**Hillphoenix**® / Barker
SPECIALTY PRODUCTS

# Service & Installation Instructions
## Keep this booklet for Future Reference

- **SMD-LT SERIES**
- **SSD-LT SERIES**
- **GELATO SERIES**

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IMPORTANT!!
KEEP FOR FUTURE REF -
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# General Information

This booklet contains information on:

**SMD-LT/SSD-LT SERIES**
Low Temperature, Service, Single Deck Gelato Cases with Spherical Front Lifting Glass

# Shipping Information

**IMPORTANT!**
**FOR YOUR PROTECTION PLEASE READ AND OBSERVE THE FOLLOWING INSTRUCTIONS:**

Transportation companies assume all liability from the time a shipment is received by them until the time it is delivered to the consumer. Our liability ceases at the time of shipment.
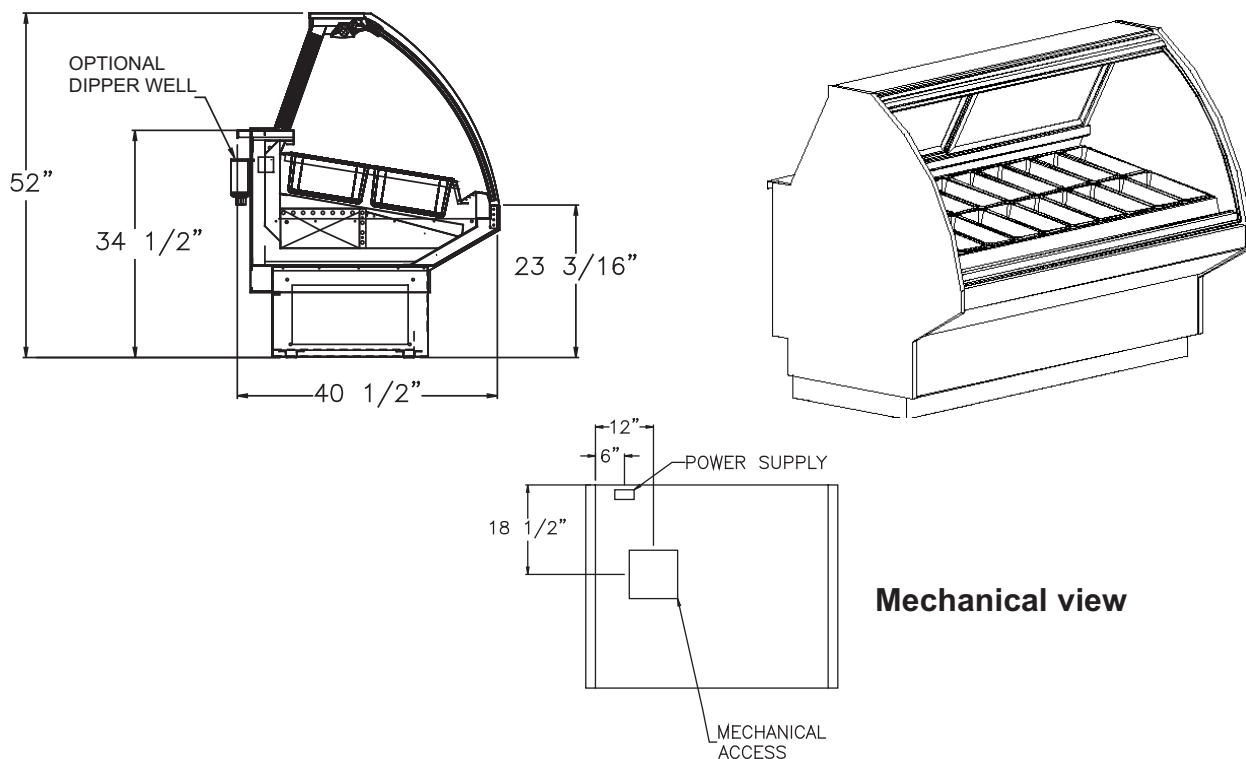
All shipments leaving our plant have been carefully inspected. If a shipment arrives with the crating or packaging damaged, have the carrier note the condition on the receipt. Check as soon as possible for concealed damage.

If it is found that the shipment has been damaged in transit, please DO NOT return it to us, but notify and file a claim with the carrier at once. **FAILURE TO FOLLOW THIS PROCEDURE WILL RESULT IN REFUSAL BY THE CARRIER TO HONOR ANY CLAIMS WITH A CONSEQUENT LOSS TO THE CONSUMER.**

If a UPS shipment has been damaged, retain the damaged material and the carton and notify us at once.
WE will file a claim.

**GOODS SHOULD NOT BE RETURNED FOR CREDIT UNLESS AUTHORIZED BY OUR SALES DEPARTMENT.**

# Case Drawings



OPTIONAL DIPPER WELL

52"

34 1/2"

23 3/16"

40 1/2"

12"

6"

POWER SUPPLY

18 1/2"

MECHANICAL ACCESS

**Mechanical view**

# Installation Instructions

## Location

This refrigerated display case has been designed for displaying and storing perishable food product. It is engineered for air-conditioned stores with a maximum ambient of 75° F and 50% relative humidity.

