

# Multi-Deck Warmer

MODEL MDW

Installation & Operation Manual

Serial Numbers 121764 and Higher



*Fresh ideas in foodservice equipment*

# Warranty Information

## LIMITED ONE YEAR WARRANTY

BKI (The "Company") warrants to the original purchaser that at time of shipment from the Company factory, this equipment will be free from defect in materials and workmanship. Written notice of a claim under this warranty must be received by the Company within ONE YEAR from the date of installation, but no longer than ONE YEAR AND THREE MONTHS from date of shipment from the factory. Defective conditions caused by abnormal use or misuse, lack of or improper maintenance, damage by third parties, alterations by unauthorized personnel, acts of God, failure to follow installation and/or operating instructions, or any other events beyond the reasonable control of the Company will NOT be covered under this warranty. The obligation of the Company under this warranty shall be limited to repairing or replacing (at the option of the Company) any part, with the exception of lamps, fuses, and glass (which are not covered under warranty), which is found defective in the reasonable opinion of the Company. Any part found defective by the Company will be repaired or replaced without charge F.O.B. factory, Simpsonville, South Carolina or F.O.B. authorized BKI Distributor. The Company and/or its authorized representatives will assume the normal replacement labor expense for the defective part for the period of the warranty as stated above, excluding travel and/or other expenses incidental to the replacement of the defective part, where replacement work is performed during standard business hours and not subject to overtime, holiday rates, and/or any additional fees. IN NO EVENT SHALL THE COMPANY BE LIABLE FOR LOSS OF USE, LOSS OF REVENUE OR LOSS OF PRODUCT OR PROFIT OR FOR INDIRECT OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO, FOOD SPOILAGE OR PRODUCT LOSS. WARRANTY DOES NOT COVER GLASS BREAKAGE. THE ABOVE WARRANTY IS EXCLUSIVE AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE EXCLUDED INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## REPLACEMENT PARTS

Any appliance replacement part, with the exception of lamps, fuses, and glass, which proves to be defective in material or workmanship within ninety (90) days of installation will be replaced without charge F.O.B. Factory, Simpsonville, SC or F.O.B. authorized BKI Distributor. The user shall have the responsibility and expense of removing and returning the defective part to the Company as well as the cost of reinstalling the replacement or repaired part.

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## Introduction

The MDW is a multi-tier, self-serve hot food merchandiser. It consists of heated glass shelves, individual shelf lighting, and electronics for powering the shelves, lighting the shelves and controlling the temperature of each shelf. This unit is for use with prepackaged foods only.

This unit is manufactured by BKI which assures you of the finest in design and engineering -- that it has been built with care and dedication -- using the best materials available. Attention to the operating instructions regarding proper installation, operation, and maintenance will result in long lasting dependability to insure the highest profitable return on your investment.

### **NOTICE**

PLEASE READ THIS ENTIRE MANUAL BEFORE OPERATING THE UNIT. If you have any questions, please contact your BKI Distributor. If they are unable to answer your questions, contact the BKI Technical Service Department, toll free: 1-800-927-6887. Outside the U.S., call 1-864-963-3471.

Floor and counter units must be sealed to the mounting surface after installation to conform to NSF requirements. (Dow Corning RTV #732 Multi purpose Sealant.)

### **Safety Precautions**

Always follow recommended safety precautions listed in this manual. Below is the safety alert symbol. When you see this symbol on your equipment, be alert to the potential for personal injury or property damage.



### **Safety Signs and Messages**

The following Safety signs and messages are placed in this manual to provide instructions and identify specific areas where potential hazards exist and special precautions should be taken. Know and understand the meaning of these instructions, signs, and messages. Damage to the equipment, death or serious injury to you or other persons may result if these messages are not followed.

#### **⚠ DANGER**

This message indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

#### **⚠ WARNING**

This message indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

#### **⚠ CAUTION**

This message indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

#### **NOTICE**

This message is used when special information, instructions or identification are required relating to procedures, equipment, tools, capacities and other special data.

