Operator Manual

PROOFER & RETARDER/PROOFER

MODELS

PW1E
PW1S
PW2E
PW2S
PW3S
RPW1S
RPW2E
RPW2S

Model Number: _____

Serial Number: _____

Date of Installation: _____

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OPERATION AND CARE OF PROOFERS & RETARDER/PROOFERS

SAVE THESE INSTRUCTIONS

GENERAL

The Proofer and Retarder/Proofer cabinets proof racks of dough products under controlled temperatures and humidity prior to baking. There are several to choose from. The standard proofers are equipped to proof dough only. Retarder/Proofers gradually thaw frozen dough. The retarders operate like a refrigerator by keeping the interior cool, which also provides an excellent environment for storing dough prior to proofing. The cooler temperature slows the yeast fermentation process and prevents the dough from rising. The Automatic Retard/Proof feature adds the flexibility of programming times to retard and automatically proof in one operation.

The Proofers and Retarder/Proofers offer a unique modular design, allowing for a wide variety of sizes in standard models. They can be ordered as one-, two-, or three-section roll-in models. All Proofer and Retarder/Proofer 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

Proofers and Retarder/Proofers must be installed by authorized trained service technicians.

OPERATION

The following pages cover the operation procedures for the various control options of the Proofer and Retarder/Proofer cabinets. The control panels come in two configurations: standard proofer and retarder/proofer.

PROOFING

Controlled temperature and humidity in the proofer promotes yeast fermentation, which generates gas and causes the dough to rise. Proofing takes from 45 to 60 minutes, depending on the product. A temperature setting of 95°F (35°C) and humidity at 85% are typical but will vary slightly, depending on the product being proofed. To dry-proof, set the humidity to the lowest setting. The chart below is only a guide. Ask your dough supplier for technical product reports to set up your own chart.

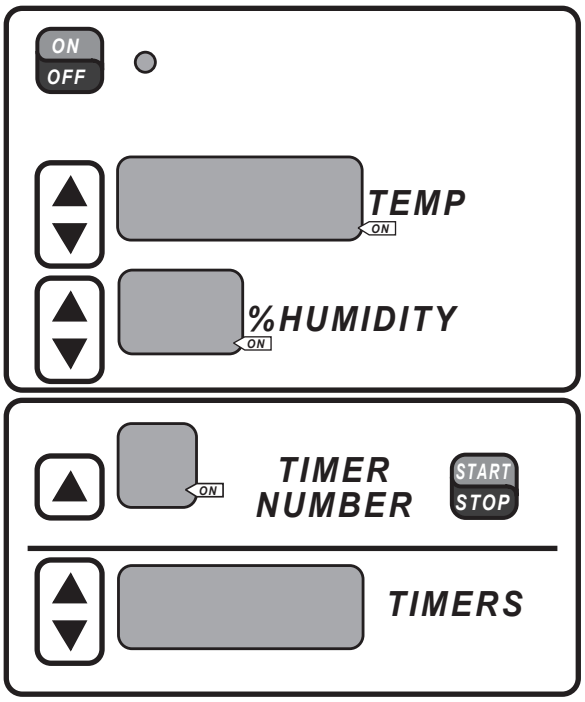
Product	Proofing		
	Temperature	% Humidity	Proof Time Minutes
Rolls	95°F (35°C)	85%	55 min.
French Crust Bread 14 oz.	90°F (32°C)	90%	45 min.
French Crust Bread 10 oz.	90°F (32°C)	85%	45 min.
Bagels	85°F (29°C)	85%	50 min.
Croissants	75°F (24°C)	70%	30 min.

RETARDING

The retard feature gradually thaws frozen dough. Set the temperature between 36°F and 38°F (2°C to 3°C) for best results. Thawing frozen dough at retarder temperatures takes approximately 6 hours minimum. Retarding slows the yeast fermentation process, reduces gas formation and inhibits the dough from rising. This also provides an excellent environment for storing dough products up to 48 hours by keeping the dough interior cool. Dough should not be refrozen after thawing.

It is likely that condensation will form if product is placed directly into the proofer from the retarder. For best results, allow the product to reach room temperature before placing into the proofer.

Units equipped with auto mode will slowly and automatically bring the proofer up to temperature without removing the product from the unit.



PROOF MODE

ON/OFF - Press to start/stop the proof mode.

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

TEMP WINDOW - Displays the current temperature.

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

%HUMIDITY WINDOW - Displays the current humidity.

NOTE: When the actual humidity is less than 26%, the humidity window will show 25%. When the actual humidity is higher than 25%, the humidity window will show the actual humidity. To view the temperature or humidity set point, touch the up or down arrow once.

TIMER NUMBER

UP ARROW - Press to select a timer (1 through 4).

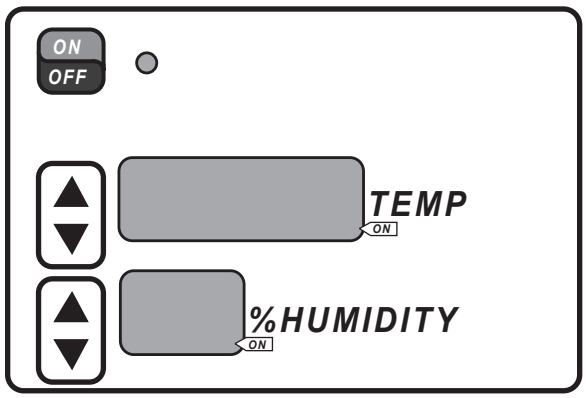
START/STOP - Press to start/stop the selected timer.

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

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

Proof

The proof feature allows thawed dough to rise by gradually increasing the temperature and humidity of the dough.



