

K 20SP



Digital Knight
**16x20 Automatic
Digital Swinger**



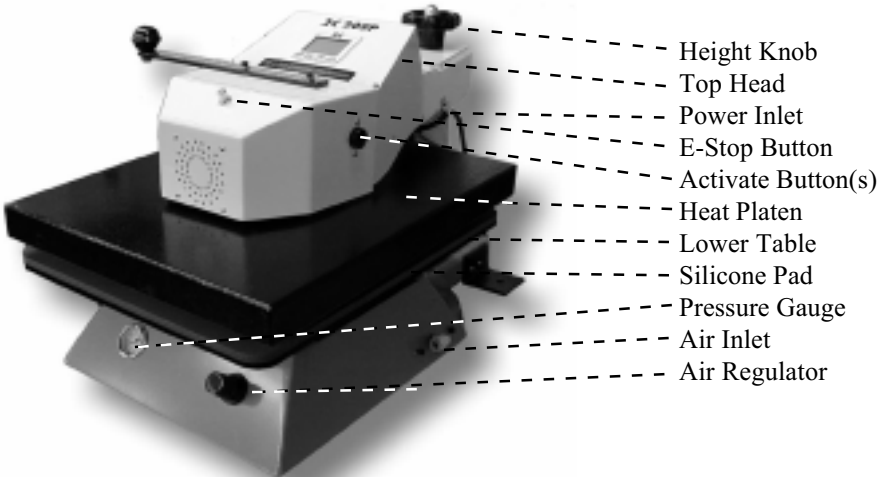
Table of Contents

Introduction.....	3
Setup & Suggestions	4
Basic Use	4
Setting Time	4
Setting Temperature	5
Setting Platen Height	6
Actuating the Press	6
Guidelines & Standard Settings	7
Programmable Presets	8
User Options Menu	9
Fahrenheit / Celsius	9
Timer Counter.....	9
Recorded Pressings	9
Pressure/Height Gauge Settings	10
Drop Sense.....	10
Beep	10
Alarms	11
Troubleshooting	12
Troubleshooting (cont.)	13
Limited Warranty	14

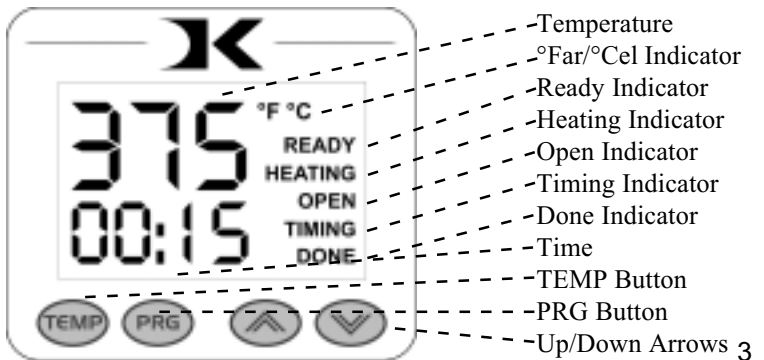
Introduction

Congratulations on your purchase of the Air Operated Automatic DK20SP 16x20 digital swinger! This heat press machine has many exciting features, all of which are meant to help make your heat transfer pressing endeavors as successful and easy as possible. Please take the time now to thoroughly read through this manual to become acquainted with them. It will explain some key features, concepts and methods that will save much time and effort in using this press and in your heat pressing applications.

Throughout this manual, many areas and components of this machine will be referred to by specific names. Please refer to the illustrations below in order to become familiar with some of the terminology used in this manual.



Default Operating Mode of Controller



Setup & Suggestions

- Locate the press on a firm, sturdy work surface.
- The height of the bench/work space the press is located on would be ideally 27” to 32” high.
- The top head should be swung over and above the pressing table when not in use.
- The air attachment is a 3/8” OD (outer diameter) compression fitting. Standard 3/8” OD poly tubing should be used for connecting the air supply to the air inlet fitting. The poly tubing is simply pressed into the fitting, and the fitting will hold the tubing with an air-tight connection.



Basic Use

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.

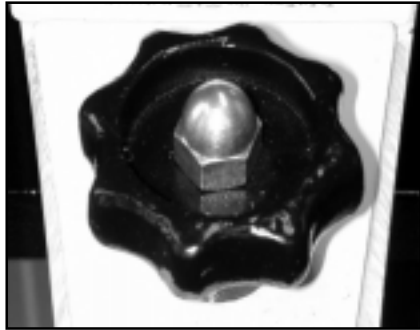


- The control will regulate the heat platen temperature based on the set point temperature. When the temperature falls below the Set Point, the “HEATING” indicator will appear.
- When the temperature reaches the Set Point, the “HEATING” indicator will disappear and the “READY” indicator will appear.
- 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.

