



DIGITAL KNIGHT

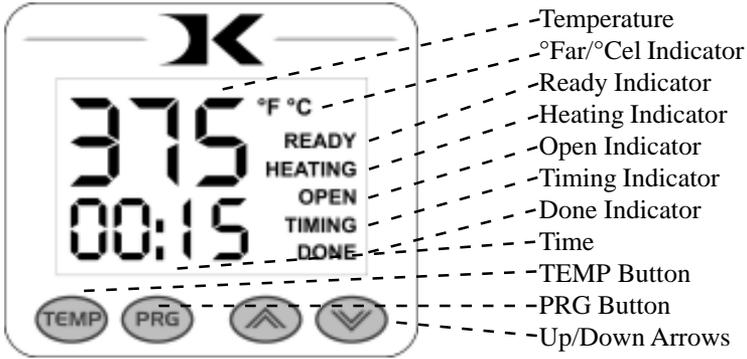
Digital Controller Instructions



Start Up

The press is now ready to operate. Plug the modular power cable into the back of the *Digital Knight* controller, and turn the on/off switch on. Please refer to the following illustration of the various terms on the controller.

Default Operating Mode of Controller



Setting Time

The time setting is always editable in the default operating mode of the controller. The left two digits of the time display are minutes. The right two digits are seconds. This can be changed to Hours/Minutes in the User Options Menu.

- Use the Up & Down arrow keys to change the time.
- Hold the Up or Down arrow key down to increment the values quickly. After a brief pause, the values will accelerate.
- Press the Up & Down arrow keys together to clear the setting to 00:00
- When the press is closed, the timing cycle starts. The “TIMING” indicator will appear.
- When the timing cycle is finished, the “DONE” indicator will appear.
- Depending on the timer alarm chosen, the alarm may continue to sound at the end of the timing cycle until the press is opened.
- When the press is opened up, the “OPEN” indicator will appear.



Setting Temperature

In the default operating mode of the controller, the displayed temperature is the **Current** temperature. This is the actual temperature of the heat platen surface. Please note that the operating range of the controller is from 150°F to 550°F (65°C to 288°C). During the first heat up cycle of the press, the controller will display 150°F (65°C) until the heat platen temperature rises above that temperature.

The **Set Point** temperature is the temperature the operator sets the press for. This is the value the press will regulate the **Current** temperature based on. The set point temperature may be changed whenever necessary:

- When in the default operating mode, press the TEMP button.
- The Current temperature will be replaced by the *blinking* Set Point temperature.
- Use the Up & Down arrow keys to change the Set Point temperature.
- Hold the Up or Down arrow key down to increment the values quickly. After a brief pause, the values will accelerate.
- Press the Up & Down arrow keys together to set the temperature to 350.
- When finished setting the temperature, press the TEMP button to return to the default operating mode.



- The control will regulate the heat platen temperature based on the set point temperature. When the temperature falls below the Set Point, the “HEATING” indicator will appear.
- When the temperature reaches the Set Point, the “HEATING” indicator will disappear and the “READY” indicator will appear.
- If the Set Point temperature is set to a temperature below the Current temperature, the press will wait to cool down to that Set Point. At that time, neither the “READY” or “HEATING” indicators will appear.