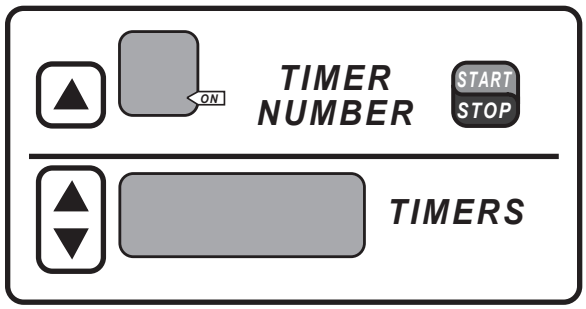
1. Press the ON/OFF button to start the proof mode. The ON/OFF Indicator Light is lit.
2. Enter the desired temperature by pressing the UP or DOWN arrow next to the TEMP window. The small ON dot located in the lower right corner of the TEMP window will light if the actual temperature is below the set temperature and the unit is calling for heat.
3. Enter the desired humidity by pressing the UP or DOWN arrow next to the %HUMIDITY window.
4. Enter the desired time. (See Entering Time below.)

NOTE: For best results, allow the proofer to reach set temperature and humidity before putting product in. Proof at lower temperatures rather than higher temperatures.

Entering Time

There are four individual timers that can be used for timed operations. Timers run independently and will not start or stop an operation.

1. Press the UP arrow button next to the TIMER NUMBER window to select one of four timers. The number will be displayed in the TIMER NUMBER window.



2. Enter the desired time by pressing the UP or DOWN arrow next to the TIMERS window.
3. Press the START/STOP button to activate the timer. The small ON dot located in the lower right corner of the TIMER NUMBER window blinks to indicate the timer is running.
4. When the timer expires, a beeper sounds and the timer number flashes in the TIMER NUMBER window. Press START/STOP to silence the beeper.
5. If more than one timer is needed, select another timer and enter the desired time. To begin the timing countdown on the timer you want to run, select the timer and press the START/STOP button. The START/STOP button only starts or stops the timing operation for the timer shown in the TIMER NUMBER window.
6. When multiple timers are in use, the timer number will flash on the screen as each one times out.
7. Previous time settings remain in the timers until changed.

ADVANCED CONTROLS - RETARDER/PROOFER

The Retarder/Proofer has several options to choose from the control panel.

- Manual Proof Operation
- Manual Retard Operation
- Automatic Retard and Proof Operation

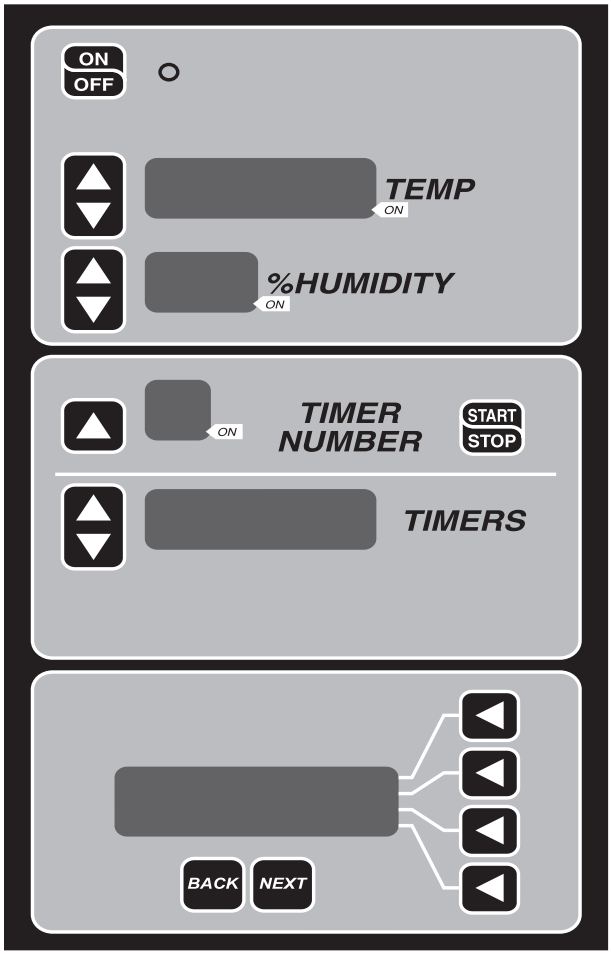


Fig. 1

START-UP:

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 Proofer, Retarder, or automatic Retard/Proofer operation.

CONTROL

To enter the operation mode, press ON/OFF button (Fig. 1).

OPERATION MODE:

The LCD panel displays three options after the ON/OFF button is pressed (Fig. 2).

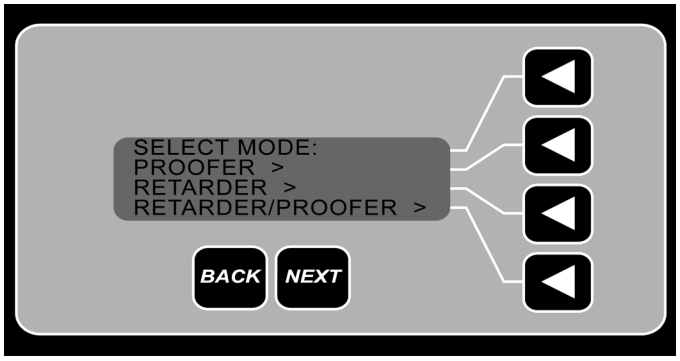


Fig. 2

Proof

- Press the "PROOFER" 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 is pulsed and timer number flashes.)

