HENNY PENNY
Engineered to Last

Humidified Holding Cabinets
Model HHC-98X

11170023

FM07-007G

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Safety

The Henny Penny open fryer has many safety features incorporated. However, the only way to ensure a safe operation is to fully understand the proper installation, operation, and maintenance procedures. The instructions in this manual have been prepared to aid you in learning the proper procedures. Where information is of particular importance or is safety related, the words DANGER, WARNING, CAUTION, or NOTICE are used. Their usage is described as follows:

⚠ **DANGER**	**DANGER!** indicates hazardous situation which, if not avoided, will result in death or serious injury.
⚠ **WARNING**	**WARNING!** indicates hazardous situation which, if not avoided, could result in death or serious injury.
⚠ **CAUTION**	**CAUTION!** indicates hazardous situation which, if not avoided, could result in moderate or minor injury.
NOTICE:	*NOTICE* is used for information considered important regarding property damage.
NOTE:	NOTE: is used to highlight especially important information.
⚠	SHOCK HAZARD SYMBOLS
⚠	HOT SURFACE SYMBOLS

Chapter 1 Introduction

1.1 Humidified Holding Cabinet

The Henny Penny humidified holding cabinets are designed to keep foods moist, while maintaining proper temperature. The units are electronically controlled for easy use and for consistent operation.

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) As of August 16, 2005, the Waste Electrical and Electronic Equipment directive went into effect for the European Union. Our products have been evaluated to the WEEE directive. We have also reviewed our products to determine if they comply with the Restriction of Hazardous Substances directive (RoHS) and have redesigned our products as needed in order to comply. To continue compliance with these directives, this unit must not be disposed as unsorted municipal waste. For proper disposal, please contact your nearest Henny Penny distributor.

1.2 Features

• Electronically controlled humidity and temperature.

• Double-panel glass, lift-off doors.

• Stainless steel construction.

• Easily maintained.

• Lift-out tray racks.

• Full perimeter magnetic door seals.

• Easy access to electrical controls.

• Automatic water-fill.

1.3 Proper Care

As in any unit of food service equipment, the Henny Penny humidified holding cabinet does require care and maintenance. Requirements for the maintenance and cleaning are contained in this manual and must become a regular part of the operation of the unit at all times.

1.4 Assistance

Should you require outside assistance, call your local independent distributor in your area, call Henny Penny at 1-800-417-8405 toll free or 1-937-456-8405, or go to Henny Penny online at www.hennypenny.com.

Chapter 2 Installation

2.1 Introduction

This section provides the installation instructions for the Henny Penny models HHC-980 and HHC-983.

NOTICE: Installation of this unit should be performed only by a qualified service technician.

⚠️ **WARNING**   SHOCK HAZARD Do not puncture the unit with any objects such as drills or screws as component damage or electrical shock could result.

2.2 Unpacking

The Henny Penny humidified holding cabinet has been tested, inspected, and expertly packed to ensure arrival at its destination in the best possible condition.

NOTICE: Any shipping damage should be noted in the presence of the delivery agent and signed prior to his or her departure.

To remove the Henny Penny cabinet from carton:

1) Cut and remove banding straps.

2) Lift carton off the unit.

3) Lift the unit off the cardboard padding and skid.

⚠️ **WARNING**   HEAVY OBJECT Take care when moving the fryer to prevent personal injury. Full size cabinets weigh about 300 lbs (136 kg).

4) Open doors are remove packing from behind racks and the water pan in the bottom of the unit.

5) Peel off any protective covering from the exterior of the cabinet.

6) The cabinet is now ready for location and use.

2.3 Selecting The Fryer Location

Place the humidified holding cabinet in an area that allows the doors to be opened without inference of loading and unloading product. Also, keep the unit level for proper operation.

NOTE: No minimum clearances are required for the rear and sides of the cabinet.

Installation

2.4 Electrical Requirements

⚠️ **WARNING**

- To avoid electrical shock, the cabinet must be adequately and safely grounded (earthed) according to local electrical codes, and this appliance must be equipped with an external circuit breaker which will disconnect all ungrounded (unearthed) conductors. The main power switch on this appliance does not disconnect all line conductors.

