Operator Manual

DEHUMIDIFYING PROOFING CABINET

DPC1S

Model Number: _____

Serial Number: _____

Date of Installation: _____

NOTE: USAGE ADDENDUM N21108 PAGES 11 THRU 13 ARE FOR USE WITH CONTROL BOARDS THAT HAVE A USB CONNECTION PORT ON THE CONTROL PCB.

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Operation and Care of
DEHUMIDIFYING PROOFING CABINET

SAVE THESE INSTRUCTIONS

GENERAL

The Dehumidifying Proofing cabinets proof racks of dough products under controlled temperatures and humidity prior to baking. The standard Dehumidifying Proofers are equipped to proof dough only.

All Dehumidifying Proofing cabinets have easy-to-clean stainless steel interior and exterior panels.

It is suggested that you thoroughly read this manual and carefully follow the instructions provided.

INSTALLATION

Dehumidifying Proofers must be installed by authorized trained service technicians.

OPERATION

The following pages cover the operation procedures for the Dehumidifying Proofing Cabinet.

DEHUMIDIFYING/PROOFING

Controlled temperature and humidity in the proofer promotes yeast fermentation, which generates gas and causes the dough to rise. Proofing takes from 40 to 50 minutes, depending on the product. A temperature setting of 105°F (40°C) and humidity at 63% are typical but will vary slightly, depending on the product being proofed. Three pre-programmed proofing cycles are supplied in the control memory. The chart below explains the three Dunkin-approved proofing cycles pre-programmed into the control.

Product	Temperature	% Humidity	Time Minutes
1st Cut Product & Munchkin	105°F (40°C)	63%	40 min.
2nd Cut Product	105°F (40°C)	63%	45 min.
3rd Cut Product	105°F (40°C)	63%	50 min.

ADVANCED CONTROL - OPERATION

The Dehumidifying Proofer has two options to choose from the control panel.

- Manual Proof Operation
- Automatic Pre-Programmed Proof Operation

START-UP

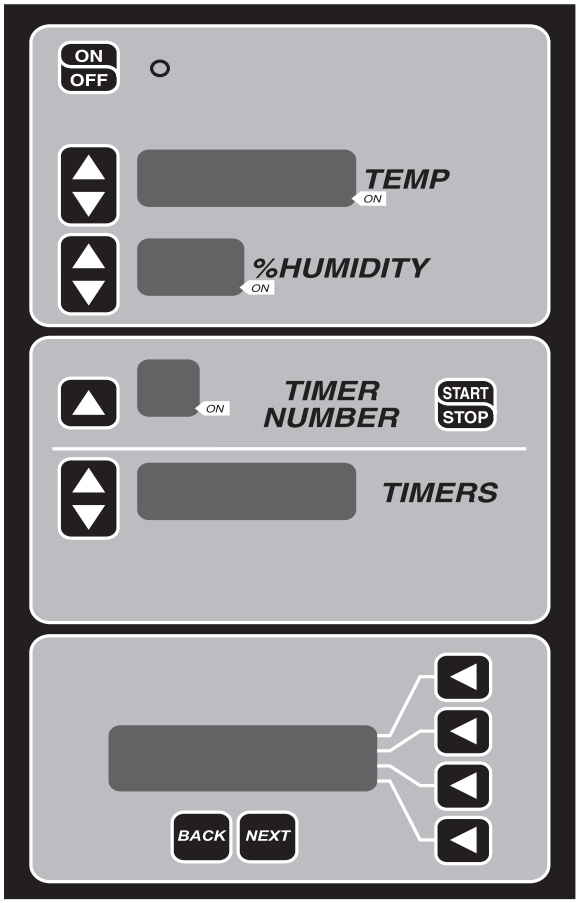


Fig. 1

ON/OFF - Turn on/off the setup mode.

TEMPERATURE UP or **DOWN ARROW -** Press to set the temperature level.

TEMPERATURE WINDOW - Displays the current temperature. Displays set temperature when being adjusted.

HUMIDITY UP or **DOWN ARROW -** Press to set the humidity level.

HUMIDITY WINDOW - Displays the current humidity. Displays set humidity when being adjusted.

TIMER NUMBER ARROW - Press to select a timer (1 to 4).

TIMER START/STOP BUTTON - Press to start/stop the timer.