## Safe Work Practices



### **Beware of High Voltage**

This equipment uses high voltage. Serious injury can occur if you or any untrained or unauthorized person installs, services, or repairs this equipment. Always Use an Authorized Service agent to Service Your Equipment



### **Beware of Hot Surfaces. Do Not Touch.**

The shelves in this unit reach temperatures that can cause burns. Use caution when placing product on and removing product from the shelves. Do not touch any of the shelves when they are energized. A CAUTION HOT message is embossed on the front of each shelf to alert you of a potential hazard.

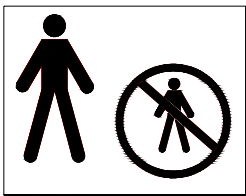


### **Keep this manual with the Equipment**

This manual is an important part of your equipment. Always keep it near for easy access. If you need to replace this manual, contact:

#### ***BKI***

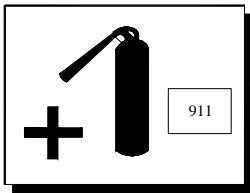
Technical Services Department  
P.O. Box 80400  
Simpsonville, S.C. 29680-0400  
Or call toll free: 1-800-927-6887  
Outside the U.S., call 864-963-3471



### **Protect Children**

Keep children away from this equipment. Children may not understand that this equipment is dangerous for them and others.

NEVER allow children to play near or operate your equipment.

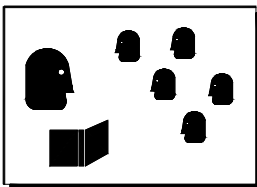


### **Be Prepared for Emergencies**

Be prepared for fires, injuries, or other emergencies.

Keep a first aid kit and a fire extinguisher near the equipment. You must use a 40-pound Type BC fire extinguisher and keep it within 25 feet of your equipment.

Keep emergency numbers for doctors, ambulance services, hospitals, and the fire department near your telephone.



### **Know your responsibilities as an Employer**

- Make certain your employees know how to operate the equipment.
- Make certain your employees are aware of the safety precautions on the equipment and in this manual.
- Make certain that you have thoroughly trained your employees about operating the equipment safely.
- Make certain the equipment is in proper working condition. If you make unauthorized modifications to the equipment, you will reduce the function and safety of the equipment as well as void the warranty.

## Operation

### Controls and Indicators

Refer to Figure 1 and the following sections for an explanation of controls and indicators.

### Shelf Power/Lighting

The POWER ON/OFF circuit breaker allows you to turn all shelves ON or OFF. This device provides overload, short circuit and ground fault protection. When an overload or earth leakage ground fault condition occurs, the circuit breaker will trip causing the actuator to move to the OFF position and the leakage trip indicator LED to illuminate. A circuit is built into the device to simulate an overload or earth leakage ground fault. To test this circuit, a push-to-test button is located above the actuator. This button should be pressed at least once a month to check the functionality of the device. The LIGHTS ON/OFF circuit breaker allows you to turn all shelf lighting ON or OFF. A pilot light is mounted between the power circuit breaker and light circuit breaker. This light illuminates when an overtemperature condition occurs within the unit.



**WARNING** When the pilot light on the switch plate is illuminated, a unit malfunction has occurred. Turn the unit off immediately and contact an authorized BKI service agent for corrective action.

### Shelf Temperature

The temperature of each shelf is individually controlled via knobs on a plate behind the swing-down front panel (accessed via ¼ turn fasteners). Each knob has a number corresponding to the shelf that it controls. The decal shows the relationship between the knobs and shelves. The initial knob settings are depicted in Figure 1.

### Power Up and Preheating

1. Ensure that the power supply cord is connected to an appropriate power receptacle.
2. Place the POWER ON/OFF circuit breaker in the ON position.
3. Place the LIGHTS ON/OFF circuit breaker in the ON position.
4. Allow the unit to preheat for a minimum of 30 minutes before loading it with product.

Check Federal and State Health and Sanitation Regulations for internal temperature required for holding cooked foods for sale. Maintaining these temperatures often tends to allow continued cooking of certain products. Therefore, smaller amounts of bulk foods should be displayed at non-peak periods and the unit refilled as needed.

