

OPERATION

Master 200 Mechanical Control with Timer

In Off Mode:

When the oven is off, there are no lights or indicators.

Start Up:

Press the Cook/Off/Cool Down rocker switch to the "Cook" position. The green lamp will light indicating the oven is powered in cook mode.

The oven will begin to heat to the temperature set on the thermostat dial. The amber lamp will light indicating the heat is active. As the heat cycles on and off to maintain the set temperature this light will go on and off accordingly.

The door must be closed for the oven to operate in cook mode. Opening the door will cause the heat to stop. The motor and fan will shut off. This is a safety feature.

Fan Speed:

The fan speed can be either high (1725 RPM) or (1150 RPM). The fan speed is controlled by the left rocker switch marked high and low.

Lights:

The oven lights are activated by pressing the light switch on the control panel. This is a momentary switch and the lights will stay lit as long as this button is held in the on position. Lights will work whenever there is electrical power connected to the oven.

Cool Down:

Pressing the Cook/Off/Cool Down rocker switch to the Cool Down position activates the fan and motor to cool the oven cavity. The door must be open slightly for the fan and motor to start. The heat is not active in this mode.

Optimal cool down will be achieved with the door open slightly. Opening the door too far will shut the fan and motor off. This is a patented safety feature.

Pressing the button to the OFF position cancels the cool down and turns the oven off.

Temperature:

The temperature range is from 150°F to 500°F (66°C to 250°C) is controlled by rotating the temperature dial and aligning the indicator to the desired temperature.

Timer:

The timer is set by rotating the dial clockwise aligning the indicator to the desired time cycle. The timer will count down from 2 minutes to 60 minutes. At the end of the timing cycle the buzzer will sound. The buzzer is turned off by rotating the dial counter-clockwise to the off position as shown on the control panel.



MASTER 300 Solid State Control with Mechanical Timer

In Off Mode:

When the controller is off, the unit will have no active prompts. Pressing the ON/OFF key will activate the controller into Start Up mode.

On Start Up:

In Start Up mode, the controller will heat to the temperature indicated on the temperature control. The fan speed will be that which was most recently set. When the oven cavity reaches the set temperature and is ready for operation the "LOAD" LED will light.

Controller Keys

Pressing the ON/OFF key will activate the oven.

Pressing the LIGHT key will turn the lights on for 30 seconds. The lights will work if the controller is in the Off mode. When the door is opened, the light will come on and stay on for 30 seconds.

Pressing the FAN HIGH key will activate the higher speed fan and light its LED.

Pressing the FAN LOW key will activate the lower speed fan and light its LED.

Pressing the COOL DOWN key will deactivate the heat, turn the fan on high and light its LED. The Cool Down will operate when the door is closed or opened *slightly*. When the door opens wider, the Cool Down mode will deactivate and the LED will flash. *This is a patented safety feature.* **Optimal cool-down will be achieved with the door open slightly.** If the doors are closed, the LED will flash. Pressing the COOL DOWN key again will turn the LED off and stop this mode. Pressing the ON/OFF key will also cancel Cool Down.

When the door is opened the fan and heat will stop until the door is closed. *This is a patented safety feature.*

When the ON/OFF key is pressed to turn the oven off and the oven is above 200°F (93°C), the oven will go into an Auto Cool Down mode. In Auto Cool Down, the oven will run the fan on high until the oven cavity drops below 150°F (66°C). During this time the "AUTO COOL DOWN" LED will light. When the oven temperature drops below 150°F (66°C) the oven turns off. This feature protects the oven motor from pre-mature failure. Optimal cool-down will be achieved with the door open slightly. Controller Dials.

Cooking TEMPERATURE is set by rotating the TEMPERATURE dial to the desired temperature, 150°F (66°C) to 550°F (288°C).

Cooking TIME is set by rotating the TIMER dial to the desired cooking time, up to 60 minutes.



NOTE: The "PROBE ERROR" LED will light if the oven temperature probe is malfunctioning or has become damaged or disconnected. Call for service if this occurs.

