Key Functions of the Controller

Temperature Scale Selection.

You can select either the Fahrenheit or Centigrade temperature scale. You must select a scale before pressing Start. Do not change the scale during a firing. The scale remains in permanent memory. To change to Centigrade or back to Fahrenheit, follow these steps:

Step	Press	Action	Display
1	^{0}F or ^{0}C	Selects Fahrenheit or Centigrade scale	CHG^0
2	Enter	Stores the new selection (Decimal point in lower right corner of display indicates ^{0}C)	(Flashes Temp.)

Delay Start

Delay start allows the operator to program the kiln now for a start at a later time that is more convenient. The option provides for a delay programmed in hours and minutes up to 99 hours and 99 minutes. This option is best utilized when a Skutt EnviroVent kiln ventilation system is installed on the kiln. With an EnviroVent, the system is completely automatic. No one will have to be close by to close the lid at the appropriate time.

The delay time is held in memory from one firing to another. To clear the option without clearing the entire program, enter 0 for delay time.

Setting a Delay can begin when the internal kiln temperature is flashing.

Step	Press	Action	Display
1	Delay	Enters delay start mode	deLA
2	0 - 9 9 9 9	Selects time (hrs.min) to delay start of firing	0-99.99
3	Enter	Stores delay time until reprogrammed.	(Flashes Temp.)

Alarm

The Alarm tells you when the kiln has reached the temperature you selected. The alarm sounds until you turn it Off by pressing Enter. When the alarm sounds it does not interrupt firing. Pressing Enter to stop the alarm does not interfere with the program.

The alarm temperature can be reset during firing without disturbing the firing program. Do not press Stop during the firing to reprogram the alarm.

When not in use, the alarm should have a value of 9999 entered so it will not sound.

One example of alarm use would be to set it for 1000^{0}F/538^{0}C to alert you that it is time to lower the lid. The following steps describe how to set the alarm temperature.

Step	Press	Action	Display
1	Alarm	Enters alarm mode	ALAr
2	0 - 9 9 9 9	Selects temperature at which alarm is to sound	0-9999
3	Enter	Stores the new alarm temperature.	(Flashes Temp.)

A sample heating alarm is illustrated below using a two segment Ramp/Hold program. The Alarm is programmed after the Ramp/Hold.

Segment	Rate	Temperature	Hold
1	570^0/hr	1566^0 F	0
2	108^0/hr	1816^0 F	0

The Alarm is set for 1500^{0}F. The alarm will sound at 1500^0 while the kiln is heating to 1816^0. When the alarm sounds, press **Enter** to stop it. The kiln will continue to fire the program until it is complete.

Review

The Review mode can be entered from the "flashing internal kiln temperature". -
Caution: Pressing Review during firing momentarily stops operation of the kiln, allowing temperature to drop. This drop in temperature will increase firing time and may also cause a slight overfire if this procedure is repeated frequently during firing.

After displaying the current program, the screen will return to its prior state. The adjusted temperature is displayed during the last hour of Cone Fire Mode. See Appendix 2 for more information on heat work.

The values shown during Review are as entered in the original profile. This is a good time to recheck the temperature value of the cone you entered during Cone Fire mode. If the kiln has been started with a 3 hour delay time set and one hour later you enter Review mode, the delay value will still be displayed as 3, not the remaining 2 hours. When Review mode is finished for this example, the display will be showing a time value indicating the time remaining in the delay start segment of the firing profile.

The Review display is quite rapid, so you may need to go through several sequences to see all the segments. The following are the steps to review the program:

Step	Press	Action	Display
1	**Review**	Displays all programmed functions and values	(See below)

Review Display for Cone Fire Mode

ConE	Cone value
SPd	Firing speed: Slow, Med, Fast
HOld	Time in hrs. min. to hold
deLA	Delay start in hours
ALAr	Temp. when alarm will sound

Review Display for Ramp/Hold Mode

USEr	Stored program number
SEGS	Number of segments
rA 1-8	Rate of temp change ea. segment
½F 1-8	Temp. to reach each segment*
HLd 1-8	Hrs. min hold each segment
deLA	Hrs. min delay before firing
ALAr	Temp. when alarm will sound

If Centigrade scale is elected, display will show ^0C.

Cone Table Feature

This function allows you to look up the final temperature the controller will reach for a given cone value. The built-in cone table uses a heating rate for self-supporting cones of 108^0F/hour. It is vitally important that you know the temperature you intend to reach and the temperature tolerance of the clay you are working with. If the wrong cone number is entered, a possible overfire may occur. Cooler cones begin with a 0 in front of the number. The larger the number with an 0 in front, the cooler the firing temperature. High fire cones begin at 1 and go up. The larger the number, the hotter the firing. See the Cone table in Appendix 2.

This function can be entered when the internal temperature of the kiln is flashing or when Ramp/Hold mode is asking for temperature in degrees for any of the six segments. The steps are as follows:

Step	Press	Action	Display
1	**Cone Table**	Enters cone table mode	ConE
2	**0 2 2 - 1 0**	Selects desired Cone (eg: 06)	06

View

The View function is used during Ramp/Hold firing to display the current segment of program currently in operation. If this function key is engaged during a Cone Fire, the data displayed will not resemble your programmed input. Unlike Review, only the current segment will be displayed.

Step	Press	Action	Display
1	**View**	During Ramp, displays heating rate and segment.	rA, 1-8
		During Hold, displays Hold and segment.	HLd, 1-8

Powering the Kiln

When the kiln is plugged in, the display reads PF. Press Enter and wait for the internal temperature to flash before proceeding. The internal temperature will flash constantly even when the kiln is not in use. The controller is not activated until Enter is pressed and a choice of Cone Fire Mode or Ramp/Hold Mode is selected.

   At the end of a firing, the display will read CPLt until you press Enter, at which time it will flash only the internal kiln temperature. In areas where there are frequent power fluctuations or electrical storms, it is wise to unplug the kiln, or turn its breaker off, when it is not operating.

Stop Firing

Pressing the Stop key will turn the controller's output off and cause the display to flash the internal temperature of the kiln. You can stop any time during operation. During a firing operation, the only function of Stop is to terminate a program. As explained on page 25, it is can also be used to quickly enter a stored USEr profile during programming.

Start Firing

From the flashing temperature, press Start to begin a firing. The controller will display On while it does a self-check. The amount of time in a delay start is then displayed and is counted down until zero delay is remaining, at which time the firing starts. During firing, the kiln temperature is displayed.