Geo Knight & Co, Inc

Model 294AP - Air-Operated Swinger
Operating Instructions

Step 1 - *SETTING UP*

Geo Knight & Co's Model **294AP** AIR OPERATED SWINGER was designed to operate at 15 amps on 110 volts AC current. The machine should be plugged into a separate circuit of its own if possible, especially if two or more presses are to be used at once.

IMPORTANT: The three-pronged plug on the cordset supplied is intended to be used in a grounded receptacle. DO NOT attempt to modify or adapt the plug to an inappropriate receptacle. ALWAYS unplug the machine at the wall outlet.

Model **294AP** features a "swing-away" heat platen. It has been factory set to swing out to the *right*. When locating the machine, allow enough clear space to swing the platen safely. Also allow sufficient space for accessories, layout, etc. Provide a well-lighted, sturdy work surface to which the machine can be permanently affixed. The bolts used in the shipping pallet may be used to secure machine to table (if of a sufficient length for your table). Good ventilation in the work area is necessary for the operator's well-being, but cold drafts in the immediate vicinity of the machine can overwork its heat elements. For safety, the heat transfer press should always be located out of reach of children and customers.

Step 2 - *BASIC OPERATION*

The FRONT PANEL of the machine houses the following components: ON/OFF SWITCH, SOLID STATE DIGITAL TEMPERATURE CONTROLLER, and SOLID STATE DIGITAL TIMER.

- #1 - Connect air hose from the air compressor to valve located at the rear of the machine.
- #2 - Plug power cord into 120 volt outlet.
- #3 - Turn on air supply and listen for any air leaks in the system. Contact Geo Knight & Co if a leak is detected.
- #4 - Turn "On" MAIN TOGGLE SWITCH: Once on, the TIMER will turn on.
- #5 - TEMPERATURE CONTROLLER will also energize and HEAT PLATEN will begin to heat up.
- #6 - The **294AP** has been set at 350 degrees F. The digital controller will rise until it reaches the set point. Normally this will take between 10-20 minutes for the entire heat platen to reach 350° F. If your process requires a different set temperature please refer to the OGDEN manual.
- #7 - Turn air pressure adjustment to 50 psi. This is a good starting point for most transfer processes. Please refer to the instructions from the transfer manufacturer for proper settings.

Step 3 - *UTILITIES REQUIREMENTS*

<u>ELECTRICAL:</u>

The **294AP** Air Operated Swinger runs on 110 volts. It is recommended that a separate 20 amp service be used to supply electricity to the machine. A standard 110 volt, 3-pronged plug is provided. Be certain that the Power Cord does not interfere with the operation of the machine.

<u>AIR:</u>

The **294AP** requires air pressure to operate. We recommend a compressor that has the following rating:

1½ Horse Power Motor
5-10 Gallon Reserve Tank
2-3 CFM at 90 psi

Please Note: These are minimum compressor requirements. For high production/continuous operation environments, a larger compressor is suggested.

The Air Filter on the machine is equipped with an Aro #210 Male Coupler. This is compatible with an Aro #2608 Connector fitting which is available at most hardware stores. Attach Female fitting to 3/8" ID (inside diameter) hose and firmly attach a clamp. Cut hose to the proper length and join machine with your compressor.

Step 4 - *MACHINE CONTROLS*

TIMER:

Use the PUSHWHEEL SWITCHES beneath the three (3) center digits to select the time setting between 000 and 999 seconds. DO NOT TOUCH the "OPERATIONAL MODE" SELECTOR or the TIME UNIT SELECTOR. These setting have been preset by the factory. The letter "B" on the left side of the timer is the correct setting for the OPERATIONAL MODE; letter "S" is the correct setting for the UNIT SETTING. If these settings have been altered, please reset them to their proper setting.

Examples: B005S = 5 SECONDS
B010S = 10 "
B060S = 60 " or 1 minute

TEMPERATURE CONTROL:

The OGDEN Temperature Controller has its own On-Off Switch. To start, flip Switch to the "On" position. The large Red display indicates the actual temperature of the Heat Platen at that moment in degrees Fahrenheit (°F). The smaller Yellow display is the desired, or set temperature. As the press heats up initially, a solid yellow light to the left of the LED display indicates that the Heat Platen is heating or simply adjusting to the set temperature. When the desired temperature is reached a solid green light will display.

ADJUSTING TEMPERATURE - Temperature can be adjusted by pressing either the UP or the DOWN Arrow. The digital display will scroll at .10°F increments. When arrow is depressed continually, display will scroll initially at .10° until it reaches the single degree digit, at which point it will adjust at single degree increments.