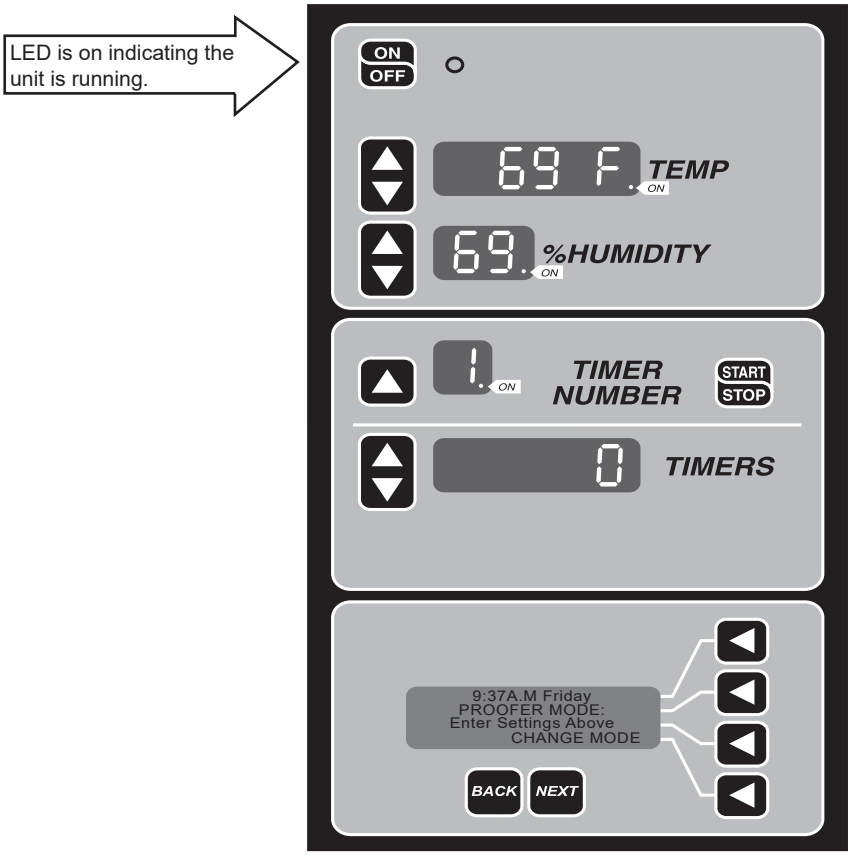


Fig. 3

After entering desired time and pressing the timer START/STOP button, the LCD displays message "PROOF TIMINGoooo" 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 "CHANGE MODE" arrow button or ON/OFF button.

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

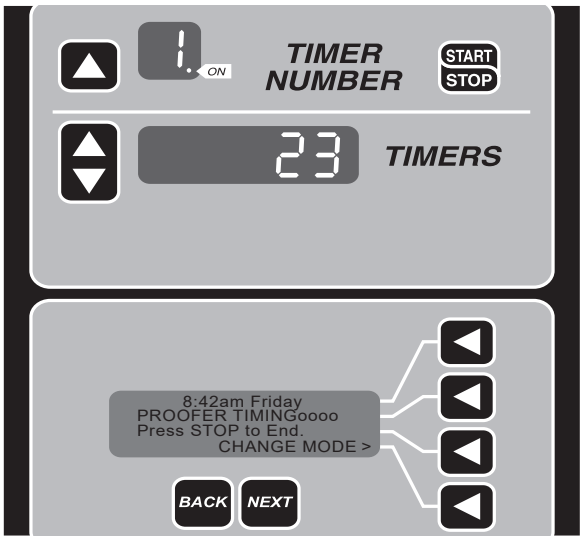


Fig. 4

Retard

- Press the "RETARDER" operation arrow button (Fig. 2).
- Enter the desired temperature (34°F - 50°F) by pressing up or down arrow button.
- Enter the desired time for timer. (If it is timed out, beeper is pulsed and timer number flashes.)

NOTE: Retard operation does not offer humidity control. A fixed humidity value is used for this operation.

NOTE: Defrost cycle can be set by entering the Parameter Setup Mode. See chart for default value. During defrost cycle active, the LCD flashes "DEFR" at the bottom left corner.

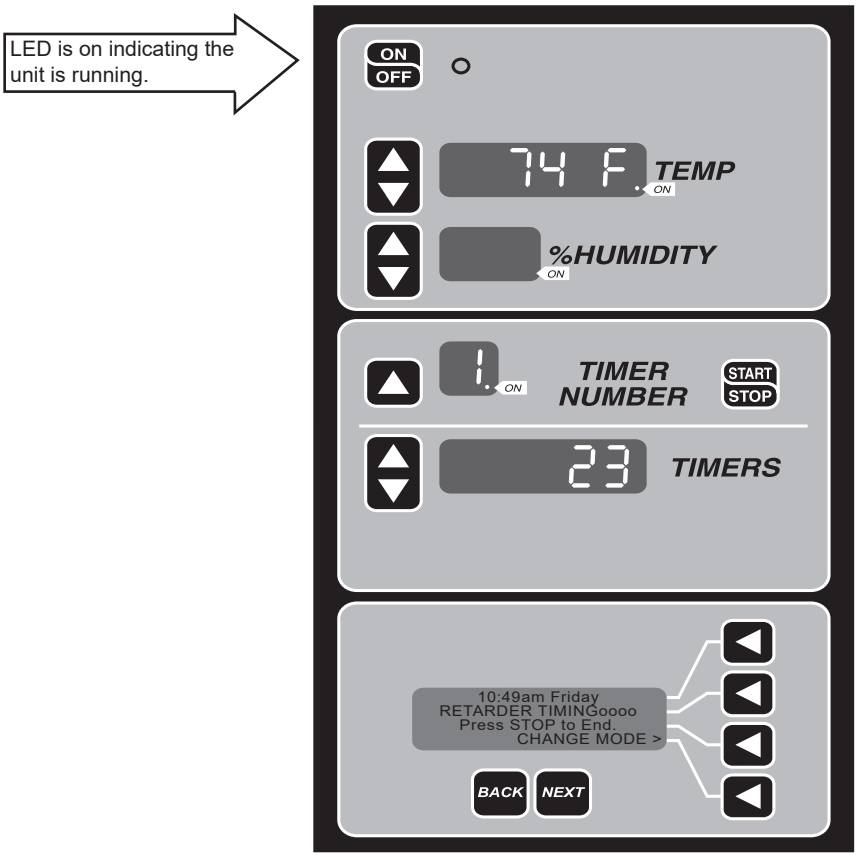


Fig. 5

Enter the desired timer and press timer START/STOP button. The LCD displays message "RETARDER TIMINGoooo" to indicate the retard operation is running with timer (Fig. 5 and Fig. 6).

