



**For service contact:**  
German Knife Inc.  
1-800-500-3519  
www.turboairinc.com

# OWNER & OPERATOR INSTRUCTION MANUAL

## Model No.

TAR-4 / TAR-24G / TAR-24RB  
TAR-6 / TAR-36G / TAR-36RB  
TARG-4B12G / TARG-12G4B  
TARG-2B24G / TARG-24G2B  
TAR-8  
TARG-6B12G / TARG-12G6B  
TARG-4B24G / TARG-24G4B  
TARG-2B36G / TARG-36G2B  
TAR-10  
TARG-8B12G / TARG-12G8B  
TARG-6B24G / TARG-24G6B  
TARG-4B36G / TARG-36G4B  
TARG-2B48G / TARG-48G2B  
TARG-6B24RG / TARG-24RG6B



## IMPORTANT SAFETY NOTICE

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL. POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

### IMPORTANT

In the event a gas odor is detected, shut down units at main shutoff valve and contact the local gas company or gas supplier for service.

### FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

### WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

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### SHIPPING DAMAGE CLAIM PROCEDURE

The equipment is inspected & crated carefully by skilled personnel before leaving factory. The transportation company assumes full responsibility for safe delivery upon acceptance of this equipment if shipment arrives damaged ;

- 1. VISIBLE LOSS OR DAMAGE :** Note on freight bill or express delivery and have signed by person making delivery.
- 2. FILE CLAIM FOR DAMAGES IMMEDIATELY :** regardless of extent of damages.
- 3. CONCEALED LOSS OR DAMAGES :** If damages are noticed after unpacking, notify transportation company immediately and file "Concealed Damage" claim with them. This should be done within fifteen(15) days from date delivery is made to you. Return container for inspection.

## INSTALLATION & OPERATION INSTRUCTION

### GENERAL

- (1) A manual gas shut-off valve must be installed in the gas supply (service) line ahead of the appliance and gas pressure regulator in the gas stream for safety and ease of future service.
- (2) The gas pressure regulator supplied must be installed on the appliance prior to connecting the equipment to the gas line failure to install a regulator will void the equipment warranty and result in a potentially hazardous condition.
- (3) The appliance and its individual shut off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressure in excess of 1/2PSI.
- (4) The appliance must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas supply piping system at test pressure equal to or less than 1/2PSI.
- (5) Please contact the factory, the factory representative , or a local service company to perform maintenance and repairs.

### RATING PLATE

The rating plate is located in the right panel of the range. Information on this plate includes the model and serial numbers. When communicating with factory about a unit or requesting special parts or information, this data is essential for proper identification. Other information on this plate is the BTU/hr input of the burners, operating gas pressure in inches WC, and whether the unit is orificed for natural or propane gas. Pilot lighting instructions(ovens only) are also located in the same area. The Salamander broiler, or Cheesemelter(if provided) is supplied with its own rating plate located on the unit.

**RADIANCE COOKING APPLIANCES MUST BE CONNECTED ONLY TO THE TYPE OF GAS IDENTIFIED ON THE RATING PLATE!**

# INSTALLATION & OPERATION INSTRUCTION

## CLEARANCE

The appliance area must be kept free and clear of all combustible. This unit is design-certified for the following installation only:

The clearances from combustible and non-combustible construction for ranges and range mounted salamander broiler or cheesemelter are as follows:

	<b>Combustible Construction</b>	<b>Non-Combustible Construction</b>
<b>BACK</b>	8"	0
<b>SIDES</b>	12"	0
<b>FLOOR</b>	Non-Combustible	6"

If legs or casters are not used, the unit must extend 2" beyond the front edge of a noncombustible curb or platform.

## CAUTION

**DO NOT PUSH** against the end of the valve cover/landing ledge in an attempt to adjust the ranges position. Although this part is deburred during manufacturing, an accident could occur if the range should move suddenly while being pushed unto position by hand.

