear Stand-Offs *(optional)*

NOTICE

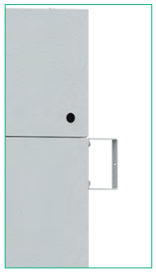
The rear stand-offs include a hole to accept a threaded fastener for anchoring the freezer to a wall. The rear stand-offs do not provide a secure means to anchor the freezer to the wall that can be considered resistant to seismic events.

Notes

- Installation of the rear stand-offs is optional.
- Anchoring the freezer to the wall is optional.
- Hardware to anchor the freezer to the wall is not provided with the freezer. The end user is responsible for determining the best method to anchor the freezer to the wall.

Install Rear Stand-Offs

1. Align holes in the stand-offs with corresponding threaded holes on back of freezer.
2. Insert 3/8” hex head cap screws through holes in stand-offs.
3. Hand-thread cap screws into threaded holes.
4. Using a 9/16” open-ended wrench, tighten cap screws to secure.



Rear Stand-off

2.4 Storage Shelves

Note

If reconfiguring storage components, FARRAR recommends moving storage racks before powering the unit on.

Configure Shelves

1. Open the chamber door and all inner doors.
2. With both hands, lift the shelf upward to disengage from the brackets and remove.
3. Using a #2 Phillips screwdriver, remove the screws securing the bracket retainers. Set the screws and retainers aside.
4. Disengage the shelf brackets from the standards and remove the brackets.
5. Reinstall the brackets in the standards at the desired locations on each side of the unit.
6. Place the notched end of the retainers over the brackets.
7. Using a #2 Phillips screwdriver, fasten the retainers to the standards with the previously removed screws.
8. Reinstall the shelf into chamber setting the shelf flat on the slides and ensuring it is level.
   Repeat steps 2 -8 for each shelf as desired.
9. Close the inner doors and the chamber door.

2.5 Initial Start-up

NOTICE

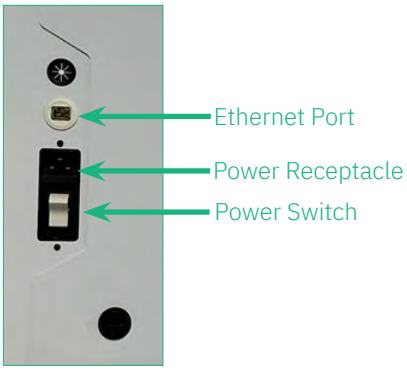
- Do not position the freezer where it will prevent access to the power cord disconnect at the wall receptacle.
- Use only manufacturer supplied power cord.
- FARRAR does not recommend operating this unit on a GFI/GFCI outlet.

Note

During initial pull-down, a High Temperature alarm message will appear on the HMI display and the indicator light bars will appear red until the unit reaches a temperature ≤2°C of the High Temperature alarm limit. An audible alarm will activate if more than 6 hours passes before this temperature is reached.

Power on CYCLONE

1. Plug the power cord into a grounded outlet on a dedicated circuit that meets the electrical requirements on the product specification label.
2. Switch backup battery ON/OFF switch **ON**.
3. Switch AC ON/OFF switch **ON**.