MASTER 410 ELECTRONIC CONTROL

MASTER 450 ELECTRONIC CONTROL WITH COOK-N-HOLD

MASTER 455 ELECTRONIC CONTROL WITH COOK-N-HOLD & CORE PROBE

In Off Mode:

When the controller is off, the display will show "OFF". Pressing the ON/OFF key will activate the controller into Start Up mode.

On Start Up:

In Start Up mode, the controller will heat to the last set temperature, time and fan speed. The factory defaults are 350°F (177°C), 30 minutes and low fan speed. The display will indicate "LO" when the oven is below the set temperature. When the oven cavity reaches the set temperature and is ready for operation the display will indicate "LOAD".

NOTE: If the oven temperature goes above the requested temperature the display will indicate "HI". If the oven temperature goes above 575°F (302°C) the display will indicate "HELP" and an audible signal will sound. *This is a safety feature.*

If the door is opened during a Cooking mode, the fan and heat will stop, and the display will indicate "DOOR" until the door is closed. *This is a patented safety feature.*

Pressing the **ACTUAL TEMP** key will display the actual oven temperature in 5° increments. Controller Keys.

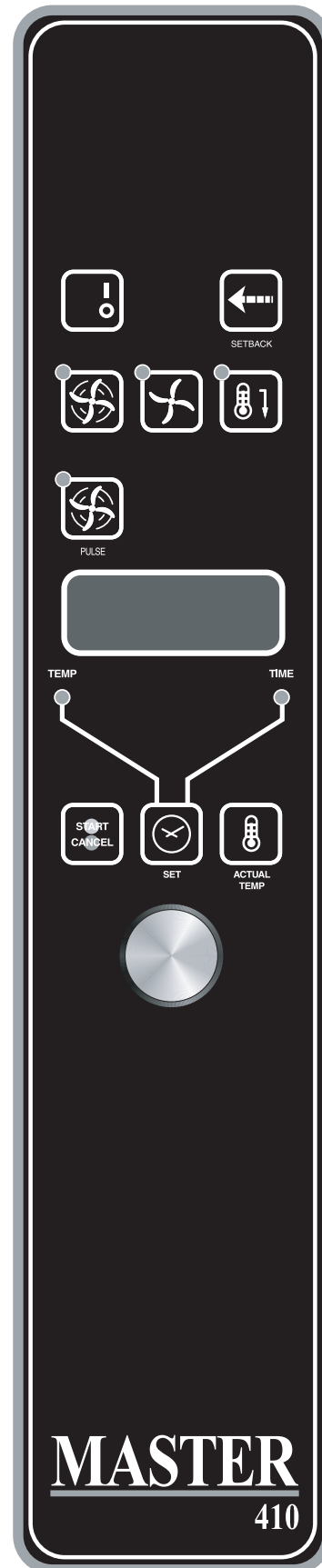
Pressing the ON/OFF key will activate the oven.

Pressing the LIGHT key will turn the lights on for 30 seconds. The lights will work if the controller is in the Off mode. When the door is opened, the light will come on and stay on for 30 seconds.

Pressing the FAN HIGH key will activate the higher fan speed and light its LED.

Pressing the FAN LOW key will activate the lower fan speed and light its LED.

Pressing the FAN PULSE key will activate the lower fan speed and light its LED. The fan will be active for 30 seconds then off for 30 seconds, and continues this cycle.



Pressing the **SETBACK** key will cool the oven cavity to a preprogrammed temperature (factory set at 250°F [121°C]). The oven will automatically go into Setback mode after the pre-programmed non-usage time, (see 'Changing Factory Setback Program'). The display will indicate "**SETB**". This is an energy-saving feature.