When selecting the location for placement of this case, avoid the following conditions:
Excessive air movement
• Doors
• Air-conditioned vents
• Other air sources

Excessive heat
• Windows
• Sun
• Flood lamps 8 feet or less from the product
• Other heat sources

## Crate Removal

Move case as close as possible to its location. Remove all crating and shipping braces above the shipping pallet. Loosen the plastic dust cover from the pallet, but leave cover over the case to protect it while removing the case from the pallet. Carefully, lift case up and off the pallet. Remove dust cover. Installation hardware ships in an installation packet located inside the case. Note: Location of horizontal supports underneath of unit before removing from pallet, damage to the finished metal will occur if correct lift points are not identified prior to removal.



## Case Exterior Loading

These cases are not designed for excessive external weight. DO NOT WALK ON THE TOP OF THE CASES. Walking on top of cases could cause personal injury and damage to the case.

## Leveling

To ensure proper operation of the refrigeration system and drainage of the condensate, the case MUST BE LEVEL. Use a carpenter level to level front to back and side to side. Shim as necessary.

## Drain, Electrical and Refrigeration Connections on Remote Cases

**NOTE: Barker remote units are shipped with a dry nitrogen charge of approximately 10 lbs. pressure in the evaporator coil. During installation if nitrogen charge is not present, leak check accordingly.**

1. Drains are heated copper and located in the center of the case. Connect copper drains to existing floor drains. Provide as much downhill slope as possible and avoid long runs of drain lines. Do not install condensate drains in contact with non-insulated suction lines in order to prevent condensate from freezing. Install the 1" copper trap, which is provided with the case. All drains must be trapped.

2. Electrical connections are made through the power supply box of each case, which can be accessed by removing the back panel above the toe kick. The power supply is located in the raceway. Voltage requirements and component amperes can be found in the electrical section of this manual, but always check the data tag located on the exterior of the case. Case must be grounded.

3. Refrigeration connections will be made through the refrigeration stub up located on the customer left side of the case (see mechanical view pg 3). See refrigeration information section for case-load and recommended settings.

For proper refrigeration performance, PRODUCT MUST NOT BE PLACED IN A POSITION WHERE IT MAY AFFECT THE AIR CURTAIN. Air discharge and return air vents must remain unobstructed.

## Doors

Rear load doors are shipped inside the case. Push top of doors all the way into top door tracks. Push bottom of door over bottom door tracks and lower over tracks.

## Glass Adjustment

Lift Glass is installed at the factory with the case perfectly level, if adjustments need to be made to align the glass first check to insure the case was properly leveled during installation.

NOTE: This is a 2-person operation. One person must hold the glass at all times.

1. Lift the glass to its highest position as shown in drawing to the right.
2. Loosen allen screws. (See profile below.)
3. Starting at the right side, tap the wedge with a #2 standard screwdriver. Repeat procedure on the left side. Continue working right to left until the wedge recesses into the aluminum extrusion.
   EXTREME CARE MUST BE TAKEN NOT TO TAP THE WEDGE TOO HARD.
4. Slide the glass right or left as needed.
5. Tighten the right allen screw while holding the left side of the glass firmly. Be careful to keep the glass level.
6. Tighten the remaining allen screws.
7. Lower glass into position. Repeat as necessary until glass is completely level.

NOTE: the entire glass clamp and glass can be moved sideways by loosening the allen screws that are located in the glass clamp hinges.
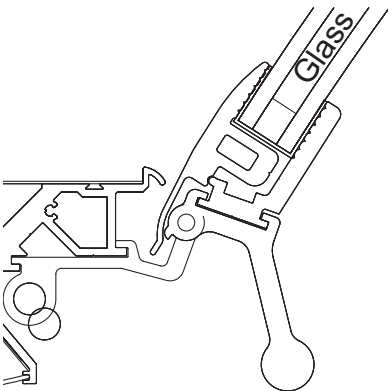


NOTE: Glass is heated to eliminate condensation. Power to heated glass runs continuously. Glass heater wires must be disconnected if glass removal is required. With glass in the up position, disconnect wires at the upper left hand corner.
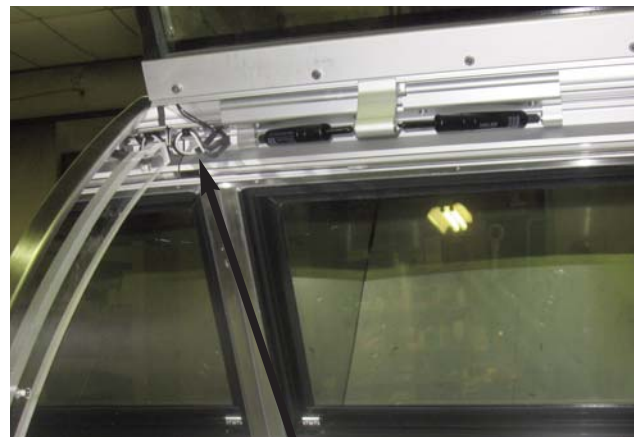


Disconnect here

## Installation Checklist

**Before supplying electrical power and starting case check the following:**

1. Evaporator Area.
   Check to ensure evaporator fan pressure plates are secure and in proper position.
   NOTE: Hinged portion of pressure plates are secured for shipping with mounting screws. Screws do not have to be removed for case operation but must be removed to use hinge.
2. Lighting System
   Check to ensure male plugs are completely inserted in female sockets and that all lamps are securely seated in light fixture.
3. Case Leveling
   Visually check case. If lift glass is out of adjustment or case looks out of square, use a carpenter's level and shim as needed.