- For Equipment With CE Mark Only: To prevent electrical shock hazard, this appliance must be bonded to other appliances with an equipotential bonding conductor. This appliance is equipped with an equipotential lug for this purpose. The equipotential lug is marked with the following symbol:

If the electrical supply to the unit is a cord and plug, then the electrical receptacle, for the plug, must be easily accessible. Refer to Table 2-1 *Electrical Ratings,* page 4.

Table 2-1 Electrical Ratings

Model	Volts	Phase	Amps	Watts
HHC-980	208	1	13.8	2880
	240	1	12.0	2876
	220-240-CE	1	11.6	2792
HHC-983	120	1	17.3	2080
	220-240-CE	1	8.3	1992

2.5 Water Requirements

Element	Acceptable Compound Level
Fe (Iron)	< .1 mg/l
Cl (Chlorine)	< .1 mg/l
Cl2 (Chlorides and Salts)	< 150 mg/l

Water Property	Particle Level
PH	7–8
Silica	< 15 ppm
Hardness	< 3 grains
Alkalinity	< 20 ppm
Dissolved Solids	< 60 ppm
Un-dissolved Solids	< 5 microns

2.6 Water Supply Connection

The automatic water-fill system requires a 1/4 inch, 100 psi maximum, water connection. A water conditioner or filter, and a shut-off valve in the supply line is recommended. See the following procedure when making the water supply connection:

1) Flush incoming water line.

2) Using a pipe joint compound on the threads, screw the brass elbow into the fitting on the left side of the cabinet. Using a 1 inch wrench, secure the fitting nut while tightening the elbow. See Figure 2-1 *Tightening Fitting Nut,* page 5.

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Figure 2-1 Tightening Fitting Nut

3) Connect 1/4 inch tubing to the female quick-disconnect fitting, supplied with the cabinet. See Figure 2-2 *Female Quick-Disconnect,* page 6.

Installation

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11170025

Figure 2-2 Female Quick-Disconnect

4) Attach female quick-disconnect to the male quick-disconnect on the elbow. NOTE: This unit as manufactured requires the installation of an appropriate back-siphoning device (as per National Plumbing Code ASA-A40:8-1955) to be connected to the water inlet line. This device to be connected in accordance with basic plumbing code of the Building Officials and Code Administrators International, Inc. (BOCA), and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).

2.7 Cabinet Dimensions & Weights

31-3/4 in (806 mm)

24-3/4 in (628 mm)

72-1/4 in (1835mm)

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Figure 2-3 HHC-980 Dimensions

31-3/4 in (806 mm) 24-3/4 in (628 mm)
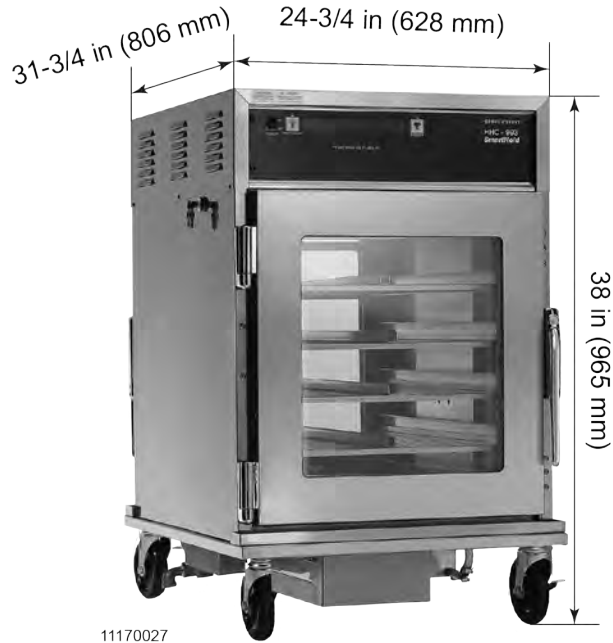
38 in (965 mm)

11170027

Figure 2-4 HHC-983 Dimensions

Table 2-2 HHC-98X Dimension & Weight

Model	Height	Width	Depth	Shipping Weight
HHC-980	72-3/4 in (1835 mm)	24-3/4 in (628 mm)	31-3/4 (806 mm)	367 lbs (167 kg)
HHC-983	38 in (965 mm)	24-3/4 in (628 mm)	31-3/4 (806 mm)	220 lbs (100 kg)

NOTE: Two HHC-983 stands are available. One gives the total height of 59 inches (1499 mm), and a taller version, gives the total height of 68 inches (1727 mm).