To stop the retard timer, press timer START/STOP button. To stop the retard operation, press "CHANGE MODE" arrow button or ON/OFF button.

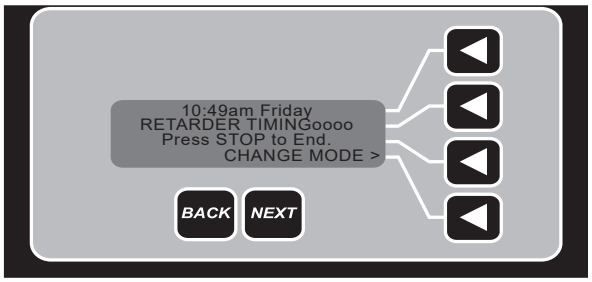


Fig. 6

RETARDER/ PROOFER (Auto Mode)

This operation will put Retard and Proof in one operation. The automatic Retard/Proof operation can be programmed for either a single day or seven days. (See chart for the parameter value setup.) After one operation cycle (Retard and Proof) is finished, the unit now runs Proofer mode. To resume the next day program, the operator must go to RETARDER/PROOFER Mode and press "Start/Retard/Proofer" arrow button.

NOTE: Rest period and Recover time are setup times before the unit enters the proof stage. (See chart for the default value.)

The operator must select "CHANGE MODE" arrow button, "RETARDER/PROOFER" arrow button, then press "Start/Retard/Proof" arrow button to resume the program for the next day.

- Follow the steps below to program automatic Retard/Proof operation.

To enter the RETARD/PROOF operation, press "Review/Edit Settings" arrow button (Fig. 7).

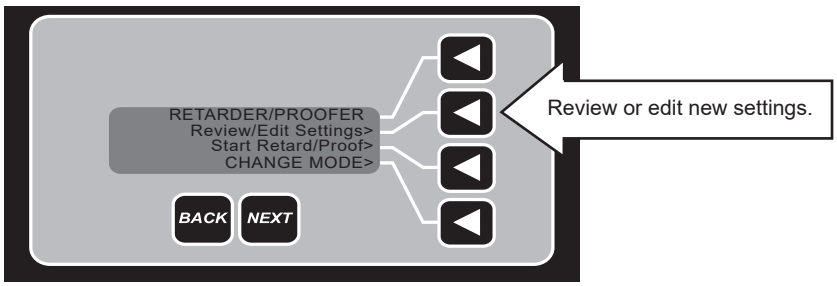


Fig. 7

After pressing Review/Edit Settings, the next screen on the LCD is shown here (Fig. 8).

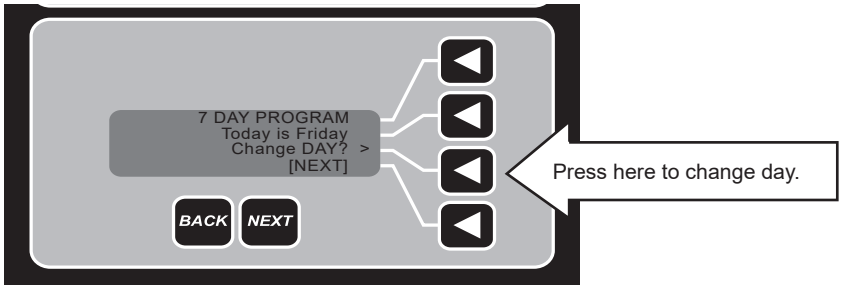


Fig. 8

In Figure 8, the LCD displays "7 DAY PROGRAM" because the parameter P15 value is set to "1".

NOTE: This step is for service only. If single day program is preferred, see Operating Parameter Setup to change P15 value to "0".

If day is not correct, then press "Change DAY?" arrow button. The LCD next screen displays the option to select days as shown below.

Use the arrow buttons to change day. Then select NEXT button or arrow button to set the clock (Fig. 9).

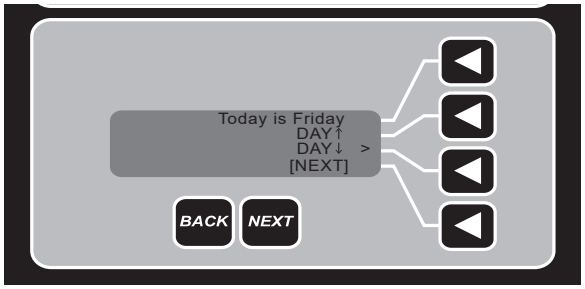


Fig. 9

If time is correct, then press NEXT button or arrow button. If time is not correct, select the "Set CLOCK?" arrow button to change time (Fig. 10).

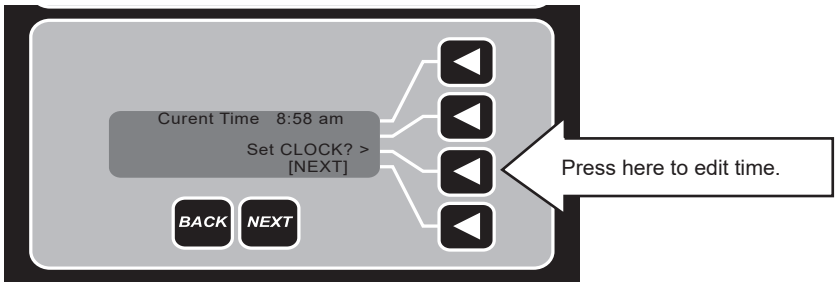


Fig. 10

NOTE: Programming is based on **Proof cycle completion** Time/Day. The program always starts with Sunday as the first day for programming. To activate the program, select the arrow button as shown below.

Operator also has the choice to skip the program on that day by pressing NEXT button or arrow button (Fig. 11).