## HIGH SHELF ASSEMBLY

- (1) Mount the high shelf riser to the range with #10 sheet metal screws(pointed tips) in the back.
- (2) Mount the high shelf to the riser with #10 sheet metal screws provided (See attachment at the end of this manual for a diagram that describes the installation of the backguard/flue riser).

NOTE: If a Salamander broiler / Cheesemelter is to be mounted on range, read installation instructions for Salamander broiler / Cheesemelter before installing high shelf. Special care must be taken to ensure that the gas supply piping and/or gas pressure regulator is not exposed to exhaust gases or elevated temperatures.

## INSTALLATION & OPERATION INSTRUCTION

### **LEVELING** (Ranges Equipped with Ovens)

A carpenter's spirit level should be placed on the oven's center baking rack and/or across the range top and the unit leveled both front to-back and side-to-side. If it is not leveled, cakes, casseroles, and any other liquid or semi-liquid batter will not bake evenly, burner combustion may be erratic, and the unit will not function efficiently.

If the floor is relatively smooth and level, the unit may be leveled further with adjustment in the foot of the leg. Adjust to the high corner and level the unit with metal shims if the adjustment required exceeds the 1-1/4" adjustment available. Units with casters must be leveled with shims. A unit will probably not return to the same position after being moved, requiring re-leveling after each move.

### **AIR SUPPLY & VENTILATION**

The area in front of, around and above the appliance must be kept clear to avoid any obstruction of the flow of combustion and ventilation air. Adequate clearance must be maintained at all times in front and the sides of the appliances for servicing and proper operation.

Means must be provided for any commercial, heavy-duty cooking appliance to exhaust combustion waste products to the outside of the building. Usual practice is to place the unit under an exhaust hood. Filters and drip troughs should be part of any industrial hood, but consult local codes before constructing and installing through a hood.

Strong exhaust fans in this hood or in the overall air conditioning system can produce a slight vacuum in the room and/or cause air drafts, either of which can interfere with pilot or burner performance and can also be hard to diagnose. Air movement should be checked during installation; if pilot or burner outage problems persist, make-up air openings or baffles may have to be provided in the room.

**NOTE:** This appliance is not capable of being operated in the event of power failure. NO attempt should be made to operate this appliance during a power failure

## INSTALLATION & OPERATION INSTRUCTION

### GAS CONNECTION

NOTE : The gas supply(service) line must be the same size or greater than the inlet line of the appliance. Radiance ranges and ovens use a 3/4" NPT inlet. Sealant on all pipe joint must be resistive to LP gas.

### MANUAL SHUT-OFF VALVE

This installer-supplied valve must be installed in the gas service line ahead of the appliance and regulator in the gas stream and in a position where it can be reached quickly in the event of an emergency.

### PRESSURE REGULATOR

All commercial cooking equipment must have a pressure regulator on the incoming service line for safe and efficient operation, since service pressure may fluctuate with local demand. The manual shut-off valve is normally supplied by the installer, however a pressure regulator is packed inside each Radiance Range.

**Failure to install a pressure regulator will void the equipment warranty!**

The regulators supplied for Radiance Ranges, have 3/4" inlet/outlet openings and are adjusted at the factory for 5" WC(natural gas) or 10"WC(propane)depending on the customer's ordering instructions.

Prior to connecting the regulator, check the incoming line pressure, as these regulators can only withstand a maximum pressure of 1/2PSI(14"WC). If the line pressure is beyond this limit, a step-down regulator will be required. The arrow forged into the bottom of the regulator body shows gas flow direction; it should point downstream to the appliance. The red air vent cap on the top regulator is part of the regulator and should not be removed.

Any adjustments to regulators must be made only by qualified service personnel with the proper test equipment.