Installation

2.8 Mounting HHC-983 On Stand

1) Unpack the humidified holding cabinet stand (HHS) and stand upright. See Figure 2-5 *Mounting Plates*, page 9.

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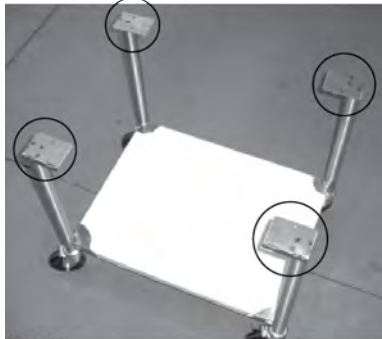
Figure 2-5 Mounting Plates

2) Remove doors from HHC-983 to allow easier lifting.

3) Lift HHC-983 onto posts of the HHS, making sure the locking casters are towards the front of the unit.

4) Align the holes in the mounting plates with the holes in the HHC-983. NOTE: The posts of the HHS can be moved, with some effort, to help align the holes in the mounting plates with the holes in the HHC-983.

5) Using the bolts and lock-washers provided with the HHS, screw the bolts up under the mounting plates and into the bottom of the HHC-983. Tighten with 7/16 inch wrench or socket. See Figure 2-6 *HHS Bolts Secured*, page 9.

01180062

Figure 2-6 HHS Bolts Secured

6) Replace the doors onto HHC-983 and unit is ready for use. See Figure 2-7 *Mounted HHC-983*, page 10.

01180063

Figure 2-7 Mounted HHC-983

Chapter 3 Operation

3.1 Introduction

This section provides operating procedures for the humidified holding cabinet. Read Chapter 1 *Introduction*, page 1, Chapter 2 *Installation*, page 3, and Chapter 3 *Operation*, page 11 before operating the unit.

3.2 Operating Controls & Indicators

The operating controls and indicators are shown in Figure 3-1 *Operating Controls & Indicators*, page 11, and described in Table 3-1 *Operating Controls & Indicators*, page 11.
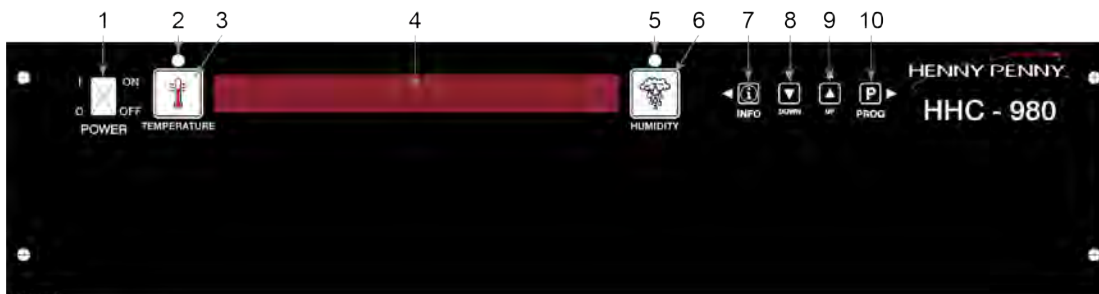
11170028

Figure 3-1 Operating Controls & Indicators

Table 3-1 Operating Controls & Indicators

Item No.	Description	Function
1	Power Switch	A rocker switch that sends electrical current to the operating components and lights when turned on.
2	Temperature LED	Lights when the control calls for heat, and the unit should start heating. It goes out once the temperature inside the cabinet reaches the programmed temperature setting.
3	Temperature Button	Press the temperature button to set the cabinet temperature.
4	Digital Display	Shows the cabinet temperature, humidity settings, and the selections in the Program Mode. The temperature of the cabinet is shown by pressing the info button. If the temperature exceeds 300°F (149°C), the display reads "E-5", "TOO HOT".
5	Humidity LED	Lights when the control calls for humidity. It goes out once the humidity inside the cabinet reaches the programmed humidity setting.