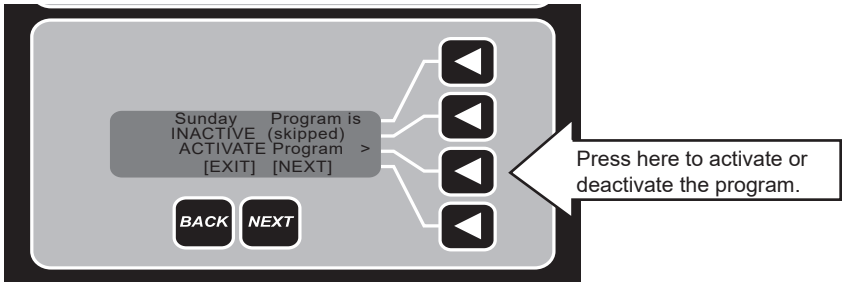


Fig. 11

If the program on Sunday is activated, this screen will display (Fig. 12).

The next LCD screen displays time that the program will be completed for proofing (Fig. 13).

Press NEXT button or arrow button.

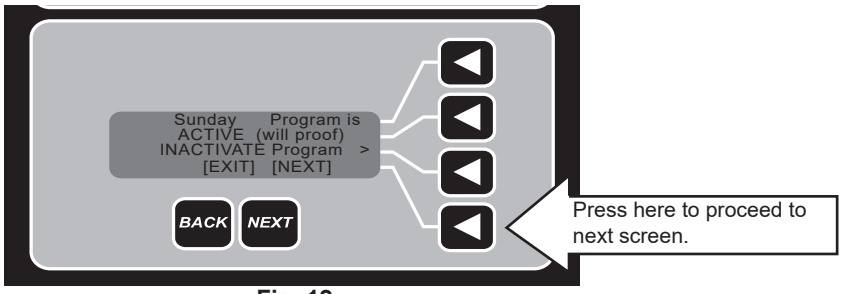


Fig. 12

Enter the desired time when to complete Proofing by pressing "Hours" and "Minutes" arrow buttons. Keep in mind that hour or minute is changed by one arrow button. If the desired hours or minutes is missed, keep pressing the arrow button until the desired time is reached.

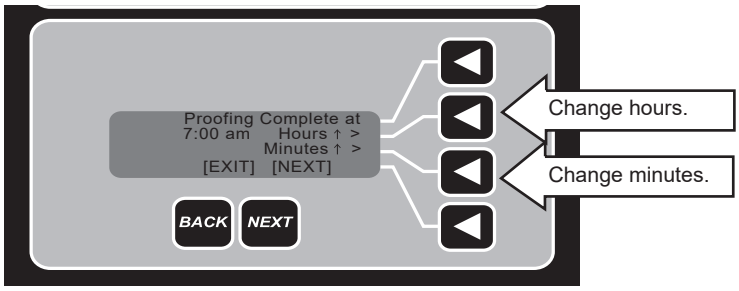


Fig. 13

Press NEXT button or arrow button.

Follow the LCD instructions to setup the Retard temperature. Press the Up or Down arrow button to select desired temperature (Fig. 14 and Fig. 15).

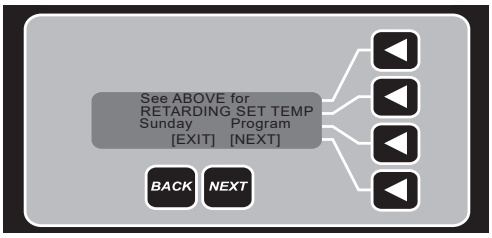


Fig. 14

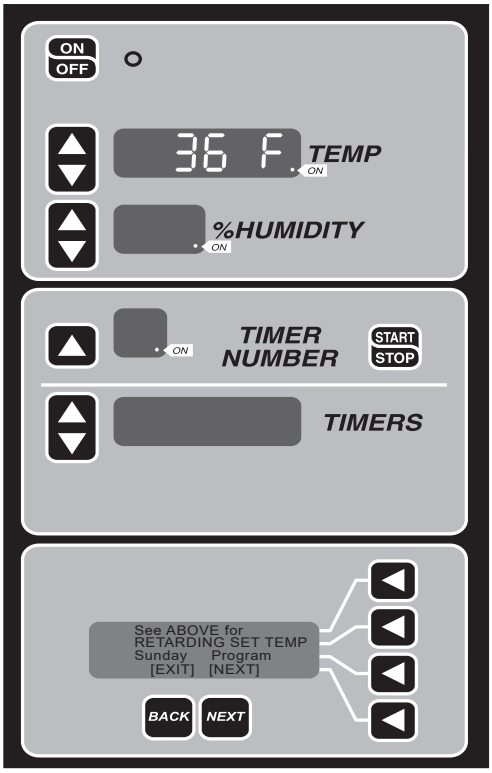


Fig. 15

After entering the Retard temperature, press NEXT button or arrow button to go to the Proof setup as shown in Fig. 16 and Fig. 17.

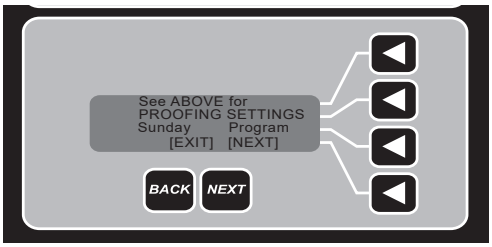


Fig. 16

Operator can enter desired temperature, humidity, and timer to end proof operation. This is the end of Retard and Proof cycle (for one day).