TIMERS UP or **DOWN ARROW -** Press to set the desired time.

TIMERS WINDOW - Displays the hours and minutes remaining on the timer.

ARROW BUTTONS - Use with LCD operation.

LCD PANEL - Displays all setup options of the Manual Dehumidifying Proofer in both manual and automatic mode operation.

CONTROL

To enter the operation mode, press ON/OFF button (Fig. 1). The LED screen will light up.

OPERATION MODE

The LCD panel displays two options after the ON/OFF button is pressed (Fig. 2). The arrow buttons on the right point to the selectable features.

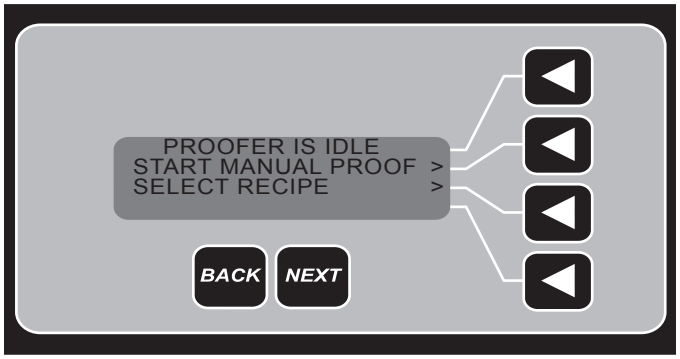


Fig. 2

Manual Proof

- Press the START MANUAL PROOF operation arrow button (Fig. 2).
- Enter the desired temperature (65°F - 115°F) by pressing up or down arrow button (Fig. 3).
- Enter the desired humidity (25% - 95%) by pressing up or down arrow button.
- Enter the desired time for timer. (If it is timed out, beeper will pulse and timer number flashes.)

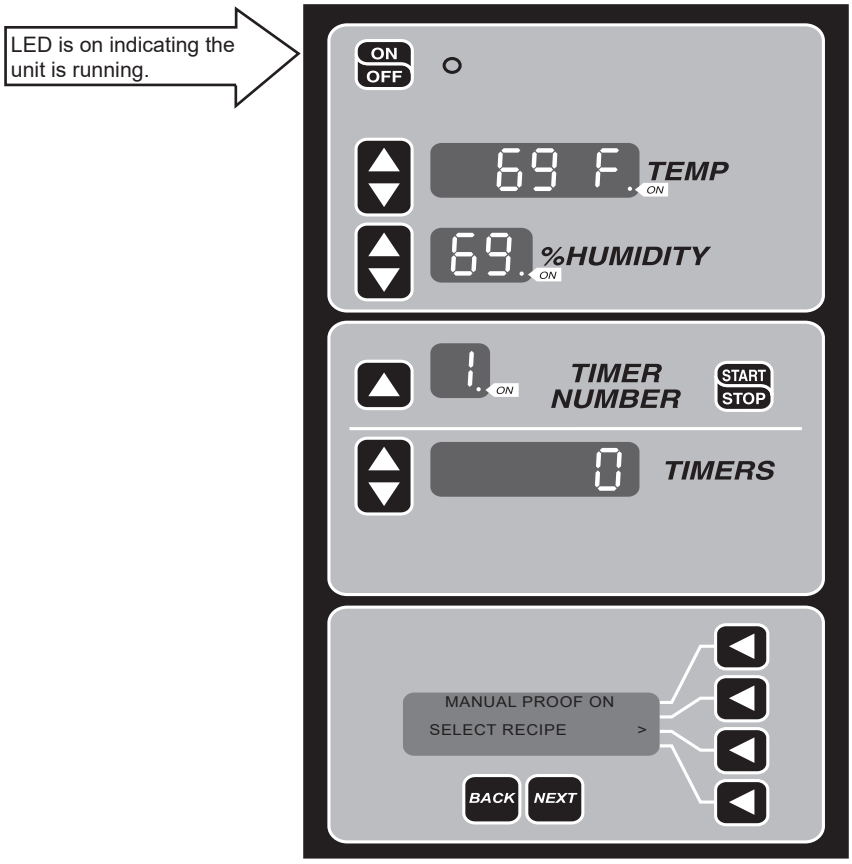


Fig. 3

After entering desired time and pressing the timer START/STOP button, a dot will start blinking to the right side of the timer number and the LCD will display the message MANUAL PROOF RUNNING to indicate the proof operation is now running with timers (Fig. 4).