Item No.	Description	Function
6	Humidity Button	Press the humidity button to set the relative humidity inside the cabinet, and to choose between the proofing and holding modes, when the unit is turned on.
7	Info Button	Press the info button to display the current cabinet humidity and temperature as well as the time and date. Also, in the program mode, press to step back to the previous parameter.
8	Down Button	Used to adjust the value of the currently displayed setting in the program mode.
9	Up Button	
10	Program Button	Used to access the Program Modes. Also, once in the Program Mode, it is used to advance to the next parameter.

3.3 Start-Up

NOTE: Before using the humidified holding cabinet, thoroughly clean the unit as described in 3.5 *Cleaning Procedures*, page 13.

1) Plug unit into electrical receptacle, or turn on wall circuit breaker. With the power switch turned to off, the display shows "POWER OFF".

⚠ **WARNING**   **SHOCK HAZARDEven though power switch is off, it does not disconnect all electrical supplies to the controls. To avoid electrical shock or property damage, move the power switch to off and disconnect main circuit breaker, or unplug cord at wall receptacle.**

2) Connect or turn on water supply.

3) Turn the power switch to on, and the display shows "Pizza Hut", then "HHC-983" or "HHC-980".

4) Press the temperature button to set the desired cabinet temperature. While the LED is flashing, press the up or down button until desired temperature shows in the display. Preset at 165°F (74°C).

5) Press the humidity button to set the desired cabinet humidity (OFF or 10-90%). While the LED is flashing, press the up or down button until the desired temperature shows in the display. Preset at 50%.

6) Allow the unit to preheat for about an hour prior to placing product in the cabinet. This allows the interior conditions to stabilize.

3.4 Operation With Product

1) The LEDs above temperature and humidity button go out when the desired temperature and humidity are reached inside the cabinet.

NOTE: The minimum holding temperature for potentially hazardous product is 150°F (66°C). Also, the cabinet product loading capacity for the full size units is 375 lbs (170 kg), and the loading capacity for the half-sized unit is 125 lbs (57 kg).

2) Place product into cabinet.

Table 3-2 Hold Times

Product	Holding Time
Dinner Size Pizza	30 Minutes
Personal Pan Pizza	30 Minutes
Wings	2 Hours

NOTE:

• If the float switch in the water pan senses low, or no water after 5 minutes, "WATER PAN NOT FILLING, CHECK WATER SUPPLY" shows in the display.

• Open the doors only as necessary to load and unload product. This helps to keep the interior conditions constant and saves energy.

3.5 Cleaning Procedures

3.5.1 Daily Cleaning

Aluminum sheet pans slowly wear as they slide in and out of stainless steel holding rails to access product. As the pan slides against the rail, it can leave behind small traces of aluminum dust or small aluminum shavings. It is important that daily cleaning is performed to prevent aluminum dust/shavings from getting into the products being held in the unit.

1) Turn all controls off and disconnect electrical supply.

⚠️ **WARNING**   **BURN RISK** To avoid burns, allow the unit to cool before cleaning.

2) Open doors and remove all pans and racks from unit, and take them to a sink to thoroughly clean. See Figure 3-2 *Removing Racks*, page 14.

11170029

Figure 3-2 Removing Racks

3) Discard all warped or bent pans.

⚠ **CAUTION**   **Failure to discard warped and/or bent pans may result in metal shavings/ dust contamination food products.**

4) Wipe interior and exterior of cabinet with damp cloth, soap, and water.

NOTICE:

• Do not use abrasive cleaners, or cleansers/sanitizers containing chlorine, bromine, iodine, or ammonia chemicals. These abrasives and chemicals deteriorate the stainless steel and shorten the life of the cabinet.

• Do not use a water jet (pressure sprayer) to clean the unit, or component failure could result.

5) Wipe the control panel with a damp cloth. Do not splash water around controls.

6) Reinstall racks, and leave a door partially open overnight to allow interior cabinet to thoroughly dry.

3.5.2 Weekly Deliming

Different levels of minerals exist in water based on location. Hard water contains minerals like calcium and magnesium which leaves limescale on the surface of the water pan. Ensure water meets the water requirements section of this manual. To better understand your water quality, contact the local water agency for a water quality report. Clean and delime the water pan regularly to maintain performance of the holding cabinet. Failure to maintain water quality and the water pan may lead to mineral deposit build up and the following issues:

• The pan may overheat.