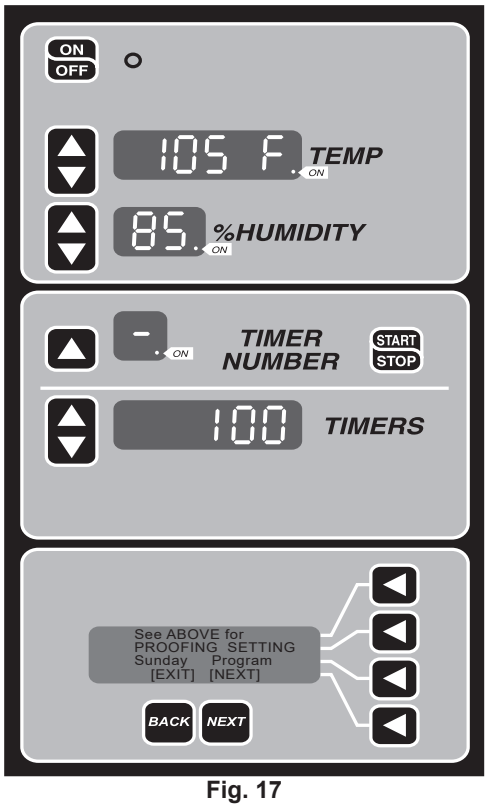


Fig. 17

The next screen shows the program for the second day after the NEXT button is pressed (Fig. 18).

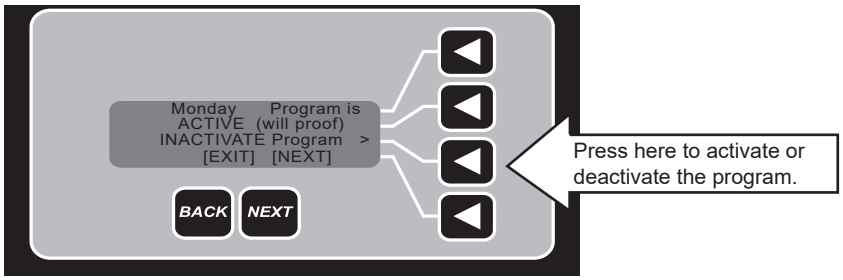


Fig. 18

Again, the LCD displays a choice of the next day program by activating or deactivating the program button. To skip the next day, the next day program must be inactive. Then press NEXT button. If next day program is activated, then proceed with similar steps as shown in screen shot Fig. 11 through Fig. 17.

After a 7-day program is finished, the LCD displays the final message as shown in Fig. 19.

The operator has two options, either to review/edit new change or go back to other operation options (manual Retard or manual Proof) by pressing "CHANGE MODE" arrow button. Otherwise, the auto Retard/Proof operation will start after the arrow button is pressed as shown in Fig. 19.

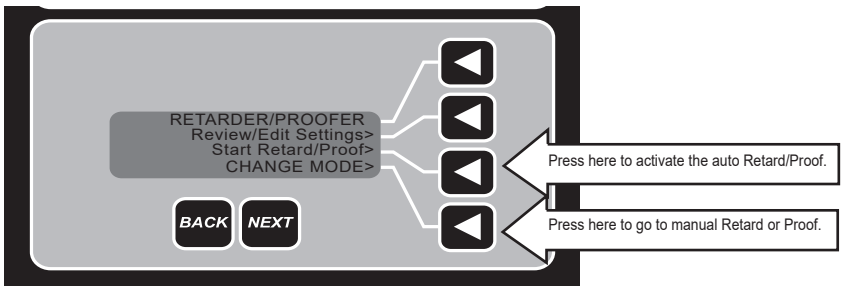


Fig. 19

OPERATING PARAMETER SETUP

- Press and hold the TIMER NUMBER arrow button.
- Press ON/OFF button. (Fig. 20).

NOTE: If timer keys are not available the parameter setup can be accessed pressing simultaneously the HUMIDITY UP button and the ON/OFF button.

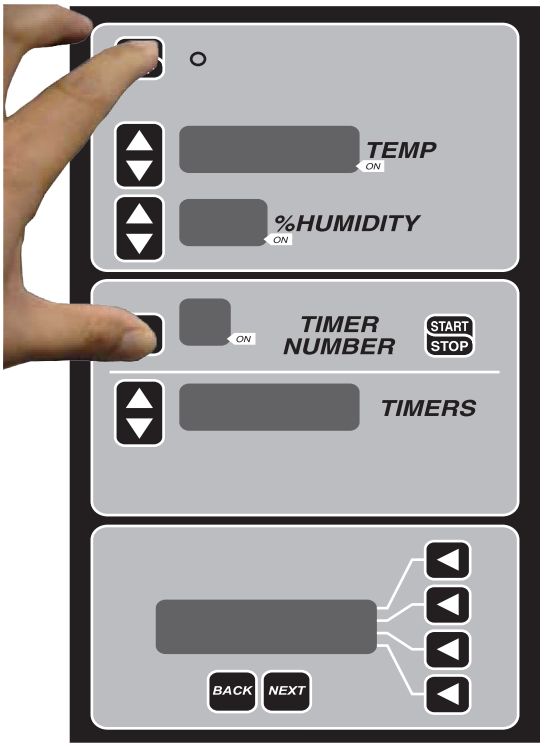


Fig. 20

After entering parameter setup mode (Fig. 21), 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.