To stop the proof timer operation, press START/STOP button. To stop the proof operation, press SELECT RECIPE arrow button or ON/OFF button.

NOTE: It is normal to notice that the circulation fans in the air duct keep running for 20 minutes to cool down after the proof operation is canceled.



Fig. 4

Manual Selection of Values

1. Select START MANUAL PROOF (Fig 5). Set required parameters as follows.
2. Set TEMP (temperature), use the up or down arrow buttons to set the desired temperature (Fig 6).
3. Set % HUMIDITY, use the up or down arrow buttons to set % relative humidity.
4. Set TIMER NUMBER, use the arrow buttons. There are 4 independent timers that can be set and run simultaneously.
5. Set TIMERS, use the up or down arrow buttons to set the time in minutes.
6. The display will show the actual readings – load product if within 5 degrees of set point.
7. When product is loaded and door closed, press START/STOP button to start the timer countdown. Dot will flash in corner of TIMER NUMBER display when counting down.
8. When the time has counted down, a beeper will sound and TIMER NUMBER will flash. Press START/STOP to stop beeper and flash.

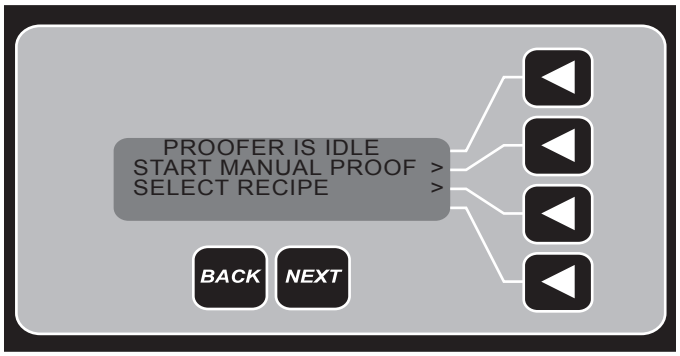


Fig. 5

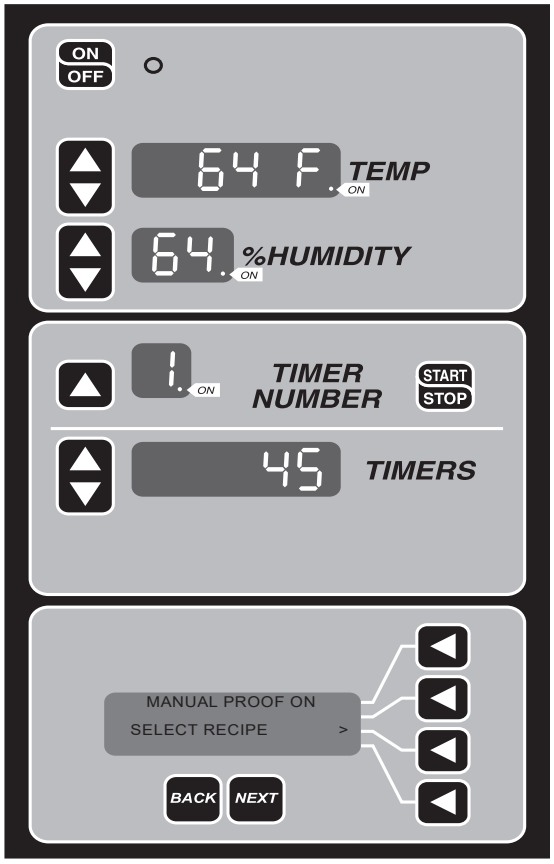


Fig. 6

Recipe Presets

1. Press the arrow button for SELECT RECIPE (Fig 7).

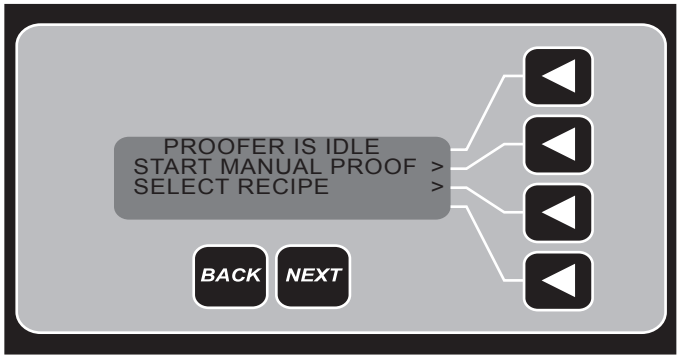


Fig. 7

2. Choose a recipe by pressing the arrow leading to selection (Fig 8).

NOTE: Pressing the next button brings up the next 3 recipes (4-6). The back button brings up the previous set of three (1-3).