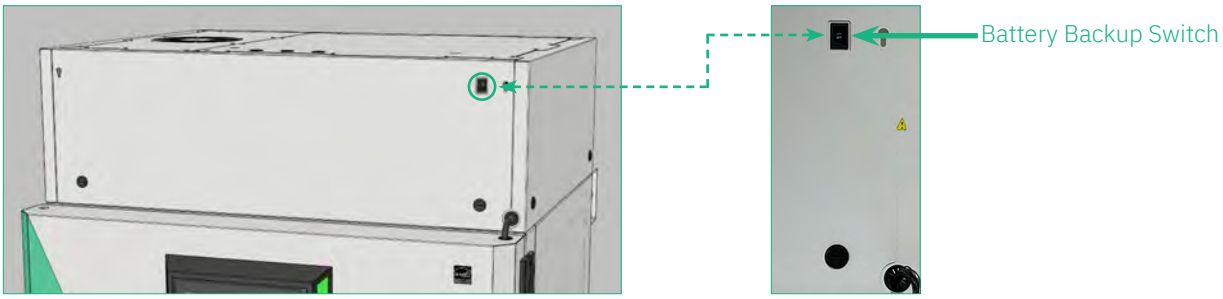


2.6 Enable Backup Power

The CYCLONE freezer is designed with a battery backup option. The battery backup switch is located behind the front fascia piece above the door. Providing full battery power is available, the controls and HMI (Human Machine Interface) will remain powered if the battery backup is engaged. Warning indications and lights state when main power is lost, and the unit is running on the backup battery. As the battery depletes and nears low battery, the backup battery low warning is shown on the HMI with accompanying light state.

Notes

- Use only a battery meeting the following specifications: ANSI/UL 1989 BAZR2, 12V, SLA, 9AH Battery; UL94-HB or greater flammability rating; 0.250” x 0.032” quick disconnect tabs.
- The backup battery does not provide power for the refrigeration system in the event of a power outage.



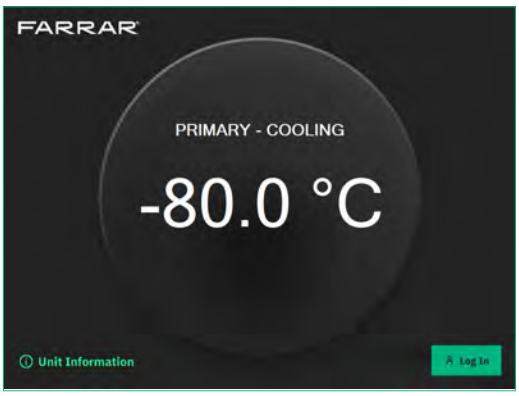
3. HMI Operation

The FARRAR® CYCLONE™ freezers are equipped with a human-machine interface (HMI) that allows approved users to adjust the temperature control set point between -20°C to -80°C. All functions and set points can be accessed on the HMI located on the exterior door.

Note

The IDLE screen appears when:

- The unit is first powered on.
- The Log Out icon is selected.
- The controller is left unattended by a Service user for more than one hour or non-Service users for more than five minutes.



IDLE screen

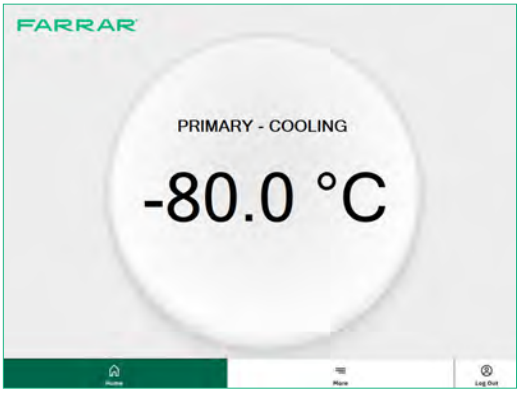
Login screen

3.1 Initial Start Up

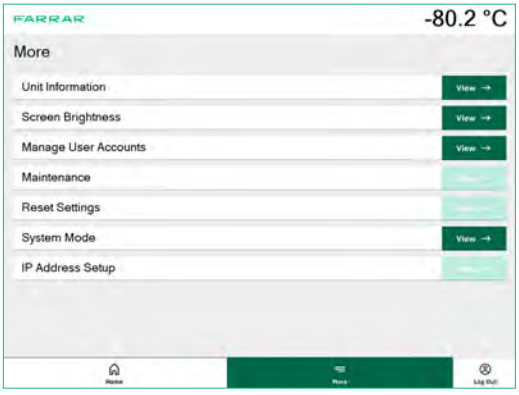
Notes

- The Administrator should set up their account with a user name and password upon first login.
- Each user should be assigened to only one security group.
- Upon start-up, only the factory-set default User Setup has Administrator level access.
- The default Administrator password is FARRAR.
- It is necessary to maintain a User Setup (Administrator) and Service password in order to perform essential functions. FARRAR recommends retaining the default settings for these two Security Groups. If the factory-set account is deleted and the password is lost, the HMI will need to be factory-programmed to restore use.