After supplying power to the case and starting unit:

1. Check to ensure all fans are operational.
2. Check all lights.
3. Check case temperature and adjust CPC controller as needed. See refrigeration section of this manual for case settings.

## Case Operation

### Refrigeration

A dedicated refrigeration circuit and EPR valve are required for proper case operation. The EPR valve can be supplied with the case if requested, or field supplied.  It MUST be adjusted in the field for proper temperature at start up. Please refer to the pressure/temperature chart to obtain proper pressure for refrigerant on site. The expansion valve superheat must be field set to 4° degrees. This case should NOT be controlled by the refrigeration rack controller, all control of case by CPC controller.

| Refrigerant | Temperature | Pressure PSIG |
|---|---|---|
| R404a | -10°F | 23.6 |
| R507a | -10°F | 25.5 |
| R402a | -10°F | 26.3 |

Refer to pressure temperature chart for other refrigerants not listed

If the gelato case must be piped with another case, the following must be done for proper operation of the gelato case.
1. Suction stop solenoid, liquid line solenoid on the other case, at case.
2. Separate defrost control for other case. (Defrost control for gelato case by CPC controller at gelato case.)
3. EPR at gelato case, adjustment as required.
4. EPR at other case, adjustment as required.

The refrigeration and defrost cycles for this case are controlled with a CPC controller.  The case is in refrigeration mode until the cut-out point (CSP) is reached.  The case controller relay then opens, cutting power to the liquid line solenoid.  Upon temperature rise in the case, the case controller relay closes. This restores power to the liquid line solenoid, and resumes the refrigeration cycle.
For proper refrigeration performance, PRODUCT MUST NOT BE PLACE WHERE IT WILL AFFECT THE AIR CURTAIN.

### Defrost

This case is equipped with an electric defrost system.  The CPC controller initiates defrost, cutting power to the liquid line solenoid.  The defrost time is programmed for 45 minutes or defrost will terminate at a 40°F.  There are 3 defrosts programmed per day.  Upon defrost termination, there is a factory programmed "drip" time of 2 minutes. During this period, there is no power to the defrost heaters, liquid line solenoid, or to the evaporator fan motor.

At the end of the "drip" time, power is restored to the liquid line solenoid, restoring refrigeration.   The evaporator fan motor (klixon controlled) resumes operation when the klixon senses 20°F. After the drip period, the controller will read "PULL", which indicates the temperature "PULLDOWN" after defrost. The controller will revert to displaying temperature at the end of the "PULLDOWN" period. NOTE:  The evaporator fans cycle off during defrost, they are controlled by a klixon.

## Case Controller Instructions

Main controller located in the electrical raceway on customer right.



Set Button    Alarm Button

The remote control is easily accessed on the customer left, outside back. It is located below back ledge.



SET

ALARM

- Press Alarm button
  [Temporarily deactivates alarm]
- Press and hold Set button until CSP appears on display.

## Temperature Set Point [CSP]

1. Press Set [Set point appears]
2. Use up or down arrows to change set point.
3. Press Set, press Down arrow.

## Defrost Termination Temperature [dEFt]

1. Press Set, defrost termination temperature appears.
2. Use Up or Down arrows to change.
3. Press Set, press Down arrow.

## Duration [dEFd]

1. Press Set [Set point appears]
2. Use Up or Down arrows to change.
3. Press Set, press Down arrow.

## Defrost on Start Up [dUPU]

1. Press Set [Set point appears ]
2. Do not change from NO
3. Press Set, press Down arrow.

## Drip Time [drip]

1. Press Set [Set point appears]
2. Do not change from 10
   (unless local conditions allow)
3. Press Set, press Down arrow.

## Defrost cycles per day [dCPd]

1. Press Set [set point appears]
2. Press Up or Down arrows to change.
3. Press Set, press Down arrow.

## High temperature alarm [tAH]

1. Press Set [set point appears]
2. Press Up or Down arrows to change
3. Press Set, press Down arrow.

## Low temperature alarm set point [tAL]

1. Press Set [set point appears]
2. Press Up or Down arrows to change.
3. Press Set, press Down arrow.

## Alarm delay after defrost [Adtd]

1. Press Set [set point appears]
2. Press Up or Down arrow to change.
3. Press Set, press down.

## Alarm delay for high/ low alarm [AdEL]

1. Press Set, press Up or Down arrow to change.
2. Press Set and hold for 5 sec.

**Program complete.**

## Manual Defrost

• Press and hold Set button for 10 sec.
  [until dEF appears]

## Alarm

• To remove alarm signal press and hold Alarm button.