Pressing the **COOL DOWN** key will deactivate the heat, turn the fan on high and light its LED. The display will indicate "**OPEN DOOR**" if the door is closed, prompting the user to open the door slightly. With the door open slightly the display will indicate "**COOL**". The Cool Down will operate when the door is closed or opened *slightly*. **Optimal cool-down will be achieved with the door open slightly.** When the door opens wider, the Cool Down mode will deactivate and the display will indicate "**DOOR**". *This is a patented safety feature.* Pressing the **COOL DOWN** key again will turn the LED off and stop this mode. Pressing the **ON/OFF** key will also cancel Cool Down. Cool Down is not active during a cook.

When the **ON/OFF** switch is pressed to turn the oven off and the oven was above 200°F (93°C), the oven will go into an **Auto Cool Down** mode. In Auto Cool Down, the oven will run the fan on high until the oven cavity drops below 150°F (66°C). During this time the display will indicate "**AUTO**". When the oven temperature drops below 150°F (66°C) the oven turns off. *This feature protects the oven motor from premature failure.* **Optimal cool-down will be achieved with the door open slightly.**

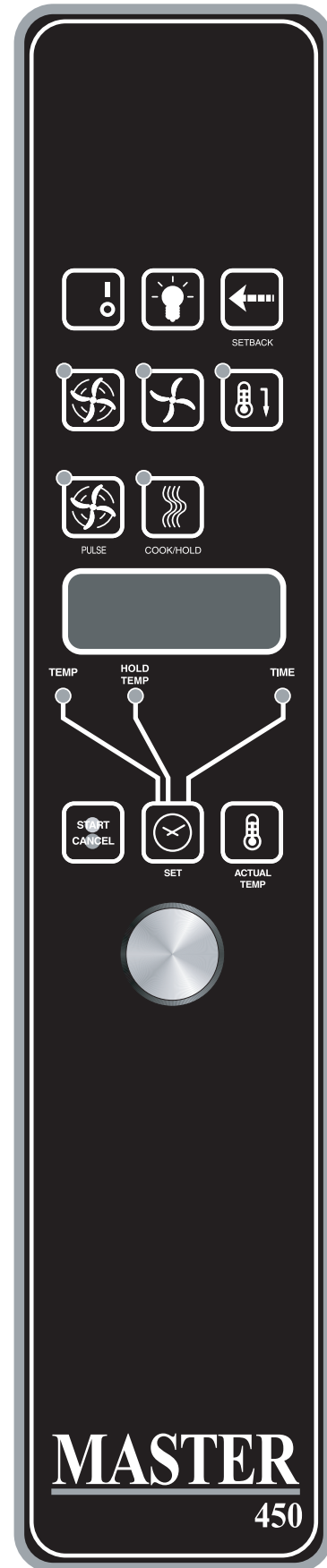
Operating the Controls

Setting the cook temperature and time are done in the same manner. Pressing the **SET** key will light the **TEMP** LED. The operator then sets the temperature by rotating the dial on the controller until the desired temperature is shown on the display. Pressing the **SET** key a second time lights the **TIME** LED and allows the operator to select the desired cook time as shown on the display. Pressing the **SET** key a third time ends the programming.

Pressing the **START/CANCEL** key will start the timing cycle. The display will count down from the Set time in minutes and seconds (solid colon) or hours and minutes (blinking colon) the minutes and seconds. When the cycle is completed, processing this key will also cancel the "**DONE**" prompt. To cancel a timing cycle in progress, press and hold the **START/CANCEL** key for 3 seconds.

Cook-N-Hold Operation

Pressing the **COOK/HOLD** (450 and 455 Controllers Only) key activates the Cook-N-Hold mode and lights its LED. To verify the proper hold temperature has been selected, press the **SET** key twice. The display will show the hold temperature. At the end of the cook cycle, an audible alarm will sound, the display will flash "**DONE**" and change to count "**UP**" the hold time. The oven will switch to the programmed hold temperature.



Setting the cook temperature, hold temperature and time are done in the same manner. Pressing the **SET** key will light the **TEMP** LED. The operator then sets the temperature by rotating the dial on the controller until the desired temperature is shown on the display. Pressing the **SET** key a second time will light the **HOLD** LED and allows the operator to select the desired hold temperature as shown on the display. Pressing the **SET** key a third time lights the **TIME** LED and allows the operator to select the desired cook time as shown on the display. Pressing the **SET** key a fourth time ends the programming.