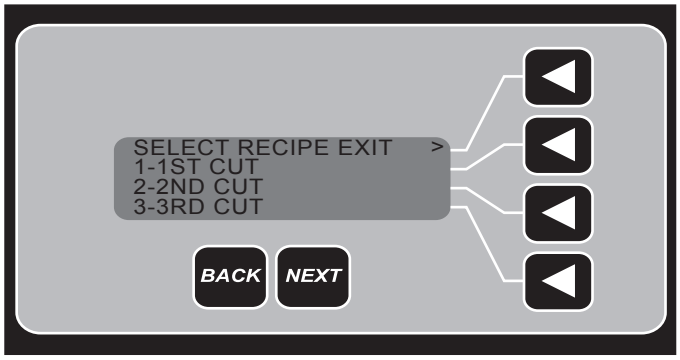


Fig. 8

3. Select LOAD THIS RECIPE (Fig 9).

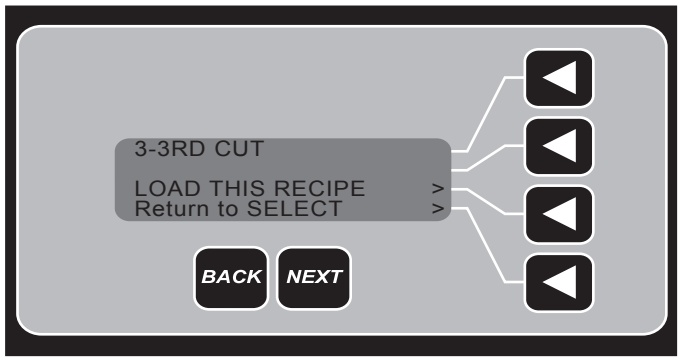


Fig. 9

4. To enter the recipe settings press the START PROOF RECIPE (Fig. 10). Temperature and humidity setting will display for 5 seconds and then show the actual values.

NOTE: To see settings of TEMP or %HUMIDITY press an arrow alongside the display.

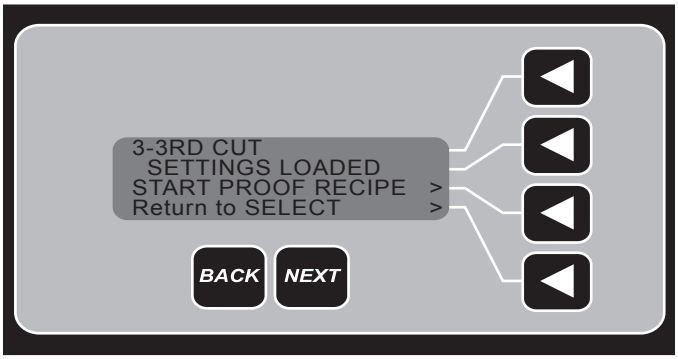


Fig. 10

5. The settings will be entered, and proofer will adjust to the required setting.

NOTE: You can only run one recipe at a time.

6. Load product if temperature is within 5 degrees of set point. When product is loaded and door is closed, press START/STOP button to start the timer countdown. Dot will flash in corner of TIMER NUMBER display when counting down. RECIPE PROOF RUNNING will display (Fig. 11).

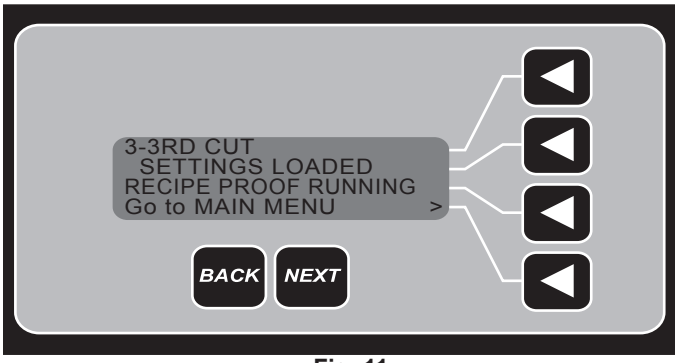


Fig. 11

OPERATING PARAMETER SETUP

- Press and hold the TIMER NUMBER button.
- Press ON/OFF button. (Fig. 12).