1. From the IDLE screen, select the Log In button. The Login screen appears with an alphanumeric keypad.
2. Enter the User Setup password *(default password is FARRAR)*. The Home screen appears.

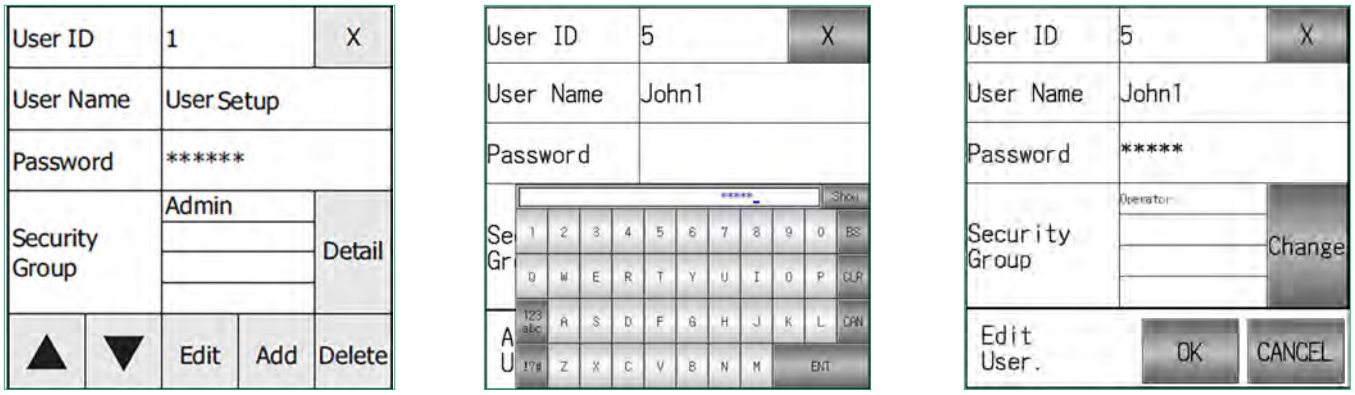


Home screen



More screen

3. Select the **MORE** button. The More screen appears with a menu of options.
4. Select the **View** button next to the Manage User Accounts option to access the User Account screen.

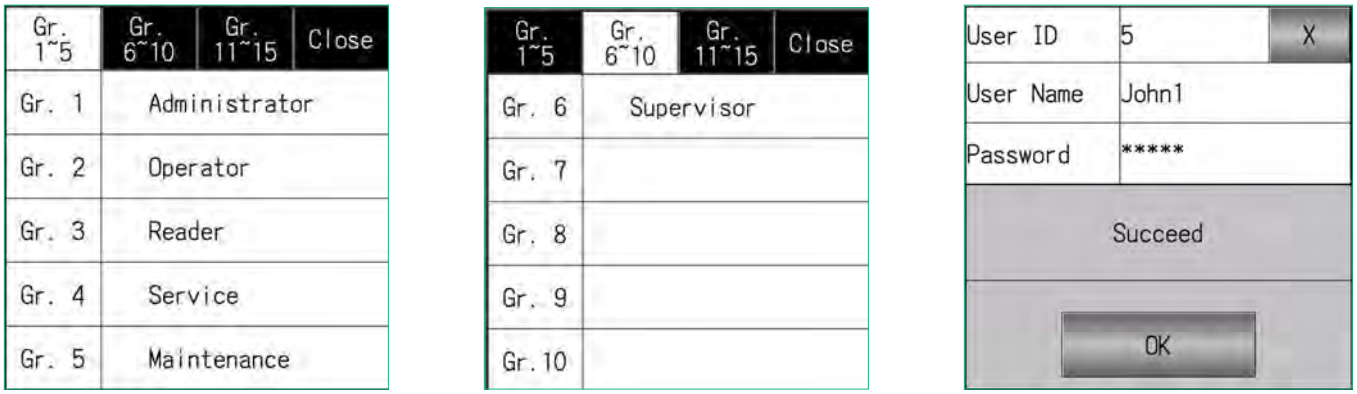


User Account screens

5. On the User Setup screen, select the **Add** button. An alphanumeric keyboard appears and the User ID field is auto-populated with the lowest available number.
6. Select the User Name field and enter a user name. Touch the **ENT** (enter) button to save the user name.
7. Select the Password field and use the keyboard to create a unique password. Touch the **ENT** button to save the password.
8. In the Security Group field, touch the **Change** button. The Security Group list appears.