Setting Platen Height

The height adjustment knob on the DK20SP allows for thicker items to be placed in the press. The factory set height of the press is the proper platen height setting for most fabrics, and materials under 1/4" thick. Unlike manual presses, the actual amount of pressure on the DK20SP is determined by the air regulator and air gauge, NOT by the height of the heat platen. However, if the platen height does not provide enough clearance for especially thick items, this can be adjusted.

- To raise the heat platen, turn the pressure knob to the left, counterclockwise.
- The top head will rise away from the lower table.
- To lower the heat platen, turn the pressure knob to the right, clockwise.
- The top head will lower toward the pressing table.



Actuating the Press

To actuate the machine, simply press both black buttons together. This will cause the air bladder to fill, the table to raise, and the work to be pressed. The digital timer will automatically begin cycling. At the end of the timer cycle the press will automatically release and the timer will reset to the preset time. **BOTH** black buttons must be pressed together, to insure that both operators hands are clear of the pressing area, for safety purposes.



To interrupt the timing cycle, in order to do a quick pre-press or press for a shorter period of time than is set, simply press both black buttons together again. For emergency one-hand release of the air pressure, press the middle button on the front panel.

Guidelines & Standard Settings

The following information covers some basic guidelines for pressing, as well as some generic parameters for basic heat transfer applications.

- When pressing shirts, it is often recommended that the shirts be quickly pressed for 2 seconds before transferring to remove wrinkles and water content.
- When pressing two sides of a garment, pull the garment over the table so that the printed side drapes underneath the table. This will avoid reheating previously transferred designs on opposite sides of garments. It will also avoid any bleed-through of inks on lighter fabrics.
- Avoid laying collars, cuffs, zippers, and other bulky parts of garments on the lower table, as these can adversely affect pressing conditions, and reduce the life of the silicone pad.
- When pressing rigid substrates (plastics, metals, woods, etc.), be sure that any protective films or laminates are removed before heating.
- Always check that the transfer image is face down against the material, to avoid sealing the image against the heat platen instead of the substrate.

Always follow the transfer media suppliers instructions when pressing. The information below is for general reference only, and may not be as accurate as the instructions provided by the transfer media & imprintable substrate supplier.

- | | |
|--|---|
| • Hot Split Supplier Transfers | 350-375°F, 8-10 secs |
| • Puff Transfers | 350-375°, 5-7 secs (extra heavy pressure) |
| • Ink-Jet Transfer Papers | 360°, 15-18 secs |
| • ColorCopy/Laser Transfer Papers | 375°, 20-25 secs |
| • Sublimation Inks (Polyester Fabrics) | 400°, 35 secs |
| • Sublimation Inks (Plastics) | 400°, 1 min, 15 secs |
| • Sublimation Inks (Metals) | 400°, 1 min |
| • Sublimation Inks (Woods) | 400°, 1 min, 15 secs |
| • Sublimation Inks (Ceramics) | 400°, 4 min |

Programmable Presets

This feature is ideal for recalling previously saved settings from various different applications. The presets are extremely easy to use, and bring a powerful level of accuracy to heat transfer pressing.

For example, the user may have Setting 00 for Hot-Split T-Shirts. When the user needs to perform that particular application, they simply select Setting 00, and the Current temperature & time parameters are updated. A pressure reference is also displayed, telling the user what pressure to set the press to. The user can then rotate the pressure knob until the gauge displays the same value that was stored and displayed by the preset.

This allows the user to quickly change from one application to another with extreme accuracy. Over time, the user will save many different settings in the presets based on the best results for every application. When those presets are selected, the user is immediately returned to the proper settings, without time consuming experimentation and risk of unsuccessful applications.

- From the default operating mode, to select a preset, press PRG.
- Use the Up & Down arrow keys to select a preset (00 - 70).
- Press PRG to update the current settings and return to the default operating mode.
- To edit or add a new preset, select the preset to be added/updated.
- Press TEMP to cycle through Temperature, Time & Pressure values. (PRS values not used in DK20SP)
- The editable value will flash indicating it may be changed.
- Use the Up & Down arrow keys to change values. Pressing Up & Down together when editing the temperature value resets it to 350, and 00 for time.
- After setting the pressure value, pressing PRG again will bring the user back to the preset selection screen.
- The user may press PRG to update the current settings and return to the default operating mode, or select another preset for editing/adding.



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 menu item.



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 keypresses 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)

Troubleshooting

The following information attempts to address the most probable mechanical and user issues with the press. Most issues with heat transfer presses are application related. That is, they have to do with the results of a particular transfer application.

For technical support on problems having to do with the final results of a particular transfer paper or media, please contact the supplier of that transfer media. Generally, the machinery manufacturer is unable to support the myriad of different transfer papers, inks and printable items on the market from other resellers.