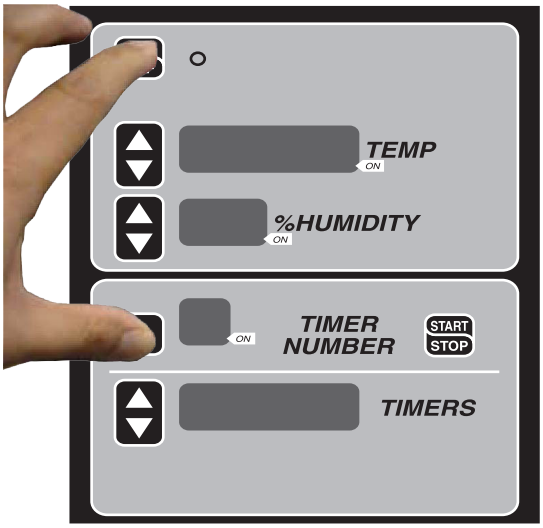


Fig. 12

After entering parameter setup mode (Fig. 13), the LCD panel shows function of each parameter definition. For more information on parameter value, see the parameter value chart to understand each parameter value.

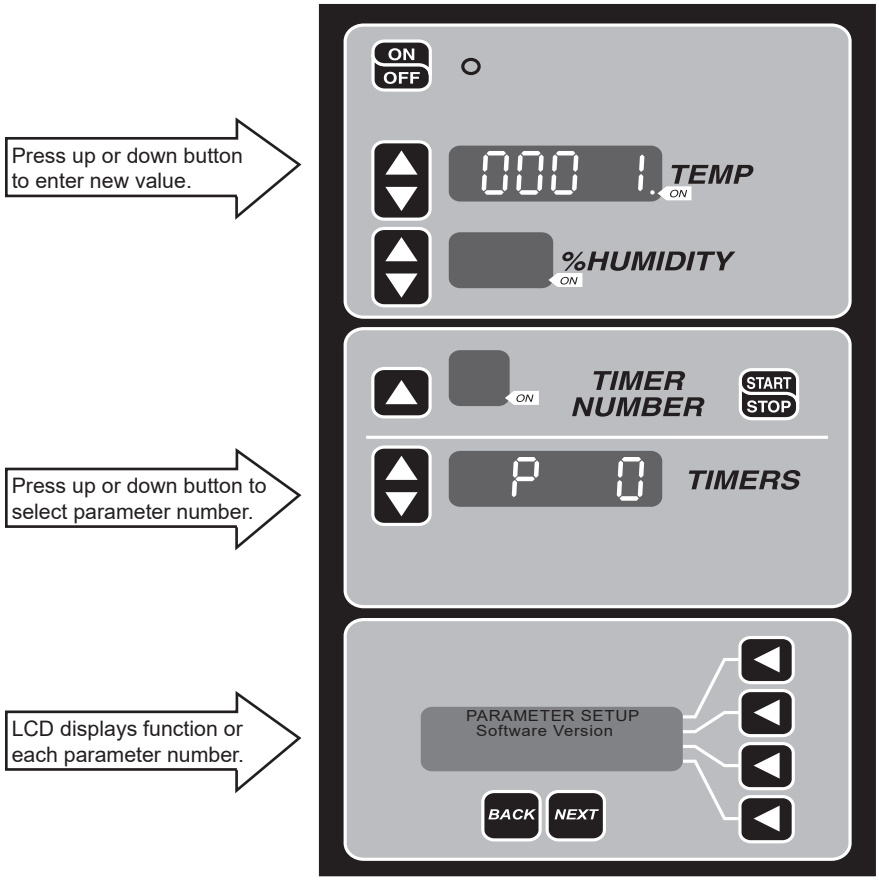


Fig. 13

Definitions and Default Values for Proofer		
/* P0	Software Version Number	
/* P1	Fahrenheit or Celsius	
/* P2	Temp Offset for Calib.	Min. 0 Max. 40, 20 is zero offset
/* P3	Hum Offset for Calib.	Min. 0 Max. 40, 20 is zero offset
/* P4	Minimum Temp for Proof	65°F
/* P5	Maximum Temp for Proof	115°F
/* P6	Minimum Humid for Proof	25%
/* P7	Maximum Humid for Proof	95%
/* P8	Recipe Lock	1 = Locked, 0 = Unlocked
/* P9	Preheat without humidity	Preset T=105°F, Time out after 15 min. If Timer START/STOP button is not pressed after 30 sec, the unit will go to Proof operation.
/* P10	Vent Fan Run Time	60 sec.
/* P11	Vent Open Time	60 sec.
/* P12	Hum Recheck Time	180 sec.
/* P13	Hi Humidity Vent %	3%

Default Parameter Values		
0001	/* P0	Software Version Number
F	/* P1	F=Fahrenheit, C=Celsius
20	/* P2	Temp Offset for Calib.
20	/* P3	Hum Offset for Calib.
65	/* P4	Minimum Temp for Proof
115	/* P5	Maximum Temp for Proof
25	/* P6	Minimum Humid for Proof
95	/* P7	Maximum Humid for Proof
1	/* P8	Recipe Lock 1=Locked 0=Unlocked
1	/* P9	Preheat 1= disabled, 0=enable
60	/* P10	Vent Fan Run Time (seconds)
60	/* P11	Vent Open Time (seconds)
180	/* P12	Hum Recheck Time (seconds)
3	/* P13	Hi Humidity Vent %

SELECT PROOFER MODEL VIA BOOTLOADER

The proofer model is set at the factory. However, if the proofer model needs to be changed this procedure shall be followed.

1. Turn off the Proofer with the ON/OFF button.