# INSTALLATION & OPERATION INSTRUCTION

## **60" RANGE REQUIRES TWO GAS CONNECTIONS**

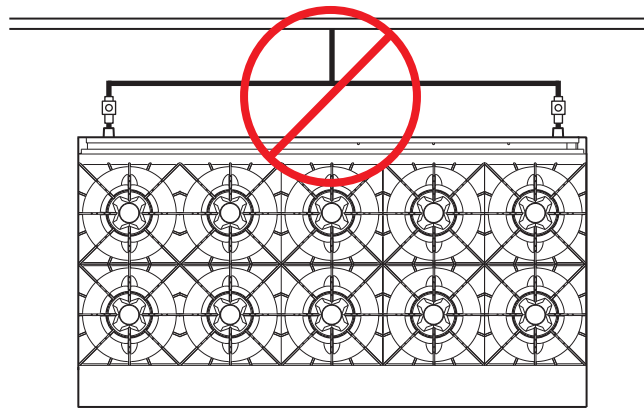
The gas inlet line size of this unit is 3/4" NPT. For proper installation, the gas service supply line must be the same size or greater than the inlet line size of the unit. Each gas connection or inlet should have an individual, dedicated line to the main gas supply.

The gas pressure regulator must be installed in each gas line (failure to install a pressure regulator will void the warranty). The arrow on the bottom of the regulator should be pointing toward the unit. The regulators supplied with ranges have 3/4" NPT connections. Be sure the regulator matches the gas type that is being used on the unit.

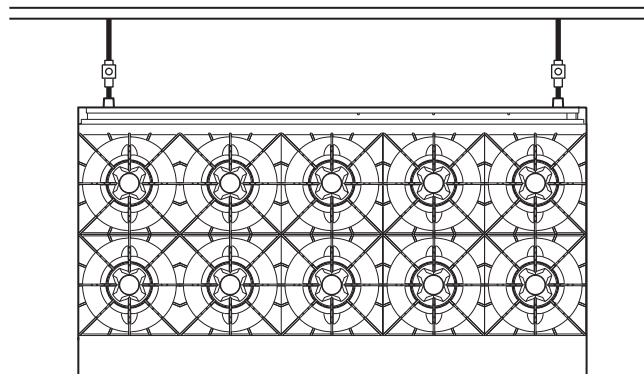
- Natural gas: 5" W.C. manifold gas pressure
- Propane gas : 10" W.C. manifold gas pressure

Before connecting the regulator, check the incoming line pressure – as these regulators can only withstand a maximum inlet pressure of 14" W.C. (exceeding this pressure will damage them).

### **IMPROPER INSTALLATION**



### **PROPER INSTALLATION**



- Natural gas: 5" W.C. manifold gas pressure
- Propane gas : 10" W.C. manifold gas pressure

## INSTALLATION & OPERATION INSTRUCTION

### **RIGID CONNECTIONS**

Double-check any installer-supplied intake pipes visually and/or blow them out with compressed air to clear any dirt particles, threading chips, or other foreign matter before installing a service line. Those particles will clog orifices when gas pressure is applied.

All connections must be sealed with a joint compound suitable for LP gas, and all connections must be tested with a soapy water solution before lighting any pilots!

### **FLEXIBLE COUPLINGS, CONNECTORS, AND CASTERS**

If the unit is to be installed with flexible couplings and/or quick-disconnect fitting, the installer must use a heavy-duty, AGA design certified commercial flexible connector of at least 3/4" NPT (with suitable strain reliefs). The flexible connector must comply with the standard for Connectors for Movable Gas Appliances, ANSI Z21.69 and addendum Z21.69a (or latest edition) and a quick-disconnect device that complies with the standard for quick-disconnect devices for use with Gas Fuel should comply with ANSI Z21.41 and addendum Z21.41a (or latest edition). If disconnection of the restraint is necessary, make sure to reconnect restraint after the appliance has been returned to its originally installed position. Domestic gas or water connectors are not suitable!

Restraining device may be attached to the back frame/panel of the unit.

If the unit is to be installed with casters, a flexible connector must be used and the same ANSI standards apply. Locking front casters are provided to limit the movement of the appliance without depending on the connector or associated piping. A suitable strain relief must be installed with the flexible connector.