- Q.** The heat platen does not align with the lower table.
- A.** The stopping position of the heat platen is adjustable. To change the point where the heat platen stops over the table, adjust the stop collar on the back of the press. This is the silver colored ring around the post that stops the head from continually swinging over the table. It can be loosened, and retightened when the correct position is obtained.
- Q.** The control displays **Err** when it first comes on, and I can not set the temperature or use the press.
- A.** The **Err** message will display if the heating signal from the platen has been cut off, interrupted, or the heating sensor has failed. First check the green heat connector that plugs into the digital control. This is inside the top head. Unplug the power cord. Remove the two screws in between the clamp/linkage that hold down the top panel, and carefully lift the panel up and look inside at the digital controller. At the top of the controller, there is a green connector that plugs in. This is the temperature sensor wire. Check to make sure it is properly seated. Be sure not to unplug any other connectors. The temperature wire connects to the center of the rear half of the heat platen. Check this connection as well to see if the connection is correct.

Troubleshooting (cont.)

- Q.** I press the keys on the keypad, and there is no sound or response from the controller.
- A.** Check the connection of the keypad to the controller. This is inside the top panel. Unplug the power cord. Remove the two screws in between the clamp/linkage that hold down the top panel, and carefully lift the panel up and look inside at the digital controller. The keypad connector passes in through the top panel. It should wind around the first circuit board and be seated fully into the connector. Check the black keypad connector that plugs into the circuit board to see if it has pulled apart. Also check the area where the keypad connects to the front membrane to see if the leads have been damaged. The membrane keypad may need to be replaced.
- Q.** The press will not activate.
- A.** Check the air connection to the press. Make sure the compressor supplying the air is on, and no relief valves have opened on the compressor. Check the air gauge, it should be set to a reading of 20-80 psi. Check to make sure the limit micro-switch in the back of the press is closing when the head is swung over. If the head is not swung all the way over the table, and the rear limit micro-switch is not being closed, the press will not activate. If all of these check points have been tried, and the digital control is counting down, but the press is not pressing, contact Geo Knight technical support. If the Digital Controller is not counting down when attempting to activate, one or both of the black activation switches needs replacement.
- Q.** The press has shut off, and will not come back on after checking the power cord, on/off switch, etc.
- A.** Check the fuse. In the back panel of the control box, the power cord socket has a built-in fuse-holder. Unplug the power cord, and gently pry out the fuse-holder. If the fuse is burnt out or there is no continuity, replace it. If the fuse is fine, check the black and white wire connections from the power socket to the on/off switch, and from the on/off switch to the controller inside the head.
- Q.** I pressed a transfer upside down. The inks and transfer material have burned onto the heat platen.
- A.** Cool the press down. Using a nonabrasive detergent or cleaner, thoroughly scrub the heat platen surface. Do not use an abrasive scrubber, or a pad that will scratch the Teflon coating of the platen. If you are still unable to remove the transfer material, obtain teflon heater block cleaner from the contact information located at the end of this manual.

Limited Warranty

Geo Knight & Co warrants that the press is free from defects in both material and workmanship One Year from the date of invoice to the buyer. If any parts or workmanship are found to be defective in manufacture, Geo Knight & Co will repair or replace the defective parts or workmanship. In addition, Geo Knight & Co warrants that the Digital Knight heat control is free from defects in both material & workmanship and is covered under no-charge support for (3) years. Geo Knight & Co also warrants that the heating element is warranted for the lifetime of the press, provided it is owned by the original purchaser. This lifetime warranty on the heating element does not cover temperature sensor failure, damage or disconnection. This warranty covers all parts to repair the defects, except when damage results from accident, alteration, misuse or abuse, or when the machine has been improperly installed, or modified in any way. If the press becomes defective during the limited warranty period of one year for the entire press, three years for the control, or the lifetime of the heating element, Geo Knight & Co reserves the right to recall the defective press to the factory for repairs if on site component replacement is deemed not possible by Geo Knight & Co. A return authorization must be granted by Geo Knight & Co prior to its return.

If a press covered by the one year limited warranty must be returned to the factory for repairs, Geo Knight & Co shall make every effort to repair buyer's press. However, Geo Knight & Co reserves the exclusive right to determine whether to repair or replace a defective press. If Geo Knight & Co authorizes a replacement press, the warranty of the replacement press shall expire on the anniversary date of the original machine's invoice to the buyer.

There are no warranties which extend beyond the description on the face hereof. Seller disclaims any implied warranty of merchantability and/or any implied warranty of fitness for a particular purpose, and buyer agrees that the goods are sold "as is". Geo Knight & Co does not warrant that the functions of the press will meet the buyers requirements or expectations. The entire risk as to use, quality and performance of the press lies with the buyer. In no event will Geo Knight & Co be liable for any damages, including loss of profits, destruction of goods or any other special, incidental, consequential or indirect damages arising from the use of the press or accompanying materials. This limitation will apply even if Geo Knight & Co or its authorized agent has been advised of the possibility of such damage.

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