2. Hold these three buttons, in this order for 5 seconds.
    - HUMIDITY DOWN ARROW
    - TEMPERATURE UP ARROW
    - ON/OFF Button.
3. Keep holding the three buttons until "conF" is shown in the Temperature display (Fig. 14).

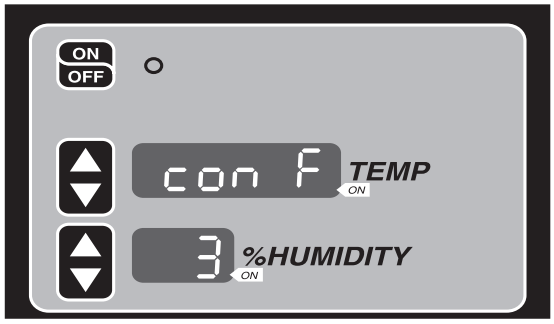


Fig. 14

4. The current proofer configuration value will be displayed in the HUMIDITY display. 1, 2 or 3
5. Pressing the HUMIDITY UP ARROW will cycle through the configurations, 1, 2 or 3
    - Config 1: Proofer (PW)
    - Config 2: Retarder/Proofer (RPW)
    - Config 3: Dehumidifying Proofer (DPC1S)
6. The configuration is saved by pressing the ON/OFF button.
7. The TEMP and HUMIDITY display LEDs will flash on and off for two seconds to indicate that the new configuration has been saved.
8. The proofer control board will reboot with the new configuration.

NOTE: If the application firmware is corrupt or missing, the unit will enter the bootloader automatically. This will happen even if you do select a proofer model, it will still return to the bootloader where you are required to load the firmware. To correct this error, update the proofer firmware.

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UPDATE THE PROOFER FIRMWARE VIA BOOTLOADER

1. Load the firmware file named proofer.bin onto a FAT formatted flash drive.
2. Turn off the Proofer with the ON/OFF button.
3. Insert the flash drive into the proofer's USB socket (Fig. 15).
4. Hold these three buttons, in this order for 5 seconds.
   - HUMIDITY DOWN ARROW
   - TEMPERATURE UP ARROW
   - ON/OFF button.
5. Keep holding the three buttons until "conF" is shown in the Temperature display (Fig. 14).
6. Press either TEMP UP or TEMP DOWN arrow until "LoAd" is displayed in the TEMP display (Fig. 16).