***All meats and vegetables should be preheated to 160 degrees F. before being placed in the unit.***

### Temperature Adjustment

After placing the product onto the shelves, it may be necessary to adjust the temperature control knobs in order to maintain the proper internal temperature for the product on display. A thermometer should be used to read the internal temperature of each product. The temperature control knobs should be adjusted to the lowest possible setting that will maintain the proper product temperature.

### Operational Guidelines

Only use product packaging suitable for the application.

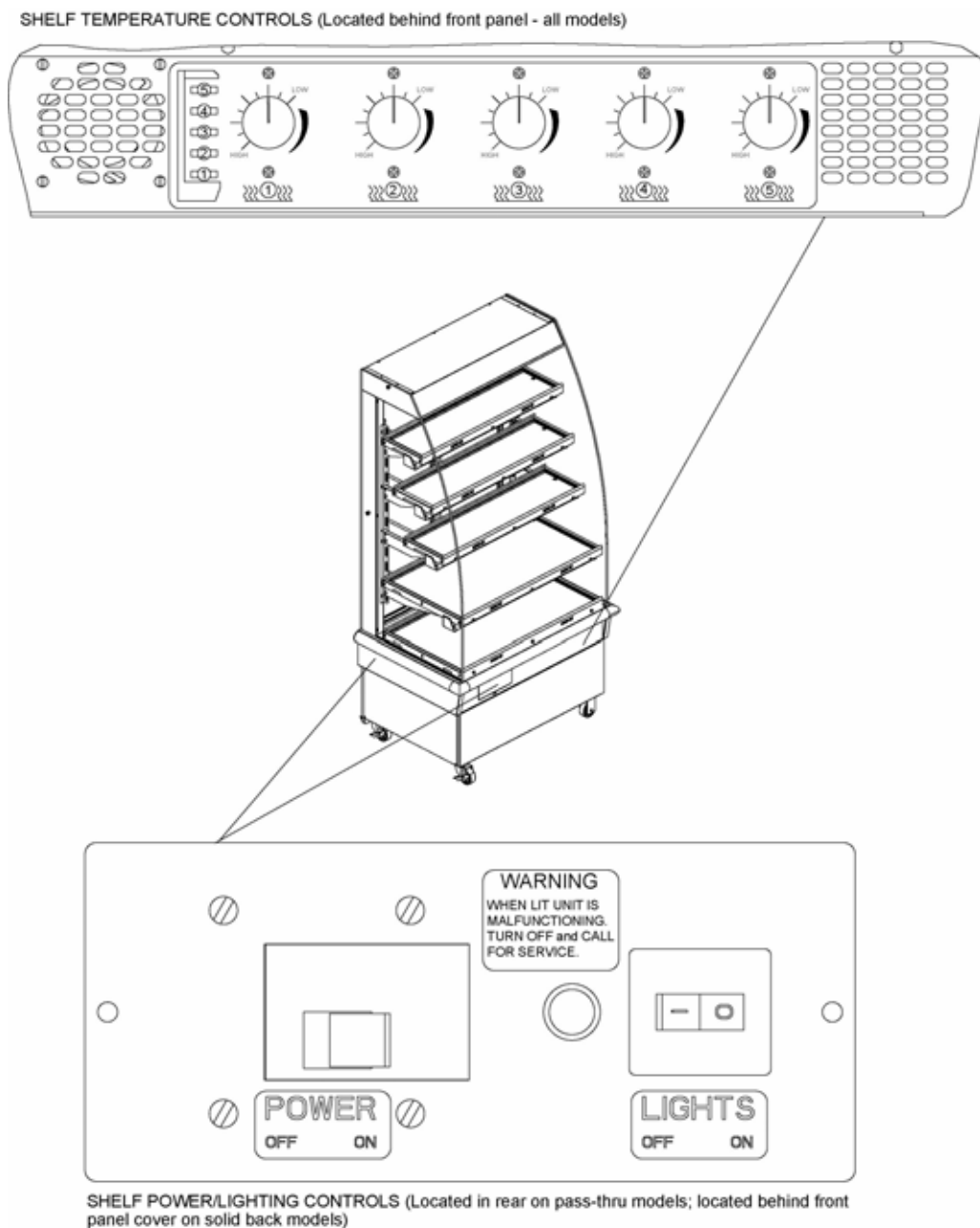
Keep portable meat thermometers on hand. Check the food temperatures hourly. Rotate the food products. Foods loaded in first should be served first as much as is practical.