AIR PRESSURE:

Pressure applied by the press is fully adjustable and can be varied by turning the Pressure Regulator - located on the front panel of the machine - to the desired setting. It is recommended that this setting **not exceed 100 psi.**

TO SET AIR PRESSURE:

1- Pull out the Air Adjustment Knob until it engages (clicks!).
2- Turn knob clockwise to increase pressure, counter-clockwise to decrease pressure.
4- All adjustments will be displayed on the Pressure Gauge. Push Black Knob back to original position to insure that consistent pressure is applied during applications.

PLATEN HEIGHT:

The height of the Heat Platen can be adjusted up to 1" to accommodate wooden plaques, ceramic tile and other substrates with a thick composition. Magno-switch to activate Timer may need to be adjusted if extreme adjustment is made. Please consult with Geo Knight & Co if such an adjustment is necessary.

Step 5 - *MACHINE SETTINGS*

Shop conditions at each location, power fluctuations, age and condition of your machine, fiber blends in garments being used and transfer materials themselves make it impossible to provide an infallible set of time, temperature and pressure settings. In general, start with the transfer manufacturer's guidelines. If release or adhesion are unsatisfactory, vary the time setting first, then try other temperature settings. Cover sheets (brown silicon paper, high gloss paper or teflon sheets) may be used for "resealing" to improve adhesion. Remember that the extra thickness of these sheets could cause an insulating effect, requiring extra sealing time.

OPTIONAL BOTTOM TABLES (Interchangeable) - The 16" x 20" BOTTOM TABLE can be interchanged with standard and custom sized tables. To remove lift table straight up so that locating pin comes free of base pin hole. When relocating table, be certain to align pin with the proper hole.

Step 6 - *MAINTENANCE*

The SILICONE BASE PAD is critical to successful heat transfers. Check it regularly for gouges, cuts, low spots, etc and replace it when necessary. Always keep the pad and the surface of the top platen clean.

The surface of the HEAT PLATEN is coated with teflon and should be protected from anything which might scratch it (such as zippers, snaps, etc). Occasionally plastisol or other melted substances will get on the platen and should be carefully wiped off, while still hot, with a cloth. TEFLON SPRAY CLEANER can be purchased from Geo Knight & Co to assist in this maintenance procedure. DO NOT USE abrasive cleaners or scrapers to clean the platen. Also periodically check the power cord for worn insulation and damaged plugs.

LUBRICATION: The REAR PIVOTING POST assembly should be greased four (4) times a year (or as needed) by injecting grease into the fitting at the back.

TOOLS INCLUDED: (1) 3/16" T-Handle Allen Wrench - Use this tool to adjust stop collar position
ie: to change platen swing direction
(1) 3/8" Allen Wrench - Fits all other allen screw bolts on press

IF THE MACHINE WON'T WORK:
First check the power at the outlet, then the power cord and then the machine fuse. If the machine still fails to operate contact:

GEO KNIGHT & CO CUSTOMER SERVICE
(800) 525-6766

Step 7 - *HOW TO PROPERLY APPLY HEAT TRANSFERS*

To assure even pressure and a smooth result, garments must be carefully placed on the Base Pad of your press. T-Shirts should be smoothed to eliminate wrinkles, front and back. Model **294AP** is designed with a raised base to allow the garment to be pulled over the base table thereby isolating the one side of the shirt to be imprinted. This is especially important if designs are to be applied to both sides of a shirt or if the fabric is a mesh or of light enough material that there is a chance of ink or adhesive bleed-through.

Jackets and other heavy or complicated garments are handled similarly to T-shirts. Avoid pressing zippers, snaps, buttons, etc. Since these can mar a design and leave permanent depressions in the base pad of the press. Minor irregularities in the fabric thickness, seams and trim can be compensated for within the silicon rubber pad. If they present a problem then they must be removed from the imprint area and draped off to the side. Always test unusual fabrics, trims and linings for heat resistance.

Careful alignment of the transfer on the garment before pressing is important since most transfers are not removeable. Use as a guide the bottoms of the seams, where the sleeves meet the body of the shirt. Usually a full-size transfer will be 1/3 above, 2/3 below this line. Heart size designs usually center on this line as do body stripes and die cut lettering. For X-Large shirts this guideline is higher, for smaller shirts, lower.

The lowest point on the collar provides a vertical center reference. Vertical distance from the two sleeve/seam points also helps center a design. Be sure to center the image by looking through the carrier paper, not just by the edges of the paper.