• Decreased humidity output may affect product quality holding times.

• Cracks may appear in the water pan.

⚠ CAUTION

Do not use steel wool, other abrasive cleaners, or cleaners containing chlorine, bromine, iodine, or ammonia chemicals as these will deteriorate the stainless steel and shorten the product life. Steel wool and abrasive cleaners can make micro scratches in the pan where minerals may build up and damage the pan.

⚠ WARNING

BURN RISK To avoid burns from steam, hot water, or chemicals, use approved safety equipment including, apron, face shield and gloves before cleaning.

To clean lime scale, use a non-boiler grade delimer with sequestrants, which deactivate minerals in water. Deactivated minerals cannot react to form scum, film, or lime scale. Use the recommended products and procedures to clean the holding cabinet.

1) Turn all controls off and disconnect electrical supply.

2) Put on personal protective equipment.

3) Remove trays and racks from cabinet.

4) Disconnect water supply at side of cabinet. Open drain valve and empty water pan into shallow pan or floor drain. See Figure 3-3 *Opening Drain Valve,* page 15.

11170031

Figure 3-3 Opening Drain Valve

⚠ WARNING

Hot Water! Do not place your hand under the drain while draining water from unit. Failure to follow this warning could result in severe burns and injury.

5) Remove concentration ring assembly from water pan. See Figure 3-4 *Removing Concentration Ring Assembly,* page 16.

11170030

Figure 3-4 Removing Concentration Ring Assembly

⚠️ **WARNING**   **HOT SURFACE Concentration ring could be hot! Allow to cool before removing, or burns could result**.

6) Wash the concentration ring in a dishwasher or sink.

7) Fill water pan with warm clean water.

8) Add 1/3 cup of de-limer to water pan.

9) Wait one hour for de-limer to break up minerals.

10) Using a soft brush, scrub sides and bottom of water pan.

11) Remove the drain plug to empty the water pan.

12) Rinse water pan with clean water.

13) Repeat STEPS 3-7 if necessary.

14) Reinstall the racks and fill the water pan with water to the maximum water fill line.

15) Return the concentration ring assembly to the water pan.

16) Reinstall the racks and pans.

Unit is now ready for use.

If the water pan still has hard mineral build-up after following the de-liming procedure, follow the procedure below.

1) Turn all controls off and disconnect electrical supply.

2) Put on personal protective equipment.

3) Remove pans and racks from cabinet.

4) Open drain valve and empty water pan into a shallow pan or floor drain.

⚠ **WARNING** HOT SURFACE Concentration ring could be hot! Allow to cool before re-moving, or burns could result.

5) Remove concentration ring assembly from water pan.

6) Wash the concentration ring in a dishwasher or sink.

7) Ensure water pan is empty and drain plug is in place.

8) Add 2 cups of de-limer to water pan.

9) Wait 10 minutes for de-limer to break up minerals.

10) Using a soft brush, scrub sides and bottom of water pan.

11) Drain the pan completely in accordance with safety and environmental regulations.

12) Rinse the water pan with clean water to ensure all de-limer is removed from pan.

13) Reinstall the racks and fill the water pan with water to the maximum water fill line.

14) Return the concentration ring assembly to the water pan.

15) Reinstall the racks and pans.

Chapter 4 Programming

4.1 Introduction

This chapter explains the following program functions:

• Clock Set

• Special Programming

4.2 Hidden Buttons

To program the following features, 5 hidden number buttons must be pressed. See Figure 4-1 *Hidden Number Button Location, page 19* before continuing in this chapter.
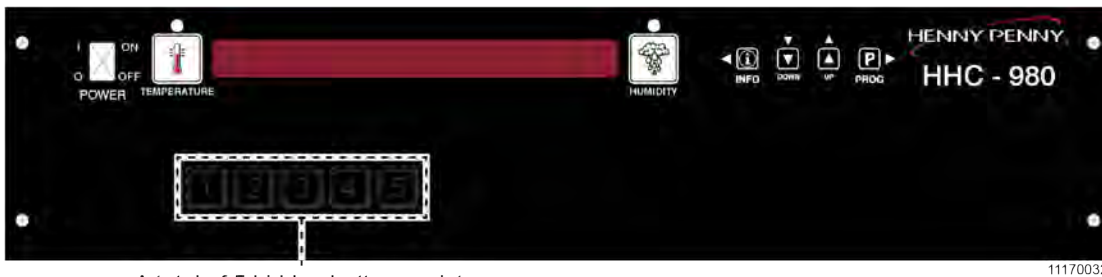

A total of 5 hidden buttons exist.