Gelato will vary based on initial mix/recipe. The CPC controller factory programmed settings may not be appropriate for all mix/recipes. Adjustments may be required in the field of the CPC, Drip time, defrosts per day, based on local conditions. These field adjustments may also include the EPR valve.

## Factory Settings
## (5-10° PRODUCT TEMPERATURE)

| | |
|---|---|
| • Temperature set point [CSP] | -10 |
| • Defrost termination   [dEFE] | 40° |
| • Defrost duration [dEFd | 45 min |
| • Defrost on power up [dUPU] | NO |
| • Drip Time [drip] | 2 min |
| • Defrost cycle per day [dCPd] | 3 |
| • Temperature alarm High [tAH] | 35 |
| • Temperature alarm low [tAL] | -20 |
| • Alarm delay after defrost [Adtd] | 60 |
| • Alarm delay high/low [AdEL] | 60 |

## CL-RSC Onboard Outputs

If using CL-RSC without an expansion board, wire the outputs to the two-wire terminals on the right side of the control unit, as shown in *Figure 6*. Each of these output points are rated to a maximum of 3A @ 250V.

For loads greater than 3A, use the outputs to energize external relays for compressors, defrost, and case lights.
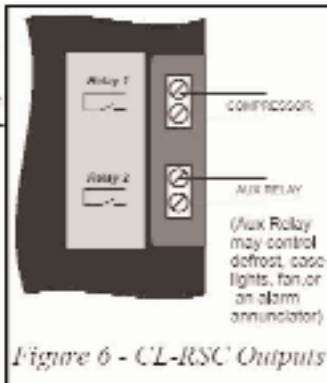


*Figure 6 - CL-RSC Outputs*

(Aux Relay may control defrost, case lights, fan, or an alarm annunciator)

## Expansion Board

The relay output board connects to the Control Link main module using an 8-pin ribbon cable. Plug the cable onto the Expansion Board connector at the bottom of the main module.

### Defrost, Fans, and Aux Relay

Using spade lugs, connect the defrost heater(s), case fans, and auxiliary output (either case lights or an alarm device) to the three relays on the left side of the relay output board as shown in *Figure 6*.

### Compressor Relays

The Control Link uses two relays on the output board to control the compressor. Line voltage must be connected to the Line 1 and Line 2 connectors on relays 1 and 2 respectively. The Load 1 and Load 2 connectors are wired to the compressor. *Figure 7* shows the wiring diagram.
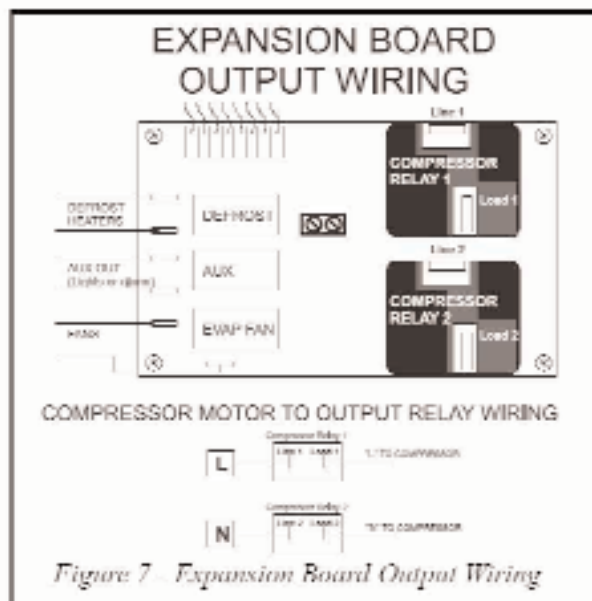


**EXPANSION BOARD OUTPUT WIRING**

COMPRESSOR MOTOR TO OUTPUT RELAY WIRING

*Figure 7 - Expansion Board Output Wiring*

### Expansion Board Relay Ratings

Defrost and Aux: 10A at 120VAC
Compressor: 208-230VAC 11FLA 60LRA
                   115VAC 13FLA 88LRA
Fan: 208-230VAC 2 FLA 4 LRA

## Pressure Switch Wiring

If desired, a pressure switch may be used to deactivate the compressor if a high/low suction pressure condition occurs. Remove the jumper wire and connect this switch to the dual screw terminal Pressure Switch connector located in the middle of the relay output board. See *Figure 8*. If not used, these terminals must be jumpered in order for the board to work.

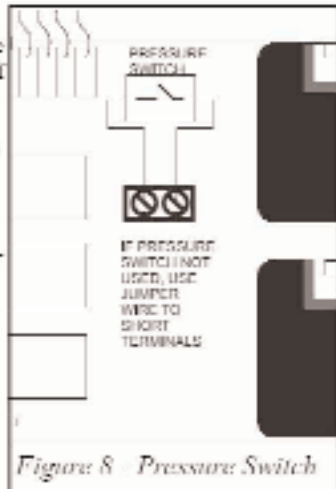The pressure switch must be N.C. (normally closed) type.