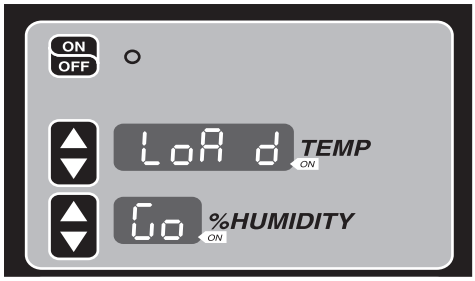


Fig. 16

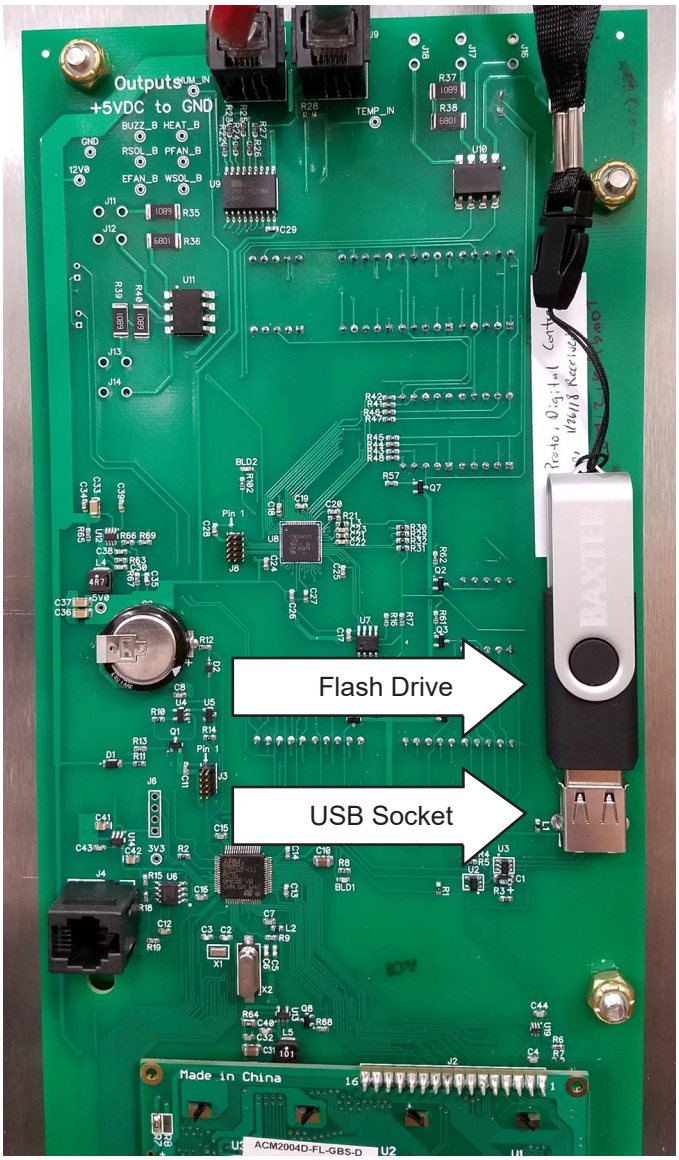


Fig. 15

7. The word "Go" is displayed on the HUMIDITY display.
8. Press HUMIDITY UP button to start the update.
9. "UPdt" will be displayed in the TEMP display for 1 second.
10. "Strt" will be displayed in the TEMP display for 1 second.
11. The image file will be validated.
    - On a successful update "Succ" will be displayed on the TEMP display for 2 seconds. The control board will reboot. Remove flash drive and turn on the proofer with the ON/OFF button. Verify the correct proofer operating mode and parameters.
    - On an unsuccessful update "Err" will be displayed on the TEMP display, this will be permanently displayed and the proofer will need the power cycled to clear this error. Depending on the cause of the failure either the old application will run if still present or the system will enter into the bootloader so you can attempt to flash again.

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CONTROL BOARD POWER UP

Each time power is applied to the control board, the bootloader is launched. The bootloader looks at the flash configuration to choose which of the three configuration modes to use.

During the boot up process, the configuration mode number 1, 2, or 3 is displayed in the HUMIDITY display for several seconds.

This function is used to help the technicians verify the proofer control board is configured correctly.

LCD CONTRAST ADJUSTMENT

If the control board includes an LCD, this procedure can be followed to adjust the LCD contrast.