These are only guidelines and they can be modified for unusual garments, special placement of designs, custom transfers, etc. In some cases it is beneficial to trim the transfers to within ¼" of the actual print.

Different heat transfer materials have different application procedures!
Fabric variables such as texture, thickness, sizing, dyes, shrinkage, heat sensitivity, and end use of the garment all effect the application time, temperature and pressure, and even the suitability of the transfer. *It is the user's responsibility to choose the correct transfer product and use it properly.* Technical assistance is available through Geo Knight & Co's Customer Service Department.

WARRANTY INFORMATION

1- Geo Knight & Co warrants that its heat transfer machines are free from defects in both material and workmanship for one (1) 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.

2- This limited one (1) year warranty covers all parts and labor to repair the defects, except when damage results from accident, alteration, misuse or abuse, or when machine has been improperly installed, or modified in any way.

3- If a machine becomes defective during the limited warranty period of one year, Geo Knight & Co reserves the right to recall the defective machine to the factory for repairs. A RETURN AUTHORIZATION must be granted by Geo Knight & Co prior to its return.

4- If a machine 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 machine. However, Geo Knight & Co reserves the exclusive right to determine whether to repair or replace a defective machine. If Geo Knight & Co authorizes a replacement machine, the warranty of the replacement machine 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".

REPLACEMENT PARTS are sold to the customer with a thirty (30) day warranty (beginning (beginning at invoice date). Since Geo Knight & Co (the "COMPANY") has no guarantee that parts have been correctly installed by the Customer or that other deteriorating components might also affect the life & performance of replaced parts, there is no liability assumed by the COMPANY beyond the thirty (30) day warranty period.

Those who choose to repair their own machine do so at their own risk! Geo Knight & Co is not liable for damages due to or as a result of repair work done by the Customer.

REPLACEMENT ASSEMBLIES are sold to the Customer with a sixty (60) day warranty (beginning at invoice date). The COMPANY supplies a complete subassembly and is responsible for it's performance for sixty days.

HEATER BLOCK CASTINGS are sold with a Limited Lifetime Warranty. This warranty applies ONLY to the original owner of the machine. Original ownership is determined from the records of Geo Knight & Co by means of the machine's model & serial number; both of which MUST be supplied by the Customer.

REPAIR WORK performed by Geo Knight & Co is warranted for ninety (90) days from the date of invoice and covers ONLY the specific area of concern identified by either the Customer or Geo Knight & Co.

EXCHANGE WARRANTY implies that a machine is within the one (1) year Limited Warranty. Any work performed or parts exchanged is done at No Charge to the Customer. Geo Knight & Co will pay for return freight ONLY via UPS Ground Service or LTD Trucking Charges. Premium freight service is the responsibility of and at the discretion of the Customer. Exchange Warranty of parts & repair is warranted for 30 (thirty) days past the warranty date of the ORIGINAL machine.

MODEL 294AP - PARTS LIST

MACHINE BASE:

- PIVOT POST ASSEMBLY:
- Post Assembly - 2½" x 12½" RD CR
- Leg Casting (Rear)
- Pivot Bolt - 7/8-14 x 5 Hex Head Bolt
- ½-20 x 1 Socket Screw (8)
- 5/8-18 Acorn Nut
- 2" x 8" x ¼ Steel Tubing Base
- Pivot Shaft Cap - 3/8 x 3½ x 3½ CR
- Base Table Casting
- 5/16-18 x 1 Hex Head (4)
- Needle Thrust Bearing Assembly (2)
- Pressure Adjustment Wheel Casting
- ½ SAE Washer
- Post Assembly - 2½" x 12½" RD CR
- Silicone Rubber Pad - 16" x 20"
- Top Frame Casting (TFC)
- Air Bag Skirt
- Air Bag Assembly
- Bolster Plate - 3/8"x 6"x 10" CRS
- Return Springs - 3/4"x 2" (4)
- Return Spring Mount - 1½" x 3" x 5½" Tube
- Bottom Frame Assembly
- Base Cover - Sheet Metal
- Front Cover - Sheet Metal
- Handle Assembly - ¼" x 1" x 12½" HRS