IF PRESSURE SWITCH NOT USED, USE JUMPER WIRE TO SHORT TERMINALS

*Figure 8 - Pressure Switch*
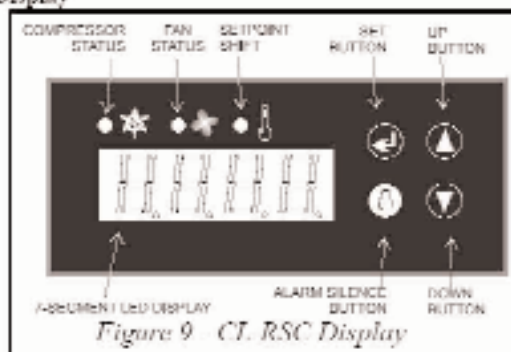
## CL-RSC Operation

### The Display



*Figure 9 - CL-RSC Display*

The primary means of interaction with the CL-RSC system during programming and operation will be the display on the front of the Control Link module (or the remote display, if one is being used).

### Seven Segment Display

The four-digit seven-segment display is the primary means a technician or operator will use for viewing temperatures and alarm codes, and programming setpoints.

### Status LEDs

The three LEDs above the seven-segment display show the status of the compressor relay, the fan relay, and whether or not a setpoint shift is active (lit if setpoint shift is active).

### Buttons

The four buttons to the right of the seven segment display are used to program the CL-RSC, select temperatures and alarms for viewing, and perform other functions such as alarm silencing and manual defrost.

## Modes of Operation

### Start-Up

Compressor operation will be suspended after power-up based on the value of the £SUd parameter (default 10 minutes). After this delay, the CL-RSC resumes normal refrigeration control. To prevent nuisance alarms when the case is first started up, no high temperature case alarms will be generated until 120 minutes after the start of the first cooling cycle.

### Normal Operation (Refrigeration)

When in refrigeration mode, the CL-RSC energizes the compressor relay when the case temperature is above the setpoint, and de-energizes it when

# Control Link Refrigeration System Controller Installation Instructions

the case temperature setpoint is satisfied. The fan relay is activated and de-activated the same way as the compressor relay, unless the CL-RSC has been programmed to keep the fans always ON.

## Alarms During Refrigeration

If the case temperature sensor value falls below the low temperature set-point or rises above the high temperature setpoint, the alarm relay (if defined) will energize, and the display will show the alarm code. The ener-gized alarm relay and display code will continue until the temperature returns to normal (1°F below high temp alarm setpoint or 1°F above low temp setpoint) or until the Alarm Silence button is pressed (alarm is sus-pended for 5 minutes, then will recover if problem is still active).

## Defrost Operation

Defrost cycles are initiated at the times programmed in the CL-RSC. Dur-ing defrost, the compressor relay is de-energized, and the defrost relay is energized. The defrost relay will be de-energized when the defrost termina-tion temperature is reached or until the programmed defrost duration has elapsed (whichever occurs first). While the defrost relay is energized, the display will show dEF instead of the case temperature.

If a defrost drip duration has been programmed, immediately after defrost termination the compressor relay will remain OFF for an amount of time to allow moisture to drain off the coil. During this time, the display will read dr1 P. When the drip time is over, refrigeration will resume.

Fans may be either off or on during defrost, based on user programming.

## Manual Defrost

A manual defrost may be initiated at any time by holding the SET button for 10 seconds until the dEF message is shown on the display. Defrost will begin immediately and terminate normally. If one of the auxiliary inputs is configured as a manual defrost switch, a contact closure on the switch will also initiate a manual defrost.

## Compressor Fail-Safe Mode

If the case temperature sensor fails, the CL-RSC will operate in a fail-safe mode that cycles the compressor ON and OFF at a user-defined regular interval. The ON/OFF rate is determined by setting parameters CSFP and CSFO in the CL-RSC. CSFP sets the interval period, and CSFO sets the amount of time during that period the compressor will be ON.

For example, if during fail-safe you want the compressor to alternate being ON for three minutes and OFF for seven minutes, set CSFO to 3 and CSFP to 10. This will cause the compressor to be ON for three minutes of the 10 minute interval, and OFF for the remaining seven minutes.

## Programming the CL-RSC

### General Parameters

General parameters are used by technicians and operators to set control set-points, defrost schedules, time and date.

Before changing parameters, clear any active alarm by pressing the Alarm Silence button. Press (SET) and hold for five seconds. If general mode pro-gramming has been password protected, you will see PASS on the display. Press (SET) and use the arrow keys to increment the password number until the correct password is shown, and then press (SET). (If general parameters are not password protected, PASS will not appear on the dis-play.)