All connections must be sealed with a joint compound suitable for LP gas all connections must be tested with a soapy water solution before lighting pilots.



## INITIAL PILOT LIGHTING



**When lighting pilots and checking for leaks, do not stand with your face close to the combustion chamber.**

All Radiance appliances are adjusted and tested before leaving the factory, effectively matching them to sea level conditions. Adjustments and calibrations to assure proper operation may be necessary on installation to meet local conditions, low gas characteristics, to correct possible problems caused by rough handling or vibration during shipment, and are to be performed only by qualified service personnel. These adjustments are the responsibility of the customer and/or dealer and are not covered by our warranty.

Check all gas connections for leaks with a soapy water solution before lighting any pilots. **DO NOT USE AN OPEN FLAME TO CHECK FOR LEAKS!** Putting an open flame beside a new gas connection is extremely dangerous.

Before lighting any pilots, make sure that burner valves and thermostats are turned "off".

### **A. TOP BURNERS / RAISED GRIDDLE-BROILER**

All top section burners are equipped with constant-burning pilots. These are to be manually lighted immediately after the gas is turned on and the system is checked for leaks. Burner pilots are provided for each burner and can be rechecked for proper adjustment. Adjustments can be made with a screwdriver to the brass pilot valve accessible through the valve cover.

### **B. HOT TOP**

The pilot should be lighted immediately after the gas is turned on and the system is checked for leaks. The pilot can be reached with a long match through the valve cover, or by lifting the plate upward and accessing through the top.

### **C. GRIDDLES**

The griddle pilot is ignited in the same fashion as the Hot Top section, using a long lighted match placed through the front control panel opening. Adjustment of the pilot flame can be made with a screwdriver to the pilot valve, accessible through the valve cover.

For detailed service instructions to adjust by-pass(minimum burner) flame and to recalibrate oven and griddle thermostatic controls.

## INITIAL PILOT LIGHTING

### D. STANDARD OVEN

Pilot gas is tapped from the main burner manifold pipe, routed through tubing to a pilot safety valve, and then to the pilot burner. Gas flow is controlled by the safety valve.

Oven pilot lighting or relighting is to be completed in the following sequence:

- (1) Turn the oven thermostat knob to "off" and wait 5 minutes.
- (2) Remove the oven's lower kick plate by lifting up and out. This exposes the pilot safety valve and the burner.
- (3) Make sure any accumulated gas has dispersed. Since propane gas is heavier than air, check near the floor area for the odor of propane gas before attempting to light any pilot burners.
- (4) Depress the button on the safety valve and hold it in throughout the lighting procedure.
- (5) Light the pilot while continuing to depress the button on the safety valve until the pilot remains lit when released.
- (6) If pilot is extinguished, repeat steps 4 & 5 above.
- (7) Turn the oven thermostat knob "on" and set to desired temperature setting; watch to make sure the oven burner ignites from the pilot and that there are no yellow flames from the burner.
- (8) Turn the oven thermostat to "off" and replace the lower kick plate.

NOTE: It may be necessary to relight the pilot several times until the lines are purged of any trapped air and a constant gas flow is attained.

## FINAL PREPARATION

### TO CHECK FOR LEAKS

- (1) Remove the kick plate.
- (2) Check pilot tubing and burner tubing for leaks where they enter the gas valve with a soapy water solution.
- (3) Light the pilot as described above.
- (4) Check the connection of the pilot tubing leaving the gas valve with a soapy water solution.
- (5) Turn the thermostat to any setting and burner should light.
- (6) Check the burner orifice elbow connection downstream of the safety valve with a soapy water solution.
- (7) Check the burner visually for blue flame. There should be no yellow tips or soot. If yellow tipping occurs, call an authorized service person to adjust the burner air shutter.

### FINAL PREPARATION

#### **A. TOP SECTION**

New units are wiped clean with solvents at the factory to remove any visible signs of dirt, oil, or grease remaining from thin film of nontoxic rust protestant. Food preparation surfaces should be washed thoroughly with hot, soapy water before being used.