Foods held for long periods of time are more difficult to maintain at proper temperature. Also, freshness and product quality diminish if foods are held too long. Most areas of the country have sanitation regulations governing how long foods can be held. Make certain to check with your local authorities.

### Unit Shutdown

1. Remove product from the unit.
2. Place the POWER ON/OFF circuit breaker in the OFF position.
3. Place the LIGHTS ON/OFF circuit breaker in the OFF position.
4. After the unit has cooled down, remove any residue from the shelves and clean the unit thoroughly.

Figure 1. Controls and Indicators



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## Installation

### ***Unpacking and Handling***

**YOU** are responsible for filling all freight claims with the delivering truck line. Inspect all cartons and crates for damage as soon as they arrive. If damage to cartons or crates is found, or if a shortage is found, note this on the bill of lading (all copies) prior to signing.

If damage is found when the equipment is opened, immediately call the delivering truck line and follow up the call with a written report indicating concealed damage to your shipment. Ask for an immediate inspection of your concealed damage item. Packaging material **MUST** be retained to show the inspector from the truck line.



Do not place heavy objects on top of the unit or damage could occur. The units are not structurally designed to support excessive external loading.

Move the unit as close as possible to its permanent location before moving it off of the shipping pallet. Make certain there are no separately packed accessories before discarding packaging.