The display will show the first programmable parameter: CSP (case tem-perature set point). The arrow keys may be used to scroll through the list of general parameters. To change the value of any parameter

1. Select the parameter using the arrow keys (until the code is shown).
2. Press (SET).

3. The current value of this parameter will be displayed. Use the arrow keys to change the value.
4. Press (SET) to accept value.
5. Repeat steps 1 - 4 until all set points have been properly configured.
6. When finished, press (SET) again for five seconds to save changes and exit. The display will blank for one second and then revert to nor-mal display if the save was successful.
7. To cancel all changes, press and hold (SILENCE) for five seconds, or leave controller idle for 60 seconds. You will lose all setpoint changes made since you entered general programming mode.

> ### WARNING!
> You MUST press and hold (SET) after changing setpoints if you want your changes to be permanent. Leaving the controller idle for 60 seconds will log you out and cancel all your setpoint changes.

NOTE: Parameters in General Parameters shaded gray are only shown if the real time clock module is being used.

### General Parameters

| Code | Description | Min | Max | Default |
|------|-------------|-----|-----|---------|
| CSP | Temp control set point (deg F, can be displayed in deg C) | -40 | 100 | 25 |
| CLSE | Clock time set (military). UP button adjusts minutes. DOWN adjusts hours. | | | |
| YEAr | Year set (last two digits of year) | 05 | 99 | 05 |
| nO | Month set | 1 | 12 | 1 |
| dAY | Day set | 1 | 31 | 1 |
| dEFL | Defrost termination temperature (deg F, can be displayed in deg C) | -40 | 100 | 35 |
| dEFd | Defrost cycle duration (minutes) | 1 | 120 | 10 |
| dUPU | Defrost upon power up? (if yes, ini-tiates defrost cycle after power restore) | no | YES | no |
| dUAP | Defrost delay after powerup (minutes) | 0 | 120 | 5 |
| dr1P | Compressor OFF delay after defrost (minutes) | 0 | 60 | 10 |
| dCPd | Defrost cycles per day (if set to 0, no dEx schedule times will be shown) | 0 | 12 | 10 |
| dF1 - dF12 | The number of dFx parameters in the list will be equal to parameter dCPd. Starting with dF1, enter the time of day each scheduled defrost cycle will begin. | 00:00 | 23:59 | (every 2 hours) |
| tAH | High temperature alarm setpoint (deg F, can be displayed in deg C) | -40 | 100 | 100 |
| tAL | Low temperature alarm setpoint (deg F, can be displayed in deg C) | -40 | 100 | -40 |
| AdLd | Alarm delay after defrost (temp alarms are suspended for this many minutes after end of defrost) | 0 | 60 | 10 |
| AdEL | Alarm delay for high/low temp alarm. Temp must remain out of alarm setpoint range for this number of minutes before an alarm can occur. | 0 | 60 | 10 |

Table 1. General Parameters

# Electrical Information

| Remote Case Data - Electrical | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Model** | **BTU Lin/Ft** | **Evap Temp** | **Defrost** | **Evap Fans** | **Cornice Lts** | **Drain Heater** | **Glass Heater** | **Defrost Heater** |
| **SMD LOW TEMP SERIES** | | | | | | | | |
| SMDLT-4 | 375 | -10° | Electric Defrost: 45"/8hrs | 0.23 | 0.49 | 0.83 | 1.0 | 5.5 |
| SMDLT-5 | 375 | -10° | 40° Termination Point | 0.46 | 0.49 | 0.83 | 1.0 | 6.0 |
| SMDLT-6 | 375 | -10° | 2" Drip | 0.46 | 0.76 | 0.83 | 1.0 | 6.0 |

| Remote Case Data - Electrical | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Model** | **BTU Lin/Ft** | **Evap Temp** | **Defrost** | **Evap Fans** | **Cornice Lts** | **Drain Heater** | **Glass Heater** | **Defrost Heater** |
| **SSd LOW TEMP SERIES** | | | | | | | | |
| SSDLT-4 | 375 | -10° | Electric Defrost: 45"/8hrs | 0.23 | 0.49 | 0.83 | 1.0 | 5.5 |
| SSDLT-5 | 375 | -10° | 40° Termination Point | 0.46 | 0.49 | 0.83 | 1.0 | 6.0 |
| SSDLT-6 | 375 | -10° | 2" Drip | 0.46 | 0.76 | 0.83 | 1.0 | 6.0 |

## Wiring Color Code

Green------------------------Ground
Black------------------------Hot
White ----------------------Neutral
Red ------------------------208/220 Only
Brown ----------------------Interlock System

Orange ----------------------Liquid Solenoid
Purple ----------------------Defrost Terminator
Gray ------------------------Light Switch
Black/White ----------------Pressure Switch

## Secondary Wiring Color Code

Red ----------Lights
Yellow -------Lights
Blue----------Lights

*SEE BALLAST DIAGRAM FOR EACH CASE*

NOTE: Case must be grounded

## Ballast Information
**Ballasts are located in the electric raceway at the rear of the case.**

| MODEL | Ballast (Canopy Only) |
|---|---|
| SMDLT/SSDLT-4 | T8 (1) 2P |
| SMDLT/SSDLT-5 | T8 (1) 4P |
| SMDLT/SSDLT-6 | T8 (1) 4P |

# Maintenance Information

## Cleaning

### Case Exterior
Clean surfaces frequently with warm water and mild detergent. Do not use strong alkali solutions, steel wool, or abrasive cleaners.