11170032

Figure 4-1 Hidden Number Button Location

4.3 Clock Set

1) Press and hold the program button for 5 seconds, "LEVEL 2", "CLOCK SET" shows in display.

2) After 5 seconds, "ENTER CODE" shows in the display.

3) Using the hidden buttons, enter code 1, 2, 3. See Figure 4-1 *Hidden Number Button Location, page 19*.

NOTE: A total of 5 hidden buttons exit. If the wrong code is entered, "INVALID CODE" scrolls across the display, and the controls automatically exits the Program Mode.

4) "CS-1, SET, HOUR", and the time of day shows in the display with the hour value flashing. Press the up or down button to change the hour value.

5) Press the program button and "CS-2, SET, MINUTE" shows in the display with the minute value flashing. Press the up or down button to change the minute value.

6) Press the program button and "CS-3, SET, MONTH" shows in the display, along with the month flashing. Press the pup or down button to change the month.

7) Press the program button and "CS-4, SET, DATE" shows in the display with the date flashing. Press the up or down button to change the date.

8) Press the program button and "CS-5, SET, YEAR" shows in the display with the year flashing. Press the up or down button to change the year.

9) Press and hold the program button to exit programming.

4.4 Special Program Mode

This section shows how to access the Special Program area of the controls in order to program cook menus, clock, and other features. Perform the following procedure before each step of the Special Program Mode.

1) Press and hold the program button until the display reads "LEVEL 2", "CLOCK SET".

2) Press the program button again then "SP PROG" shows in the display.

3) After 5 seconds, "ENTER CODE" shows in the display.

4) Using the hidden buttons, enter code 1, 2, 3. See .

NOTE: A total of 5 hidden buttons exit. If the wrong code is entered, "INVALID CODE" scrolls across the display, and the controls automatically exits the Program Mode. See for program code descriptions; see for navigation instructions for Special Program Modes.

Table 4-1 Special Program Modes

Program Code	Description
SP-1	Degrees Fahrenheit/Celsius
SP-2	Lock/Unlock
SP-3	Air Temperature Setpoint
SP-4	Humidity Setpoint
SP-5	Out of Water Trip Point
SP-6	Clean Water Pan Setpoint
SP-7	System Initialization (Factory Settings)
SP-8	Audio Volume
SP-9	Audio Tone
SP-10	Audio Effects
SP-11	Language Options
SP-12	CE Heat Regulation
SP-13	Water Fill Option

Table 4-2 Special Programming Procedures

Menu Step	Description
SP-1 Fahrenheit/ Celsius	1. "TEMP, UNITS", along with "°F" or "°C" shows in display. 2. Press the up or down button to change the temperature unit. 3. Press the program button to continue onto SP-2 Lock/Unlock.
SP-2 Lock/ Unlock	1. "LOCK/UNLOCK PROGRAMMING" shows in display, along with "LOCK" or "UNLOCK". 2. Press the up or down button to toggle between locking or unlocking the programming. 3. Press the program button to continue onto SP-3 Air Temperature Setpoint.
SP-3 Air Temperature Setpoint	1. "AIR TEMP SETPOINT", and the preset cabinet temperature show in the display. 2. Press the up or down button to change the air temperature setpoint; 140°F (60°C) minimum, 210°F (99°C) maximum. 3. Press the program button to continue onto SP-4 Humidity Setpoint.
SP-4 Humidity Setpoint	1. "HUMIDITY SETPOINT", and the preset humidity setpoint show in display. 2. Press the up or down button to change the humidity setpoint; 0% to 90%. 3. Press the program button to continue onto SP-5 Out of Water Trip Point.
SP-5 Out of Water Trip Point	1. "OUT OF WATER TRIP POINT" and the preset trip point temperature show in the display. If the float switch fails, the trip point temperature is the water pan temperature at which the control senses the water pan is out of water. We recommend a trip point temperature of 450°F (232°C). 2. Press the up or down button to change the out-of-water trip point. 3. Press the program button to continue onto SP-6 Clean Water Pan Setpoint.
SP-6 Clean Water Pan Setpoint	1. "CLEAN WATER PAN SETPOINT" and the preset temperature, at which the control senses that the water pan needs cleaned of lime, show in the display. We recommend a setpoint temperature of 425°F (218°C). 2. Press the up or down button to change the setpoint. 3. Press the program button to continue onto SP-7 System Initialization.