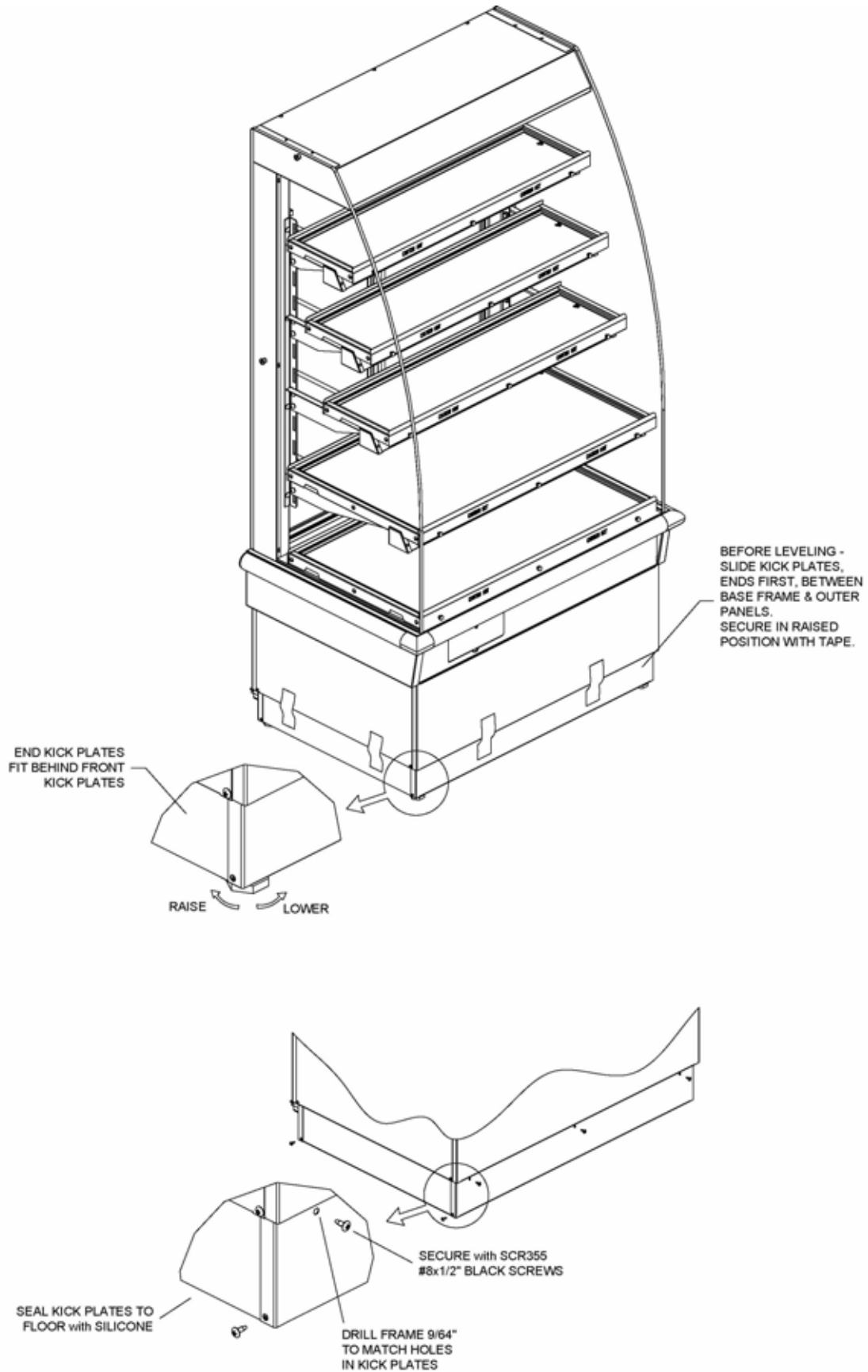
### ***Floor Model***

Follow the procedure below to level the unit and mount the kick plates. See Figure 2.

1. Slide kick plates, ends first, between the base frame and outer panels. Secure in raised position with tape. Make sure that the end kick plates fit behind the front and rear kick plates.
2. Using a carpenter's level on the lowest shelf, level the unit by adjusting the leg levelers at the corners of the unit.
3. Raise the low end of the unit to level it, do not lower the high end.
4. Check for level side-to-side and front-to-back.
5. Remove the tape holding the kick plates in raised position.
6. Make certain that the kick plates are flush to the floor.
7. Drill 9/64" diameter holes in the base frame to match the pre-drilled holes in the kick plates.
8. Attach the kick plates to the base frame with the #8x1/2" black sheet metal screws provided (SCR355).
9. Seal kick plates to floor using a silicone-type sealant (Dow Corning RTV #732 or equivalent).



Figure 2. Floor Model – Leveling & Kick Plate Mounting



## Counter Model

Counter mounted units must be mounted on a level surface that can support the weight of the unit and its contents. Use a carpenter's level to level the unit.

These units are to be sealed to the counter if required by local health codes. Seal the perimeter of the units to the counter using a silicone-type sealant (Dow Corning RTV #732 or equivalent).

## Caster Model

Caster mounted units must be moved to a permanent location and the two swivel casters locked before using.

## Wiring



Electrocution, equipment failure or property damage could result if an unlicensed electrician performs the electrical installation. Ensure that a licensed electrician perform the electrical installation in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI NFPA 70-20XX.

This unit, when installed by an authorized BKI service agent, must be wired for use in accordance with all applicable local, state, and federal codes. For specific electrical requirements and connections refer to the wiring diagram attached to the unit or provided in the Service Manual.

## Initial Setup and Adjustment

Follow the procedure below to setup and adjust the unit for proper operation.

1. Connect the unit power cord to a receptacle that supplies power matching that specified on the unit rating plate.
2. Place the POWER ON/OFF circuit breaker in the ON position.
3. Let the unit preheat for 30 minutes.
4. Measure and adjust the temperature as necessary to achieve an initial temperature between 190° F and 200° F. Use a surface temperature thermometer to measure this temperature (DO NOT USE A MEAT THERMOMETER). Additional adjustments may be necessary once the product is placed on the shelves. If so, refer to the section entitled Temperature Adjustment on page 4.
5. Place the POWER ON/OFF circuit breaker in the OFF position.