Pressing the **START/CANCEL** key will start the timing cycle. When the cycle is completed, pressing this key will also cancel the "DONE" prompt. To cancel a timing cycle in progress press and hold the **START/CANCEL** key for 3 seconds.

Core Probe Operation

The **Core Probe option** (455 Controller Only) is only active when the core probe is plugged into its connector. To set the core temperature, first plug the core probe into its connector. The display will indicate "100" and the **CORE TEMP** LED will be on. The operator then sets the temperature by rotating the dial on the controller until the desired temperature is shown on the display. Pressing the **SET** key stores the core temperature and starts the cooking process.

To set the oven temperature, press the **SET** key again. The **TEMP** LED will light and the oven temperature can be set by rotating the dial on the controller until the desired temperature is displayed. Pressing the **SET** key again will light the **HOLD** LED allowing the operator to set the hold temperature in the same manner.

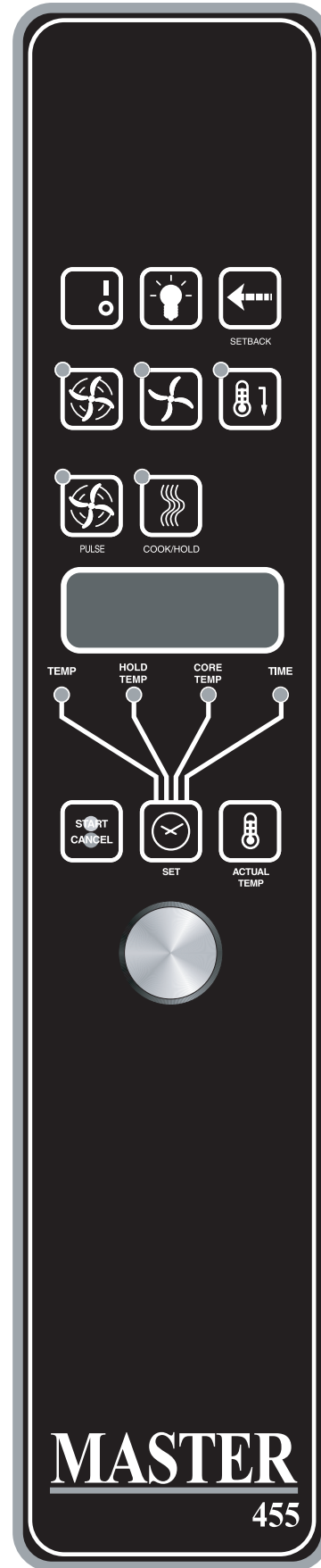
NOTE: If the hold temperature is not set, the default hold temperature is 150°F (66°C) or the last programmed temperature. (Hold temperature range is 140°F (60°C) to 210°F (99°C).

When the core temperature is reached, the display will sound and flash "DONE" for 3 seconds. Automatically, the display will switch to count "UP" the time the oven is on hold.

CHANGING FACTORY SETBACK PROGRAM

To change the factory setback settings, press and hold the **SETBACK** key for two seconds. The **TEMP** LED will light and a temperature will be displayed (factory preset at 250°F [121°C]). Set the temperature using the dial, then press the **SET** key. The **TEMP** LED will go out and the **TIME** LED will light. Set the time using the dial, then press the **SET** key. Press the **SET** key one more time to exit programming.

NOTE: To disable the setback function, set the time to zero.