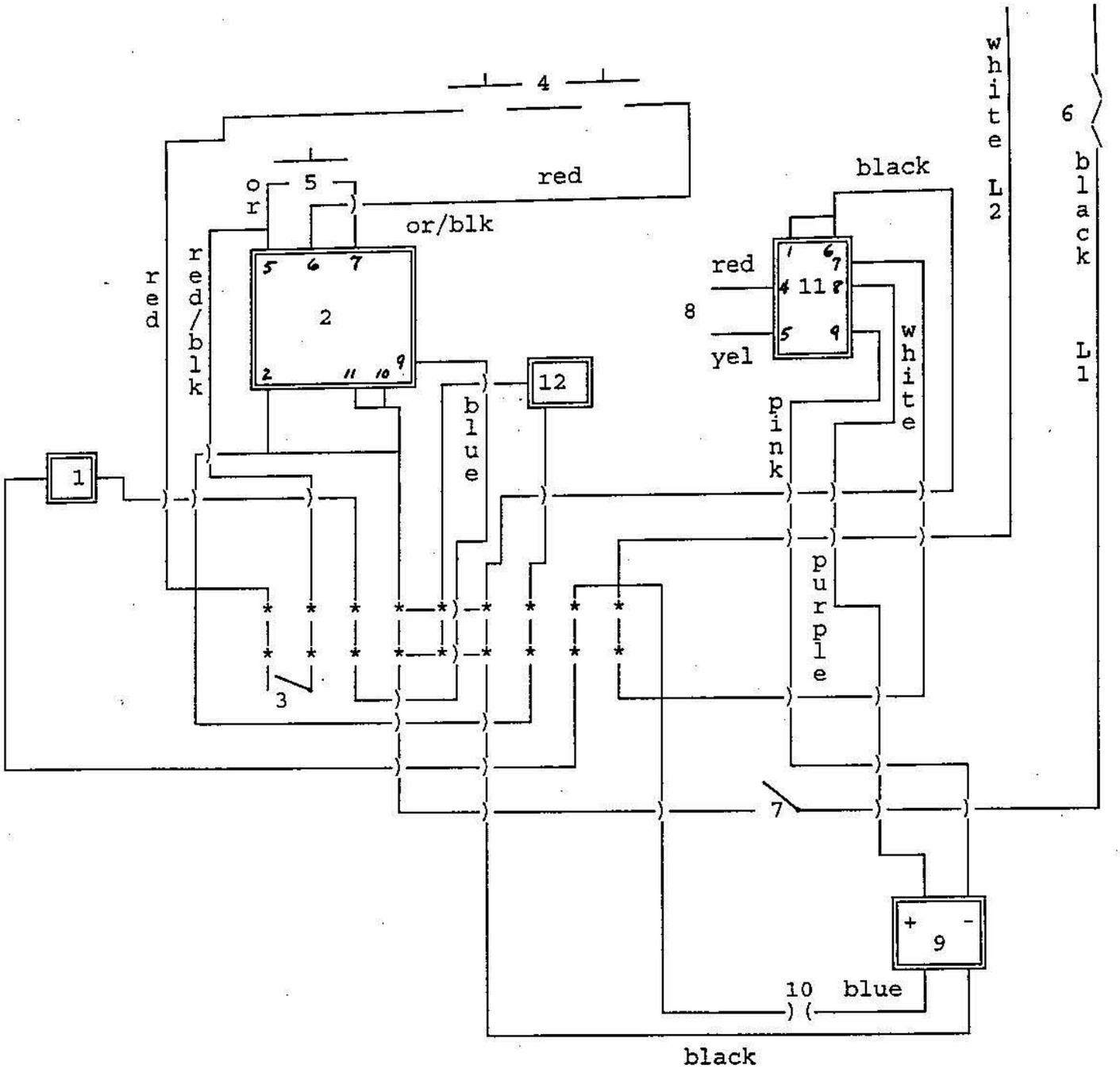
HEAT PLATEN ASSEMBLY:

- 16" x 20" Heater Block Casting
- Heater Block Cover
- Access Panel
- 10-32 x 3/8 Truss Head Screws (8)
- Collar Stop Assembly
- ¼-20 x 1 Socket Head Screw (2)
- 6-32 x ½ Flat Head Screw
- Rear Cover
- 3/8 SM Plug
- 6-32 x ¼ Pan Head Screw (4)
- HB 2" Insulation
- Wire Harness

TOP CHANNEL ASSEMBLY:

- Power Cord - 9 ft
- 9-Place Buss Bar
- Toggle Switch
- Ogden Temperature Control
- Pin (6)
- 5/16-18 x 1 Hex Head Bolt (8)
- P&B Timer
- Timer Retainer

MODEL 294AP - *WIRING SCHEMATIC*



1- 62E1 Sol Valve
2- P&B Timer
3- Magno Centering SW Tolomatic
4- Push Button Start
5- Quick Release
6- 20 amp Circuit Breaker
7- On/Off Switch
8- Thermocouple
9- Grayhill Relay
10- Heat Unit
11- Ogden Control
12- Fan