Notes

- The CYCLONE unit has six (6) security group access levels for users. *(Refer to Security Groups table below.)*
- Reader-level access is available but is not recommended for the general user.
- A user account with Supervisor or Service level access must be created to configure the unit.



Security Group screens *User Account Acceptance screen*

9. At the top of the Security Group screen, select the tab that corresponds with the desired Security Group.
10. Select the security group desired for the account and touch **Close** to save your selection and return to the User Account screen.
11. Once all fields are completed, touch the **OK** button at the bottom of the User Account screen. The Succeed message will display confirming the profile has been saved.
12. Press the **OK** button below the Succeed message to complete the process.
13. Touch the **X** button to return to the More screen followed by the **Home** button to return to the Home screen.

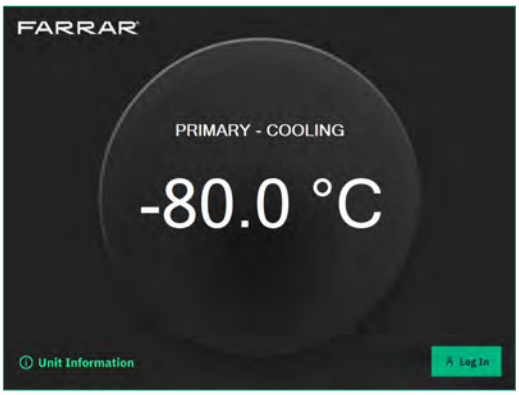
Table 1. Security Group Access

Security Group	Edit User Login	View Info Screens	Upload Project Data	Download Project Data	Turn Unit Off/Auto	Access Health Screens	Modify Set points	Modify all Settings
Administrator	X	X	X	X				
Operator		X		X	X			
Reader		X		X				
Maintenance		X			X	X		
Supervisor		X			X	X	X	
Service		X			X	X	X	X

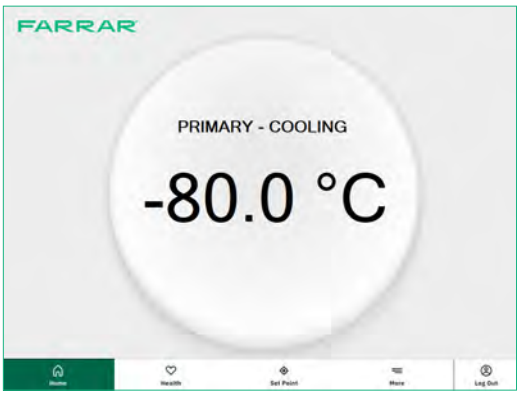
3.2 Operation

Notes

- Refer to the HMI User Guide for Ultra-Low Freezers for complete information regarding the HMI.
- The HMI Home screen displays temperature and alarm information, and provides access to other functions.
- Options in the bar at the bottom of the Home screen will vary depending on the security group login entered.
- After five minutes of inactivity, the IDLE screen will be displayed. To return to the Home screen, touch the Log In button and enter the password.