### Non-Glare Glass
Non-glare glass surfaces are coated to reduce the glare from lighting. Care must be taken not to scratch the coating. Use the following products only.

### Cleaning Cloths
**Scotch-Brite® High Performance Cloth** - manufactured by 3M® and available in most grocery stores under the name Scotch-Brite® Microfiber Cleaning Cloth in a 12" x14" size. This cloth is washable and may be reused as long as it remains clean.

**Spontex® Microfibre Cleaning Cloth** - distributed by Spontex® and available in most grocery stores under the same name in a 15.75" x 12" size. This cloth is washable and may be reused as long as it remains clean.

The cleaning cloths named above will normally remove dust, grease, oil and fingerprints without the need for cleaning fluids. A light spray of the cleaning fluids listed below will reduce the time required for cleaning.

**Cleaning Fluid** - for more difficult cleaning jobs, these products are recommended:

> **Windex®** - standard product only (extra-strength or specialty products may not be suitable)
> **Glass-Plus®** - standard product only (extra-strength or specialty products may not be suitable)
> **Warm Water**

**DO NOT USE** the following types of materials for cleaning glass with anti-reflective coatings.

Coarse Paper Towels
Scouring Pads or Powders
Steel wool or Steel Fiber Materials
Blades
Acidic or highly Alkaline detergents
Fluorine based detergents

### Case Interior
All pans and the deck can be removed for cleaning. Check to make sure the case drain(s) are not clogged. Clean interior with warm water and a mild detergent. A sanitizer should be used after washing to eliminate bacteria. Rinse thoroughly being careful not to flood drain system. Avoid spraying water directly into electrical connections. DO NOT USE A HIGH PRESSURE WATER HOSE. MAKE SURE FANS ARE SHUT OFF WHEN CLEANING THE INTERIOR OF THE CASE. Drains should be cleaned once a month.
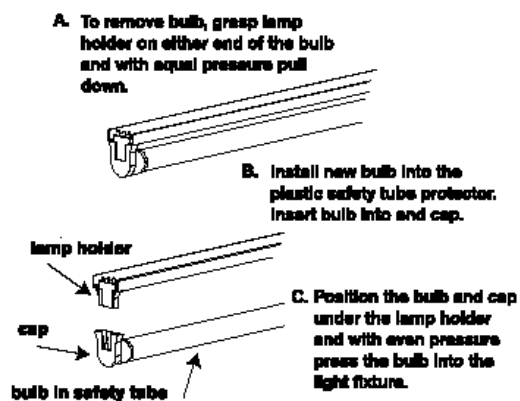
### Evaporator Coil
Clean as needed.

## Light Replacement
The fluorescent lights in this case are furnished with plastic safety shields and end caps. When replacing fluorescent lamps, be certain to reinstall safety shield and caps. *(See illustration)*. If the bulb is not fully seated the lights will not operate. BE SURE BULBS ARE FULLY SEATED.

The light switch is mounted to the right side of the ceiling. See mechanical drawing for ballast box location.



A. To remove bulb, grasp lamp holder on either end of the bulb and with equal pressure pull down.

B. Install new bulb into the plastic safety tube protector. Insert bulb into end cap.

lamp holder

cap

bulb in safety tube

C. Position the bulb and cap under the lamp holder and with even pressure press the bulb into the light fixture.

*Caution: Failure to install bulb fully into light socket will cause premature bulb life and may cause damage to light fixture*

# Troubleshooting Guide

| Problem | Cause | Action |
|---|---|---|
| **Case temperature is too warm.** | Case is in defrost. | Review CPC settings. |
| | Ambient conditions may be affecting the case operation. | Check case position in store. Is the case located near an open door, window, or air conditioning vent? RH should not be over 50% and temperature above 75º. |
| | Evaporator coil is clogged or dirty. | Clean coil, cycle defrost |
| | Evap. fan not working. | Check fan and replace. |
| **Case temperature is too cold.** | The CPC Temp is set too low. Ambient conditions may be affecting the case operation. | Check setting. See factory guidelines. Check case position in store. Is the case located near an open door, window, or air conditioning vent? RH should not be over 50% and temperature above 75º. |
| | CPC unit is not working. | Check CPC connections and replace. |
| | Suction pressure too low. | Raise suction pressure on EPR valve |
| **Condensation on glass.** | Glass heater not working properly | Check wire connection |
| | Ambient conditions may be affecting the case operation. | Check case position in store. Is the case located near an open door, window, or air conditioning vent? RH should not be over 50% and temperature above 75º. |
| **Water has pooled under case.** | Case drain is clogged. | Clear drain. |
| | Copper drains leaking. | Repair as needed. |
| **Frost or ice on evaporator coil.** | Check evaporator fans. | Check electrical connections. Have unit serviced by a qualified service technician. |
| | CPC defrost is not set correctly. | Check settings  (pg 6). |
| | Electrical defrost not working. | Check heater to make sure it's working properly and receiving power. Check heater contactor |
| | Solenoid not operating correctly. | Check to make sure solenoid is receiving power. Have unit serviced by a qualified service technician. |
| **Product too hard or soft** | Storing gelato in freezer overnight | If storing product overnight in a walk in freezer, product may be harder than when displayed in case. Product should soften with normal case operation. DO NOT RAISE TEMPERATURE IN CASE! |
| | Different sugar or fruit content | Due to the product differences, place high sugar or fruit content product on the back row (service side) of case |