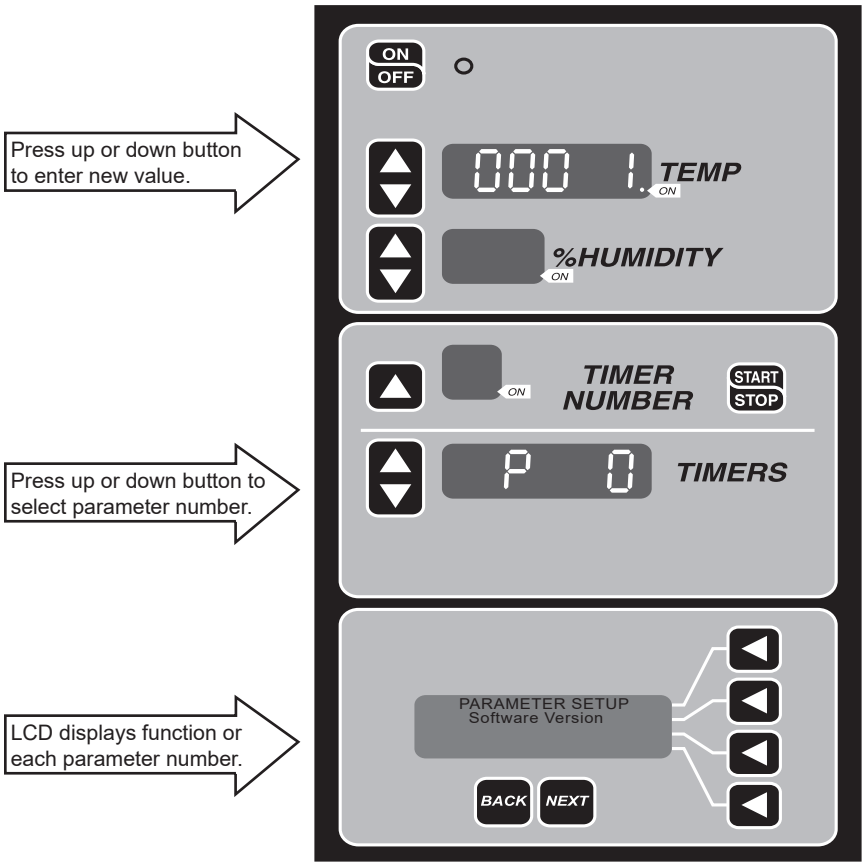


Fig. 21

Definitions and Default Values for Retarder Proofer		
/* P0	Software Version Number	
/* P1	Fahrenheit or Celsius	
/* P2	Temp Offset for Calib.	Min. 0 Max. 30, 15 is zero offset
/* P3	Hum Offset for Calib.	Min. 0 Max. 30, 15 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	Dummy (undefined)	
/* 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	Minimum Temp for Retard	34°F
/* P11	Maximum Temp for Retard	50°F
/* P12	Rest Time	Min. 5 min. Max. 480 min.
/* P13	Recovery Time	Min. 30 min. Max. 480 min.
/* P14	1=AM/PM, 0 = Military Time	
/* P15	1= 7Day, 0= Single Day	
/* P16	Defrost Every xx (hours)	Max. 10 hrs.
/* P17	Defrost FOR xx (minutes)	Max. 60 min.

NOTE: P0 thru P9 are for Proofer and Retarder Proofer. P10 thru P17 are for Retarder Proofer only.

Default Parameter Values		
0001	/* P0	Software Version Number
F	/* P1	F=Fahrenheit, C=Celsius
15	/* P2	Temp Offset for Calib.
15	/* 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
	/* P8	Not used
1	/* P9	Preheat 1= disabled, 0=enable
34	/* P10	Minimum Temp for Retard
50	/* P11	Maximum Temp for Retard
30	/* P12	Time for Rest Time
60	/* P13	Time for Recovery
1	/* P14	1=AM/PM, 0 = Military
0	/* P15	1= 7Day, 0= Single Day
6	/* P16	Defrost every x hours
10	/* P17	Defrost time x minutes

CUSTOMIZED OPERATION

The Proofer and the Retarder/Proofer controls have the capability of being customized to fit your own personal needs using the setup mode.

NOTE: Before entering the setup mode, read all the instructions to make sure you are completely clear on what to do. If you need assistance, please call your authorized service office.

Entering Setup Mode

1. Press and hold the TIMER NUMBER arrow button. While pressing the TIMER NUMBER arrow button, press the ON/OFF button (Fig. 22).
2. A "0" will appear in the TIMER NUMBER display.
3. Release both buttons.
4. You are now in setup mode.

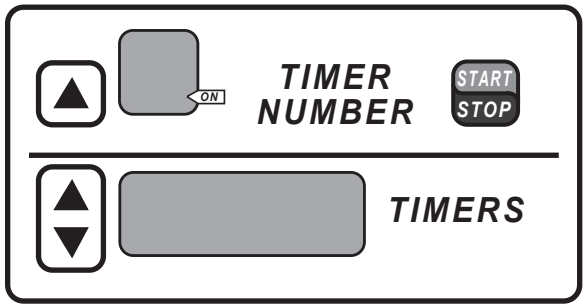


Fig. 22

Changing Items in Setup Mode

1. The number in the TIMER NUMBER display is the setup number. The other display windows will light up, depending on what item is being changed.
2. To change the setup item being displayed, go to that display and use the arrow buttons to the left of the display to adjust the setting.
3. To change the setup number, press the UP or DOWN arrow to the left of the TIMERS display.
4. To exit the setup mode, press the ON/OFF and TIMER NUMBER arrow button once to get back to normal operation.

NOTE: There may be setup numbers in the setup mode that do not pertain to your particular proofer. Do not attempt to set these. Skip them and go to the next appropriate number.

Setup Guide

Setup Number	Setup Item
1	Degrees Fahrenheit
2	Temperature Offset (0= -15°F/C, 15= 0°F/C, 30= +15°F/C)
3	Humidity Offset (0= -15%RH, 15= 0%RH, 30= +15%RH)
4	Minimum proof temperature that can be set
5	Maximum proof temperature that can be set
6	Minimum proof humidity that can be set
7	Maximum proof humidity that can be set
9	Preheat Disabled (1=Disabled, 0=Enabled) (PW only)
10	Minimum retard temperature that can be set (RPW only)
11	Maximum retard temperature that can be set (RPW only)
12	Rest period (RPW only)
13	Recovery period (RPW only)
14	Military or standard time (RPW only)
15	Daily/Weekly (1= 7 Day Cycle, 0= 1 Day Cycle)
16	Defrost Refrigeration equipment every xx hours (Max. 10 hours)
17	Defrost Refrigeration equipment for xx minutes (Max. 60 minutes)

Setup Hints

- During Rest Period, the unit does not heat, cool or circulate air; this allows the dough to rest.
- During Recovery Time, the unit slowly heats up and adds humidity, bringing the unit to the preset temperature and humidity and into the proof stage of the automatic retard/proof process.