IDLE screen

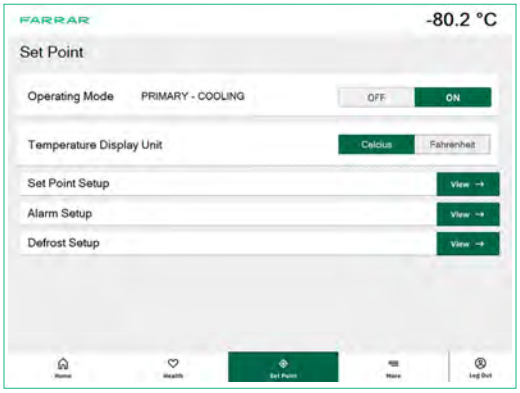


Home screen

3.3 Set Point Configuration

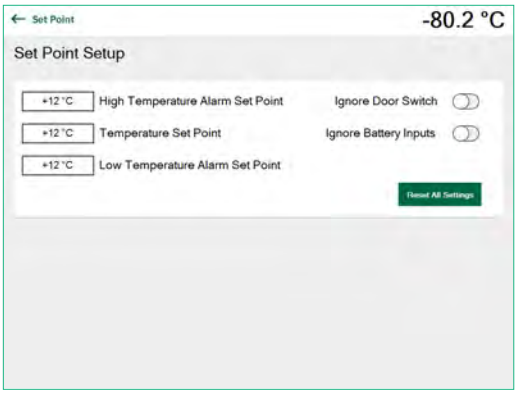
Notes

- The Set Point screen can be accessed using an Operator, Maintenance, Supervisor or Service level security group login.
- Changes to set points can only be made by a user with a Supervisor or Service level security group login.
- The Operating Mode appears at the top of the Set Point screen indicating the current status of the system and allows the user to cycle the unit ON or OFF.



Set Point screen

Set Point Setup



Set Point Setup screen

Establish Set Points

Notes

- Default set point is -80.0°C.
- The available high alarm range is +30°C to -80°C.
- The available low alarm range is -20°C to -99°C.
- The available temperature range is -20°C to -80°C.

1. Log in using a Supervisor or Service level password.
2. Select the **Set Point** button at the bottom of the screen. The Set Point screen appears.
3. Touch the **View** button View → on the Set Point Setup line. The Settings screen appears.
4. Select the temperature set point field you wish to set --- High Temperature Alarm, (chamber) Temperature Set Point, or Low Temperature Alarm. A numeric keypad appears.
5. Enter the desired set point and press **Enter** to save or **X** to exit without saving.
6. Select the Set Point screen return arrow ← Set Point to return to the Set Point Screen followed by the **Home** button to return to the Home screen.

Enable/Disable Door and Battery Alarms

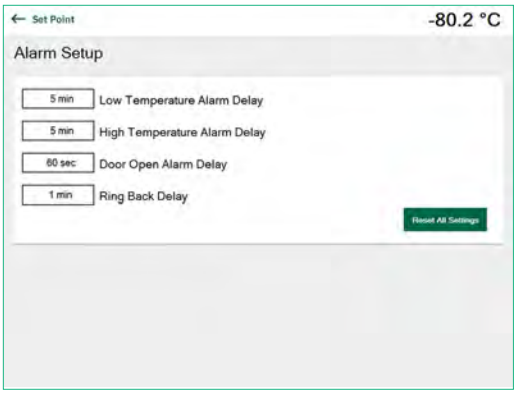
Notes

- The Ignore Door Switch and Ignore Battery Input are OFF by default.
- When Ignore switches are activated, a message appears on the Home screen and no alarms or lights related to the condition will be activated.

- The Ignore toggle button will turn green when enabled.
- FARRAR recommends the Ignore Door Switch mode be used only if a door switch fails.
- FARRAR recommends the Ignore Battery Inputs mode be used only if the backup battery fails.

1. Log in using a Supervisor or Service level password.
2. Select the **Set Point** button at the bottom of the screen. The Set Point screen appears.
3. Touch the **Ignore Door Switch** toggle button to enable or disable the Door Open alarm.
4. Touch the **Ignore Battery Inputs** toggle button to enable or disable the Low Battery alarm.
5. Select the Set Point screen return arrow ← Set Point to return to the Set Point Screen followed by the **Home** button to return to the Home screen.