Menu Step	Description
SP-7 System Initialization (Factory Settings)	**1.** "DO SYSTEM INIT" shows in the display. **2.** Press and hold the down button until the display counts down from 3, and the display flashes "-INIT-", then "INIT*DONE*". This completes the initialization, and sets the control to factory settings. **3.** Press the program button to continue onto SP-8 Audio Volume.
SP-8 Audio Volume	**1.** "AUDIO VOLUME" and the volume setting (1 to 10) shows in the display. Press the hidden 1 button to test volume. See Figure 4-1 *Hidden Number Button Location*, page 19. **2.** Press the up or down button to change the volume level. **3.** Press the program button to continue onto SP-9 Audio Tone.
SP-9 Audio Tone	**1.** "AUDIO TONE - (Hz)-" and the tone setting (50 to 2000) shows in display. **2.** Press the up or down button to change the tone setting. **3.** Press the program button to continue onto SP-10 Audio Effects
SP-10 Audio Effects	**1.** "AUDIO EFFECT" and the effect setting (0 to 3) shows in display. **2.** Press the up or down button to change the pattern of the tone. **3.** Press the program button to continue onto SP-11 Language Options.
SP-11 Language Options	**1.** "LANGUAGE" and the preset language show in the display. **2.** Press the up or down button to toggle between English, French, German, Spanish, and Portuguese. **3.** Press the program button to continue onto SP-12 CE Heat Regulation.
SP-12 CE Heat Regulation	**1.** "CE HEAT REG" along with "YES" or "NO" shows in the display. **2.** Press the up or down button to toggle between "YES", if its a CE unit, or "NO", if its a non-CE unit. **3.** Press the program button to continue onto SP-13 Water Fill Option.
SP-13 Water Fill Option	**1.** "WATER FILL OPTION" along with "AUTO" or "MANUAL" shows in the display. **2.** Press the up or down button to select auto, if unit has automatic water fill ability, or manual, if water pan has to be manually filled. **3.** Press and hold the program button at any time to exit the Special Program Mode.

NOTE: For more information on the other settings of Special Program Mode, call your local Henny Penny Distributor or the Corporate Headquarters at 1-800-417-8405, or 937-456-8405.

Chapter 5 Troubleshooting

5.1 Introduction

This section provides troubleshooting information in the form of an easy to read table. If a problem occurs during the first operation of a new fryer, recheck the installation per Chapter 2 *Installation,* page 3. Before troubleshooting, always recheck Chapter 3 *Operation,* page 11.

5.2 Troubleshooting

To isolate a malfunction, proceed as follows:

1) Clearly define the problem (or symptoms) and when it occurs.

2) Locate the problem in Table 5-1 *Troubleshooting,* page 25.

3) Review all possible causes. Then, one-at-a-time work through the list of corrections until the problem is solved.

4) Refer to the maintenance procedures in the Technical manual to safely and properly make the checkout and repair needed.

⚠ **WARNING**   **If maintenance procedures are not followed correctly, injuries and/or property damage could result.**

Table 5-1 Troubleshooting

Problem	Cause	Correction
Product not holding temperature.	Doors left open.	Keep doors closed except to load and serve product.
	Product held too long.	Hold product only for recommended times.
	Control temperature set too low.	Increase air temperature setpoint in 4.4 *Special Program Mode,* page 20 (SP-3).
	Door gasket torn or worn.	Replace bad door gaskets.
Cabinet steaming, product soggy.	Humidity setpoint too high.	Reduce humidity setting in 4.4 *Special Program Mode,* page 20 (SP-4).
Product dry.	Humidity setpoint too low.	Increase humidity setting in 4.4 *Special Program Mode,* page 20 (SP-4).
	No water in pan.	Check water shut-off valve.
Unit not heating.	Blown fuse.	Change 15 amp fuse.