Enter Bootloader:

1. Turn off the Proofer with the ON/OFF button.
2. Hold these three buttons, in this order for 5 seconds.
   - HUMIDITY DOWN ARROW
   - TEMPERATURE UP ARROW
   - ON/OFF button.
3. Keep holding the three buttons until "conF" is shown in the Temperature display (Fig 14).
4. The current proofer configuration value will be displayed in the HUMIDITY display. 1, 2 or 3.
5. While in the normal bootloader mode, hold down the HUMIDITY DOWN button and then press the TEMP UP button. You will see the LED display change and the LCD will display the instructions (Fig. 17). The system is now in LCD contrast setting mode.
6. Using the HUMIDITY UP and DOWN buttons set the LCD contrast as desired.
7. Once satisfied with the LCD contrast setting, press the TEMP UP button to save the setting and exit the LCD contrast mode. You will return to the bootloader mode.
8. Once back in the bootloader mode, set the desired configuration and press ON/OFF button to start the application.

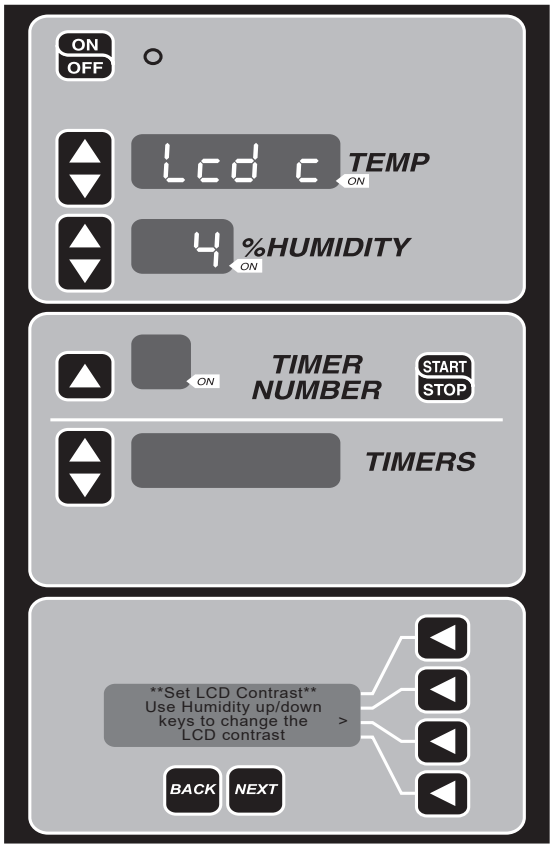


Fig. 17

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MAINTENANCE

⚠ WARNING Disconnect the electrical power to the unit and follow lockout / tagout procedures.

Every 6 months, have authorized service personnel check air duct, drain, heater plate and spray nozzle.

LIGHT BULBS

Replace light bulb(s) with 40-watt incandescent appliance-type bulb(s) ONLY.

SHUT DOWN

1. Remove all remaining product.
2. Turn off proofer.
3. Clean the proofing chamber. (See Cleaning below.)

CLEANING

1. Using a clean cloth moistened in warm, soapy water, wash the stainless steel interior of the cabinet. Rinse with clear water and dry with a clean cloth.
2. Clean the outside daily with a clean, damp cloth.
3. Use care when cleaning around sensitive interior parts, such as probes and sensors.
4. Do not use cleaners containing grit, abrasive materials, bleach, harsh chemicals or chlorinated cleaners. Do not use steel wool on stainless steel surfaces. Never spray down the proofer with water, steam or power wash.
5. Be cautious with new or improved cleaning formulas; use only after being well tested in an inconspicious place.

SERVICE AND PARTS INFORMATION

Contact your authorized service office for any repairs or adjustments needed on this equipment.

TROUBLESHOOTING

PROBLEM	CORRECTIVE ACTION
Machine will not turn on.	1. Make sure that the power cord is plugged in. 2. Verify that the main power supply is on. 3. Contact your local authorized service office.
Machine will not heat up.	1. Verify that the temperature is set properly. 2. Contact your local authorized service office.
Machine will not humidify air .	1. Verify that the humidity is set properly. 2. Verify that the water supply is turned on to the equipment. 3. Contact your local authorized service office.
Machine shows very high humidity(in excess of 3% of set point).	1. Verify exhaust fan and vent motor are running. 2. Verify that water solenoid valve closes when humidity exceeds the set point. 3. Contact your local authorized service office.

NOTES