Programmable Presets

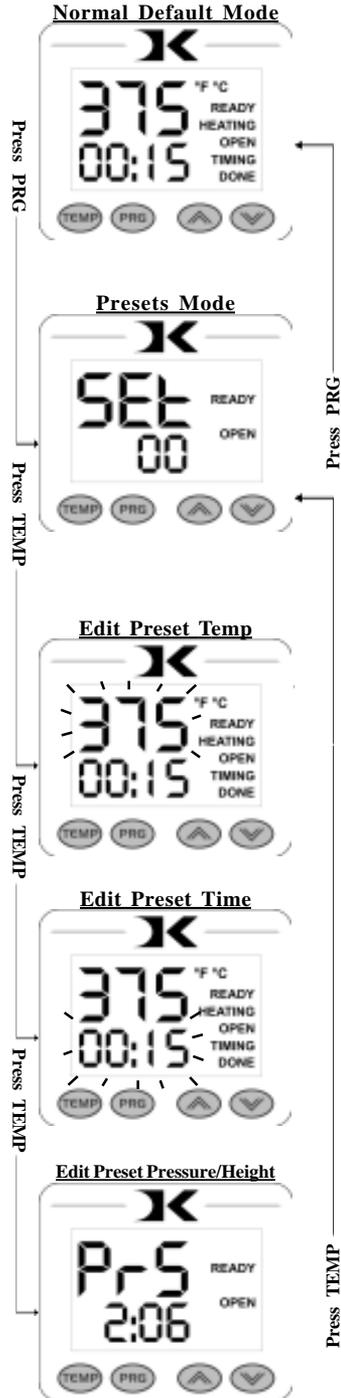
Programmable presets are stored programs where commonly used Temperature, Time and Height (pressure) settings can be stored and retrieved.

Presets can be recalled simply by pressing the PRG key, selecting the program desired with the arrow keys, and pressing the PRG key again. This will update the current settings on the press with the settings in the preset.

Presets can be edited by pressing the TEMP key while inside the programs. When the display shows “SEt”, press the TEMP key to change the temperature, time and PRS (height) settings for that preset. The TEMP key moves the flashing value from Temp to Time to PRS and back to “SEt”. The arrow keys change the value.

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So... the PRG key enters into the presets, and also exits the presets. When exiting the presets, the press' temperature & time is updated with the values that were stored in the preset, and the PRS display tells the operator what height level to adjust the pressure to.



User Options Menu

The user options menu is a set of features and calibration options that are programmable and adjustable by the user. It consists of a set of menu items that can be scrolled through. Each menu item is a feature whose values can be viewed and /or changed. To enter the user options menu:

- From the default operating mode, press the TEMP & PRG keys simultaneously.
- If the keys are not pressed exactly at the same time, you may enter the temperature edit mode, or the presets mode. Exit either of those modes and try again.
- To cycle from one menu item to the next, press PRG.

Fahrenheit / Celsius

The Current, Set Point, and Preset temperature values can be displayed in Fahrenheit or Celsius. To change the value to F or C, use the arrow keys. Press PRG to move to the next menu item.



Timer Counter

The timer displays as factory default Minutes:Seconds. This can be changed to Hours:Minutes. To change to value to HR (hours:mins) or MIN (mins:secs), use the arrow keys. Press PRG to move to the next menu item.



Recorded Pressings

The digital control records the number of pressing cycles completed. This can be very helpful when counting the number of full pressings that have been performed. The value will scroll from left to right. A “-” sign will separate the beginning and end of the number. To reset the count to Zero, press an arrow key. Press PRG to move to the next



Pressure/Height Gauge Settings

The PrH, PrL, and Prr settings are not applicable to this particular use of the *Digital Knight* controller.

Drop Sense

A temperature alarm is available for warning the user of out-of-range temperature conditions. The user can set this menu item to sound an alarm if the heat platen drops below the Set Point temperature by the amount indicated. This can be helpful when pressing substrates that absorb an unusually large amount of heat, causing the platen to fall in temperature quickly. If the results of the transfer begin to deteriorate, the Drop Sense feature can help the user avoid this.

Use the arrow keys to set the degrees or to turn this feature off. If the Current temperature drops below the Set Point by this amount or more, an alarm will sound. The default value is OFF.



Beep

Normally, all buttons on the keypad beep when pressed. This can be turned off, so all button key-presses are silent. Use the arrow keys to turn this feature On or Off.



Alarms

There are 10 different alarms available to choose from. These alarms are sounded at the end of the timing cycle, as well as if the Drop Sense feature is enabled.

Use the arrow keys to change the values or to turn the alarm off. Please note the different alarms below.



- denotes a short beep.
- _ denotes a longer beep.
- ~ denotes infinite loop.

<u>Alarm #</u>	<u>Alarm Pattern</u>
Off	No alarm
01	••• _
02	••• _ ~
03	•• _
04	•• _ ~
05	•••
06	••• ~
07	_ ~
08	_
09	•
10	• (shorter)



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