The top grates should be removed and washed before use. With these removed, it will be possible to remove any plastic tie cords holding the burners in place.

#### **B. GRIDDLE**

New Griddles should be seasoned following this sequence:

- (1) Clean the griddle surface thoroughly with hot, soapy water to remove the protective oil coating wiped on at the factory.
- (2) Rinse with a mixture of 1/4 cup vinegar to one quart water.
- (3) Spread unsalted solid shortening or liquid frying compound evenly over the entire griddle surface.
- (4) Turn all griddle burners to "medium" or thermostats to 350 degrees and wait until the shortening begins to smoke, then turn the burners "off".
- (5) Rub the now-melted shortening into the griddle surface with burlap, moving in the direction of the surface's polish marks and covering the entire surface.
- (6) Let the griddle cool, than repeat steps 3, 4, & 5.
- (7) When the griddle is cool after the second seasoning, wipe it once again with a thin film of shortening or cooking oil.

#### **C. HOT TOP**

These should be washed in place to remove the solvent and oil films, then given a light coating of cooking oil before being used for food preparation. To remove the hot top, use a flat tip screwdriver as a lever in front.

#### **D. OVENS**

On initial installation, turn the oven to 250 degrees and operate for about 1 hour, then, reset the thermostat to its maximum and operate for another hour. This will drive off any solvents remaining in the unit. At the end of this second hour, turn the thermostat OFF, open the door and allow the unit to cool. Oven should then be thoroughly washed using hot, soapy water.

## CLEANING AND MAINTENANCE

Any piece of equipment works better and lasts longer when maintained properly. Cooking equipment is no exception. Your Radiance range and oven must be kept clean throughout the day and thoroughly cleaned at the end of the day.



**NEVER USE AMMONIA IN AN OVEN THAT IS WARMER THAN ROOM TEMPERATURE AND ALWAYS HAVE DIRECT VENTILATION!**

### DAILY

#### OPEN BURNERS

1. Lift all the open grates.
2. Lift off the burner heads and venturies by raising the head slightly, sliding to the rear of the range and lifting upwards.
3. Wash all of the above in hot, soapy water.
4. Reinstallation of the top burners is the reverse of removal.

#### GRIDDLES

1. Scrape with a nylon griddle scraper to remove cooked on spills. Use a fine grained stone only when absolutely necessary.
2. Wipe away any griddle stone dust food particles with burlap.
3. Wash with hot, soapy water, then rinse with vinegar and water.
4. Rinse again with clear water.
5. Re-oil with shortening or liquid frying compound.
6. DO NOT FLOOD A HOT GRIDDLE WITH COLD WATER! This promotes and cause the griddle plate to crack if continued over a long period of time.

#### HOT TOPS

1. Scrape off any food spills.
2. Wash with hot, soapy water then rinse and lightly oil.

#### ALL OVENS AND SALAMANDER BROILERS

1. Remove the baking racks. Wash in hot soapy water, and replace after the rest of the oven is cleaned.
2. Remove the oven bottom by lifting it out from the front then sliding forward, out of the oven.
3. Scrape off any food particles with a nylon griddle scraper. Be very careful about scratching the porcelain finish on the oven liner panels.
4. Wash all the above with hot soapy water, then reassemble.
5. Baked on spills may be loosened and stubborn stains removed with ordinary household ammonia and scrubbing with a nylon pad in a cold oven only.
6. Do not allow spray type oven cleaners to come into contact with the temperature probe in the oven.
7. After cleaning the oven, rinse well with 1/4 cup of vinegar to quart of clear water solution to neutralize any caustic residue of the cleaning compound. Wipe dry.
8. Infra-red burners, available on TACM cheesemelters and TASM salamanders require cleaning once a month. The use of any solvents or wire brushes may damage tiles.

## CLEANING AND MAINTENANCE

### PERIODIC CLEANING

Check the ventilation system periodically to see that nothing has fallen down into the stub back, high riser or high shelf exhaust vents.