MASTER 470/475 ELECTRONIC PROGRAMMABLE CONTROL

Manual cooking:

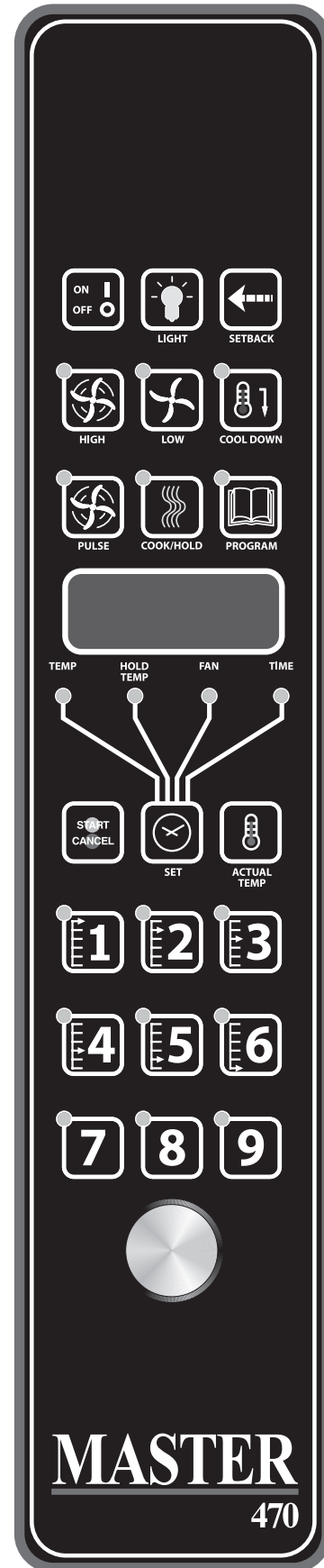
1. Press SET key - TEMP LED will light.
2. Set temperature using the dial (factory preset at 350°F).
3. Press SET key - FAN LED will light.
4. Select fan mode using one of the three (3) fan keys (HIGH, LOW, PULSE) - the selected fan LED will light.
5. Press SET key - TIME LED will light.
6. Set cook time using the dial (factory preset at 30:00).
7. Press SET key - ready to cook.
8. Press START/CANCEL to begin manual cooking.

Manual cooking using Cook-N-Hold:

1. Press the COOK/HOLD key, that key's LED will light.
2. Press SET key - TEMP LED will light.
3. Set cook temperature using the dial (factory preset at 350°F).
4. Press SET key - HOLD LED will light.
5. Set hold temperature using the dial (factory preset at 200°F).
6. Press SET key - FAN LED will light.
7. Select fan mode using one of the three (3) fan keys (HIGH, LOW, PULSE) - the selected fan LED will light.
8. Press SET key - TIME LED will light.
9. Set cook time using the dial (factory preset at 30:00).
10. Press SET key - ready to cook.
11. Press START/CANCEL to begin manual cooking.

Programming Product Keys (Master 475):

NOTE: Cooking time(s) is the element of the program that tells the controller that other information (temperature, fan speed, etc.) will be inputted into the controller. The first step is to enter all the time periods required, followed by the addition of the other cooking elements.



1. Press and hold PROG key for three (3) seconds - all the product key LEDs light.
2. CODE will be displayed. The controller is asking for the access code. Press 4-2-7-5 and the START/CANCEL key. PROD will be displayed indicating you have gained access to Product Programming.
3. Press the product key (1 - 9) into which you want to store a cooking program. SHLF will be displayed. The control is asking if you want to program the key as a shelf timer or with a cooking profile. Select your answer by pressing the START/CANCEL key. When the correct answer is displayed, press the SET key. The TIME LED will light. 30:00 will be displayed.
4. Set first cook time using dial. If more than one cooking profile is desired:
 - press the product key where the program is to be stored (1 - 9) - PR-2 will be displayed.
 - set the second cook time using the dial (factory presets for PR-2 through PR-5 are :00).
 - press the same product key (1 - 9) again - PR-3 will be displayed.
 - Repeat this process for all profiles. When the last profile time has been entered, press the SET key, OR