Alarm Setup



Alarm Setup screen

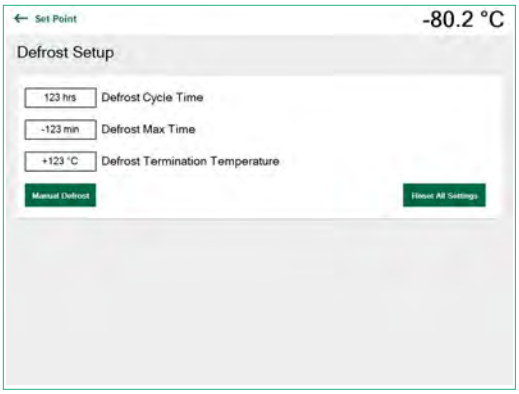
Set Alarm Time Delay

Notes

- The factory default delay for a High or Low Temperature alarm is 5 minutes. The available range is 0 to 120 minutes.
- The factory default delay for the Door Open alarm is thirty (30) second. The available range is 5 to 300 seconds.
- The factory default for the Ring Back delay is 1 minute. The available range is 1 to 3000 minutes.
- The Ring Back delay allows the user to set the amount of time before the unit re-enables the audible alarm after it has been silenced during an ongoing alarm condition.
- Temperature alarms are audible, visual and transmitted through alarm contacts.
- Door Open alarms are visual and transmitted through alarm contacts. An audible alarm occurs after the Door Open delay time has elapsed.

1. Log in using a Supervisor or Service level password.
2. Select the **Set Point** button at the bottom of the screen. The Set Point screen appears.
3. Select the **View** button on the Alarm Setup line. The Alarm Setup Screen appears.
4. Select the alarm delay field you wish to set --- Temp Alarm Delay, Door Open Delay or Ring Back Delay. A numeric keypad appears.
5. Enter the desired time delay and press **Enter** to save or **X** to exit without saving.
6. Select the Set Point screen return arrow ← Set Point to return to the Set Point Screen followed by the **Home** button to return to the Home screen.

Defrost Cycle Setup



Defrost Setup screen

Set Defrost Parameters

Notes

- Only the evaporator is defrosted by the automatic defrost system keeping the coil clear to maintain airflow.
- FARRAR does not recommend changing defrost settings. Consult FARRAR Technical Service before changing any defrost setting.
- The default Defrost Cycle Time is 24 hours. The available range is 2 to 168 hours.
- The default Defrost Max Time is 30 minutes. The available range is 5 to 60 minutes.
- The default Defrost Termination Temperature is 10°C. The available range is 0°C to +40°C.

1. Log in using a Supervisor or Service level password.
2. Select the **Set Point** button at the bottom of the screen. The Set Point screen appears.
3. Select the **View** button next to the Defrost Setup line. The Defrost Setup screen appears.
4. Select the defrost parameter you wish to set *(Defrost Cycle Time, Defrost Max Time or Defrost Termination Temperature)*. A numeric keypad appears.
5. Enter the desired time or temperature and press **Enter** to save or **X** to exit without saving.
6. Select the Set Point screen return arrow ← Set Point to return to the Set Point Screen followed by the **Home** button to return to the Home screen.

3.4 Alarms, Warnings and Notifications

When an event occurs, a notification message appears on the display to alert the user. Indicator light bars located on each side of the display may change from green to yellow or red to help signify the criticality of the occurrence. Indicator bars flashing red imply an alarm has been triggered and action is needed; Solid or flashing yellow indicator bars represent a warning the operation status has changed; Green indicator bars imply normal operating conditions.

HMI Display with light bars illuminated

Note

The Refrigeration System Failure warning will appear when one or more of the Alarms listed below occur. The Refrigeration System Failure warning can only be cleared by viewing the alarm log screen.

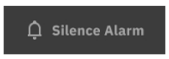
- Control and Evaporator Coil Probe Failure occurs simultaneously
- Evaporator Coil Low Temperature (> 2 minutes)
- ISHX High Temp
- ISHX Low Temp
- ISHX Probe Failure
- 1st Stage Compressor High Pressure
- 2nd Stage Compressor High Pressure