## Maintenance

### **CAUTION**

Failure to comply with the maintenance below could result in a serious accident.

### **WARNING**

Electrocution, equipment failure or property damage could result if an unlicensed electrician performs electrical repair. Ensure that a licensed electrician performs electrical repair.

### **Scheduled Maintenance**

Use the following table to help manage scheduled maintenance activities.

| Frequency | Performed By | Part                               | Activity  |
|-----------|--------------|------------------------------------|---|
| Daily     | User         | Unit                               | Clean the entire Unit. Refer to the cleaning procedure below.                                     |
| Monthly   | User         | Shelf Power ON/OFF Circuit Breaker | Press push-to-test button to test overload, short circuit and ground fault protection capability. |

### **Cleaning**

This unit should be cleaned at the end of each day. Use the following procedure:

### **DANGER**

Failure to remove power from this unit may cause severe electrical shock. This unit may have more than one disconnect switch.

1. Place the POWER ON/OFF circuit breaker in the OFF position.
2. Place the LIGHTS ON/OFF circuit breaker in the OFF position.
3. Allow unit to cool down.
4. Disconnect power from the unit by unplugging it from the power receptacle.
5. Remove product from the shelves.

### **CAUTION**

Using abrasive cleaners may damage the unit. Use only a mild soap and water solution.

Never steam clean or get excess water in the interior of the unit as this can damage unit.

6. Use a mild soap and water solution to clean the unit.
7. Sponge the inside and outside with a mild soap and water solution.
8. Wipe the unit dry with a soft, clean cloth.

## Troubleshooting

Refer to the table below for troubleshooting information.

| <b>Problem</b>                               | <b>Cause</b>  | <b>Possible Solution</b>  |
|--|---|---|
| <b>Shelves Not Heating and Lights Not On</b> | Unit not plugged into power receptacle.                         | Ensure unit power cord is connected to appropriate power receptacle.  |
|  | No Power to the unit.   | Check circuit breaker or fuses at building power panel. If problem persists, contact an authorized BKI service agent for corrective action.       |
|  | Power circuit breaker is OFF and Lights circuit breaker is OFF. | Place the Power circuit breaker ON and the Lights circuit breaker ON.   |
| <b>Power Circuit Breaker has Tripped</b>     | Overload, short circuit or ground fault condition exists.       | Place circuit breaker actuator in the ON position. If circuit breaker trips again, contact an authorized BKI service agent for corrective action. |
| <b>No Heat to Single Shelf</b>               | Power circuit breaker is OFF.                                   | Place the Power circuit breaker ON.   |
|  | Shelf Temperature control is turned fully counterclockwise.     | Adjust the shelf temperature control. Refer to the section entitled Temperature Adjustment on page 4.   |
|  | Defective Shelf.  | Contact an authorized BKI service agent for corrective action.  |
|  | Loose Wire or bad Connection.                                   | Contact an authorized BKI service agent for corrective action.  |
|  | Shelf Temperature control is defective.                         | Contact an authorized BKI service agent for corrective action.  |
| <b>Individual Light is not On</b>            | Failed fluorescent lamp.  | Change fluorescent lamp.  |
|  | Possible Ballast failure.                                       | Contact an authorized BKI service agent for corrective action.  |
| <b>Holding Temperature Not Adequate</b>      | Unit has not been preheated.                                    | Refer to the preheating section on page 4. If problem persists, contact an authorized BKI service agent for corrective action.                    |
|  | Product is below 160° F when loaded.                            | Check product temperature before loading the unit.  |
|  | Loose Wire or bad Connection.                                   | Contact an authorized BKI service agent for corrective action.  |
|  | Shelf temperature control not set properly.                     | Adjust the shelf temperature control. Refer to the section entitled Temperature Adjustment on page 4.   |
| <b>Switch Plate Pilot Light is On</b>        | Overtemperature condition exists. Possible fan failure.         | Turn unit OFF then contact an authorized BKI service agent for corrective action.   |

## **Notes**







P.O. Box 80400, Simpsonville, S.C. 29680-0400, USA  
<http://www.bkideas.com>

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