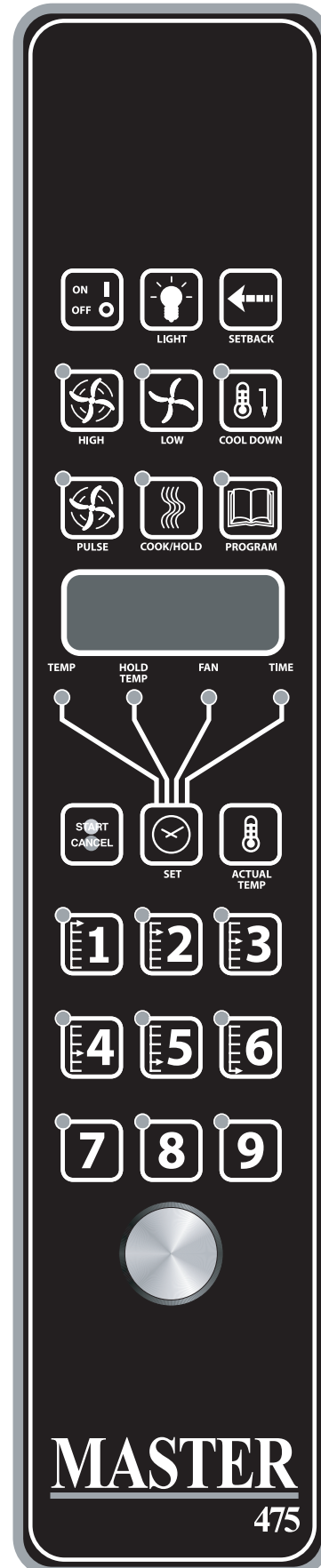
If less than five (5) profiles are desired press the SET key after the last required profile - PRE will be displayed, followed by :00. The controller is asking if you would like a reminder alarm (pre-alarm) to sound during the cooking process. (factory preset is :00).
5. If a pre-alarm signal is desired - dial in the time that the alarm is to sound. (Ex. If the product is to be turned halfway through the 60 minute cooking cycle, set the pre-alarm to 30 minutes). If pre-alarm is not desired verify that ":00" is displayed. Press the SET key - TEMP Led will light, and the display will show the first profile cooking temperature. (factory preset at 350°F).
6. Set the first cooking temperature using the dial.

Press the product key - PR-2 will be displayed followed by the second temperature.

Set the second cooking time using the dial.

Repeat as you did for cooking time, for all the profiles desired.

NOTE: The controller will only accept cooking temperatures for the number of profiles for which a cooking time has been set. If the product key is pressed after the last programmed profile, the first temperature will be displayed.



Press SET after the last cooking temperatures has been entered, HOLD will be displayed.

7. Use the START/CANCEL key to select yes or no. Press the SET key.
8. If yes was selected, the HOLD LED will light. Enter the hold temperature using the dial. (factory preset at 200°F) Press the SET key. FAN will be displayed and the FAN LED will light.

Set the fan speed desired for the first cooking profile using the individual fan keys (HIGH, LOW or PULSE), press the product key and set the fan speed for the second cooking profile. Continue until all the profiles have been assigned a fan speed. Press the SET key when complete. As with the temperature, if the product key is pressed after the last programmed profile, the first fan speed will be displayed.

9. FL or St will be displayed (for flex time or straight time) (factory preset for flex time). Select flex or straight time using the START/CANCEL key for the first profile. Press the product key and select straight time or flex time for the second profile. Continue until all the profiles have been assigned straight or flex time. Press the SET key when complete. If the product key is pressed after the last programmed profile, the first profile will be displayed.
10. Programming for that product key is complete.

Programming Product Keys (Master 470):

NOTE: The Master 470 controller will only accept a single cooking profile per product key (one cooking time, one cook temperature, one fan speed, and one choice for straight or flex time).

Press and hold PROG key for three (3) seconds - all the product key LEDs light.

1. CODE will be displayed. The controller is asking for the access code. Press 4-2-7-5 and the START/CANCEL key. PROD will be displayed indicating you have gained access to Product Programming.
2. Press the product key (1 - 9) into which you want to store a cooking program. SHLF will be displayed. The control is asking if you want to program the key as a shelf timer or a cooking profile. Select your answer by pressing the START/CANCEL key. When the correct answer is displayed, press the SET key. The TIME LED will light. 30:00 will be displayed.
3. Set the cook time using dial.