Table 2. HMI Alarm, Warnings and Notifications

Alarm	Description	Light Bar
High Temperature	Sensor reading is above high temperature alarm set point	Red
Low Temperature	Sensor reading is below low temperature alarm set point	Red
ISHX Probe Failure	No temperature reading detected for more than 5 seconds	Red
Control Probe Failure	No temperature reading detected for more than 5 seconds	Red
AC Mains Power Failure	AC line voltage has failed	Red
Door Open Too Long	Door is open beyond user-specified duration	Red
2nd Stage Compressor High Pressure	2nd stage compressor high pressure cuts off	Red
1st Stage Compressor High Pressure	1st stage compressor high pressure cuts off	Red
ISHX High Temp	Interstage heat exchanger is warmer than set limit	Red
ISHX Low Temp	Interstage heat exchanger is colder than set limit	Red
Evaporator Coil Low Temp	Evaporator coil is colder than set limit for more than two minutes	Red
Evaporator Coil Probe Failure	No temperature reading detected for more than 5 seconds	Red
Drain Pan Probe Failure	No temperature reading detected for more than 5 seconds	Red
Internal System Communication Failure	Information displayed does not represent actual data monitored	Red
Warning	**Description**	**Light Bar**
Refrigeration System Failure	One of the key components of the refrigeration system is operating outside allowable limits	Red
Door Open	External door is open	Yellow
Defrost Event	Scheduled defrost is in process	Yellow
Notification	**Description**	**Light Bar**
Battery Inputs Disabled	Backup battery voltage is depleted	Green
Low Backup Battery	Battery voltage is low	Green
Preventive Maintenance Reminder	Unit requires preventive maintenance	Green
Low PLC Backup Battery	Battery voltage is low	Green
Defrost Timeout	Defrost terminated due to preset time limit	Green
Calibration Reminder	Sensor calibration is required	Green

3.5 Mute Active Alarms

Touching the Silence Alarm button at the top of the screen will silence the audible alarm for a period of time set by the user. Should the alarm condition remain active, the audible will sound again at the end of the delay period.



Unmuted

From the Set point screen, select the View button on the Alarm Setup line and touch the Ring Back Delay box to set the mute duration.

Note

The factory default for the Ring Back delay is 1 minute. The available range is 1 to 3000 minutes.

4 Product Specifications

4.1 Operating Standards

- Indoor use only
- Altitude (maximum): 2000 m
- Ambient temperature range: 10 °C to 32 °C
- Relative humidity: 60% for temperatures within the ambient range
- Temperature control range: -20 °C to -80 °C
- Overvoltage Category II
- Pollution Degree 2
- RF Emissions: Group 1 - Class A
- EMC Environment: Basic
- Sound level is less than 70 dB(A).

Table 3. Electrical Specifications

Model	FCF133
Input Voltage and Frequency	220-240V 50/60 Hz
Voltage Tolerance	±10%
Circuit Breakers	15 A, 2-pole
Current Draw	10.13 A
Power Source	15A dedicated circuit
Backup Battery for HMI Monitoring System	12V, 9 Ah rechargeable sealed lead acid battery
Remote Alarm Capacity	0.5A at 30V (RMS); 1.0A at 60V (DC) (Min Load: 5V (DC), 10mA)
Temperature re-transmit voltage output	0-10V (DC), -100°C - 100°C

NOTICE

- The interface on the remote alarm monitoring system is intended for connection to the end user's central alarm system(s) that uses normally-open or normally-closed dry contacts.
- If an external power supply exceeding 30V (RMS) or 60V (DC) is connected to the remote alarm monitoring system's circuit, the remote alarm will not function properly; may be damaged; or may result in injury to the user.

Note

Overall exterior dimensions include casters, handle, HMI bezel, door hinges, and rear stand-offs.

Table 4. Ultra-Low Freezer Specifications

Model	Voltage Code	Amps	Storage Capacity Cu. Ft (Liters)	Dimensions Interior W x D x H in. (mm)	Dimensions W x D x H in. (mm)		Net Wt. lbs (kg)
					Exterior (cabinet)	Overall Exterior	
FCF133	220-240V 50/60 Hz	10.13	30 (850)	38 x 29.5 x 51 (965 x 749 x 1295)	46 X 40.4 X 74.6 (1168 x 1027 x 1895)	49.5 x 46.6 x 77.5 (1258 x 1184 x 1968)	950 (431)

Note

Vacuum-insulated panels are included in cabinet walls on indicated models. All models feature vacuum-insulated panels in the exterior door.