Lubricate the pivot pins of oven door hinge where the right and left lever arms connect to the door. Use a multi-purpose lubricating oil sparingly so as to not drip excessively.

Your Radiance range should be checked for safe and efficient operation at least yearly by a qualified service company.

### STAINLESS STEEL

All stainless steel body parts should be wiped regularly with hot soapy water during the day and with a liquid cleaner designed for this material at the end of each day. **DO NOT USE** steel wool, abrasive cloths, cleansers or powders to clean stainless surfaces! If it is necessary to scrape stainless steel to remove encrusted materials, soak in hot water to loosen the material, then use a wood or nylon scraper. **DO NOT USE** a metal knife, spatula, or any other metal to scrape stainless steel! Scratches are almost impossible to remove.

# LIMITED WARRANTY

## WARRANTY CLAIM:

German Knife / Radiance warrants that the equipment, as supplied from the factory to the end-user, is free from defects in materials and workmanship. Should any part be found defective resulting from normal use within the defined warranty period, German Knife / Radiance will gladly dispatch an authorized service agency to repair and/or replace necessary parts under the following conditions.

Repairs under this warranty are to be performed by a German Knife / Radiance authorized service agency only. German Knife / Radiance will not be responsible for service parts and labor charges performed by non-authorized service companies. All claims should include the model number, serial number, proof of purchase, date of installation, and all pertinent information supporting the alleged defect.

## PRODUCTS UNDER WARRANTY:

### ***One Year Warranty:***

- Radiance Medium Duty Microwaves- ER/MR series (TMW-1100ER, TMW-1100MR)
- Radiance Ranges & Countertop cooking series  
(All TAR-, TARG-, TAHP-, TARB-, TAMG-, TATG-, TASP-, TAWR-)
- Radiance Cheesemelters, Salamanders, Steam Tables, Hand Wrappers, and Food Warmers  
(All TACM-, TASM-, RST-, RHW-, RFW-)
- German Knife Light Duty Slicer- LD series (GS-10LD, GS-12LD)

### ***Two Year Warranty:***

- German Knife Heavy Duty Meat Slicer- Automatic & Manual (GS-12A, GS-12M, GS-13A, GS-13M)
- German Knife Meat Grinder (All GG-)
- German Knife Band Saw (All GBS-)

### ***Three Year Warranty:***

- Radiance Heavy Duty Microwaves- HD Series (TMW-1200HD, TMW-1800HD)

Any part covered under this warranty that is found by German Knife / Radiance to have been defective within the above time period is limited to the repair or replacement, including labor charges, of defective parts or assemblies. The labor charges shall include standard straight time labor charges only and reasonable travel time as determined by German Knife / Radiance.

## WHAT IS NOT COVERED BY THIS WARRANTY:

German Knife / Radiance's sole obligation under this warranty is limited to either repair or replacement of parts, subject to the additional limitations below. This warranty neither assumes nor authorizes any person to assume obligations other than those expressly covered by this warranty.

- Equipment failure resulting from improper installation will not be honored under warranty. Examples are wrong utility connection and improper utility supply problems.
- Equipment that has not been maintained accordingly. Examples are calibration of controls, adjustment to pilots and burners, and damage from improper cleaning.
- Equipment that has not been used in an appropriate manner, alteration, neglect, abuse, misuse, accident, damage during transit or installation, fire, food, acts of God.
- Warranty is not transferrable and only applies in favor of the original purchaser.
- Equipment failure resulting from electrical power failure, use of extension cords, low voltage, and voltage drops to the unit.

These warranties are exclusive and in lieu of all other warranties, including implied warranty and merchantability or fitness for a particular purpose. No consequential damages. German Knife / Radiance is not responsible for economic loss, profit loss or special, indirect, or consequential damages. There are no warranties which extend beyond the description on the face hereof.

Outside the U.S., this warranty does not apply to, and German Knife / Radiance is not responsible for, any warranty claims made on products sold or used outside the continent of the United States.