COOL (Cone Fire Controlled Cooling)

- This option allows you to toggle the Cool feature ON or OFF. The Cool feature allows you to add a 1-segment cooling program to the end of a Cone Fire program. When it is toggled "ON", it will prompt you to input a "Rate", "Temperature", and "Hold Time" after you input the Hold Time for a Cone Fire program. This is helpful when trying to achieve certain glaze effects. The Rate will show as "RA 8", the Temperature as "°F 8", and the Hold Time as "Hd 8". Once "SET" is seleced, press **ENTER**. Press **MENU** until the display shows "COOL", then press **ENTER**. Display will read current option. Press the **1** key to toggle the feature ON or OFF, then press **ENTER**.

CHG ° (Change from Fahrenheit to Celsius Scale)

- The controller can display temperature values in Fahrenheit or Celsius. If the scale is set to display in Celsius, an LED dot will illuminate in the bottom right hand corner of the display. To select a new scale, press **MENU**, the display will show "SET", press **ENTER**. Press **MENU** until the display shows "CHG", then press **ENTER**. Display will read current option. Press the **1** key to toggle to the alternate scale. "°C" represents Celsius and "°F" represents Fahrenheit.

16-S

- This option allows you to toggle the 16-S feature ON or OFF. This feature links the Ramp/Hold programs stored in memory positions 5 and 6 to allow you to create a program with up to 64 segments (previously up to 16 segments, hence the name of the feature). Normally a program is limited to 32 segments. This feature will only display when a CONE FIRE Mode program or the number 5 Ramp/Hold program is loaded. See page 22 for programming instructions.

ARM

- This feature can be turned on (ARMED) to allow you to remotely turn the kiln on and off when used in conjunction with the CIS (Computer Interface System) which is an optional accessory. This is a safety feature designed to prevent someone from remotely starting a kiln when it is being worked on by a technician or when the kiln area cannot be checked to be free of combustible material. Once "SET" is seleced, press **ENTER**. Press **MENU** until the display shows "ARM", then press **ENTER**. Display will read current option. Press the **1** key to toggle the feature ON or OFF, then press **ENTER**.

dIAG (Diagnostics)

"dIAG" or Diagnostics, is where all of the diagnostic tools are located. To access the dIAG menu press **MENU** until the display will shows "dIAG", press **ENTER**. The following options are available under the "dIAG" menu:

ERTF (Error Temp & Time of Last Firing)

- This feature will display the temperature and the point of time in the firing at which the last Error occurred. Often times this information is helpful in troubleshooting the problem which created the error. Once "ERTF" is selected, press **ENTER** and it will first flash the temperature at which the error occurred and then the time into the firing it occurred. The ERTF information will also appear automatically when an error alarm sounds and the program is terminated. Pressing any key, will show the temperature and elapsed time at which the error occurred.

VOLT (Voltage)

- This feature is used to test the voltage supply to your kiln. It tests the voltage first with the elements off, "No Load" and then again with the kiln on, or "Full Load". Select "VOLT" under the "dIAG" menu and press **ENTER**. After the "NOLd" number reading is displayed, press **ENTER** to receive the "FLLd" number reading. The power to the kiln will be switched on for a brief moment when the full load voltage is checked. Our technicians can use this information to help you troubleshoot voltage related problems over the phone. When the voltage readings appear on your display, write them down. Often times voltage related problems can happen only at certain times of day, so try to obtain the readings at the same general time your kiln would be firing.

AMPS (Amperes)

- This is probably the most useful diagnostic tool available to you. All KilnMaster kilns produced after 3/20/2006 are equipped with a current sensor in the control box. This allows us to test the current of each output to the kiln. This is very helpful in determining if a relay or element needs replacing.
- When you select "AMPS" under the "dIAG" menu and press **ENTER**, it will give you an ampere reading for each output of the kiln (except the accessory and safety output). Which elements these outputs control will vary by kiln model. If your kiln uses only one or two outputs, it will still give you three readings but the unused outputs will give a reading of zero.

LEd (LED Display)

- This feature, when activated, lights up all of the segments in the LED display. This is helpful in locating any segments in the display that may have gone bad and may explain why some indicated readings are not correct. Select "LEd" under the "dIAG" menu and press **ENTER** to activate.

bd T (Board Temperature)

- The electronics on the controller's circuit board may be damaged if the board exceeds 160˚F (71˚C). This should not occur under normal conditions. However, if the kiln is located in a small enclosure with poor ventilation or in areas where the temperatures are unusually hot, it is possible. Using this feature will tell you if your controller temperature is approaching potentially harmful levels.
- If you find that your board temperature is consistently over 150˚F (66˚C), you may want to consider improving air circulation to the kiln room. A box fan blowing on the controller can help considerably.
- Select "bd T" under the "dIAG" menu and press **ENTER** to see the current board temperature. you can also see the current "bd T" temperature during a firing by pressing the **VIEW** key.

SW V Software Version

- At Skutt, we are continually working on ways of improving our products. This feature will indicate the software version your controller is using. Select "SW V" under the "dIAG" menu and press **ENTER** to see software version.

OUTS (Output Test)

- There are four outputs that can be used on the controller. There are three designated for elements and one designated to run an accessory. This feature allows you to test each output individually to see if it is operating correctly. Select "OUTS" under the "dIAG" menu and press **ENTER** to activate.
- When activated this feature will test each output beginning with Output 1 and ending with Output 4. It will cycle each output on for approximately two minutes. You can advance to the next output at any time by pressing **ENTER**. To see if the elements are cycling ON, you can place a small piece of paper on each element (before doing the Output Test and with the kiln unplugged or circuit breaker turned off). If the paper is burned after doing the Output Test, then the element came on.
- Be sure that the control box and kiln lid are closed before you use this feature in order to ***avoid electrical shock.***

TEST

- This is diagnostic tool designed for field technicians that will check the following items. It is accessed through the "dIAG" menu under "Test" by pressing **ENTER**.
    - Output Test
    - AMP Check by section
    - Voltage Test
    - Voltage Test Under load
    - DC Output Voltage
    - A to D (Analog to Digital) Chip Check