# WOOD SHOW BROILER AND COMBO BROILER



# **OPERATIONS AND SERVICE MANUAL**

J&R MANUFACTURING, INC.

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## **NADVERTENCIA**

Leer y comprender el Manual de operaciones y servicio antes de usar esta máquina.

El incumplimiento de las instrucciones de operación podría causar lesiones graves o daño al equipo.



## **<b>⚠WARNING**

Read and understand operations and service manual before using this machine.

Failure to follow operating instructions could result in personal injury or damage to equipment.

Reorder No. 8980-02WHPS

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### **ADVERTENCIA**

#### Riesgo de explosión

- 1. Nunca utilizar químicos volátiles como líquido para encender carbón, gasolina, grasa, etc., para encender o ayudar a prender un fuego. Nunca utilizar gas (natural o propano). Utilizar únicamente leña o ayudas que sean sólidas (poco volátiles) para encender el fuego.
- 2. Siempre deberá "RETIRARSE" por lo menos un minuto antes de abrir cualquier puerta para evitar retrocesos de la llama.





#### **Explosion hazard**

- 1. Never use volatile chemicals such as charcoal lighter fluid, gasoline, grease, etc. to start or aid fire. Never use gas (natural or propane). Use only kindling or safe (low volatility) solid fire starting aids.
- 2. Always "EVAC" for at least one minute before opening any door to avoid flashbacks.

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# **WARNINGS!**

#### Disposal of Ashes

Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

#### Creosote - Formation and Need for Removal -

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited this creosote makes an extremely hot fire. The chimney connector and chimney should be inspected at least twice monthly during the heating season to determine if a creosote buildup has occurred. If creosote has accumulated it should be removed to reduce the risk of a chimney fire.

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#### **Exhaust Hood Required**

This unit <u>MUST BE INSTALLED</u> under a Class 1 exhaust hood with an approved fire suppression system

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#### DANGER-Risk of Fire or Explosion

Do not burn garbage, gasoline, drain oil or other flammable liquids

#### WARNING-Risk of Fire

Do not operate with fuel loading doors or ash removal drawers open. Do not store fuel or other combustible material within marked installation clearances.

Inspect and clean flues and chimney regularly

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#### **CAUTION-Hot Surfaces**

Keep children away
Do not touch during operation



## WOOD SHOW BROILER

# OPERATIONS AND SERVICE MANUAL



MANUFACTURED BY:

J & R MANUFACTURING, INC

Rev. 09-17

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#### **VENTING INFORMATION**

In all cases, it is imperative to obtain the approval of the AHJ (Authority Having Jurisdiction). This will typically be the mechanical inspection department of the local municipality's building inspection division and/or the local fire marshal.

- A. Exhaust hoods should be Listed, Type 1 hoods with automatic fire suppression systems and conform to NFPA 96 requirements.
- B. For Canopy-type commercial cooking hoods the inside edge thereof shall overhang or extend a horizontal distance of not less than six (6) inches beyond the edge of the cooking surface on all open sides, and the vertical distance between the lip of the hood and the cooking surface shall not exceed four (4) feet.
- C. A grease duct serving a Type 1 Hood shall be constructed of at least 0.054 inch thick (No. 16 Manufacturer's Standard Gauge) steel or at least 0.043 inch thick stainless steel (No. 18 MSG). Duct enclosures for grease duct shall be constructed as the Building Code requires. Duct enclosures shall be of at least one-hour fire-resistive construction in all buildings and shall be of 2-hour fire-resistive construction in buildings with four or more stories.
- D. Exhaust hood volume should be based on the specifications from the 2009 (or later) International Mechanical Code Section 507.

#### Notes:

- 1. Exhaust volume should be determined by the exhaust hood manufacturer based on their products listing and local code requirements. States such as California, Oregon, Washington, and Connecticut all have code driven maximum exhaust volumes for specific equipment. For example: California mandates that solid fuel exhaust hoods for a wall mounted application can use NO MORE than 385 cfm/lf for solid fuel.
- 2. Spark arrestor type filters are required
- 3. Hoods serving solid fuel equipment must be dedicated to solid fuel only (no gas or electric) with their own dedicated fire protection system.