**Hillphoenix Barker Specialty Products Service Department**

IMPORTANT INFORMATION!
FOR PROMPT SERVICE WHEN CONTACTING THE FACTORY FOR SUPPORT, BE
SURE TO HAVE CASE MODEL AND SERIAL NUMBER HANDY.
(THIS INFORMATION IS LOCATED ON THE DATA TAG ATTACHED TO THE CASE. SEE BELOW FOR DATA TAG LOCATIONS)

**For any warranty or service issues not covered by this manual, for tech support, or for warranty service calls, please contact the Barker Specialty Products Service Department at:**

<div align="center">

**(319) 293-3777**

</div>

**Parts**
**Ordering Procedure**
1.　　Contact the Service Parts Department
　　　Melissa Marshall
　　　703 Franklin Street
　　　PO Box 478
　　　Keosauqua, IA 52565
　　　Tel: 319-293-8323
　　　Fax: 319-293-8377
　　　melissa.marshall@hillphoenix.com

2.　　Provide the serial number of the case containing the part.
　　　To locate the serial number look on the data tag located on the
　　　customer left, outside back of the case, the customer left, inside
　　　top of the case, or contact the factory for location.

3.　　If parts are to be returned for credit, contact the Parts
　　　Department. Do not send parts without authorization.



CAUTION

BEFORE SERVICING

ALWAYS DISCONNECT ELECTRICAL
POWER AT THE MAIN DISCONNECT
WHEN SERVICING OR REPLACING
ANY ELECTRICAL COMPONENT.

# Hillphoenix

A **DOVER** COMPANY

# WARRANTY
## HEREINAFTER REFERRED TO AS MANUFACTURER

FOURTEEN MONTH WARRANTY. MANUFACTURER'S PRODUCT IS WARRANTED TO FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USE AND MAINTENANCE FOR A PERIOD OF FOURTEEN MONTHS FROM THE DATE OF ORIGINAL SHIPMENT. A NEW OR REBUILT PART TO REPLACE ANY DEFECTIVE PART WILL BE PROVIDED WITHOUT CHARGE. PROVIDED THE DEFECTIVE PART IS RETURNED TO MANUFACTURER. THE REPLACEMENT PART ASSUMES THE UNUSED PORTION OF THE WARRANTY.

WARRANTY CLAIMS: All claims should include: the serial number of the cabinet, proof of purchase, date of installation, and all pertinent information supporting the existence of the alleged defect. Any action for breach of these warranty provisions must be commenced within one (1) year after that cause of action has accrued.

All warranty service work must be pre-authorized by Barker Specialty Products (800-814-0446). Barker Specialty Products reserves the rights to designate the service provider, time in which labor is to be performed and specify amount of time per warranty problem.

This warranty does not include labor or other costs incurred for repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts.

The fourteen month warranty shall not apply:

1. To any unit or any part thereof which has been subject to accident, alteration, negligence, misuse or abuse, operation on improper voltage, or which has not been operated in accordance with the manufacturer's recommendation, or if the serial number of the unit has been altered, defaced, or removed.

2. When the unit, or any part thereof, is damaged by fire, flood, or other act of God.

3. Outside the continental United States.

4. To labor cost for replacement parts, or for freight, shipping expenses, sales tax or upgrading.

5. When the operation is impaired due to improper installation

6. When installation and startup forms are not properly complete or returned within two weeks after startup.

THIS PLAN DOES NOT COVER CONSEQUENTIAL DAMAGES. Manufacturer shall not be liable under any circumstances for any consequential damages, including loss of profit, additional labor cost, loss of any delay in its performance hereunder due to causes beyond its control. The foregoing shall constitute the sole and exclusive remedy of any purchases and the sole and exclusive liability of Manufacturer in connection with this product.

The Warranties are Expressly in Lieu of All Other Warranties, Express of Implied and All Other Obligations or Liabilities on Our Part. The Obligation to Repair or Replace Parts or Components Judged to be Defective in Material or Workmanship States Our Entire Liability Whether Based on Tort, Contract or Warranty. We Neither Assume Nor Authorize any Other Person to Assume for Us Any Other Liability in connection with Our Product.

Mail approved warranty claims to the address listed below:

Hillphoenix Barker Specialty Products
703 Franklin Street, PO Box 478
Keosauqua, IA 52565
Tel: 319-293-3777/Fax: 319-293-3776