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. 23).

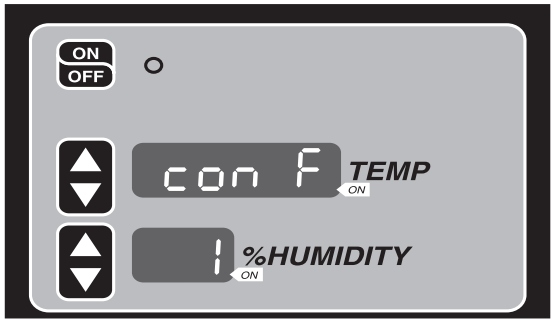


Fig. 23

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.

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. 24).
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. 23).
6. Press either TEMP UP or TEMP DOWN arrow until "LoAd" is displayed in the TEMP display (Fig. 25).

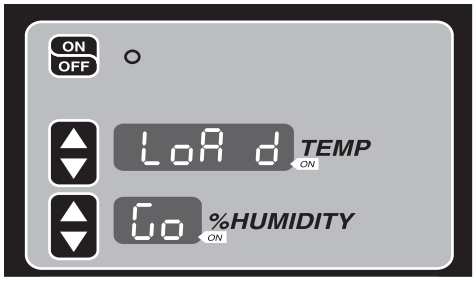


Fig. 25

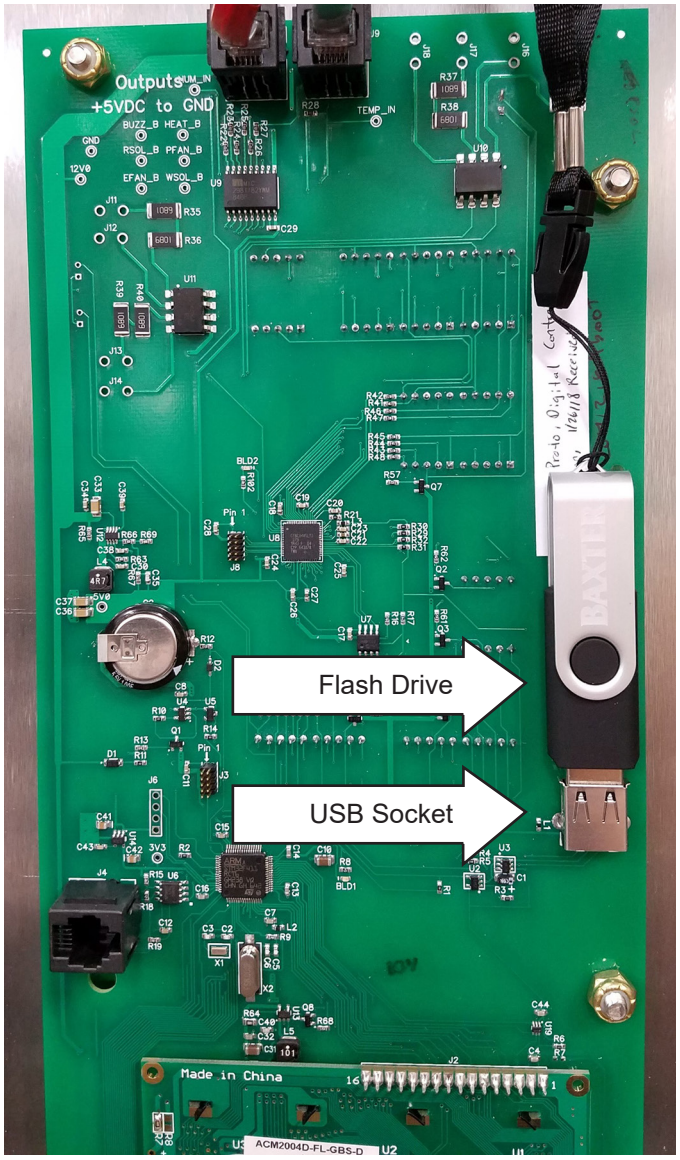


Fig. 24

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.

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 23).
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. 26). 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.

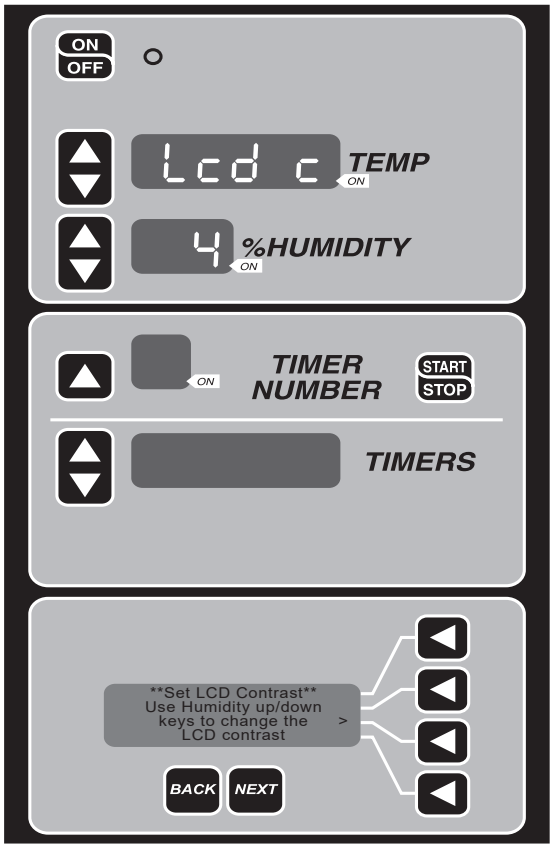


Fig. 26

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, spray nozzle and refrigeration coils (if applicable).

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 will not cool.	1. Verify that the temperature is set properly. 2. Contact your local authorized service office.