#### INSTALLATION

#### SHIPPING:

The Wood Show will be shipped fully assembled. The grates will be packed inside the unit, along with the casters.

#### HANDLING:

The unit can be handled with a forklift with a 4000 pound capacity (larger, custom Wood Shows may require a larger forklift). Install the casters on the unit while the forklift is available, then it can be rolled into place.

#### CLEARANCE:

The unit must be installed to conform to the following minimum clearances (in inches):

From non-combustible walls:

Back and sides: 0

Front: 48

From combustible walls:

Front: 48" Back and sides:

With no upper enclosure panels: 48

With upper enclosure panels: 2

Unit to be installed on a non-combustible floor.

#### **GRATES AND GRATE FRAME:**

Remove all items packed inside the unit. If your unit has a moveable cooking surface (with lifting wheel), carefully allign the cables on the wheel shaft while the grate frame is resting on the firebox floor, with no grates installed. Slowly turn the wheel to begin lifting the grate frame, taking care to ensure that the cables spool onto the shaft without overlapping. The right and left cables should simultaneously begin to lift their respective sides. If the grate frame is not level, lower it and begin the lift again, adjusting the cable track to ensure a level frame. Install the grates on the grate frame.

#### **OPERATING PROCEDURES**

Cooking on the Wood Show Broiler is practically the same as using a backyard grill. A little common sense and basic cooking knowledge will go a long way toward successful use of an open pit grill.

1. Building a fire in an open pit broiler or grill is practically the same as in a fire place. We recommend that kindling or safe (low volatility) solid fire-starting blocks be used with small chunks of wood or with charcoal. Adjust the air control damper on the ash drawer to the full open position to allow additional air to be pulled into the firebox.

#### Turn on the exhaust fan before lighting the fire.

Once the fire becomes established, add larger wood. It is recommended that the fire be built in the center of the firebox and then spread.

# NEVER USE VOLATILE CHEMICALS SUCH AS CHARCOAL LIGHTER FLUID, GASOLINE, GREASE, ETC. TO START A FIRE SERIOUS INJURY MAY OCCUR.

2. Most novices with a grill will build a much larger fire than is needed. The fire should be large enough to cook properly with the food grate (or grill) level with the top rim of the firebox. A quick and accurate measure of the temperature of the fire is to hold your palm close to the cooking surface. If you have to remove your hand within 2 seconds you have a (700° to 800° F); 4 seconds, medium (300° to 400° F); 6 seconds, slow (190° to 250° F). Here follows basic information for grilling various products:

FOOD	FIRE	SPECIAL	COOKING TIME
Beef Steak 1" Well Done	Slow	Use Spatula, not fork	15 to 20 minutes
Beef Steak 1" Rare	Hot	Turn for marking	8 to 10 minutes
Pork Spareribs	Med Hot	Watch Carefully	1 to 1 ¼ hours
Chicken-half	Med	Bone down 1st 20	45 to 50 minutes
		min.	
Chicken-whole	Med	Breast up	1 ¼ to 1 ½ hours
Fish-Firm Fleshed	Med Hot	Brush & baste often	6 to 8 minutes
Fajita ¼" thick	Med Hot	Beef-Skirt Steak	2 to 3 min./side

3. Since cooking over an open flame (grilling) is a dry-heat method of cooking, it is sometimes advantageous to marinate the food in an acidic (vinegar, wine, fruit juice) marinade prior to grilling.

#### WORDS OF CAUTION

- 1. Your new Wood Show Broiler employs the use of "Chef-Cool Insulation". This consists of 2" of castable 2500° F refractory material forming the interior walls, plus 2 inches of high temperature fiberglass insulation between the refractory material and the outside wall of heavy-duty steel treadplate. BUT—a word of caution: Do not throw logs of wood against the inside cast walls...even though it's very tough and rugged, repetitious hard shocks may eventually cause cracks in the wall and require patching.
- 2. Do not let the flames get too high, this will cause not only the burning of foods, but warpage of grate and possible weakening of the lifting cable.
- 3. Do not let the adjusting wheel free-fall, as this might snap the cable, or weaken it.
- 4. Clean the grate surface after each use and grease well.
- 5. Do not turn the product until it has been on the grill long enough to seal over, otherwise, the meat will stick to the surface.
- 6. Do not allow hot ashes and coals to remain in contact with the grate frame (or grate frame legs if your unit employs a grate frame with legs). This will cause premature failure of the steel due to heat corrosion.