Problem	Cause	Correction
Unit not reaching set temperature.	Doors left open.	Keep doors closed except to load and serve product.
	Door gasket torn or worn.	Replace bad door gaskets.

5.3 Error Code

The display shows the following error codes and warning when a fault is detected, along with an alarm sound. Both the heat and humidity systems shut down, except when specified otherwise.

NOTICE

A humidity error only shuts down the humidity system. If a humidity error occurs, and you want to use the cabinet without humidity, turn the humidity off by following the directions for SP-4, Humidity Setpoint, in Special Programming Section of this manual. Once the setpoint is off, the alarm stops, but the error code shows in display. (Includes "E-12A", "E-12B", "E-17" and "E-18").

Table 5-2 Error Codes

Display	Cause	Panel Board Correction
"E-4" "CPU TOO HOT"	Control board too hot; unit over-heating or louvers clogged.	Turn unit off, then back on; if display stills shows "E-4", the PC board is getting too hot; clean louvers and check cooling fan; If cooling fan is not working, have it replaced; once panel cools down, the controls should return to normal; if error code persists, have the PC board replaced.
"E-5" "AIR TEMP TOO HOT"	Faulty relay, PC board, or air probe.	Turn unit off, then back on; if display still shows "E-5", the heating circuits and temperature probe should be checked; once the unit cools down, the controls should return to normal; if error code persists, have the PC board replaced.
"E-6A" "AIR TEMP SENSOR FAILED OPEN"	Faulty air temperature probe.	Turn unit off, then back on; if the display shows "E-6(A or B)", the temperature probe should be checked; once the temperature probe is repaired, or replaced, the controls should return to normal; if error code persists, have the PC board replaced.
"E-6B" "AIR TEMP SENSOR FAILED SHORT-ED"		
"E-12A" "WATER	Faulty water heater probe.	Turn unit off, then back on; if display shows "E-12(A or B)", the water heater should be checked and repaired, or

Display	Cause	Panel Board Correction
HEATER SENSOR FAILED OPEN"		replaced (the water heater probe is built into the water heater); the controls should return to normal; if error code persists, have PC board replaced.
"E-12B" "WATER HEATER SENSOR FAILED CLOSED"		
"E-17" "HU-MIDITY SENSOR FAILED"	Faulty humidity sensor.	Turn unit off, then back on; if display shows "E-17", the humidity sensor should be checked; once the humidity sensor is repaired, or replaced, the controls should return to normal; if error code persists, have PC board replaced.
"E-18" "NO WATER, FLOAT SWITCH FAILED"	Float switch stuck or faulty;	Turn unit off, then back on; if display shows "E-18", check and clean float switch.
	Water pan needs cleaned.	Clean water pan.
	Loose or faulty water heater sensor; faulty relay (stuck on).	Have relay and water heater sensor checked and replaced if necessary.
	Acorn nuts on water heater cover loose.	Tighten acorn nuts on water heater cover.
	Water heater insulation missing or damaged.	Make sure the insulation is under the water heater cover; if error code persists, have PC board replaced.
"E-41" "SYSTEM DATA LOST"	Memory scrambled.	Turn unit off, then back on; if display shows "E-(41 or 46)", the control should be re-initialized (see Chapter 4 *Programming*, page 19); if error code persists, have PC board replaced.
"E-46" "DA-TA SAVE FAILED"		
"E-54A" "CPU TEMP SENSOR OPEN"	Faulty PC board.	Turn unit off, then back on; if display shows "E-54(A or B)", the control should be re-initialized (see Chapter 4 *Programming*, page 19); if the error code persists, have PC board replaced.

Display	Cause	Panel Board Correction
"E-54B" "CPU TEMP SENSOR SHORT-ED"		
"PLEASE DE-LIME WATER PAN"	Water pan needs cleaned.	Follow procedures in section 3.5.2 *Weekly Deliming*, page 14; this warning will not shut down the heat or humidity; if error code persists, have PC board replaced.
"WATER PAN NOT FILLING, CHECK WATER SUPPLY"	Water supply shut-off; solenoid clogged or faulty.	Check water shut-off valve; clean or replace solenoid; this warning will not shut down the heat or humidity.