Table 5. Interior/Exterior Cabinet Specifications

Model	FCF133
Insulation	Vacuum-Insulated panels and urethane foam (zero ozone depletion potential, U.S. EPA SNAP-compliant.)
Wall Thickness	4” (102 mm)
Door Thickness	5” (127 mm)
Internal Compartments	3
Shelves	3 Stainless steel
Maximum Shelf Load	160 lbs (73 kg)
Internal Material	Stainless steel
External Material	Galvannealed steel with bacteria-resistant powder-coated finish
USB Port	Customer data transfer (5VDC/500mA)
Ethernet Port	Customer Connection to building automation system. Ethernet CAT 5 or newer
External Port	2, standard (top-left corner, rear of cabinet; bottom-left corner, rear of cabinet)
Vacuum Break Port	Standard (heated)
HMI	±0.5 °C (0.9 °F) at set point accuracy

Table 6. Refrigeration System Specifications

Model	FCF 133
High Stage Refrigerant	R290 *(99.5% purity or higher)*
Low Stage Refrigerant	R170 *(99.5% purity or higher)*
High Stage Initial Charge	4.6 oz. (130 g +/- 1 g)
Low Stage Initial Charge	4.6 oz. (130 g +/- 1 g)

5 Compliance

5.1 Safety Compliance

This product is certified to applicable UL and CSA standards by a NRTL.

This product is certified to IEC IEC 61010-1, IEC 61010-2-011, UL 61010-1, UL 61010-2-011, CSA 61010-1, and CSA 61010-2-011.

5.2 Environmental Compliance

RoHS COMPLIANT This device complies with the 2011/65/EU Directive for the Restriction of Hazardous Substances (RoHS).

This device falls under the scope of Directive 2012/19/EU Waste Electrical and Electronic Equipment (WEEE) .

When disposing of this product in countries affected by this directive:

- Do not dispose of this product as unsorted municipal waste.
- Collect this product separately.
- Use the collection and return systems available locally.

For more information on the return, recovery, or recycling of this product, contact your local distributor.

5.3 EMC Compliance

This device complies with FCC Radiated and Conducted Emissions Approval to CFR47, Part 15; Class A levels

This product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure the product is used in such an environment.

Electromagnetic Emissions

Emissions Test	Compliance	Electromagnetic Environment - Guidance
RF emissions CISPR 11	Group 1	The product uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The product is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic Emissions IEC 61000-3-2	Class A	
Voltage Fluctuations/Flicker Emissions IEC 61000-3-3	Complies	

- The product should not be used adjacent to other equipment. If adjacent use is necessary, the product should be observed to verify normal operation in the configuration in which it will be used.
- The use of accessories other than those specified for the product by FARRAR is not recommended. They may result in increased emissions or decreased immunity of the device.

Disclaimer

This manual is intended as a guide to provide the operator with necessary instructions on the proper use and maintenance of certain FARRAR products.

Any failure to follow the instructions as described could result in impaired product function, injury to the operator or others, or void applicable product warranties. FARRAR accepts no responsibility for liability resulting from improper use or maintenance of its products.

The screenshots and component images appearing in this guide are provided for illustrative purposes only, and may vary slightly from the actual software screens and/or product components.

Appendix A

Notes

- Default User Names and Passwords can be modified. Refer to the HMI User Guide for instructions on editing User information.
- It is necessary to maintain a User Setup and Service password in order to perform essential functions. FARRAR recommends retaining the default settings for these Security Groups.

Default Security Group User Names and Passwords

Security Group	User Name	Default Password
Administrator	User Setup	FARRAR
Operator	Operator	OPER8
Maintenance	Maintenance	MAIN10
Supervisor	Supervisor	SUPER
Service	Service	LTS1
Read	Read	READ

FARRAR®

14400 Bergen Boulevard, Noblesville, IN 46060
T: 800.242.7197 | www.farrarscientific.com
lssinfo@tranetechnologies.com

Life Science Solutions
A business unit of Trane Technologies

LSFU-PRM001-EN
360460/C