#### CLEANING / ASH REMOVAL / MAINTENANCE

Keep unit clean, wipe off during and after use.

Remove accumulated ash regularly, and use a metal receptacle only!

Do not dump the ashes until you are sure that no embers remain. Ashes can remain alive for several days.

Neveruse water or ice to put out a fire. Repeated thermal shock will cause the refractory to crack requiring replacement or repair.

Inspect the lifting cables regularly; replace if frayed.

#### **HINTS AND SUGGESTIONS**

- A. Always remove meats from refrigerator 20 to 30 minutes prior to grilling.
- B. Keep a water spray handy to quench flare-up.
- C. It is often good to have a cover (such as a domed plate cover) to place over items in which you may want extra smoke or moisture.
- D. It is often best to pre cook (par-boil or microwave) some vegetables such as potatoes, whole onions, rutabagas, carrots, etc., prior to kabobing.
- E. If a marinade is heavy with sugar or syrups, it is best to baste for the last few minutes only, to avoid caramelizing and burning.
- F. Always test the doneness of your food. Chicken must be checked at the thigh and leg joints for doneness. A sharp fork inserted should let <u>clear juices</u> escape. Fish should be flaky when tested or in the case of swordfish firm when pressed.
- G. Never try to grill fish thinner than one (1) inch in thickness as it will dry out rapidly. Fish must be brushed often with olive oil, lemon butter, etc.
- H. By cooking with the food grill raised up and above the fire enclosure, you will lose heat and smoke. This will waste wood. Raise the food grate by turning the wheel on the Wood Show Broiler.
- I. Keep the grates clean and oiled. A large onion speared on a cook's fork and dipped into oil is a flavorful and easy way to oil the grates between cooks.

#### **WARRANTY**

J & R MANUFACTURING, INC. warrants its equipment against defective parts and workmanship under normal use and when installed in accordance with manufacturer's recommendations for a period (after date of shipment\*) of twelve (12) months on parts and ninty (90) days on labor with the following provisions:

- 1. This warranty does not apply if problems or claims are the result of: (a) damage in transit (equipment becomes owner's property upon shipment from factory and owner must file claim with transport company); (b) misuse, neglect, improper maintenance, and or unauthorized alterations to equipment; (c) improper installation of exhaust stacks, air supply, and extraneous exhaust systems; (d) improper voltage hook-up; (e) wind, rain, hail, fire and acts of God.
- 2. In-warranty replacement parts will be credited only upon receipt and inspection of defective parts at the factory. All shipping charges are the responsibility of the owner, but, at the discretion of J&R Manufacturing, ground shipping charges may be waived or credited.
- 3. Labor to remove, replace, or repair defects under this warranty must be authorized by factory. Premium time (overtime) and travel time are not included in the warranty.
- 4. Sales, excise, and other taxes, food loss, and down-time are not covered under this warranty.
- 5. The removal of manufacturer's nameplate(s) voids the warranty.

It is the aim of J & R Manufacturing, Inc. to build the finest equipment possible and to facilitate quick solutions to all problems that might arise with the lowest expense possible to the user(s). To help us achieve this goal, please follow these procedures:

- 1. Telephone our service department at 972-289-0801 at the first sign of a problem. Have ready the Model and Serial Number of your equipment.
- 2. Cooperate with our Service Department by making certain visual checks as requested. Most problems are quick and easy to pinpoint and resolve.
- 3. In the event it is necessary to use a service company, the factory will contact its authorized service agency. If no authorized service agency is available, please recommend a service company. The use of a service company not specifically authorized by our Service Department at factory headquarters may invalidate this warranty.

or provable start up date, whichever is later (start up must be within 12 months of ship date)

#### **Arnold Bros. Forest Products Inc.**

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