Press the SET key - PRE will be displayed, followed by :00. The controller is asking if you would like a reminder alarm (pre-alarm) to sound during the cooking process. (factory preset is :00).

4. If a pre-alarm signal is desired - dial in the time that the alarm is to sound. (Ex. If the product is to be turned halfway through the 60 minute cooking cycle, set the pre-alarm to 30 minutes). If pre-alarm is not desired verify that ":00" is displayed.

• Press the SET key - TEMP Led will light, and the display will show the cooking temperature. (factory preset at 350°F).

5. Set the cooking temperature using the dial.
Press the SET key. - FAN will be displayed and the FAN LED will light.
6. Set the fan speed desired using the individual fan keys (HIGH, LOW or PULSE).
Press the SET key. - FL or St will be displayed (for flex time or straight time) (factory preset for flex time).
7. Select flex or straight time using the START/CANCEL key.
Press the SET key when complete.
8. Programming for that product key is complete.

Cooking Using The Product Keys (Master 475 and Master 470):

1. On initial start-up, press the product key for the menu item to be cooked. Wait until LOAD is displayed.
2. Load the oven.
3. Press the product key for the loaded menu item.
4. Press the START/CANCEL key.
5. To cancel the alarm or the hold, press the START/CANCEL key followed by the product key.

Verifying hold time (Master 475 and Master 470):

While a product is being held, press and hold the product key. The actual hold time will be displayed.

Selecting Fahrenheit or Celsius (Master 475 and Master 470):

Press PROG and ACTUAL TEMP keys at the same time, F or C will be displayed. (factory preset for F)

Press the START/CANCEL key to switch between F and C,

When the desired setting is displayed press the PROG and ACTUAL TEMP keys at the same time.

Cooking with the Shelf Timer (Master 475 and Master 470):

The shelf timer option is used to independently time each of the up to six different shelves or racks within the oven.

NOTE: To use the shelf timer option, at least one product key must be programmed with a cooking profile (temperature, time, fan speed, flex or straight time). The program key must be limited to a single cooking profile to be used with the shelf timing option. If more than one product key is to be used, all product keys to be used must feature the same cooking temperature and fan speed. Flex or straight time and cooking time can be different. The Cook-N-Hold option can not be used with the shelf timer operation.

Pressing the desired product key will bring the oven to the desired cooking temperature, once the oven has reached the proper cooking temperature as indicated by LOAD in the display.

1. Press the product key containing the desired cooking profile (1 - 9).
2. Press the shelf key for the shelf location to be timed (1 - 6).
NOTE: product keys and shelf keys are the same keys.
3. Press the START/CANCEL key to begin the cooking/timing process.
4. When the cooking/timing process is complete for each shelf, an audible "done" signal will sound and the display will indicate which shelf is finished. Example: SH-1
5. To turn off the alarm press the product key with the flashing LED.

Example: Two product profiles contain the same cooking temperature, fan speed and are both programmed for flex time - keys 1 and 6.

Two trays of product are going to be cooked in the oven at the same time. The first tray will use product key 1 and will be placed in rack position 2. The second tray will use product key 6 and will be placed in rack position 4. Once the oven display indicates LOAD:

1. Load food product into oven on shelf 2.
2. Press product key 1, then shelf key 2.
3. Press the START/CANCEL key to start cooking on shelf 2.
4. Load food product into oven on shelf 4.
5. Press product key 6, then shelf key 4.
6. Press the START/CANCEL key to start cooking on shelf 4.
7. When product on shelf 2 is finished cooking, an audible alarm will sound and the display will flash DONE, then SH-2, and the product key 1 LED will be flashing.
8. To turn off the alarm, press product key 1.
9. When product on shelf 4 is finished cooking, an audible alarm will sound and the display will flash DONE, then SH-4, and the product key 6 LED will be flashing.
10. To turn off the alarm, press product key 6.